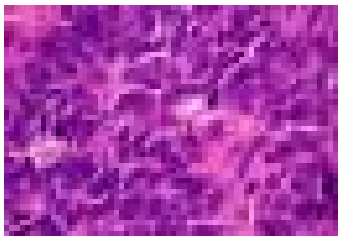
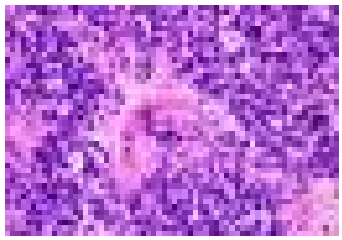
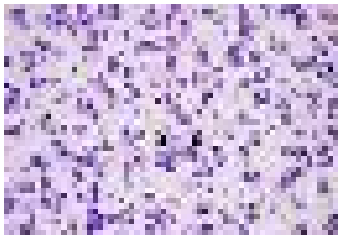
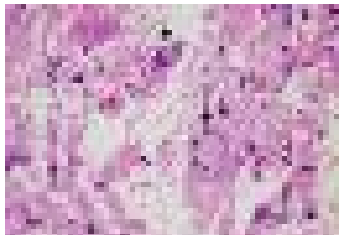
WEST VIRGINIA DEPARTMENT OF HEALTH AND HUMAN RESOURCES

West Virginia Cancer Registry

2007

POLICY AND PROCEDURE MANUAL

Facility-Based Registry Edition

Bureau for Public Health
350 Capitol Street, Room 125
Charleston, WV 25301

Joe Manchin III, Governor
Martha Yeager Walker, Secretary

2007 Policy and Procedure Manual
Facility-Based Registry Edition

Joe Manchin III
Governor

Martha Yeager Walker
Secretary, Department of Health and Human Resources

Chris Curtis, MPH
Acting Commissioner, Bureau for Public Health

Catherine Slemp, MD, MPH
Acting State Health Officer, Bureau for Public Health

Joe Barker, MPA
Director, Office of Epidemiology and Health Promotion

Loretta Haddy, PhD
Director, Division of Surveillance and Disease Control

Patricia Colsher, PhD
Director/Epidemiologist, West Virginia Cancer Registry

Cover images courtesy of the National Cancer Institute Visuals Online. Top left: Medulloblastoma. Top right: Ependymoma. Lower left: Oligodendroglioma. Lower right: Glioblastoma.

Manual Prepared and Cover Design, Graphics and Layout by:

Patricia Colsher, PhD
Director/Epidemiologist, West Virginia Cancer Registry

Materials Reviewed by:

Darlene Maxwell, CTR
Leslie Boner, CTR
Lee Ann Phalen, CTR
WVCR Data Quality Staff

WVCR Staff

Patricia Colsher, PhD	Director/Epidemiologist
Darlene Maxwell, CTR	Data Quality/Training
Leslie Boner, CTR	Data Quality/Training
Lee Ann Phalen, CTR	Data Quality/Training
R. Neal Kerley, CTR	Systems Management
Brenda Shehab	Surveillance
Stephen Williams	Surveillance
Judy Arbogast	Surveillance
Jena Webb	Support Services

Table of Contents

CHAPTER 1: THE WEST VIRGINIA CANCER REGISTRY

Mission 1
Geographic Coverage 1
Temporal Coverage 2
Confidentiality 2
Release of Identified Information 2
Funding 3
Certification 3
Use of WVCR Data 3

CHAPTER 2: HEALTH INSURANCE PROTABILITY AND ACCOUNTABILITY ACT

Permissibility of Reporting 4
West Virginia HIPAA Resources 4
Other HIPAA Resources 5

CHAPTER 3: REPORTING REQUIREMENTS

Reportable Diseases 6
Computerized Edits 9
Timeliness 9
Data Format 9
Method of Reporting 10

CHAPTER 4: REQUIRED DATA ELEMENTS

Determination 11
Summary of Required Items 12

CHAPTER 5: CASE ASCERTAINMENT

Resources 20
General Guidelines 20
Screening Lists of ICD-9 Codes 21
Other Sources to Review 23

CHAPTER 6: ABSTRACTING OVERVIEW

Resources 25
Introduction to Abstracting 26

CHAPTER 7: ABSTRACTING: GENERAL ISSUES

Text Documentation 60
Ambiguous Terminology 62
Descriptive Tumor Size 64

CHAPTER 8: ABSTRACTING: PATIENT IDENTIFICATION

Name 65
Social Security Number 66
Address 67
Telephone 69
Marital Status 70
County at Diagnosis 71
Age at Diagnosis 72
Place of Birth 73
Date of Birth 74
Occupation and Industry 75
Census Tract & Associated Items 76
Race 77
Spanish/Hispanic Origin 80
IHS Link 82
Computed Ethnicity & Source 83
Sex 84
Tobacco History 85
Alcohol History 86

Family History of Cancer 87

CHAPTER 9: ABSTRACTING: CANCER IDENTIFICATION

Date of Diagnosis 88
Primary Site 92
Laterality 95
Number of Primaries 1/1/93 to 12/31/06 99
Number of Primaries 1/1/07 forward 122
Ambiguous Termonology MP/H 130
Date Conclusive Termonology MP/H 134
Multiplicity Counter MP/H 135
Date Multiple Tumors MP/H 138
Type of Multiple Tumors MP/H 140
ICD-O-3 Histologic Type 142
Behavior Code 149
Grade 151
Diagnostic Confirmation 162

CHAPTER 10: ABSTRACTING: REPORTING SOURCE

Reporting Source 165
Place of Diagnosis 167
Primary Payer 168
Physicians 171
Abstracted by 173
Accession Year 174
Abstract Number 175
Sequence Number 176
Date First Contact 178
Medical Record Number 179
Class of Case 180

CHAPTER 11: ABSTRACTING: STAGING

Introduction 182
Tumor Size 184
Descriptive Equivalents of Size 186
Positive Regional Nodes 187
Regional Nodes Examined 189
Sites of Distant Metastases 191
Tumor Marker 1 192
Tumor Marker 2 193
Tumor Marker 3 195
Summary Staging 196
Collaborative Staging 211
CS Tumor Size 215
CS Extension 220
CS Tumor Size/Extension Evaluation 221
CS Lymph Nodes 223
CS Nodes Positive 226
CS Nodes Examined 228
CS Lymph Node Evaluation 230
CS Metastases at Diagnosis 231
CS Mets at Diagnosis Evaluation 233
CS Site Specific Factor 1 235
CS Site Specific Factor 2 238
CS Site Specific Factor 3 240
CS Site Specific Factor 4 242
CS Site Specific Factor 5 244
CS Site Specific Factor 6 246
Coding None vs. Unknown 248

CHAPTER 12: ABSTRACTING: TREATMENT

Introduction 250
First Course of Therapy 251
Date Therapy Initiated 259
Surgery of Primary Site 262
Surgical Margins 264
Scope of Regional Lymph Node Surgery 265
Surgical Procedure of Other Site 267
Reason No Surgery 268
Radiation 270
Radiation Sequence with Surgery 275

Reason No Radiation 277
Chemotherapy 278
Hormone Therapy 282
Immunotherapy 285
Hematologic / Endocrine 289
Palliative Procedure 293
Other Therapy 294
Systemic/Surgery Sequence 299

CHAPTER 13: ABSTRACTING: OUTCOMES

Date of Last Contact 301
Vital Status 303
Autopsy 304
Cause/Underlying Cause of Death 305
Place of Death 306

CHAPTER 14: QUALITY CONTROL

Faciloty Activities 307
WVCR Activities 308

CHAPTER 15: NEW FOR CASES DIAGNOSED IN 2007

Changes 309

APPENDIX A

West Virginia Code and Rule 310

APPENDIX B

USDHHS and NAACCR HIPAA Materials 316

APPENDIX C

West Virginia Hospitals 323

APPENDIX D

USPS Abbreviations 328

APPENDIX E

USPS ZIP Codes 349

APPENDIX F

FIPS Codes for West Virginia 376

APPENDIX G

Race and Nationality Descriptions 378

APPENDIX H

SEER Geocodes 390

APPENDIX I

Customizing the Newest CS Manual 407

APPENDIX J

Head & Neck SSF 414
Colon, Rectosigmoid and Rectum SSF 420
Liver SSF 421
Pleura SSF 423
Melanoma SSF 424
Mycosis Fungoides SSF 427
Breast SSF 428
Ovary SSF 435
Placenta SSF 436
Prostate SSF 437
Testis SSF 450
Retinoblastoma SSF 455
Brain SSF 458
Thyroid SSF 459
Kaposi Sarcoma SSF 460
Lymphoma SSF 461

Chapter

1

The West Virginia Cancer Registry

Chapter 16-5A-2a of the West Virginia Code and Title 64, West Virginia Administrative Rules, Division of Health, Cancer Registry, Series 68, which provide the legal basis for WVCR, appear in Appendix A.

The West Virginia Cancer Registry (WVCR) was established by the West Virginia Department of Health and Human Resources in 1991 as a breast and cervical cancer registry. In 1993, WVCR became an all-site registry, collecting data on all cancers except basal and squamous cell carcinoma of the skin and in situ cervical cancer. In 2002, 2 years prior to the Federal mandate, WVCR began collecting data on non-malignant brain and other central nervous system tumors. WVCR is funded by both State and Federal funding, with the latter administered through a cooperative agreement with the Centers for Disease Control and Prevention's National Program of Cancer Registries.

Mission

The West Virginia Cancer Registry will collect and analyze cancer data to determine incidence rates by anatomical site, sex, race, geographic location, and other factors and monitor trends in cancer incidence and among West Virginia residents.

Geographic Coverage

The West Virginia Cancer Registry collects information on all cancers diagnosed and/or treated in the state of West Virginia and, through lawful reciprocal data sharing agreements, all cancers diagnosed and/or treated among West Virginia

residents by health care providers outside the state of West Virginia. A resident is a person reporting a West Virginia address at the time of diagnosis.

Temporal Coverage

The West Virginia Cancer Registry's reference date (the start date after which reportable cancer cases must be included in the registry) is January 1, 1993 for all cancer sites. The reference date for benign brain and CNS neoplasms is January 1, 2002.

Confidentiality

All West Virginia Cancer Registry employees sign a confidentiality pledge that meets the requirements of applicable state laws as well as the requirements of the Health Insurance Portability and Accountability Act (HIPAA). West Virginia code protects the confidentiality of both patient and health care provider. Legal analysis of the applicable state laws concerning the establishment and operation of the West Virginia Cancer Registry found that the West Virginia laws were, with one exception (specification of de-identification methodology), more stringent than HIPAA (http://www.wvdhhr.org/hipaa/documents/pre_matrix.pdf, pages 17 and 18 of the PDF).

Release of Identified Information

West Virginia code permits release of identified data only under two circumstances:

1. Data provided by a facility or reporter may be provided back to that facility or reporter as a failsafe in the event of catastrophic data loss. However, ONLY data provided by the facility or reporter may be provided. Additional information provided by other sources may NOT be disclosed.
2. When a lawful reciprocal data sharing agreement exists, WVCR may provide identified data about another state or territory's residents or tribal entity's members diagnosed and/or treated in West Virginia back to the state/territory/tribal entity, which, in turn, is to provide WVCR with identified data on West Virginia residents.

Funding

The West Virginia Cancer Registry is funded by appropriations made by the State of West Virginia and by the Centers for Disease Control and Prevention's National Program of Cancer Registries (NPCR). Additional information about the National Program of Cancer Registries is available from the CDC website at http://www.cdc.gov/cancer/npcr/about.htm.

Certification

The West Virginia Cancer Registry is subject to certification by the North American Association of Central Cancer Registries (NAACCR). Certification is based on timeliness, completeness and data quality. WVCR was certified at the "silver" level for diagnosis years 1997 and 1998 and at the "gold" (highest) level for diagnosis years 1999, 2000, 2001, 2002 and 2003 (the most recent year for which certification results were available at the time of this writing).

Use of West Virginia Cancer Registry Data

The West Virginia Cancer Registry is committed to the use of cancer incidence data as a critical component of cancer control and publishes an annual report on cancer incidence in West Virginia that is used by state, community-based, regional and national cancer control groups. WVCR also provides de-identified summary data (rates and distributions of stage at diagnosis) for use by the American Cancer Society and provides de-identified data to the Centers for Disease Control and Prevention for the publication United States Cancer Statistics (http://www.cdc.gov/cancer/npcr/uscs/) and to the North American Association of Central Cancer Registries for the publication Cancer in North America (http://www.naaccr.org/index.asp?Col_SectionKey=11&Col_ContentID=50). Researchers may obtain access to de-identified individual level data under strict controls including approval by the relevant institutional review board and the WVCR Advisory Committee.

Chapter

2

Health Insurance Portability and Accountability Act

Permissibility of Reporting

Relevant materials from the United States Department of Health and Human Services are provided in Appendix B.

The Health Insurance Portability and Accountability Act permits reporting to public health authorities (an agency or authority of the United States government, a State, a territory, a political subdivision of a State or territory, or Indian tribe that is responsible for public health matters as part of its official mandate, as well as a person or entity acting under a grant of authority from, or under a contract with, a public health agency). According to the United States Department of Health and Human Services (http://www.hhs.gov/ocr/hipaa/publichealth.pdf.pdf):

> *The Privacy Rule (i.e., HIPAA) permits covered entities to disclose protected health information, without authorization, to public health authorities who are legally authorized to receive such reports for the purpose of preventing or controlling disease, injury, or disability. This would include, for example, the reporting of a disease or injury; reporting vital events, such as births or deaths; and conducting public health surveillance, investigations, or interventions. See 45 CFR 164.512(b)(1)(i).*

West Virginia HIPAA Resources

The West Virginia Department of Health and Human Resources (WV DHHR) maintains a website that specifically addresses HIPAA (http://www.wvdhhr.org/hipaa/) with information on HIPAA-associated WV DHHR activities and findings.

Relevant materials from the North American Association of Central Cancer Registries are provided in Appendix B.

Other HIPAA Resources

The North American Association of Central Cancer Registries obtain legal opinions attesting to the permissibility of reporting to central cancer registries under HIPAA. These documents are available on the NAACCR website (http://www.naaccr.org/index.asp?Col_SectionKey=28&Col_ContentID=101).

Chapter

3

Reporting Requirements

Reportable Diseases

Rule 64CSR68, section 3.11. requires the reporting of "(a)ny case of cancer diagnosed after December 31, 1992, where the primary tumor is determined to be malignant or carcinoma in situ, with the exception of basal cell or squamous cell carcinomas of the skin and carcinoma in situ of the cervix," and West Virginia Code §16-5A-2a(b) mandates the inclusion of "nonmalignant intracranial and central nervous system tumors" as well. Please note that this includes not simply those cases diagnosed and/or treated on an inpatient basis at a facility but also cases:

1. Diagnosed and/or treated on an outpatient basis
2. Seen only in the emergency room
3. Presented only at a facility's tumor board or cancer conference
4. Dead on arrival at the reporting facility
5. Diagnosed at autopsy (also called "Class 5" cases)
6. Seen for consultation only
7. In which only specimens were reviewed at the reporting facility

Thus although the American College of Surgeons Commission on Cancer may not require that certain cases (i.e., so-called non-analytic cases) be included, West Virginia law DOES require those cases and they are to be reported to WVCR. Please also note that cases seen in diagnostic or treatment facilities that are free-standing but owned and/or operated by a particular facility or otherwise a part of that facility are to be reported by that facility.

The WVCR will register all primary tumors diagnosed from 1993 through 2000 with a morphology behavior code of 2 (carcinoma in situ) or 3 (malignant) listed in the *International Classification of Diseases for Oncology, Second Edition*, and all primary tumors diagnosed from January 1, 2001 forward with a behavior code of 2 or 3 listed in the *International Classification of Diseases for Oncology, Third Edition*. These are

usually described by the terms cancer, carcinoma, leukemia, lymphoma, malignant, sarcoma, or melanoma.

Non-malignant intracranial and central nervous system tumors diagnosed on or after January 1, 2002 are also reportable to the WVCR. Primary tumors occurring in the following sites are reportable regardless of histologic type or behavior:

CODE	DESCRIPTION
C70.0	Cerebral meninges
C70.1	Spinal meninges
C70.9	Meminges, NOS
C71.0	Cerebrum
C71.1	Frontal lobe
C71.2	Temporal lobe
C71.3	Parietal lobe
C71.4	Occipital lobe
C71.5	Ventricle, NOS
C71.6	Cerebellum, NOS
C71.7	Brain stem
C71.8	Overlapping lesion of the brain
C71.9	Brain, NOS
C72.0	Spinal cord
C72.1	Cauda equine
C72.2	Olfactory nerve
C72.3	Optic nerve
C72.4	Acoustic nerve
C72.5	Cranial nerve, NOS
C72.8	Overlapping lesion of the brain and central nervous system
C72.9	Nervous system, NOS
C75.1	Pituitary gland
C75.2	Craniopharyngeal duct
C75.3	Pineal gland
C75.9	Endocrine gland, NOS

Reportable tumors diagnosed, treated, or otherwise identified in the institution's inpatient or outpatient department or ambulatory care center (if the medical record is the property of the reporting institution) *must* be reported.

The following are exclusions:

8000-8004	Neoplasms, malignant, NOS of the skin (C44.0-C44.9)
8010-8045	Epithelial carcinomas of the skin (C44.0-C44.9)
8050-8082	Papillary and squamous cell carcinoma of the skin (C44.0-C44.9)
8090-8110	Basal cell carcinoma of the skin (C44.0-C44.9)
	Carcinoma in situ and CIN III (any behavior code 2) of the cervix (C53.0-C53.9)

Please note the following:

1. The above lesions *are* reportable for patients diagnosed with basal and squamous cell cancers originating in mucoepidermoid sites; **lip (C00.0-C00.9); anus (C21.0); vulva (C51.0-C51.9); vagina (C52.9); penis (C60.0-C60.9); scrotum (C63.2)**.

2. Hospital registries which report basal or squamous cell skin cancers should not sequence them with other malignancies and should *not* report them to the Central Registry.

3. The American College of Surgeons Commission on Cancer required certain skin cancers (histology codes 8000 to 8110 diagnosed at stage II, III or IV) under ROADS, but no longer requires those cases under FORDS for cases diagnosed on or after 1/1/2003. Previously accessioned cases should remain in the registry and continue to be followed.

4. Cancer cases diagnosed **before** January 1, 1993, which is the reference date of the WVCR, are *not* reportable to the Central Registry.

5. Primary tumors with a behavior code of "0" (benign) and "1" (borderline *uncertain* whether malignant) are *not* reportable to the Central Registry, *except* non-malignant (benign) primary brain tumor at any of the following sites (*International Classification of Diseases for Oncology (ICDO)* codes in parentheses): brain (C71.0-C71.9); meninges (C70.0-C70.9); spinal cord, cranial nerves, and other parts of the central nervous system (C72.0-C72.9); and pituitary and pineal glands (C75.1-C75.3). Include all tumor morphologies located within these sites. Changes are effective with cases diagnosed January 1, 2002.

Computerized Edits

All cancer registry software offers the possibility of running computerized edits. WVCR urges, in the strongest possible terms, that all registrars run edits on their cases before submitting them to WVCR. This will greatly improve the quality of data in hospital registries and the quality of data provided to WVCR.

Timeliness

West Virginia Legislative Rule, Cancer Registry, 64CSR68, section 4.3. ***requires that cases be reported to WVCR within six (6) months of diagnosis.*** Failure to report in compliance with 64CSR68 subjects persons to "criminal penalties prescribed in West Virginia Code 16-1-18," including fines. WVCR will provide regular feedback to reporters regarding the timeliness of their reports. When reporters fall behind, WVCR will attempt to make reasonable accommodation, but it is the responsibility of reporters to make WVCR aware of special circumstances warranting reasonable accommodation.

Data Format

Reporting is to be done in compliance with the standards of the National Program of Cancer Registries, which funds WVCR. These standards require electronic reporting and state that the following data layouts are to be used:

1. For abstract reports: The NAACCR record layout version specified *in* ***year-appropriate*** *Standards for Cancer Registries Volume II: Data Standards and Data Dictionary.*

2. For pathology reports: *NAACCR Standards for Cancer Registries Volume V: Pathology Laboratory Electronic Reporting.*

Method of Reporting

In accordance with NPCR requirements, WVCR requires electronic reporting via a secure Internet-based, FTP, (being developed at the time of this writing) or encrypted email. If, under special circumstances reporters must mail data, the data must be encrypted and the mailing method should allow for tracking.

Chapter

4

Required Data Elements

Determination

Because many organizations have a stake in cancer registration, there are many versions of what data elements are required and in some cases, data required by one group are not required by another. The West Virginia Cancer Registry bases decisions about required data elements on what is required by West Virginia code (see Appendix A) and what is required by the National Program of Cancer Registries and the North American Association of Central Cancer Registries. WVCR recognizes that requirements change over time, and thus has provided the following table, which lists the required data elements, and the source of the standards for the data elements. The key for the "status" column is as follows:

R	Required
RS	Required, site-specific
R^	Text requirement
R*	Required when available
R**	Required only of facilities that use TNM staging
R$	Requirements differ by diagnosis year
RH	Required historically
D	Derived by computer algorithm
A	Assigned by WVCR

Summary of Required Data Items

#	Item	Status	Standard
10	Record Type	R	NAACCR
40	Registry ID	R	NAACCR
50	NAACCR Record Version	R	NAACCR
60	Tumor Record Number	R	NAACCR
70	Addr at DX--City	R	COC
80	Addr at DX--State	R	COC
90	County at DX	R	FIPS/SEER
100	Addr at DX--Postal Code	R	COC
110	Census Tract 1970/80/90	A	SEER
120	Census Cod Sys 1970/80/90	A	SEER
130	Census Tract 2000	A	NAACCR
160	Race 1	R	SEER/COC
161	Race 2	R	SEER/COC
162	Race 3	R	SEER/COC
163	Race 4	R	SEER/COC
164	Race 5	R	SEER/COC
190	Spanish/Hispanic Origin	R	SEER/COC
192	IHS Link	A	NPCR
200	Computed Ethnicity	R	SEER
210	Computed Ethnicity Source	R	SEER
220	Sex	R	SEER/COC
230	Age at Diagnosis	R	SEER/COC
240	Birth Date	R	SEER/COC
250	Birthplace	R*	SEER/COC

#	ITEM	STATUS	STANDARD
270	Occupation Code--Census	R*	Census/NPCR
280	Industry Code--Census	R*	Census/NPCR
290	Occupation Source	R*	NPCR
300	Industry Source	R*	NPCR
310	Text--Usual Occupation	R*	NPCR
320	Text--Usual Industry	R*	NPCR
330	Occup/Ind Coding System	R*	NPCR
340	Tobacco History	R	Varies
350	Alcohol History	R	Varies
360	Family History of Cancer	R	Varies
364	Census Tr Cert 1970/80/90	A	SEER
365	Census Tr Certainty 2000	A	NAACCR
366	GIS Coordinate Quality	A	NAACCR
390	Date of Diagnosis	R	SEER/COC
400	Primary Site	R	SEER/COC
410	Laterality	R	SEER/COC
420	Histology (92-00) ICD-O-2	RH	SEER/COC
430	Behavior (92-00) ICD-O-2	RH	SEER/COC
440	Grade	R	SEER/COC
450	Site Coding Sys--Current	R	NAACCR
470	Morph Coding Sys--Current	R	NAACCR
490	Diagnostic Confirmation	R	SEER/COC
500	Type of Reporting Source	R	SEER
522	Histologic Type ICD-O-3	R	SEER/COC
523	Behavior Code ICD-O-3	R	SEER/COC
540	Reporting Facility	R	COC
550	Accession Number--Hosp	R	COC
560	Sequence Number--Hospital	R	COC

#	ITEM	STATUS	STANDARD
570	Abstracted By	R	COC
580	Date of 1st Contact	R	COC
610	Class of Case	R	COC
630	Primary Payer at DX	R	COC
759	SEER Summary Stage 2000	RH	SEER
760	SEER Summary Stage 1977	RH	SEER
780	EOD--Tumor Size	R	SEER/COC
820	Regional Nodes Positive	R	SEER/COC
830	Regional Nodes Examined	R	SEER/COC
880	TNM Path T	R**	AJCC
890	TNM Path N	R**	AJCC
900	TNM Path M	R**	AJCC
910	TNM Path Stage Group	R**	AJCC
920	TNM Path Descriptor	R**	COC
930	TNM Path Staged By	R**	COC
940	TNM Clin T	R**	AJCC
950	TNM Clin N	R**	AJCC
960	TNM Clin M	R**	AJCC
970	TNM Clin Stage Group	R**	AJCC
980	TNM Clin Descriptor	R**	COC
990	TNM Clin Staged By	R**	COC
1060	TNM Edition Number	R**	COC
1120	Pediatric Stage	R**	COC
1130	Pediatric Staging System	R**	COC
1140	Pediatric Staged By	R**	COC
1150	Tumor Marker 1	RH	SEER
1160	Tumor Marker 2	RH	SEER
1170	Tumor Marker 3	RH	SEER

#	ITEM	STATUS	STANDARD
1260	Date of Therapy Initiated	R	SEER
1290	RX Summ--Surg Prim Site	R	SEER/COC
1292	RX Summ--Scope Reg LN Sur	R	SEER/COC
1294	RX Summ--Surg Oth Reg/Dis	R	SEER/COC
1296	RX Summ--Reg LN Examined	R	SEER/COC
1320	RX Summ--Surgical Margins	R	COC
1340	Reason for No Surgery	R	SEER/COC
1360	RX Summ--Radiation	R	SEER
1380	RX Summ--Surg/Rad Seq	R	SEER/COC
1390	RX Summ--Chemo	R	SEER/COC
1400	RX Summ--Hormone	R	SEER/COC
1410	RX Summ--BRM	R	SEER/COC
1420	RX Summ--Other	R	SEER/COC
1430	Reason for No Radiation	R	COC
1460	RX Coding System--Current	R	NAACCR
1570	Rad--Regional RX Modality	R	COC
1639	RX Summ--Systemic/Sur Seq	R	COC
1750	Date of Last Contact	R	SEER/COC
1760	Vital Status	R	SEER/COC
1770	Cancer Status	R	COC
1791	Follow-up Source Central	R	NAACCR
1910	Cause of Death	R	SEER
1920	ICD Revision Number	R	SEER
1930	Autopsy	R	NAACCR
1940	Place of Death	R	NPCR
1980	ICD-O-2 Conversion Flag	R	SEER

#	ITEM	STATUS	STANDARD
1981	Over-ride SS/NodesPos	R	NAACCR
1982	Over-ride SS/TNM-N	R	NAACCR
1983	Over-ride SS/TNM-M	R	NAACCR
1984	Over-ride SS/DisMet1	R	NAACCR
1985	Over-ride Acsn/Class/Seq	R	COC
1986	Over-ride HospSeq/DxConf	R	COC
1987	Over-ride COC-Site/Type	R	COC
1988	Over-ride HospSeq/Site	R	COC
1989	Over-ride Site/TNM-StgGrp	R	COC
1990	Over-ride Age/Site/Morph	R	SEER
2000	Over-ride SeqNo/DxConf	R	SEER
2010	Over-ride Site/Lat/SeqNo	R	SEER
2020	Over-ride Surg/DxConf	R	SEER
2030	Over-ride Site/Type	R	SEER
2040	Over-ride Histology	R	SEER
2050	Over-ride Report Source	R	SEER
2060	Over-ride Ill-define Site	R	SEER
2070	Over-ride Leuk, Lymphoma	R	SEER
2071	Over-ride Site/Behavior	R	SEER
2072	Over-ride Site/EOD/DX Dt	R	SEER
2073	Over-ride Site/Lat/EOD	R	SEER
2074	Over-ride Site/Lat/Morph	R	SEER
2110	Date Case Report Exported	R	NPCR
2111	Date Case Report Received	R	NPCR
2112	Date Case Report Loaded	R	NPCR
2113	Date Tumor Record Availbl	R	NPCR
2116	ICD-O-3 Conversion Flag	R	SEER/COC

#	ITEM	STATUS	STANDARD
2230	Name--Last	R	NAACCR
2240	Name--First	R	NAACCR
2250	Name--Middle	R	COC
2280	Name--Alias	R	SEER
2300	Medical Record Number	R	COC
2320	Social Security Number	R	COC
2330	Addr at DX--No & Street	R	COC
2335	Addr at DX--Supplementl	R	COC
2350	Addr Current--No & Street	R	COC
2380	DC State File Number	R	State
2390	Name--Maiden	R	SEER
2460	Physician--Managing	R	NAACCR
2470	Physician--Follow-Up	R	COC
2480	Physician--Primary Surg	R	COC
2490	Physician 3	R	COC
2500	Physician 4	R	COC
2520	Text--DX Proc--PE	R^	NPCR
2530	Text--DX Proc--X-ray/Scan	R^	NPCR
2540	Text--DX Proc--Scopes	R^	NPCR
2550	Text--DX Proc--Lab Tests	R^	NPCR
2560	Text--DX Proc--Op	R^	NPCR
2570	Text--DX Proc--Path	R^	NPCR
2580	Text--Primary Site Title	R^	NPCR
2590	Text--Histology Title	R^	NPCR
2600	Text--Staging	R^	NPCR
2610	RX Text--Surgery	R^	NPCR
2620	RX Text--Radiation (Beam)	R^	NPCR

#	ITEM	STATUS	STANDARD
2630	RX Text--Radiation Other	R^	NPCR
2640	RX Text--Chemo	R^	NPCR
2650	RX Text--Hormone	R^	NPCR
2660	RX Text--BRM	R^	NPCR
2670	RX Text--Other	R^	NPCR
2680	Text--Remarks	R^	NPCR
2800	CS Tumor Size	R	AJCC
2810	CS Extension	R	AJCC
2820	CS Tumor Size/Ext Eval	R	AJCC
2830	CS Lymph Nodes	R	AJCC
2840	CS Reg Node Eval	R	AJCC
2850	CS Mets at DX	R	AJCC
2860	CS Mets Eval	R	AJCC
2880	CS Site-Specific Factor 1	RS	AJCC
2900	CS Site-Specific Factor 3	RS	AJCC
2935	CS Version 1st	R	AJCC
2936	CS Version Latest	R	AJCC
2940	Derived AJCC T	R**	AJCC
2950	Derived AJCC T Descriptor	R**	AJCC
2960	Derived AJCC N	R**	AJCC
2970	Derived AJCC N Descriptor	R**	AJCC
2980	Derived AJCC M	R**	AJCC
2990	Derived AJCC M Descriptor	R**	AJCC
3000	Derived AJCC Stage Group	R**	AJCC
3020	Derived SS2000	D	AJCC
3050	Derived SS2000--Flag	D	AJCC

#	ITEM	STATUS	STANDARD
3250	RX Summ--Transplnt/Endocr	R	COC
3270	RX Summ--Palliative Proc	R	COC
3300	RuralUrban Continuum 1993	D	NAACCR
3310	RuralUrban Continuum 2003	D	NAACCR

Chapter

5

Case Ascertainment

Resources

It is not the intent of WVCR that this manual substitute for thorough and ongoing training. Users needing additional information on case ascertainment are referred to the following sources:

1. The National Cancer Institute's Surveillance, Epidemiology and End Results Program's online training on case finding (http://training.seer.cancer.gov/module_casefinding/casefinding_home.html)

2. The National Program of Cancer Registry's Fundamentals of Registry Operations, Case Finding module, developed in conjunction with the North American Association of Central Cancer Registries (http://www.naaccr.org/index.asp?Col_SectionKey=10&Col_ContentID=82)

General Guidelines

Reportable cases are to be reported to the WVCR regardless of the type of admission; i.e., all cases in the following situations are to be reported, when they meet the reportable disease list criteria:

1. Diagnosed and/or treated on an outpatient basis
2. Seen only in the emergency room
3. Presented only at a facility's tumor board or cancer conference
4. Dead on arrival at the reporting facility
5. Diagnosed at autopsy (also called "Class 5" cases)
6. Seen for consultation only

7. In which only specimens were reviewed at the reporting facility

Thus although the American College of Surgeons Commission on Cancer may not require that certain cases (i.e., so-called non-analytic cases) be included, ***West Virginia law DOES require those cases and they are to be reported to WVCR***. Please also note that cases seen in diagnostic or treatment facilities that are free-standing but owned and/or operated by a particular facility or otherwise a part of that facility are to be reported by that facility. Case ascertainment procedures should take these requirements into account and the relevant sources should be reviewed.

Screening Lists of ICD-9 Codes

Morphology Codes

The reportable Neoplasm List must include all malignancies with an ICD-0-3 (*International Classification of Diseases for Oncology, Third Edition*, World Health Organization) morphology behavior code (fifth digit) of "2" or higher, including carcinomas, sarcomas, melanomas, leukemias, and lymphomas. However, many malignant diagnoses do not contain any of these terms. Therefore, it is useful to include a list of diagnoses to watch for while casefinding.

Medical Records Diagnosis Index Codes

Medical records departments in U.S. hospitals use ICD-9-CM (*International Classification of Diseases, Ninth Edition*, Clinical Modification) to maintain diagnosis indexes. Registrars using these indexes for casefinding should review all cases with any of the following codes as primary or secondary diagnosis:

CODE	DIAGNOSIS
042	AIDS (review cases for AIDS-related malignancies)
140.0-208.9	Malignant neoplasms
203.1	Plasma cell leukemia (9733/3)
205.1	Chronic neutrophilic leukemia (9963/3)
230-234.9	Carcinoma is situ

CODE	DIAGNOSIS
237.4	Other and unspecified endocrine gland, neoplasm of uncertain behavior
237.5	Brain and spinal cord, neoplasm of uncertain behavior
237.6	Meninges, neoplasm of uncertain behavior
237.7	Neurofibromatosis, neoplasm of uncertain behavior
237.9	Other and unspecified nervous system, neoplasm of uncertain behavior
238.4	Polycythemia vera (9950/3)
238.6	Solitary plasmacytoma (9731/3) Extramedullary plasmacytoma (9734/3)
238.7	Chronic myeloproliferative disease (9960/3) Myelosclerosis with myeloid metaplasia (9961/3) Essential thrombocythemia (9962/3) Refractory cytopenia with multilineage dysplasia (9985/3) Myelodysplastic syndrome with 5q- syndrome (9986/3) Therapy-related myelodysplastic syndrome (9987/3)
273.2	Gamma heavy chain disease; Franklin's disease
273.3	Waldenstrom's macroglobulinemia
284.9	Refractory anemia (9980/3)
285.0	Refractory anemia with ringed sideroblasts (9982/3) Refractory anemia with excess blasts (9983/3) Refractory anemia with excess blasts in transformation (9984/3)
288.3	Hypereosinophilic syndrome (9964/3)
289.8	Acute myelofibrosis (9932/3)
V07.3	Other prophylactic chemotherapy (screen carefully for miscoded malignancies)
V10.0-V10.9	Personal history of malignancy (review these for recurrences, subsequent primaries, and/or subsequent treatment)
V58.0	Admission for radiotherapy
V58.1	Admission for chemotherapy

CODE	DIAGNOSIS
V66.1	Convalescence following radiotherapy
V66.2	Convalescence following chemotherapy
V67.1	Radiation therapy follow-up
V67.2	Chemotherapy follow-up
V71.1	Observation for suspected malignant neoplasm
V76.0-V76.9	Special screening for malignant neoplasm

Please note:

1. In situ and invasive cancers (behavior codes 2 or 3 in ICD-O-3) includes VIN III, VAIN III, and AIN III.

2. Prostatic Intraepithelial Neoplasia (PIN III) M-8148/2 is NOT

3. Pilocytic/juvenile astrocytoma M-9421 which moved from /3 to /1 with ICD-O-3 is collected as a /3.

4. Borderline cystadenomas M-8442, 8451, 8462, 8472, 8473, of the ovaries which moved from /3 to /1 with ICD-O-3 is NOT be collected as of 1/1/2001 but previous cases will continue to have to be submitted.

5. The World Health Organization (WHO) diagnosis "B-cell chronic lymphocytic leukemia/small lymphocytic lymphoma" is coded as 9823/3, and cross-referenced to 9670/3, malignant lymphoma, small B lymphocytic. If this WHO term is diagnosed in blood or bone marrow, code 9823/3; if diagnosed in tissue, lymph nodes or any organ in combination with blood or bone marrow, code 9670/3.

Other Sources to Review

Depending on the services offered at a given facility, the following sources should also be reviewed:

1. Pathology and cytology laboratory

2. Autopsy services

3. Radiation, chemotherapy and nuclear medicine units

4. Medical oncology units
5. Outpatient services
6. Day surgery services
7. Facility-associated free-standing diagnostic, surgery and other treatment centers
8. Billing

Chapter

6

Abstracting: Overview

Resources

Given the frequency with which cancer registration rules change and the likelihood that rules and manuals, once issued, will become the subject of errata, clarifications, corrections, modifications and outright changes, this manual does not provide detailed information on abstracting or coding. Rather, it provides registrars with links to the resources needed to correctly abstract and code cancer cases. Registrars needing training in abstracting are referred to the following electronic resources:

1. The National Cancer Institute's Surveillance, Epidemiology and End Results Program's online training on abstracting, site-specific modules and other training modules (http://www.training.seer.cancer.gov/)

2. The National Cancer Institute's Surveillance, Epidemiology and End Results Program's Self-Instructional Manuals for Tumor Registrars (http://seer.cancer.gov/training/manuals/)

3. Online training on the new (for 2007) multiple primary and histology rules (http://seer.cancer.gov/tools/mphrules/training.html)

4. Online Collaborative Staging exercises (http://www.cancerstaging.org/cstage/othersources.html)

Introduction to Abstracting

Note: The materials in this section were taken from the National Cancer Institute's training materials for cancer registrars. This provides a general commentary only. For specific instructions on how to code items, please see the coding sections of this manual.

Composition of Medical records

A medical record may be quite simple, containing only a few pages; or it may be extremely complex containing a variety of reports, some of which may be handwritten. It is imperative that you master medical terminology to the best of your ability not only because of the unfamiliar terms you will encounter, but because of the difficulty in deciphering physician's handwriting. If you know your root words and how to use your medical dictionary, you can generally decipher most medical terms.

Other portions of the medical record may be referred to for clues as to what the incomprehensible term might be. Request assistance from your medical consultant when necessary. In any case, familiarize yourself with the diagnostic procedures used in your hospital so that you are aware of missing or incomplete information. Medical records have certain characteristics in common. It is these fundamental characteristics which you will study in this block of instruction.

The following is a list of specific types of information contained in most medical records. The information will not necessarily appear in this order.

Patient Identification

Referral Information

Biographical Information

Medical History

- Chief complaint (CC) (date of onset and description of symptoms)
- Review of Systems (R.O.S)
- Pregnancy history
- Personal medical History (to include medically-related social history, for example, drinking, drug habits, smoking and exposure to other carcinogens)

Physical Examination

- General (general patient description by MD)
- Head
- Eyes
- Ears

Nose and Sinus
Mouth
Throat
Neck
Thorax
Lymph nodes
Cardiovascular System
Lungs Breasts
Abdomen
Genitourinary System
Rectum
Bones, Joints, and Muscles
Nervous and Mental State (neurological condition)
Extremities

Provisional Diagnosis (admitting diagnosis, first impression)

Special Examinations

Radiologic Examinations (diagnostic x-rays)
EKG (electrocardiogram)
Diagnostic Imaging Nuclear Examinations (scans)
Laboratory Reports: Urinalysis, hematologic analysis (blood chemistries), other chemistries, serology and cultures
Consultation Reports
Endoscopic Examinations

Exploratory Surgery

Pathologist Reports

Exfoliative Cytological Examinations

Tissue Examinations

Gross (description based on visual examination)
Microscopic (description based on histologic examination)
Pathologic Diagnosis (determining the disease)

Final Diagnosis (made after all routine and special studies have been completed)

Treatment (therapy) Reports

Medication record (drugs or other medications)
Surgery (report of surgery, operative report)
Radiation therapy
Chemotherapy
Immunotherapy
Hormonal therapy
Physical therapy

Progress Notes

Doctor's orders
Nurse's notes
Social worker's notes
Occupational therapy
Physical therapy
Hospice notes

Discharge (Narrative) Summary

Follow-up Reports

Progress notes added after the patient has been discharged from the hospital:

(1) Based on patients return visits to outpatient departments
(2) Based on replies to correspondence with patient's physician, other tumor registrars, other medical facilities, with the patient or with the patients family

Autopsy Report (gross and microscopic)

All of the major organs and systems are examined unless the autopsy is restricted to certain organs. Any pertinent findings should be recorded on the tumor registry abstract. The information can be of particular value in indicating the primary site of the tumor, which may have been incorrectly diagnosed or unknown prior to autopsy.

Death certificate (when the patient dies in the hospital or when the death certificate is obtained through follow-up activities)

Forms used to record information in a medical record

Following is a list of most forms, records notes, and summary sheets which may be found in your hospital's medical record. The names are self explanatory. Some contain little or no information of interest to a tumor registrar. Starred" (*) items are most likely to contain relevant information for filling out a cancer registry abstract.

*Admission Sheet
Anesthesia Record
*Autopsy (Necropsy; post Mortem) Report
*Chemotherapy Report
*Consultation Report (Request for opinions or aid from other physicians or departments)
*Cytology (Cytopathology) Report
*Death Certificate
*Diagnostic Radiology (X-ray) Report
*Discharge (Narrative) Summary

*Doctor's Order Sheets
Doctor's Progress Notes
Electrocardiogram (EKG) Report
*Electroencephalogram (EEG) Report
Emergency (Accident) Report
*Endoscopy Report
Graphic Reports (Temperature, Pulse, Respiration, Blood Pressure)
Recovery (Post-Anesthesia) Room Report
Request to Blood Bank Report
*Hematology Report
*History and Physical Examination
*Immunotherapy Report
Informed Consent to Treatment
Intake-Output Chart (measured liquids)
*Laboratory Reports
*Medical Record Data Sheet (Face or Cover Sheet)
*Medication Record
*Nuclear Medicine Report (Diagnostic Imaging / Scans)
*Nuclear medicine Report (Radio-Isotope Exposure Record)
*Nurse's Notes
Occupational Therapy
*Operation (Surgery) Report
*Outpatient Clinic Record
*Pathology (Histology) Report
Physical Therapy Report
*Protocol Study Report
*Radiation Therapy Summary
*Referral Letters (From local medical doctor's or other institutions)
*Serology Report
*Tumor Board Summary Serology Report

Each hospital has its own procedures for organizing a medical record. Most of the time this will be done by the medical records department, also known as the Health Information Department. Usually, the record will be organized in terms of the temporal sequence of events with the latest admission located at the front of the medical record. After the patient is discharged from the hospital, a summary of the patient's diagnoses and treatments may be prepared by the attending physician and inserted at the front of the medical record. This summary can be used as a guide to ensure that reports are not overlooked. Abstracting should, however, directly be done from the actual reports in the record and not from the point of view of the attending physician. Usually, dictation occurs after the patient is discharged from the hospital, possibly from inadequate notes or an incomplete medical record.

In some facilities, a copy of the tumor registry abstract is kept in the patient's medical record. It acts as a handy summary of the history, diagnoses, and

treatment. Not only is the abstract a useful service to physicians, but it makes them aware of the Registry as a source of cancer data available in their own hospital.

What

A separate abstract is generally prepared for each independent cancer. Specific rules may modify that general rule for selected sites. For example, in the SEER Program multiple neoplasms of the urinary bladder are represented by a single summary abstract since multiple tumors frequently occur in this site. Skin cancers are also handled in this manner. However, for most multiple primary tumors, each unrelated malignancy is abstracted on a separate form.

The registry number for patients with multiple primary tumors usually remains the same; a higher sequence number is assigned for each new primary cancer. Sequence number indicates the order in which a primary tumor is discovered in relation to the total number of primaries for a given patient. For example, the sequence number for the first of two primaries is 1; the sequence number for the second of two primaries is 2. Each primary is recorded on a separate abstract.

Hospitals with cancer programs approved by the Commission on Cancer of the American College of Surgeons are required to register all carcinomas, sarcomas, melanomas, leukemias, and lymphomas, i.e. all malignancies with a behavior code of 2 or higher in the International Classification of Diseases for Oncology, Third Edition, (ICD-O-3). In situ cancers of the cervix are not reportable. Basal and squamous cell cancers of the skin are also not reportable, unless they are beyond localized at the time of diagnosis.

Benign tumors and borderline malignancies (behavior codes 0 and 1) also may be included in the registry. These diagnosis are referred to as "reportable-by-agreement" cases.

INCONCLUSIVE DIAGNOSIS

To assist with vague or inconclusive diagnostic terms the following terms indicate involvement. For example a probable carcinoma of the lung.

Apparent(ly)	Favors	Probable
Appears to	Malignant appearing	Suspect
Comparable with	Most likely	Suspicious
Compatible with	Presumed	Typical of
Consistent with		

The following terms are **not** to be interpreted as involvement:

Cannot be ruled out	Potentially malignant	Suggests
Equivocal	Questionable	Worrisome
Possible	Rule out	

For example, a diagnosis of probable carcinoma of the left lung would be abstracted as a lung primary. A diagnosis of questionable carcinoma of the left lung with brain metastasis would be abstracted, and the primary site would be coded to an unknown primary. A possible carcinoma is not reportable.

CHANGING THE DIAGNOSIS

Over time, information may be added to the patient's medical chart that was missing in the original record. Therefore, it is the practice to accept the thinking and information about the case based on the latest or most complete information. Thus, it is acceptable to change the primary site, and histology, as information becomes more complete, as long as the info is supplementing the original diagnosis ie: site, histology and stage is not changed as the tumor progresses.

When

While it may seem highly desirable to abstract the patient's medical record immediately upon discharge from the hospital, this is usually impractical. There is always the inevitable delay in incorporating into the medical record the various diagnostic and treatment reports which are needed for abstracting. Treatment may be continued over a period of weeks or months; and it may well cover more than one admission to your hospital or more than one visit to the out-patient department. Therapy which should be incorporated into the registry record may even be administered at another institution, on an out-patient basis, or in the

physician's office. The abstract cannot be completed until the first course of therapy has been given and all the pertinent reports are filed in the medical record.

Some cancer registries may elect to initiate the abstracting process before the completion of the first course of therapy. If this is done, it then becomes necessary to review the patient's medical record again at a later date in order to complete the abstract.

For certain diagnoses further treatment may not be anticipated, therefore the case maybe abstracted as soon as the medical record is complete. Patients who expire right away will, of course, fall into this category. You may find it necessary, however, to wait for the autopsy report to verify the diagnosis or to determine the stage of disease.

How

Certain information is basic to any abstract, such as the medical record number, diagnosis, date of diagnosis, age, sex, race, treatment, date of last follow-up, and status of the patient at last follow-up. For a detailed list of information requirements for a cancer registry see the Registry Operations and Data Standards Manual (ROADS, soon to become the "Facility Oncology Registry Data Standards" (FORDS), effective with 2003 cancer diagnoses) of the Commission on Cancer, American College of Surgeons. Other information is optional depending upon the scope of your registry. The detailed description that follows is designed to fit the needs of all users-hospitals, clinics, and central registry systems.

Name

The use of the patients full name is recommended whenever possible. If the middle and maiden names are given, record both. Very often the middle (or maiden) name will be given only as an initial and should be so recorded. However, every effort should be made to avoid the use of initials for first names.

For married women, the first name of the husband should not be used; record the name of married female patients, for example, as Jones, Paula Ann, not Jones, Mrs. John T. The husband's name will be recorded under the heading spouse.

For children, the name(s) of the parent(s) should be recorded.

In recording the name of Catholic clergy, it is preferable to use family names, if known. Use the title (Sister, Brother, Father, Mother) as a family name only until the true name is known. A cross reference will probably be necessary to facilitate this matching of names and avoid duplication.

For male patients who are Sr., Jr., III so indicate following the last name. Also, if it is known that the patient has a graduate professional degree (M.D., D.D.S., D.D.), indicate -- for example, Smith, III MD, Robert Quintin.

Hospital Medical Record Number

Record the number assigned to the patient by the hospital admitting office. If the hospital has a unit numbering system, all patient records will carry this identifying number. If the hospital has a serial numbering system, a new number is assigned on each admission to the hospital. In this case each registry must work out a system which will best serve as a cross reference to the hospital medical record, for example, an alphabetic card index file. This file can then be checked against the medical record department's alphabetic file to determine the patient's latest admission. You may decide to retain as your registry number; the number assigned to the patient by the hospital at the time the neoplasm was first diagnosed. If the hospital has a serial unit system, each admission is given a unique number, such as an accounting number, but the patient's record is filed under a unit number in medical records.

Local Registry (Accession) Number

A patient's registry number should remain the same regardless of the number of admissions or primary sites. This method is recommended by the American College of Surgeons.

Address and Phone Number

Record the number, street, city, state, and zip code of patient's usual residence. Record the phone number, including area code, if it is known.

Social Security Number

Record the patient's social security number. In Veterans Administration hospitals and military hospitals, the Social Security number of the sponsor, or a portion of it (last 4 or 6 digits, or first 4 or 6 digits), is the hospital medical record number. For Medicare patients, the number of the husband, not that of the patient may be that of the primary beneficiary, for example, the number of the husband, not that of the patient.

Spouse

Record the complete name of the husband or wife. For single adults and children, record as "not applicable" (N/A)

Physicians

1. Family: Name, address, and telephone number of any family physician.
2. Attending: Name, address, and telephone number of any attending physician.
3. Admitting: Name, address, and telephone number of any admitting physician.
4. Referral: Name, address, and telephone number of any referring physician

5. Hospital Staff: Name, department, and the telephone number of the physician who attended the patient. In hospitals where patients are not under the care of a particular physician, record the name of the physician in charge of the department.

Employer

Record name, address, department, and telephone number. Other applicable entries are: self employed, not employed, unknown.

Sex

Record male, female, hermaphrodite, transsexual, or unknown. In very rare instances, the sex cannot be determined. This information should be recorded.

Age at Diagnosis

This refers to years of age at time of initial diagnosis for the reported cancer. Record age at last birthday; do not round to the next birthday. The age of children less than 1 year old should be recorded as 000.

Birthdate

Record month, day, and year (including century) of patient's birth. If any of this information is unknown, record as NK (Not Known) or XX -- for instance, June, NK (or XX), 1925.

Place of Birth

Record state for patients born in the U.S. For foreign born, record country. Some registries and registry systems have developed a code to record city, state, and country. If your registry utilizes such a code system, record the code as determined from your geographic location code. The SEER Program uses GSA (Government Services Administration) codes for birthplace.

Race / Ethnic Group

There may be some problems in classifying individuals of mixed (multi-cultural) heritage--for instance, a person with a Japanese mother and an African American father. Record all the details. Abbreviations on medical records can be misleading. Black may be specified as "NW"-- non-white. However, Japanese patients may also be classified as "NW." Hence, when abstracting hospital records which utilize abbreviations, be sure you know exactly what the abbreviations mean. It will be of use to note a general rule in trying to distinguish between Chinese and Japanese names: usually, Chinese names have only one syllable and Japanese names have two or more syllables. Chinese names end in consonants; Japanese in vowels. Latin American and Puerto Rican are designations for ethnic groups, not races. In many sections of the country, ethnic groups are of particular interest, and you will need to identify them -- for example, Spanish surname or origin, such as Mexican, Puerto Rican, or Cuban.

Marital Status

Select the appropriate alternative: single, married, divorced, separated, widowed. Do not assume that a person specified as Miss should be classified as single. Often women who have been separated or divorced use their maiden names. A patient whose only marriage has been annulled should be classified as single. Patients having "common law" marriages should be classified as married. There may be some instances in which this information is unknown, particularly with the more frequent use of "Ms."

Occupation

Record the patient's usual or primary occupation and the industry in which the patient is currently or was previously employed. Also, note a secondary occupation if one is listed in the medical record. This is particularly important for determining possible carcinogenic exposure, for example, people working with asbestos or in the manufacture of polyvinyl chloride.

Social History

Record information on use of, or contact with, carcinogenic agents, such as history of smoking, drug usage, and drinking. Many also record the use of birth control pills, or any other information which your Committee on Cancer requests.

Medical History

A. PREVIOUS DIAGNOSIS OF THIS NEOPLASM

If the reported neoplasm was first diagnosed (whether clinically or histologically) in a physician's office or at another institution, record the name of the referring physician, the name of the facility where the diagnosis was made, the date of diagnosis, and the diagnosis (site and morphology).

B. PREVIOUS TREATMENT FOR THIS NEOPLASM

Indicate whether or not treatment was given for this neoplasm before entry to your institution.

Record the date and describe the nature of the treatment. This information may be contained in the referral letter or in the history section of the medical record. Copies of the diagnosis and treatment reports from the other institutions will frequently be appended to your hospital record.

When information concerning previous treatment is missing from the medical record, the registry or registry system should make every effort to contact institutions or physicians who have examined or treated the patient to obtain such information.

C. OTHER PREVIOUS NEOPLASMS

Some registries prepare separate abstracts for each previously diagnosed primary mentioned in the patient's history. Other registries may elect only to record the fact that the patient has a history of one or more primary cancers if there is no

evidence of these earlier cancers at time of admission. Your Cancer Committee will decide how your registry will handle previous neoplasms. Whether entered on a separate abstract or on the abstract of the neoplasm for which the patient is admitted. The date, site, type, and treatment of earlier diagnosis should be recorded in a uniform manner.

Admission Date

Record the date the patient was first admitted to your hospital for diagnosis and/or treatment of his or her malignancy. The patient may be readmitted many times for the same primary. Record only the date of the first admission. Sometimes the patient may be seen and treated only in an outpatient clinic or in the radiology department. For such cases, record the date the patient first appeared at the outpatient clinic or radiology department for diagnosis and/or treatment of this malignancy.

Diagnosis Date

Record the first diagnosis of this cancer by a recognized medical practitioner. This may be a clinical diagnosis and may not ever be confirmed histologically. When the biopsy is histologically confirmed, the date of diagnosis is the date of the first clinical diagnosis and not the date of histologic confirmation.

Discharge Date

Record the date the patient was discharged from the hospital following the first admission for this malignancy. For patient seen only as outpatients, leave blank.

Abstracting Diagnostic Procedures: General Description

The tumor registrar must understand the events leading to the diagnosis of a malignancy. In this training module you will learn to locate and summarize statements of diagnostic procedures and findings. The real-life examples you will work with in this module were chosen to illustrate typical reports. To facilitate learning, the reports are typed instead of handwritten as in many medical records.

Sometimes the patient will have been diagnosed prior to admission to your hospital. Be sure to look for a letter or referral from an outside source.

Generally, however, the medical record begins with the patient's chief complaint (CC), medical history (Hx), or history of the present illness (HPI) plus past history (Past Hx), and review of systems (ROS). There may be separate entries for family history (Fam Hx) and/or social history (Soc Hx). Next is the physical examination (PE), usually listed by organ systems of the body.

Either directly following the history and physical examination, or at some point later, the physician will first state an impression (Imp), tentative diagnosis (Dx), or differential diagnosis (DDx). For some patients, the presence of a possible malignancy will be first detected on the initial physical examination in the hospital.

The examining physician typically will then order a series of diagnostic tests to confirm a clinical impression, distinguish one disease from among a number of possibilities, identify more precisely the extent of the disease, and determine a patient's overall state of health. Prior to or upon admission to a hospital, patients routinely undergo examinations of their blood and urine. The findings of the examinations will be noted on one or more laboratory reports. Following this, certain diagnostic examinations may be made for the purpose of specifically determining the presence or absence of cancer. Depending upon the necessary examinations, the findings may appear on report types such as hematology, pathology, cytology, radiology, or endoscopy. There may be one or more reports of operation. All reports will be filed in the patient's medical record. You will quickly learn to recognize the relevant reports and how to abstract the diagnostic findings. For the majority of cancer patients, standard procedures are employed to establish a diagnosis. The most definitive way to prove the presence of cancer and identify its type is by the microscopic visualization of cancer cells in tissues from a suspected tumor.

For internal tumors where it may be difficult to obtain tissue and cells for examination, other diagnostic procedures may be used. Improved diagnostic techniques are constantly being developed while old ones are used less frequently. As a tumor registrar you will be continually learning about new techniques.

Each diagnostic procedure will be described in detail in a separate report filed in the patient's medical record. Each report will include a description of the technique used together with a statement of the findings. These reports of diagnostic procedures will provide detailed information which you as a tumor registrar will summarize on the abstract. In a later lesson, you will learn that the information contained in diagnostic reports is crucial to the determination of the extent of disease in addition to establishing the diagnosis of cancer.

You will find reports for conditions other than cancer in medical records. These reports should not be summarized unless specifically requested by your cancer committee. For example, you may be asked to record specific premalignant conditions, particular symptoms, or comorbid conditions.

In the following learning units, you will learn how to abstract from copies of actual reports. Note that fictitious names, dates, and identifying numbers are used in these forms.

Always record certain basic information:

1. The date of the examination or procedure
2. The name of the examination or procedure
3. The results of the examination or procedure -- any pertinent positive or negative information
4. The diagnostic impression, if one is given.

As you abstract each sample report, compare your results with the suggested abstraction that can be accessed via a hyper link located at the upper right corner of the example page. In this manner you will learn how to recognize pertinent information and how to abstract it. Some reports will state the presence or absence of cancer as a "diagnosis." Other reports will contain a statement of the "impression." Do not attempt to distinguish between the two. Simply use whatever term appears on the report.

Physical Exam

As part of the physical examination, the examining physician will systematically record his/her findings relative to the various body regions--head and neck, thorax, abdomen, lymph nodes, and extremities. He will closely observe all external surfaces and palpate various portions of the body. The act of palpation involves the application of fingers with light pressure to the body for the purpose of determining the consistency of the parts beneath the surface. For example, some enlarged organs of the body and some lymph nodes can be palpated. Cancer of the skin is quite readily detected by observation and palpation.

One of the most important diagnostic statements is located at the end of the physical examination. This statement records the diagnostic impression(s) of the examination.

Radiologic Exam

Plain Films

There are a number of indirect diagnostic approaches which can be used to detect cancer. The most common of these methods is known as radiology or roentgenography. Radiology refers to photography by means of roentgen rays, which are electromagnetic radiation of extremely short wave length with great penetrating powers in matter opaque to light. X-rays are produced when high energy beams of electrons strike matter. An X-ray photograph is a negative (like a camera film) rather than a positive (like a print).

Words ending in "-graphy" refer to the act of recording studies of various parts of the body. Words ending in "-gram" refer to the resulting record while "-graph" refers to either the instrument for recording or the resulting record.

X-Ray Series

Quite often an x-ray examination will require the taking of a number of pictures. This is referred to as an x-ray series and is summarized in one report. For example, a metastatic series involves x-raying various parts of the body to determine whether or not a cancer has metastasized to any of those parts.

Body Section

Body section radiography involves taking radiographs of layers of the body, that is, a series of x-rays taken at different depths in order to define images of desired areas. The desired image is brought sharply into focus while blurring out the other areas. These types of radiograms are used to locate lesions accurately in places like the lungs and bones. They are referred to as tomograms, laminograms, and planograms.

Tomography:
A special x-ray technique to show in detail images of structures lying in a predetermined plane of tissue while blurring or eliminating detail in images of structures in other planes. (Same as Laminography)

Laminography:
X-ray of a selected layer of the body made by Laminography (Picker Ultrasonic Laminograph) (See Tomography) In the early 1970's, computerized tomography (CT) was introduced into clinical medicine and revolutionized the field of diagnostic imaging.

Digital Radiography:
A system which uses computers to convert the lighter and darker areas of the radiographic image into numbers and then translate these numbers into an image on a cathode ray (television) tube.

Contrast Media

Certain materials or gases can be injected into veins, arteries, lymphatics, or hollow cavities to obtain contrast with the surrounding tissues. A contrast medium is a radiopaque substance which obstructs the passage of x-rays so that the structures containing it appear white on the x-ray film thus delineating abnormal pouches or growths and defining the contour of body structures on x-ray. Examples of radiopaque material are Hypaque and Renografin, dyes used in intravenous pyelogram (IVP) and barium (the substance used in gastrointestinal series). Some of the more common radiographic examinations which use contrast media are:

Angiography: The radiographic study of the vascular system

Cerebral angiogram	X-ray of the vessels of the brain
Cardiac angiogram	X-ray showing the functions of the heart and large blood vessels
Lymphangiogram	X-ray study of the vessels of the lymphatic system
Arteriography	X-ray examination of the arteries

Venography	X-ray examination of the veins

Urography: Radiologic study of the urinary tract

Urogram (Pyelogram)	X-ray of the kidney and ureter with emphasis on the pelvis of the kidney by intravenous injection of a contrast medium
Cystogram	X-ray of the urinary bladder by intravenous injection of a contrast medium
IVP (Intravenous Pyelography)	A succession of x-ray films of the urinary tract following the injection into a vein of an iodine-containing substance which is collected by the kidneys, passing into the ureters and subsequently the bladder, allowing the study of urinary tract function (also known as Intravenous Urography, IVU)
Retrograde Urography	(Retrograde Pyelography): Examination of the ureter and renal collection structures by means of installation of contrast material through a ureteral catheter passed through a cystoscope into the bladder and ureter

Bronchography: The radiographic study of the bronchi of the lung

Bronchogram	an x-ray of the bronchial system

Upper GI Series or Barium Swallow:	X-ray studies, following ingestion of barium, of the pharynx, esophagus, stomach, duodenum, and small intestine

Lower GI Series or Barium Enema: X-ray studies, following rectal injection of the barium, of the large bowel

Cholecystography: Radiologic study of the function of the gallbladder and bile ducts after an opaque medium has been introduced either orally or intravenously

1. Cholangiogram: X-ray of the extrahepatic bile ducts
2. Cholecystogram: X-ray of the gallbladder

Infusion Nephrotomography: Radiologic visualization of the kidney by tomography after intravenous introduction of contrast medium

Myelography: Radiologic study of the spinal cord

Salpingography: Radiologic study of the uterus and fallopian tubes

Sialography: Radiologic study of the salivary ducts

Pneumocolon: X-ray examination of the colon in which air and barium are used as contrast materials; also know as double contrast enema and air contrast enema

Fluoroscopy

Fluoroscopy is a technique for continuous or intermittent x-ray monitoring. X-ray images may be viewed directly without taking and developing x-ray photographs. This allows observation of certain dynamic body processes and is useful in certain surgical and diagnostic procedures. The radiologist moves the screen up and down the patient's body and observes what is happening within

selected parts of the body. Fluoroscopy is especially useful for identifying the presence of restricted or blocked passages in the hollow organs of the body. For example, barium is swallowed and followed through the esophagus, stomach, and the upper intestinal tract. The results of a fluoroscopic examination of the esophagus are reported in the x-ray report (Example E3). Other examples of fluoroscopic examinations include upper and lower gastrointestinal series, oral cholecystograms, cystourethrograms, fistulograms, and retrograde ileograms.

Renal Flow Study: A fluoroscopic examination to check the flow of blood through the kidneys after contrast material has been injected into the veins.

Intraoperative Imaging: An imaging procedure such as X-ray, CT scan, or ultrasound that is performed during an operative procedure, e.g., to direct a biopsy or to verify the position of a prosthesis.

ULTRASONOGRAPHY:

Diagnostic ultrasound is a technique for visualizing internal structures of the body by recording the reflection of ultrasonic waves (high frequency sound waves) as they interact with various tissues in the body. Different densities in tissue cause different sound waves or echoes. Differences can be detected between normal tissues, benign tumors, and malignant neoplasms. The record produced may be called an ultrasonogram, or an echogram.

MAMMOGRAPHY:

Mammography is a technique for the detection of breast cancer. In this procedure, several x-ray views are taken of one or both breasts and the radiographs are examined for the presence of a lesion. When a lesion is detected, the radiologist often can determine quite accurately whether it is malignant or benign. Mammography is important because very small, early cancers can be diagnosed with the technique before they are large enough to palpate. Mammograms of the opposite breast should be recorded as well as those of the involved breast.

XERORADIOGRAPHY:

Xeroradiography, a product of Xerox Corporation, has been known since 1950. The xerographic process is another way of doing mammographic examinations. Its merit is in its greater precision in outlining boundaries of masses and detecting fine calcification often seen in occult neoplasms.

In xeroradiography, the x-rays are developed using the same image-producing process as the Xerox office copier machines. The xeroradiography machine can produce either a positive or negative picture on specially coated white paper that can be read in any light.

Today, xeroradiography is used for x-rays of the skull, limbs (arms, legs), and breast as well as for cervical spinal examination. Also, it can be used for locating foreign objects (wood, glass or metal splinters) in the eye or other parts of the body.

THERMOGRAPHY:

Thermography is a technique for detecting cancer by differentiating regions of hot and cold in the body. The surface temperature (its infrared radiation) is photographically recorded. The thermogram is a mosaic of many thousands of bits of temperature information displayed photographically in shades of gray. The lighter tones indicate hot spots (increased emission of heat); the darker tones indicate cool areas. Since cancer cells usually divide more rapidly than normal cells, they often give off more heat than the normal cells surrounding them. It will be reported on a thermographic report.

CT and ECT

Computerized (Axial) Tomography (CT)

Computerized scanners are used for the examination of body tissues. Most well known are EMI scans, Delta-Scans, and Acta-Scanner. Unlike a conventional x-ray that sends a broad beam of radiation over a large area, the CT scanner's x-ray tube

directs a thin, concentrated beam of radiation through a cross section of the body detectors. The technique involves recording of "slices" of the body with an x-ray scanner; theses records are then integrated by computer to give a cross-sectional image. A complete study of a patient usually takes 8 to 15 separate scans of 13 mm-thick slices of the body.

From the readings, the computer constructs an image which is displayed on a television screen where it can be photographed for a permanent record. The precision of the scanner permits a more accurate diagnosis of the extent of disease than any other external means. It can discover tumors at an early stage and pinpoint their exact location. It may avert the risk of exploratory surgery to determine if an organ is diseased. CT scans can be performed with or without the use of contrast media.

Emission Computerized Tomography (ECT)

SPECT: Single Photon ECT

Selected planes can be analyzed without interfering overlap from other planes. For example: in liver scanning for metastasis, smaller, deeper lesions can be better identified than with conventional scans.

PET: Position Emission Tomography

Some elements, for example, oxygen, carbon and nitrogen, do not have a single photon-emitting isotope suitable for conventional imaging. PET permits investigation of cerebral glucose metabolism and cerebral blood and, thus, measures chemical compounds of the body.

Nuclear Medicine

Diagnostic Nuclear Medicine Examinations: Radioisotope Scintillation Scanning (Scintiscan)

In nuclear medicine, radioactive substances known as radioisotopes are administered to the patient in order to diagnose disease. A radioactive isotope disintegrates spontaneously (ultimately losing its radioactivity) and emits gamma rays from within the body which enable the physician to visualize internal abnormalities. This differs from x-ray procedures where the x-rays are passed through the body from an external source.

Examples of radioactive isotopes, commonly used for isotope-imaging studies, are gallium, iodine, and technetium. Sometimes non-radioactive compounds are simply labeled or tagged with a radioactive isotope and sometimes radioactive tracers (radioactive pharmaceuticals) are given by mouth or by vein. Some of the isotopes are selectively absorbed by tumors or by specific organs in the body. The concentrated radioisotopes outline the tumor or organ making it visible on the photoscanner by the emission of the radioactive energy. Much research in nuclear

medicine is concerned with attempts to find new radioisotopes and to develop radioisotope-labeled compounds that will be selectively absorbed in specific parts of the body.

A device called a photoscanner is used to measure the radioactivity from the nuclear substance absorbed by various parts of the body. A two dimensional representation or map can be made of the rays emitted from the radioisotope which shows where it is concentrated in the body tissue. Findings of such an examination are photographically recorded and are referred to as scans. The more common scans are illustrated in the diagram on the next page (Diagnostic Imaging -- Nuclear Medicine), -- bone, kidney, thyroid, brain, salivary glands, heart/lung, liver/spleen, and total body. Bone scanning with various bone-seeking isotopes is advocated for earlier diagnosis of bone metastasis. Other names for these types of scans are scintiscan, gallium scan, and lymphoscintography.

Magnetic Resonance Imaging

Magnetic Resonance Imaging (MRI) has rapidly become a powerful diagnostic tool-the diagnostic imaging method of choice in many clinical situations. It is based on magnetization of the various biological tissues. It does not use any ionizing radiation (such as x-rays) and is capable of direct imaging in any plane without reformatting. It can take multiple slices simultaneously. It can produce cross sections of the brain, spinal cord, heart, lungs, abdomen and blood vessels. In some instances it can chemically analyze body tissues by recording the behavior of atomic nuclei in living cells.

NMR Chemical-Shift Imaging (or Spectroscopic Imaging)

NMR chemical-shift imaging literally adds a dimension to the potential clinical utility of Magnetic Resonance. Not only images, but chemical analysis of body tissues is possible through the use of magnetic resonance spectroscopy.

Hematologic Exam

A hematologic examination is the microscopic examination of the cells of the blood or blood-forming tissues (especially bone marrow), looking for changes in the structure of and /or numbers of various types of blood cells, including immature cells.

Peripheral blood is circulating blood obtained from the extremities or from the circulatory system remote from the heart. One of the most frequently used procedures for obtaining blood for a complete blood count is the fingerstick method. Other procedures for obtaining specimens for hematologic examination include venipuncture, bone marrow aspiration, and bone marrow biopsy which will be discussed in detail later.

There are three main types of blood cells-erythrocytes, leukocytes, and thrombocytes (platelets)-all suspended in a fluid portion called plasma.

Definitions

Before you can begin to abstract from the hematology reports, you must be aware of the terms you will encounter and of their significance. Following are definitions of terms which you will encounter frequently.

RED BLOOD CELLS

There is only one type of mature erythrocyte (red blood cell), but there are several types of immature erythrocytes. One common type is called a reticulocyte.

Hemoglobin is a blood protein found in red blood cells; it transports oxygen to the tissues of the body and returns carbon dioxide to the lungs.

Hematocrit measures the volume of erythrocytes. It is expressed as a percentage of the volume of whole blood.

WHITE BLOOD CELLS

Leukocytes (white blood cells) are of two main types-granulocytes or granular leukocytes (containing granules in their cytoplasm) and agranular leukocytes (lacking granules in their cytoplasm).

Granulocytes or granular leukocytes can be further subdivided (based on the staining properties of the granules) into:

Neutrophils (purple) - 40-60% of all leukocytes
Eosinophils (red) - 1-3% of all leukocytes
Basophils (blue) - 0-1% of all leukocytes

A neutrophil may be further specified as segmented (SEGS), banded (STABS), or juvenile (a metamyelocyte).

A myelocyte is a granulocytic cell.

Agranular leukocytes may be further subdivided into two types:

Monocytes - 4-8% of all leukocytes
Lymphocytes - 20-40% of all leukocytes

PLATELETS

Platelets (thrombocytes) are tiny cells or discs whose primary function is hemostasis (clotting of blood).

Normal Blood Values

The values for blood may vary in relationship to the altitude of your geographic location. Check with your Hematology Department if the normal values do not appear on your hematology report forms.

Certain types of disease associated with the abnormality of blood cells are:

Anemia	Deficiency in erythrocytes or hemoglobin
Aplastic anemia	A form of anemia in which there is a lack of formation of blood cell elements in the bone marrow
Leukemia	A progressive, malignant disease of the blood and blood forming organs characterized by uncontrolled proliferation and development of leukocytes. It is diagnosed by microscopic detection of abnormal cells in the blood and bone marrow.
Leukocytosis	An increase in the number of leukocytes in the blood
Leukopenia	Reduction in the number of leukocytes in the blood
Polycythemia	Excessive number of erythrocytes
Thrombocytopenia	Decrease in the number of blood platelets

Therefore, you can see that the hematology report contains information which the tumor registrar must abstract for leukemias and polycythemia vera.

BONE MARROW STUDIES

Examination of the bone marrow is critically important in the diagnosis and management of a wide variety of hematologic disorders, for example, leukemia. Circulating blood cells are actively produced in the bone marrow. Bone marrow can be obtained by needle aspiration (considered as "positive histology" in the diagnostic confirmation field), by biopsy of tissue utilizing one of a variety of special needles, or by open surgical biopsy with a trephine (histologic examination). An abnormal cytologic examination will generally be supplemented by a histologic examination.

BLOOD SERUM STUDIES

Automation and modern advances in medical technology enable the physician to obtain a complete battery of laboratory tests from the patient's blood. Listed

below are a few of the studies you may want to check to assess the diagnosis or spread of cancer.

Serum Calcium. Calcium circulated in the blood in equilibrium with the calcium in the bone. Patients with cancer have a tendency to develop an excess of calcium in the blood (hypercalcemia), particularly with lung and breast cancers, reflecting metastatic disease of the bone. When bone is replaced with malignant cells, calcium is released in an increased amount in the blood circulation. Normal values are 8.5-10.5 mg/100 ml (slightly higher for children).

Serum Alkaline Phosphatase. Alkaline phosphatase is an intercellular enzyme which becomes elevated when there is destruction of cells. The key areas where it is produced are the liver and bones. An elevated alkaline phosphatase is indicative of bone and liver abnormalities. See the table below for normal values.

Serum Acid Phosphatase. Elevated serum levels of acid phosphatase are seen in patients with carcinoma of the prostate that has extended beyond the prostatic capsule. Patients with prostatic carcinoma still confined within the capsule usually have a normal serum acid phosphatase level. However, patients with benign prostatic hypertrophy may have slight elevations of the serum acid phosphatase level after vigorous prostatic "massage". Since other tissues may also release acid phosphatase into the blood serum, minor elevations may reflect an origin other than the prostate. Serum acid phosphatase studies have been used diagnostically to help determine the resectability of prostatic cancers. Cancers which have extended beyond the prostatic capsule, i.e., to the bone, are not generally treated by prostatectomy. See the table below for normal values.

There are different methods for determining the alkaline phosphatase and acid phosphatase levels in the blood. Commonly used are the Bodansky and the King-Armstrong methods. It is necessary to know the method used and the normal values in order to interpret your hospital's test results.

OTHER LABORATORY STUDIES

Marrow Acid Phosphatase. Accurate staging of prostatic cancer is important for determining treatment. Since the skeletal survey by routine radiography may be negative until approximately 40 percent of bone is involved with tumor, other tests, including marrow acid phosphatase, are used for the detection of early bone metastasis in patients with prostatic cancer. An elevated bone marrow acid phosphatase follows dissemination of prostatic cancer to the marrow space and contraindicates radical surgery in these patients. Normal values for marrow acid phosphatase are the same as for serum acid phosphatase.

Hormonal/Steroid Studies. Certain malignancies are quite apt to change the levels of hormones and/or steroids produced in the body. A study of the hormone/steroid composition of the urine can sometimes be used to infer the presence of such a malignancy.

There are more and more instances when you will have to abstract a report of a hormone or steroid study. Hormone studies may be used as an aid in diagnosing tumors of the adrenal cortex, pancreas, uterus, and testis.

Bilirubin. Bilirubin is a pigment excreted normally by the gallbladder and liver. An elevated bilirubin is indicative of obstruction of the gallbladder or of hepatic disease which affects the function of the liver. Normal values are: One min. 0.4 mg/100 ml. Direct: 0.4 mg/100 ml. Total: 0.7 mg/100 ml. Indirect is total minus direct.

BUN (Blood urea nitrogen). An elevated BUN may result in uremia reflecting the failure of the kidneys to excrete normal waste materials. For example, it occurs frequently in patients with cancer of the cervix and bladder where extensive growth of the cancer obstructs the ureters. Normal values are 8-25 mg/100 ml.

Uric Acid. In any malignancy with rapid destruction of cells, uric acid may be elevated. It is of particular interest in patients with lymphoma, Hodgkin disease, lymphosarcoma, polycythemia vera, and leukemia treated by radiation therapy and/or chemotherapy. Normal values are 3.0-7.0 mg/ml.

Total protein. This test measures the amount of total circulating protein (albumin and globulin) in the patient's blood serum. It is elevated in multiple myeloma. Low total protein (low level of albumin) is associated with pleural effusion and ascites. Normal values are 6.0-8.0 mg/100 ml.

LDH (Lactic acid dehydrogenase). LDH is an intracellular enzyme which occurs in many body cells. An elevated LDH is indicative of increased cell destruction, possibly from metastatic spread of cancer. Normal values are 60-100μ/ml.

SGOT (Serum Glutamic-oxalacetic-transaminase). This is an enzyme which is specifically manufactured in the liver. It is elevated when the liver does not function normally. Normal values are 10-40100μ/ml.

CEA (Carcino-embryonic-antigen). This term was first used in 1965 to describe a glyco-protein which is present in extracts of carcinoma cells. An elevated CEA may be indicative of cancer of the gastrointestinal tract and, occasionally of the breast, lungs, and female reproductive system. When the entire malignancy is removed, the CEA level may drop; it may rise when recurrence or metastasis develops. Normal values are 0-2.5 mg/ml. However, CEA titers less than 2.5 mg/ml are not proof of the absence of malignant disease. Normal values do not apply if the patient is a smoker.

MANIPULATIVE PROCEDURES

There are a variety of diagnostic procedures which involve the direct viewing, feeling, hearing, and smelling of the body. In many instances, special instruments have been devised to directly view the interior of the body. In this segment of

instruction, we will discuss gross (as opposed to microscopic) direct examination procedures. Most of the instructional and practical exercise material will be related to endoscopic procedures.

ENDOSCOPIC EXAMINATIONS

An endoscope is an instrument for examining the interior of a canal or hollow viscus (any large interior organ). A variety of endoscopes have been developed for direct inspection of the interior of the stomach, larynx, colon, rectum, bladder, esophagus, and portions of the lung. Listed below are the more common endoscopic examinations:

Bronchoscopy: Examination of the bronchi

Colonoscopy: Examination of the colon and rectum by means of an elongated flexible fiberscope

Colposcopy: Examination of tissue of the cervix and vagina by use of a magnifying lens inserted into the vagina

Cystoscopy: Direct visual examination of the interior of the urinary bladder

Esophagoscopy: Observation of the interior of the esophagus

Gastroscopy: Inspection of the interior of the stomach

Laryngoscopy: Examination of the larynx

Nasopharyngoscopy: Examination of the nasopharynx, pharynx, and the pharyngeal end of the auditory tube by lighted telescopic endoscope

Ophthalmoscopy: An examination in which an instrument containing a perforated mirror and lenses is used to examine the interior of the eye

Otoscopy: Inspection of the internal ear

Panendoscopy: A cystoscopy that permits wide angle viewing of the urinary bladder

Proctoscopy: Inspection of the rectum

Sigmoidoscopy: Inspection of the colon up to sigmoid flexure

Vaginoscopy: (See Colposcopy)

Proctoscopy, sigmoidoscopy and colonoscopy

Inspection of the intestinal tract is done by tubular endoscopes with appropriate illumination. The instrument for examination of the rectum is called a proctoscope. To examine the sigmoid colon, a device called a sigmoidoscope is used which can visualize up to 25 cm from the anal verge. To examine the entire colon from the rectum to the cecum a device called a fiberoptic colonoscope is used. The sigmoidoscope or proctoscope can be either rigid or flexible. If a

malignancy is suspected, tissue can be removed during the examination for histologic study.

Bronchoscopy and Laryngscopy

Bronchoscopy is the visual examination of the bronchi of the lungs by the use of the bronchoscope which may be inserted into the oral or nasal cavities. The larynx, pharynx, and trachea may be visualized as the scope is passed to the bronchi. It may serve other purposes also. For example, it may be used to remove a foreign body from the bronchus, or for clearing a mucous plug which is causing atelectasis.

Laryngoscopy

Direct Visualization: A laryngoscopy is the visual examination of the larynx and hypopharynx using a laryngoscope. Abstract what you think is pertinent in the laryngoscopy report (Example F2) and compare with the suggested abstraction.

Indirect Visualization: Examination of the interior wall of the larynx by observation of the reflection of it in a laryngeal mirror.

Cystoscopy

A cystoscopy is the examination of the interior of the urinary bladder by means of a cystoscope. It is inserted into the bladder by way of the urethra and, therefore, can be used to examine the urethra as well.

Gastroscopy

A gastroscopy is the visual examination of the interior of the stomach. This report may also contain examination findings as the scope is passed through the esophagus.

Other "Oscopies"

In all of the "oscopies" described so far, the scope has been inserted through a natural opening in the body. However, in the following five types of "oscopies", an actual incision is made and the instrument is inserted into the body space that is to be examined.

Culdoscopy: Visual examination of the female pelvic viscera by means of an endoscope introduced through the posterior vaginal wall into that part of the pelvic cavity known as the rectovaginal pouch or cul de sac.

Laparoscopy: Examination of intra-abdominal structures by means of an illuminated tubular instrument (laparoscope) inserted through a small incision in the abdominal wall.

Mediastinoscopy: Examination of the mediastinum by means of a tubular instrument permitting direct inspection of the area between the lungs.

Peritoneoscopy: Examination of the peritoneal cavity by an instrument inserted through the abdominal wall (See also laparoscopy).

Thoracoscopy: Direct examination of the pleural cavity by means of an endoscope which is inserted into the cavity through an intercostal space.

Operative Procedures

Exploratory Surgery

Sometimes, cancer of an internal organ may be suspected but the organ may be so located that direct access to it is possible only with surgery. Exploratory surgery may then be performed to determine whether or not a cancerous condition exists and the degree to which the cancer may have affected other organs and structures within the observed area. In most instances, biopsies will be performed and the specimen examined histologically. The exploratory operation may be followed immediately by definitive surgery, or it may reveal cancer so extensive as to rule out definitive surgery. It may be that by-pass surgery is indicated as a palliative measure. All surgery, whether it is definitive, exploratory, or by-pass surgery, is described in an operative report.

Operative Report

An operative report will usually contain a pre- and post-operative diagnosis, the name of the procedure, and the operative findings. Examples F14 and F15 illustrate operative reports of exploratory laparotomies. Example F16 illustrates a report of an exploratory laparotomy with ligation of the (R) ureter. Example F17 illustrates a report of exploratory laparotomy, gastrectomy, and gastroduodenostomy (by-pass surgery).

The findings may include statements as to the exact location of the primary tumor, the size of that tumor, and the extent to which it has or has not spread beyond the primary site. Therefore, close scrutiny of the entire operative report is required. What the surgeon sees is significant, especially if all of the malignancy is not excised or if no definitive surgery is done. This may be the most complete description of the malignancy available, and it should be abstracted.

Pathological Examinations

The most accurate methods for diagnosing cancer are: 1) the microscopic examination of tissues removed from the site of a suspected cancer and 2) the microscopic examination of cells contained in fluid which bathes a suspected site. The purpose of the microscopic examination includes determination of characteristics of the tissues and cells indicative of a malignancy. Histologic examination (study of tissue) will be discussed beginning on page 194. The histologic information is found on the Pathology Report, sometimes called the Histopathology Report. Cytologic examination (study of cells) will be discussed in Cytologic Examination learning section. The cytologic information is usually

found on a Cytology Report, sometimes called a Cytopathology Report, but it may be submitted on a Pathology Report.

Both the operative reports and the pathologic reports should be reviewed by the tumor registry abstractor. The operative report may contain information regarding the size, location and extent of disease. It may also contain information on spread of disease to tissues which were not excised. For example, liver metastasis may be observed by the surgeon at the time of abdominal surgery, and a biopsy may not be taken. The surgeon may also describe the size of the tumor as well as apparent metastases to lymph nodes and other organs. It is important that this information be abstracted for a complete and accurate description of the extent of the disease. If there is a discrepancy between the operative report and the pathology report with respect to involvement of excised tissues, the pathology report takes precedence over the operative report.

The following are two topics included in this learning section.

- Histologic Examination
- Cytologic Examination

Histological examinations

For most neoplasms histologic examination (study of tissue) provides the best evidence regarding the presence or absence of cancer. Sometimes there will be more than one pathology report in the record. Summarize each report giving the name and date of the procedure, the slide number(s), the source of the specimen, and the pertinent positive and/or negative findings. A histologic examination may be made from a biopsy specimen, a surgical specimen, or at autopsy. Each of these procedures will be described in this part of the learning sub-section together with practical exercises demonstrating how the information given in the reports might be abstracted. The study of cells (cytologic examination) will be covered separately in the next learning sub-section, Cytologic Examination. Select a topic listed below to learn more about histologic examination.

Biopsy

The term biopsy (Bx) refers to the removal and examination, gross and microscopic, of tissue or cells from the living body for the purpose of diagnosis. A variety of techniques exist for performing a biopsy of which the most common ones are:

Aspiration biopsy or bone marrow aspiration: Biopsy of material (fluid, cells or tissue) obtained by suction through a needle attached to a syringe.

Bone marrow biopsy: Examination of a piece of bone marrow by needle aspiration, can also be done as an open biopsy using a trephine (removing a circular disc of bone).

Curettage: Removal of growths or other material by scraping with a curette.

Excisional biopsy (total): The removal of a growth in its entirety by having a therapeutic as well as diagnostic purpose.

Incisional biopsy: Incomplete removal of a growth for the purpose of diagnostic study.

Needle biopsy: Same as aspiration biopsy.

Percutaneous biopsy: A needle biopsy with the needle going through the skin.

Punch biopsy: Biopsy of material obtained from the body tissue by a punch technique.

Sponge (gel foam) biopsy: Removal of materials (cells, particles of tissue, and tissue juices) by rubbing a sponge over a lesion or over a mucous membrane for examination.

Surface biopsy: Scraping of cells from surface epithelium, especially from the cervix, for microscopic examination.

Surgical biopsy: Removal of tissue from the body by surgical excision for examination. Total biopsy: See excisional biopsy.

Note: Any biopsy can be processed quickly by a frozen section technique or by routine fixation (permanent section) by H and E (Hematoxylin and Eosin) stain which usually takes 48 hours to prepare.

Operative Pathology Report

The Operative Pathology Report (Surgical Specimen)

The operative pathology report of the surgical specimen contains a description of the gross and microscopic examination of the surgical specimen. This report is important for you, the tumor registrar, because it may tell you which structures and organs of the body are involved by the tumor. It verifies the primary site of the cancer and describes the extent to which it has spread.

Tumor size will usually be stated in the gross description of the surgical specimen. It is usually specified in centimeters and needs to be converted to millimeters. The tumor size given on the pathology report should always be recorded.

Abstracting the Pathology Report

Let us now examine the following pathology reports (G2-G5). A number of important features of these reports are given below:

1. The date of the report. This date should coincide with the date of the corresponding operative report, not the date the slides were read nor the date of dictation.

2. A short clinical history of the patient. This information describes the reasons why the tissue was removed.
3. In the space labeled "pre-operative diagnosis" or "clinical diagnosis will be a brief description of the diagnosis as based on the physical examination and/or on a statement provided by a referring physician.
4. The "gross description" of the report will contain a description of the material received for examination and will include the source of the specimen. The size of the tissue fragments taken at biopsy and how they were received and the size of the surgical specimen are not important to the abstractor and should not be reported, but if the tumor size is given it should be recorded.
5. The "microscopic description" of the report contains the pathologist's description of the specimen(s) examined. Of special significance is the total size of the tumor, and where it has extended or metastasized. Size will usually be reported in centimeters (cm), and often the length, breadth, and thickness of the tumor will be given. The abstractor need only report the largest dimension of the tumor. If there is a discrepancy between the microscopic and gross description of the excised tumor, the microscopic takes precedence.
6. The "diagnosis" section will summarize the microscopic findings for each specimen examined. The diagnosis confirms or denies gross findings or malignancy, giving the histologic type of the cancer and, in some instances, giving the grade or degree of differentiation (the degree to which the malignant cells resemble the normal tissue they originated from).
7. Complete excision of the tumor may also be confirmed or denied by describing whether or not surgical margins are clear of tumor. This most often appears in the microscopic, but may also be found in the final diagnosis.

When summarizing the pathology report, record the following information:

The date and name of the report
Slide number
The source of the specimen
The primary size
Tumor size
The histologic diagnosis including the grade or degree of differentiation
The extent of disease within and beyond the primary site

Autopsy Report

The most important portion of the autopsy report as far as the abstractor is concerned is the section entitled "Final Diagnosis". It usually will describe the primary site, histologic type, and extension and metastases of the tumor based on a histopathologic examination of the tissues obtained after death. All of the major organs are examined unless, as sometimes happens, the autopsy is restricted to certain organs. All pertinent findings should be recorded.

Autopsy findings confirm the diagnosis of cancer made prior to death, if still present, and may determine the primary site of a tumor which may have been incorrectly diagnosed or unknown prior to death. The histologic findings described in the autopsy report relative to the primary site and cell type usually take precedence over those reported in prior pathology reports.

On occasion, the presence of cancer will be an incidental discovery at the time of the autopsy. When this occurs, the patient's history and physical examination findings should be reviewed to rule out a clinical diagnosis of cancer prior to death. In instances where the diagnosis of cancer was first made at autopsy, the cases are abstracted and identified as "diagnosed at autopsy". In such cases the date of diagnosis is the date of death.

The autopsy report for patients who died in your hospital should be included in the medical record. The autopsy protocols for those who die after discharge may be available from other hospitals or coroners' offices. Your Cancer Committee should decide whether to recommend that you attempt to obtain autopsy reports (and Death Certificates) for those patients who died elsewhere.

If the autopsy report is based on gross observation alone (no microscopic exam) this should be noted. However, as part of most autopsies, a histologic examination of tissue removed from the body will be performed routinely.

Cytologic Examinations

The study of cells, their origin, structure, function, and pathology is called cytology. Cells are continually shed (exfoliated) from tissues that line the cavities and hollow organs of the body. These exfoliated cells may float in the fluid and mucous material which bathes or passes through these cavities. These cells can be examined microscopically to determine their tissue of origin and whether or not they are malignant. The term exfoliative cytology refers to "microscopic examination of cells contained within body fluids".

The three body cavities, the pleura (enclosing the lungs), the peritoneum (enclosing the intestinal tract), and the pericardium (enclosing the heart), may be checked for fluid. The normal fluids within the body cavities are limited to an insignificant lubricating layer that cannot be aspirated. Therefore, fluid in any body cavity which can be aspirated indicates a pathological process, commonly malignant and metastatic. It is believed that the formation of malignant ascites (fluid in the abdominal cavity), for example, is brought about by colonies of cancer

cells which damage the capillaries and lymphatics resulting in leakage of cancer cells and plasma directly into the abdominal cavity.

The table below lists the sources of some of the specimens that are examined histologically and some that are examined cytologically. As a further guide, histology is the study of *tissues*, while cytology is the study of *cells*.

Histologic Examination	**Cytologic Examination**	
Biospy material	Sputum	Bronchial washing
Frozen section	Breast Secretion	Prostate secretion
Bone marrow biopsy/aspiration (tissue)	Gastric fluid	Spinal fluid
Operative specimen	Peritoneal fluid	Urinary sediment
Autopsy specimen	Pleural fluid	Cervical & vaginal smears
	Bone marrow aspiration (cells)	Tracheal washing
	Bronchial brushing	

Cytology and Its Procedures

Cytology is the study of the structure and function of cells; the examination of cells under a microscope as used in the diagnosis of cancer.

There are a variety of procedures employed to obtain material for cytologic examination from fine needle aspiration of superficial or internal lesions to exfoliated cells obtained by aspiration, washing, brushing, smears, or scraping of vaginal secretions, sputum, urine, abdominal fluid, prostate secretions, etc. The more common techniques include:

Brushings - The procedure of brushing the lining of an organ for the purpose of obtaining cells

Punctures - Inserting a hollow needle into a cavity or organ for the purpose of removal of some portion of the contents (fluid, bone marrow, tissue)

Paracentesis - Surgical puncture of a cavity for aspiration of fluid, such as the abdominal cavity

Thoracentesis - Surgical puncture for aspiration of fluid from the chest

Scrapings - The procedure of scraping the lining of a structure with an instrument for the purpose of obtaining cells.

Swabs - Using a swab or similar device to obtain fluid and secretions which then can be used to make a smear.

Washings - The removal of fluid from a hollow organ or structure for the purpose of collecting any cells in the fluid which may be exfoliated.

Cytology Report

A cytology report recorded as suspicious is not considered as diagnostic of cancer and unless supported by a positive biopsy (as reported on a pathology report) or by a clinical impression of cancer, these cases should not be abstracted.

The Papanicolaou classification of cells for the detection of malignancy ("Pap" smear) used in the past is as follows:

Class	Interpretation
I	No evidence of a malignant neoplasm, no atypical cells
II	Atypical cells present but no evidence of malignant neoplasm
III	Cells present causing suspicion of malignant neoplasm
IV	Fairly conclusive evidence of malignant neoplasm
V	Conclusive evidence of malignant neoplasm

Some medical records will contain more than one cytology report. If there are multiple reports on the same type and source of specimen, record the findings on the first positive report. If they are based on different types and sources of specimens, summarize all pertinent findings.

According to the National Cancer Institute Workshop on Terminology for Cervical and Vaginal Cytology, December 12-13, 1988, "While the Papanicolaou Classes have a significant historical association with the early development of cytology, it can no longer be relied upon to communicate clinically relevant information. In particular, the Papanicolaou Classes do not reflect current understanding of cervical neoplasia, do not provide for the diagnosis of non-cancerous entities, and as a result of numerous idiosyncratic modifications over the years, no longer reflect uniform diagnostic interpretations. Accordingly, it is our conclusion that the Papanicolaou Class System is not acceptable in the practice of diagnostic cytology". Their organization of the new terminology and classifications is a follows:

> STATEMENT ON ADEQUACY OF THE SPECIMEN,
> GENERAL CATEGORIZATION of the diagnosis (within normal limits or other), and
> DESCRIPTIVE DIAGNOSIS

For Squamous Cell the following terminology is used:

1. Atypical squamous cells of undetermined significance (specify recommended follow-up and /or further investigative procedures)
2. Squamous intraepithelial lesions (Comment on presence or absence of cellular changes consistent with Human papillomavirus (HPV) infection
    a. Low grade squamous intraepithelial lesion encompassing: Cellular changes consistent with HPV infection Mild dysplasia/CIN 1
    b. High grade squamous intraepithelial lesion encompassing:
        Moderate dysplasia/CIN 2
        Severe dysplasia/CIN 3
        Carcinoma in situ/CIN 3
3. Squamous carcinoma

At first you may find it somewhat disconcerting to discover that more than one type of form may be used to report similar findings. For example:

The source of the specimen is recorded by checking one of the blocks on the left of the report. This report is of special interest to the new tumor registrar because it lists the major sources of material used as specimens for a cytologic examination.

At the top left of the report, the clinical diagnosis may be summarized. This need not be recorded on the abstract. In many cases the laboratory study was ordered on the basis of a previously suspicious Pap smear.

The findings of the examination will be recorded by checking one of the blocks listed in the section describing the tissue status on the lower right.

Chapter 7

Abstracting: General Issues

Text Documentation

Rule 64CSR68, section 4.2.c. requires that hospitals provide "(s)ufficient narrative to determine the accuracy of coding and information." This documentation is especially critical for determining staging, histology, treatment and other clinically important information. When cases lack appropriate documentation, additional hospital staff time may be spent retrieving records and collecting documentation that should have been provided with the original submission.

Text documentation should be provided for the following items and any other items needing clarification:

1. Place of diagnosis if other than at the reporting facility
2. Usual occupation
3. Usual industry
4. Primary site
5. Other primary tumors
6. Diagnostic procedures – pathology
7. Histology title
8. Diagnostic procedures – X-rays and scans
9. Diagnostic procedures – lab tests

10. Diagnostic procedures – physical exam
11. Diagnostic procedures – operative notes
12. Diagnostic procedures – scopes
13. Staging
14. Description of tumor size
15. Treatment – surgery
16. Treatment – radiation, beam
17. Treatment – radiation, other
18. Treatment – chemotherapy
19. Treatment – hormone
20. Treatment – biologic response modifiers
21. Treatment - other

TEXT DOCUMENTATION IS REQUIRED.

Ambiguous Terminology

There will be occasions when the terminology used in the medical record is not clear. Use the following guidelines to determine whether an organ is involved by tumor. If there is any doubt about involvement, apply the general TNM staging rule that says to assign the lower (lesser) value.

Diagnosis

As part of the registry case-finding activities, all pathology reports should be reviewed to confirm whether a case is required. If the terminology is ambiguous, use the following guidelines to determine whether a particular case should be included.

Terms That Constitute a Diagnosis

Apparent(ly)	Favors	Probable
Appears to	Malignant appearing	Suspect
Comparable with	Most likely	Suspicious
Compatible with	Presumed	Typical of
Consistent with		

Terms That Do Not Constitute a Diagnosis

Cannot be ruled out	Potentially malignant	Suggests
Equivocal	Questionable	Worrisome
Possible	Rule out	

Staging

In the absence of cytologic or histologic confirmation, interpret the following terms as constituting or not constituting tumor involvement. The description may be taken from the clinical, operative, or pathologic documentation.

Do NOT Consider as Involvement

abuts	extension to without invasion/ involvement of
approaching	kiss/kissing
approximates	matted (except for lymph nodes)
attached	possible
cannot be excluded/ruled out	questionable
efface/effacing/effacement	reaching
encased/encasing	rule out
encompass(ed)	suggests
entrapped	very close to
equivocal	worrisome

Consider as involvement

adherent	induration
apparent(ly)	infringe/infringing
appears to	into*
comparable with	intrude
compatible with	invasion to into, onto, out onto
consistent with	matted (for lymph nodes only)
contiguous/continuous with	most likely
encroaching upon*	onto*
extension to, into, onto, out onto	overstep
features of	presumed
fixation to another structure**	probable
fixed**	protruding into (unless encapsulated)
impending perforation of	suspected
impinging upon	suspicious
impose/imposing on	to*
incipient invasion	up to

*interpreted as involvement whether the description is clinical or operative/pathological

**interpreted as involvement of other organ or tissue

DETERMINING DESCRIPTIVE TUMOR SIZE

Millimeter Equivalents for Descriptive Terms

FRUITS	mm
Apple	070
Apricot	040
Cherry	020
Date	040
Fig (dried)	040
Grape	020
Grapefruit	100
Kumquat	050
Lemon	080
Olive	020
Orange	090
Peach	060
Pear	090
Plum	030
Tangerine	060

NUTS	mm
Almond	030
Chestnut	040
Chestnut, horse	040
Hazel	020
Hickory	030
Peanut	010
Pecan	030
Walnut	030

VEGETABLES	mm
Bean	010
Bean, lima	020
Pea	991
Pea, split	991

10 mm = 1 cm
1 mm = 1/10 cm
2.5 cm = 1 inch
1 cm = .394 inch

MISCELLANEOUS FOOD	Mm
Doughnut	090
Egg	050
Bantam	040
Goose	070
Hen	030
Pigeon	030
Robin	020
Lentil	991
Millet	991

MONEY	mm
Dime	010
Dollar, half	030
Dollar, silver	040
Nickel	020
Penny	010
Quarter	020

OTHER	mm
Ball, golf	040
Ball, ping-pong	030
Ball, tennis	060
Baseball	070
Eraser on a pencil	991
Fist	090
Marble	010
Matchhead	991

Microscopic focus	990
Described as < 1 cm	991
Described as between	
1 and 2 cm	992
2 and 3 cm	993
3 and 4 cm	994
4 and 5 cm	995

Chapter

8

Abstracting: Patient Identification

TEXT DOCUMENTATION IS REQUIRED.

YOU SHOULD INCLUDE STATEMENT PROVIDING GENERAL DEMOGRAPHIC INFORMATION (AGE, RACE, ETHNICITY, SEX, ETC.) IN YOUR ABSTRACT.

Patient Name

The North American Association of Central Cancer Registries sets the standards for reporting names (http://www.naaccr.org/filesystem/pdf/Volume%20II%20Version%2011.1.pdf, pages 173 and 174 as page numbers appear on the page, not PDF). Care should be taken spell the name correctly. Both ROADS (pages 46 to 52) and FORDS (pages 39 to 41 for the 2003 original version and pages 39 to 42 for the 2004 revision) also provide guidance on reporting of names.

Social Security Number

The Social Security Number is critical to record de-duplication and has become increasingly important as central cancer registries perform data linkages with the Indian Health Service (to improve identification of American Indians) and the National Death Index (to provide vital status of non-residents). It is therefore important that it be recorded correctly. Social Security Numbers ending with B or D should NOT be reported as they may indicate a patient receiving care under a spouse's Social Security Number. If the Social Security Number is unknown, it should be entered as 999999999.

YEAR	REFERENCE(S)
1/1/93 to 12/31/02	Registry Operations and Data Standards (ROADS), page 44 (http://www.facs.org/cancer/coc/roads/roads1996.pdf)
1/1/03 to 12/31/03	Facility Oncology Registry Data Standards (FORDS) Original (2003) , page 37 (http://www.facs.org/cancer/coc/fords/fordsoriginal2003.pdf)
1/1/03 to present	Facility Oncology Registry Data Standards (FORDS) 2004, page 37 (http://www.facs.org/cancer/coc/fords/fordsrevised0605.pdf)

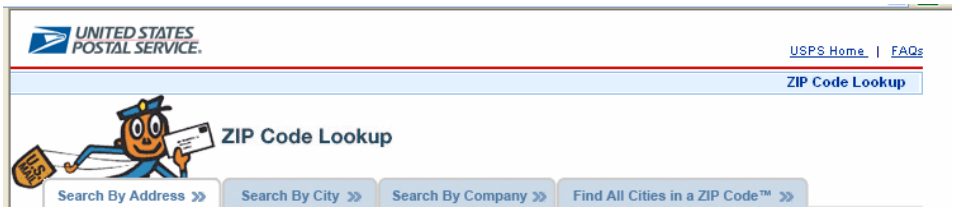
Note: When page numbers are given, they refer to the page numbers that appear in the document (i.e., on the "page"), not the page of the PDF. PDF pagination includes title pages, front-matter and other pages that are not usually included in hard-copy pagination.

Standard United States Postal Service abbreviations are provided in Appendix D and West Virginia Zip Codes are in Appendix E.

Address, City, State and Zip Code

Address at diagnosis refers to the home address, not the mailing or billing address. It has become especially critical in West Virginia due to increases in requests for investigation of community concerns about possible environmental causes of cancer. Acceptable abbreviations for use in addresses are given in Appendix D and West Virginia Zip Codes are in Appendix E.

A number of free Zip look-ups are available on-line, with the most authoritative being that of the US Postal Service: http://zip4.usps.com/zip4/welcome.jsp.



Codes for unknown or partially known addresses are as follows:

DATA ELEMENT	CONDITION	CODE
Address	Address not known	Unknown
City	City not known	Unknown
Zip	Zip not known	99999
State	Resident of a country other than the U.S. or Canada and the country is known	XX
State	Resident of a country other than the U.S. or Canada and the country is unknown	YY
State	Resident of U.S., NOS; resident of Canada, NOS; residence unknown	ZZ

YEAR	REFERENCE(S)
1/1/93 to 12/31/02	Registry Operations and Data Standards (ROADS), pages 54 to 66 (http://www.facs.org/cancer/coc/roads/roads1996.pdf)
1/1/03 to 12/31/03	Facility Oncology Registry Data Standards (FORDS) Original (2003) , pages 42 to 54 (http://www.facs.org/cancer/coc/fords/fordsoriginal2003.pdf)
1/1/04 to present	Facility Oncology Registry Data Standards (FORDS) 2004, pages 42 to 54 (http://www.facs.org/cancer/coc/fords/fordsrevised0605.pdf)

Note: When page numbers are given, they refer to the page numbers that appear in the document (i.e., on the "page"), not the page of the PDF. PDF pagination includes title pages, front-matter and other pages that are not usually included in hard-copy pagination.

Telephone

Record the area code and phone number. If the telephone number is unavailable or unknown, enter 9 in all fields; if the patient does not have a telephone, enter 0 in all fields.

YEAR	REFERENCE(S)
1/1/93 to 12/31/02	Registry Operations and Data Standards (ROADS), page 69 (http://www.facs.org/cancer/coc/roads/roads1996.pdf)
1/1/03 to 12/31/03	Facility Oncology Registry Data Standards (FORDS) Original (2003) , page 55 (http://www.facs.org/cancer/coc/fords/fordsoriginal2003.pdf)
1/1/04 to present	Facility Oncology Registry Data Standards (FORDS) 2004, page 55 (http://www.facs.org/cancer/coc/fords/fordsrevised0605.pdf)

Note: When page numbers are given, they refer to the page numbers that appear in the document (i.e., on the "page"), not the page of the PDF. PDF pagination includes title pages, front-matter and other pages that are not usually included in hard-copy pagination.

Marital Status

Code the patient's marital status at diagnosis for each primary tumor. The data may be corrected, but never change or update this data item (e.g., if the patient was single at the time of diagnosis but later married, the item should remain as "single"). Codes are as follows:

CODE	DESCRIPTION
1	Single (never married)
2	Married (including common law)
3	Separated
4	Divorced
5	Widow/Widower
9	Unknown

Note: If a patient is younger than 15 years of age, assume he/she is single and code 1.

Reference: Registry Operations and Data Standards (ROADS), page 53 (http://www.facs.org/cancer/coc/roads/roads1996.pdf)

West Virginia FIPS coded are provided in Appendix F.

County at Diagnosis

West Virginia residents should be assigned the FIPS code (see Appendix F) for their county of residence. Out-of-state residents should be coded as 998 and persons who are West Virginia residents but of unknown county should be coded 999.

YEAR	REFERENCE(S)
1/1/93 to 12/31/02	Registry Operations and Data Standards (ROADS), pages 60 and 66 (http://www.facs.org/cancer/coc/roads/roads1996.pdf)
1/1/03 to 12/31/03	Facility Oncology Registry Data Standards (FORDS) Original (2003) , page 48 (http://www.facs.org/cancer/coc/fords/fordsoriginal2003.pdf)
1/1/04 to present	Facility Oncology Registry Data Standards (FORDS) 2004, page 48 (http://www.facs.org/cancer/coc/fords/fordsrevised0605.pdf)

Note: When page numbers are given, they refer to the page numbers that appear in the document (i.e., on the "page"), not the page of the PDF. PDF pagination includes title pages, front-matter and other pages that are not usually included in hard-copy pagination.

Age at Diagnosis

This three-digit field will be computed by the software program if the date of birth and date of diagnosis are recorded.

Examples:	000	Less than one year old
	001	One year old, but less than two years
	002	Two years
	101	One hundred one years old
	999	Unknown age

YEAR	REFERENCE(S)
1/1/93 to 12/31/97	SEER Program Code Manual, Revised, page 73 (http://seer.cancer.gov/manuals/historic/codeman_1992.pdf)
1/1/93 to 12/31/02	Registry Operations and Data Standards (ROADS), page 72 (http://www.facs.org/cancer/coc/roads/roads1996.pdf)
1/1/98 to 12/31/03	SEER Program Code Manual, Third Edition, page 78 (http://seer.cancer.gov/manuals/codeman.pdf)
1/1/03 to 12/31/03	Facility Oncology Registry Data Standards (FORDS) Original (2003) , page 58 (http://www.facs.org/cancer/coc/fords/fordsoriginal2003.pdf)
1/1/04 to present	Facility Oncology Registry Data Standards (FORDS) 2004, page 58 (http://www.facs.org/cancer/coc/fords/fordsrevised0605.pdf)
1/1/04 to present	SEER Program Coding and Staging Manual 2004, page 44 (http://seer.cancer.gov/manuals/2004Revision%201/SPM_2004_maindoc.r1.pdf)

Note: When page numbers are given, they refer to the page numbers that appear in the document (i.e., on the "page"), not the page of the PDF. PDF pagination includes title pages, front-matter and other pages that are not usually included in hard-copy pagination.

SEER Geocodes for Place of Birth are provided in Appendix H.

Place of Birth

Record the patient's place of birth using the SEER Geocodes for Place of Birth in Appendix H. These codes include states of the U.S. as well as foreign countries. Use the most specific code possible. For known places of birth outside the U.S., enter 998 (geocode unknown). For unknown place of birth, enter 999.

YEAR	REFERENCE(S)
1/1/93 to 12/31/97	SEER Program Code Manual, Revised, page 71 (http://seer.cancer.gov/manuals/historic/codeman_1992.pdf)
1/1/93 to 12/31/02	Registry Operations and Data Standards (ROADS), page 70 (http://www.facs.org/cancer/coc/roads/roads1996.pdf)
1/1/98 to 12/31/03	SEER Program Code Manual, Third Edition, page 76 (http://seer.cancer.gov/manuals/codeman.pdf)
1/1/03 to 12/31/03	Facility Oncology Registry Data Standards (FORDS) Original (2003) , page 56 (http://www.facs.org/cancer/coc/fords/fordsoriginal2003.pdf)
1/1/04 to present	Facility Oncology Registry Data Standards (FORDS) 2004, page 56 (http://www.facs.org/cancer/coc/fords/fordsrevised0605.pdf)
1/1/04 to present	SEER Program Coding and Staging Manual 2004, page 41 (http://seer.cancer.gov/manuals/2004Revision%201/SPM_2004_maindoc.r1.pdf)

Note: When page numbers are given, they refer to the page numbers that appear in the document (i.e., on the "page"), not the page of the PDF. PDF pagination includes title pages, front-matter and other pages that are not usually included in hard-copy pagination.

Date of Birth

Record the patient's date of birth as mmddccyy. If the complete date of birth is unknown, use 99 in either the month (mm) or day (dd) fields, but try to obtain the year of birth.

YEAR	REFERENCE(S)
1/1/93 to 12/31/97	SEER Program Code Manual, Revised, page 72 (http://seer.cancer.gov/manuals/historic/codeman_1992.pdf)
1/1/93 to 12/31/02	Registry Operations and Data Standards (ROADS), page 71 (http://www.facs.org/cancer/coc/roads/roads1996.pdf)
1/1/98 to 12/31/03	SEER Program Code Manual, Third Edition, page 77 (http://seer.cancer.gov/manuals/codeman.pdf)
1/1/03 to 12/31/03	Facility Oncology Registry Data Standards (FORDS) Original (2003) , page 57 (http://www.facs.org/cancer/coc/fords/fordsoriginal2003.pdf)
1/1/04 to present	Facility Oncology Registry Data Standards (FORDS) 2004, page 57 (http://www.facs.org/cancer/coc/fords/fordsrevised0605.pdf)
1/1/04 to present	SEER Program Coding and Staging Manual 2004, page 42 (http://seer.cancer.gov/manuals/2004Revision%201/SPM_2004_maindoc.r1.pdf)

Note: When page numbers are given, they refer to the page numbers that appear in the document (i.e., on the "page"), not the page of the PDF. PDF pagination includes title pages, front-matter and other pages that are not usually included in hard-copy pagination.

Occupation and Industry

Usual Occupation Text

Record the patient's usual occupation (the kind of work performed during most of the patient's working life before diagnosis of this tumor). Do *not* record "retired." If *usual* occupation is not available or is unknown, record the patient's current or most recent occupation or any known occupation.

If the patient was a housewife/househusband and did *not* work outside the home for most of her/his adult life, record "housewife" or "househusband." If the patient was not a student or housewife and never worked, record "never worked" as the usual occupation. If no information is available, leave blank.

Occupation Code

This code is assigned by WVCCR in accordance with US Census and NPCR guidelines.

Company or Industry Text

This is a text field. Record the company or industry for the above occupation. If unknown, leave blank.

Industry Code

This code is assigned by WVCCR in accordance with US Census and NPCR guidelines.

PROVIDE SUFFICIENT TEXT DOCUMENTATION FOR USUAL OCCUPATION AND COMPANY OR INDUSTRY TO PERMIT CODING OF THESE ITEMS BY WVCR.

Census Tract and Associated Items

Census Tract, Census Coding System and Census Tract Certainty are all coded by WVCR using rules developed by SEER, the methods promulgated by NAACCR (http://www.naaccr.org/filesystem/pdf/GIS%20handbook%206-3-03.pdf) and Census Tract data from the United States Census Bureau (http://www.census.gov/).

YEAR	REFERENCE(S)
1/1/93 to 12/31/97	SEER Program Code Manual, Revised, pages 69 and 70 (http://seer.cancer.gov/manuals/historic/codeman_1992.pdf)
1/1/93 to 12/31/03	SEER Program Code Manual, Third Edition, pages 72 to 74 (http://seer.cancer.gov/manuals/codeman.pdf)
1/1/04 to present	SEER Program Coding and Staging Manual 2004, pages 38 and 39 (http://seer.cancer.gov/manuals/2004Revision%201/SPM_2004_maindoc.r1.pdf)

Note: When page numbers are given, they refer to the page numbers that appear in the document (i.e., on the "page"), not the page of the PDF. PDF pagination includes title pages, front-matter and other pages that are not usually included in hard-copy pagination.

Race 1, 2, 3, 4 and 5

Accurate reporting of race is vital to understanding the burden of cancer in West Virginia, describing race-associated differences in cancer incidence and tracking temporal changes in race-associated disparities in stage at diagnosis and treatment. The following codes are to be used for race:

CODE	DESCRIPTION
01	White
02	Black
03	American Indian, Aleutian, or Eskimo
04	Chinese
05	Japanese
06	Filipino
07	Hawaiian
08	Korean
09	Asian Indian, Pakistani
10	Vietnamese
11	Laotian
12	Hmong
13	Kampuchean (includes Khmer and Cambodian)
14	Thai (**cases diagnosed after 12/31/1993**)
20	Micronesian, NOS
21	Chamorran
22	Guamanian, NOS
25	Polynesian, NOS
26	Tahitian
27	Samoan
28	Tongan
30	Melanesian, NOS
31	Fiji Islander
32	New Guinean
88	No Further Race Documented (**cases diagnosed after 12/31/1999)**
96	Other Asian (Asian, NOS; Oriental, NOS)
97	Pacific Islander, NOS
98	Other
99	Unknown

For cases diagnosed prior to 1/1/2000, Race 2, Race 3, Race 4, and Race 5 should be blank. For cases diagnosed after 12/31/1999, it is possible to code up to five races, in accordance with prevailing US Census standards for reporting race http://www.census.gov/population/www/socdemo/race/Directive_15.html). The following general guidelines should be used for cases diagnosed since 12/31/1999 (see the below noted references to SEER manuals for detailed instructions and examples):

1. If only one race is noted, it should be coded to Race 1 and Race 2-5 should be coded as 88.

2. If more than one race is noted and ANY of the races are Hawaiian, code Hawaiian (07) in Race 1 and the other races in Race 2-5.

3. If more than one race is noted but NONE of the races are Hawaiian, code Race 1 as the first stated non-white race and the remaining stated races to the remaining stated races to Race 2-5.

4. Under some circumstances, race can be coded from nationality or place of birth. For details, see Appendix G, which provides US Census and Vital Statistics guide for assigning race. Please note that this should be used only when race is not coded.

US Census and Vital Statistics guide for assigning race based on national origin is provided in Appendix G.

YEAR	REFERENCE(S)
1/1/93 to 12/31/97	SEER Program Code Manual, Revised, pages 74 and 75 (http://seer.cancer.gov/manuals/historic/codeman_1992.pdf)
1/1/93 to 12/31/02	Registry Operations and Data Standards (ROADS), page 73 (http://www.facs.org/cancer/coc/roads/roads1996.pdf)
1/1/98 to 12/31/03	SEER Program Code Manual, Third Edition, pages 79 to 80 (http://seer.cancer.gov/manuals/codeman.pdf)
1/1/03 to 12/31/03	Facility Oncology Registry Data Standards (FORDS) Original (2003) , pages 59 to 64 (http://www.facs.org/cancer/coc/fords/fordsoriginal2003.pdf)
1/1/04 to present	Facility Oncology Registry Data Standards (FORDS) 2004, pages 59 to 64 (http://www.facs.org/cancer/coc/fords/fordsrevised0605.pdf)
1/1/04 to present	SEER Program Coding and Staging Manual 2004, pages 45 to 56 (http://seer.cancer.gov/manuals/2004Revision%201/SPM_2004_maindoc.r1.pdf)

Note: When page numbers are given, they refer to the page numbers that appear in the document (i.e., on the "page"), not the page of the PDF. PDF pagination includes title pages, front-matter and other pages that are not usually included in hard-copy pagination.

Spanish/Hispanic Origin

Spanish/Hispanic origin is NOT dependent on race. A person of Spanish or Hispanic origin may be of any race. The following codes are to be used for Spanish/Hispanic Origin:

CODE	DESCRIPTION	EFFECTIVE DATE
0	Non-Spanish/Non-Hispanic (includes Portugese, Brazilians and Filipinos, which are not Spanish or Hispanic)	1/1/93
1	Mexican (includes Chicano)	1/1/93
2	Puerto Rican	1/1/93
3	Cuban	1/1/93
4	South or Central American (except Brazil)	1/1/93
5	Other specified Spanish/Hispanic origin (includes European, excludes Dominican Republic)	1/1/93
6	Spanish, NOS, Hispanic, NOS, Latino, NOS There is evidence, other than surname or maiden name, that the person is Hispanic but s/he cannot be assigned to any of the categories 1-5	1/1/93
7	Spanish surname only The only evidence of the person's Hispanic origin is the surname or maiden name and there is no contrary evidence that the person is not Hispanic	1/1/94
8	Dominican Republic	1/1/05
9	Unknown whether Spanish/Hispanic	1/1/93

YEAR	REFERENCE(S)
1/1/93 to 12/31/97	SEER Program Code Manual, Revised, page 76 (http://seer.cancer.gov/manuals/historic/codeman_1992.pdf)
1/1/93 to 12/31/02	Registry Operations and Data Standards (ROADS), page 74 (http://www.facs.org/cancer/coc/roads/roads1996.pdf)
1/1/98 to 12/31/03	SEER Program Code Manual, Third Edition, page 81 (http://seer.cancer.gov/manuals/codeman.pdf)
1/1/03 to 12/31/03	Facility Oncology Registry Data Standards (FORDS) Original (2003) , page 65 (http://www.facs.org/cancer/coc/fords/fordsoriginal2003.pdf)
1/1/03 to present	Facility Oncology Registry Data Standards (FORDS) 2004, page 65 (http://www.facs.org/cancer/coc/fords/fordsrevised0605.pdf)
1/1/04 to present	SEER Program Coding and Staging Manual 2004, page 57 (http://seer.cancer.gov/manuals/2004Revision%201/SPM_2004_maindoc.r1.pdf)

Note: When page numbers are given, they refer to the page numbers that appear in the document (i.e., on the "page"), not the page of the PDF. PDF pagination includes title pages, front-matter and other pages that are not usually included in hard-copy pagination.

IHS Link

Linkage to the Indian Health Service is performed by the West Virginia Cancer Registry in accordance with National Program of Cancer Registry Program Standards.

Computed Ethnicity and Computed Ethnicity Source

These variables are filled by the West Virginia Cancer Registry using Rocky Mountain Cancer Data Systems in accordance with SEER rules.

YEAR	REFERENCE(S)
1/1/93 to 12/31/03	SEER Program Code Manual, Third Edition, page 82 (http://seer.cancer.gov/manuals/codeman.pdf)
1/1/04 to present	SEER Program Coding and Staging Manual 2004, pages 58 and 59 (http://seer.cancer.gov/manuals/2004Revision%201/SPM_2004_maindoc.r1.pdf)

Note: When page numbers are given, they refer to the page numbers that appear in the document (i.e., on the "page"), not the page of the PDF. PDF pagination includes title pages, front-matter and other pages that are not usually included in hard-copy pagination.

Sex

The following codes are to be used for sex:

CODE	DESCRIPTION
1	Male
2	Female
3	Other (hermaphrodite)
4	Transexual
9	Unknown

YEAR	REFERENCE(S)
1/1/93 to 12/31/97	SEER Program Code Manual, Revised, page 77 (http://seer.cancer.gov/manuals/historic/codeman_1992.pdf)
1/1/93 to 12/31/02	Registry Operations and Data Standards (ROADS), page 75 (http://www.facs.org/cancer/coc/roads/roads1996.pdf)
1/1/98 to 12/31/03	SEER Program Code Manual, Third Edition, page 83 (http://seer.cancer.gov/manuals/codeman.pdf)
1/1/03 to 12/31/03	Facility Oncology Registry Data Standards (FORDS) Original (2003) , page 66 (http://www.facs.org/cancer/coc/fords/fordsoriginal2003.pdf)
1/1/04 to present	Facility Oncology Registry Data Standards (FORDS) 2004, page 66 (http://www.facs.org/cancer/coc/fords/fordsrevised0605.pdf)
1/1/04 to present	SEER Program Coding and Staging Manual 2004, page 61 (http://seer.cancer.gov/manuals/2004Revision%201/SPM_2004_maindoc.r1.pdf)

Note: When page numbers are given, they refer to the page numbers that appear in the document (i.e., on the "page"), not the page of the PDF. PDF pagination includes title pages, front-matter and other pages that are not usually included in hard-copy pagination.

Tobacco History

Although standard setting organizations have abandoned this variable, West Virginia code requires that it be collected. The codes are as follows:

CODE	DESCRIPTION
0	Never used
1	Cigarette smoker, current
2	Cigar/pipe smoker, current
3	Snuff/chew/smokeless, current
4	Combination use, current
5	Previous use
9	Unknown

YEAR	REFERENCE(S)
1/1/93 to present	Registry Operations and Data Standards (ROADS), page 86 (http://www.facs.org/cancer/coc/roads/roads1996.pdf)

Alcohol History

Although standard setting organizations have abandoned this variable, West Virginia code requires that it be collected. The codes are as follows:

CODE	DESCRIPTION
0	No history of alcohol use
1	Current use of alcohol
2	Past history of alcohol use, does not currently use
9	Unknown

YEAR	REFERENCE(S)
1/1/93 to present	Registry Operations and Data Standards (ROADS), page 87 (http://www.facs.org/cancer/coc/roads/roads1996.pdf)

Family History of Cancer

Although standard setting organizations have abandoned this variable, West Virginia code requires that it be collected. The codes are as follows:

CODE	DESCRIPTION
0	No family history of cancer
1	Yes, family history of cancer
9	Unknown

YEAR	REFERENCE(S)
1/1/93 to present	Registry Operations and Data Standards (ROADS), page 85 (http://www.facs.org/cancer/coc/roads/roads1996.pdf)

Chapter

9

Abstracting: Cancer Identification

TEXT DOCUMENTATION IS REQUIRED.

YOU MUST PROVIDE SUFFICIENT TEXT DOCUMENTATION TO SUBSTANTIATE CODING.

Date of Initial Diagnosis

Record the appropriate code for the month, day, and year (mmddccyy) of diagnosis. This date refers to the date of first diagnosis of this cancer by any recognized medical practitioner. This is often a clinical diagnosis and may not ever be confirmed histologically. Even if confirmed later, *the diagnosis date refers to the date of the first clinical diagnosis and not to the date of confirmation* (refer to diagnostic language on page 5). If upon medical and/or pathological review of a previous condition the patient is deemed to have a cancer at an earlier date, then this earlier date is the date of diagnosis, i.e., the date of diagnosis is back-dated.

> Example: A March 12, 2004 mammogram reveals a mass in the upper-outer quadrant of a patient's right breast compatible with carcinoma. On March 20, 2004, the patient has an excisional breast biopsy that confirms infiltrating ductal carcinoma. Date of diagnosis is 3/12/2004.
>
> Example: A physician notes a prostate nodule that is suspicious for cancer during a May 12, 2004 physical examination. On June 15, 2004, an

ultrasound guided needle biopsy of the prostate provides histologic confirmation of adenocarcinoma. Date of diagnosis is 5/12/2004.

If the physician states that, in retrospect, the patient had cancer at an earlier date, use the earlier date as the date of diagnosis.

Example: A patient has a total abdominal hysterectomy for endometriosis in January 1995. The patient is admitted to the hospital with abdominal pain and distention in November 1996. A laparoscopy with omental biopsy shows metastatic cystadenocarcinoma. Pathologists review the 1995 hysterectomy specimen. They identify an area of cystadenocarcinoma in the left ovary. Date of diagnosis is 1/99/1995.

The date of diagnosis for "Autopsy Only" cases is the date of death.

If the exact date of diagnosis is unknown, enter the best estimate based on available information. Approximation is preferable to recording unknown. Some approximation guidelines include:

a. For a case diagnosed before a patient entered the hospital, such as in a clinic or physician's office, the date of first hospital admission may be used if it seems that the patient was hospitalized within one month from the true date of diagnosis by the referring physician.

b. If the only information is spring, middle, or fall of the year, approximate these as April, July, or October, respectively. For winter, it is important to discern whether the beginning or the end of the year is meant before estimating the month.

c. If there is no basis for approximation, code the month 99.

d. If necessary, estimate the year.

e. The date of first cancer-directed therapy may be used as the date of diagnosis if the cancer-directed therapy was initiated prior to the definitive diagnosis of cancer, which was later confirmed.

f. If the patient is diagnosed elsewhere before entering the reporting institution and the date of diagnosis is unknown, record the date the patient was first seen at the reporting institution as the date of diagnosis.

Codes for Month

CODE	MONTH	CODE	MONTH	CODE	MONTH
01	January	06	June	11	November
02	February	07	July	12	December
03	March	08	August	99	Unknown month
04	April	09	September		
05	May	10	October		

Codes for Day

01
02
03
..
..
31
99 Unknown day

Codes for Year

Code the four-digit year.
Record 9999 for unknown year

DESCRIPTION	DATE CODE
Spring	April
Middle of the year	July
Fall of the year	October
Winter	Try to determine if it means the beginning or edn of the year. Code January or December as indicated.

YEAR	REFERENCE(S)
1/1/93 to 12/31/97	SEER Program Code Manual, Revised, page 88 (http://seer.cancer.gov/manuals/historic/codeman_1992.pdf)
1/1/93 to 12/31/02	Registry Operations and Data Standards (ROADS), pages 101 and 102 (http://www.facs.org/cancer/coc/roads/roads1996.pdf)
1/1/98 to 12/31/03	SEER Program Code Manual, Third Edition, page 88 (http://seer.cancer.gov/manuals/codeman.pdf)
1/1/03 to 12/31/03	Facility Oncology Registry Data Standards (FORDS) Original (2003) , pages 89 to 90 (http://www.facs.org/cancer/coc/fords/fordsoriginal2003.pdf)
1/1/04 to present	Facility Oncology Registry Data Standards (FORDS) 2004, pages 89 to 90 (http://www.facs.org/cancer/coc/fords/fordsrevised0605.pdf)
1/1/04 to present	SEER Program Coding and Staging Manual 2004, pages 65 to 68 (http://seer.cancer.gov/manuals/2004Revision%201/SPM_2004_maindoc.r1.pdf)

Note: When page numbers are given, they refer to the page numbers that appear in the document (i.e., on the "page"), not the page of the PDF. PDF pagination includes title pages, front-matter and other pages that are not usually included in hard-copy pagination.

Primary Site

Record the *International Classification of Disease for Oncology, Third Edition*, (ICD-O-3) code for the primary anatomical site where the malignancy originates. Omit the decimal point, and omit the leading C.

Example: Female breast, upper outer quadrant will be recorded as 504.

Primary site codes may be found in the Topography, Numeric Section (pages 45-65) in ICD-O-3, or in the Alphabetic Index (pages 105-218) of ICD-O-3, which includes both Topography and Morphology terms.

When reviewing a medical record to obtain the primary site, make certain the operative report, surgical pathology report, radiology report, and progress notes are reviewed. The face sheet may not have the primary site as specific as the operative note or the pathology report.

Summary of Principal Rules for Using ICD-O, Third Edition

Corresponding ICD-O-2 rule numbers are provided in parentheses.

Rule A (2). ***Topographic regions and ill-defined sites:*** **If the diagnosis does not specify the tissue of origin, code the appropriate tissues suggested in the alphabetic index for each ill-defined site in preference to the "NOS" category.** Ill-defined sites, such as "arm," have several component tissues. For example, "squamous cell carcinoma of the arm" should be coded to C44.6 (skin of arm) rather than to C76.4 (arm, NOS). There are a few exceptions to this, such as chin and forehead, because these regions are predominantly composed of skin, and the NOS category was therefore assigned to skin.

Rule B (3). ***Prefixes:*** **If a topographic site is modified by a prefix such as peri-, para-, or the like, and is not specifically listed in ICD-O-3, code to the appropriate ill-defined subcategory C76 (ill-defined site), unless the type of tumor indicates origin from a particular tissue.** This general rule also applies to imprecise phrases such as "area of" or "region of."

Rule C (4). ***Tumors involving more than one topographic category or subcategory:*** **Use subcategory ".8" when a single tumor overlaps the boundaries of two or more categories or subcategories and its point of origin cannot be determined.** Because more categories have been allotted to neoplasms in ICD-10 than in ICD-9, some previous three-digit categories have been replaced by two three-character categories.

Rule D (12). ***Topography codes for lymphomas:*** **If the site of origin of the lymphoma is in the lymph nodes, code to C77._. If a lymphoma involves multiple lymph node regions, code to C77.8 (lymph nodes of multiple regions). Code extranodal lymphomas to the site of origin, which may not be the site of the biopsy. If no site is indicated for a lymphoma and it is suspected to be extranodal, code to C80.9 (unknown primary site).** Lymphomas occur in specific sites, for example stomach, as well as in one or more lymph nodes and therefore are not assigned a site-specific topography code. Lymphomas occurring in specific sites are called extranodal.

Rule E (13). ***Topography code for leukemia:*** **Code all leukemias except myeloid sarcoma (M-9930/3) to C42.1 (bone marrow).**

Rule F (5). ***Behavior code in morphology:*** **Use the appropriate 5th digit behavior code even if the exact term is not listed in ICD-O.** Use of the 5th digit behavior code number that fits the diagnosis, even though the exact term is not listed in ICD-O. For example, "benign chordoma" as a diagnosis should be coded M-9370/0. If the pathologist states that the behavior differs from the usual behavior as given in ICD-O, code as the pathologist indicates.

Rule G (6). ***Grading or differentiation code:*** **Assign the highest grade or differentiation code described in the diagnostic statement.** If a diagnosis indicates two different degrees of grade or differentiation (such as "well and poorly differentiated" or grades II-III"), code to the higher grade.

The 6th digit may also be used for identifying cell origin for lymphomas and leukemias. In these lymphatic and hematopoietic diseases, T-cell (code 5), B-cell (code 6), Null cell(code 7), and NK cell(code 8) take priority over grade codes 1-4.

Rule H (8,9). ***Site-associated morphology terms:*** **Use the topography code provided when a topographic site is not stated in the diagnosis. This topography code should be disregarded if the tumor is known to arise at another site.** The appropriate site-specific codes are listed in parentheses after morphology terms for neoplasms that usually occur in the same site or tissue, for example "retinoblastoma" (C69.2). If no site is indicated in the diagnosis, the site-specific code should be used (in this case, the site should be coded to retina C69.2).

If a site is given that is different from the site indicated by the suggested code, use the site code appropriate to the diagnosis. This should be done only after thoroughly reviewing the case to ascertain that the neoplasm at the site mentioned is not a metastasis.

Only three-character codes are given for some sites, for example C44._ (skin), because the appropriate fourth-digit cannot be assigned in advance. Use the detail provided in the actual diagnosis to assign the subsite.

Certain neoplasms have names that could be interpreted as implying a topographic location (pseudotopographic morphology terms), but these entities should not necessarily be coded to that site. For example, bile duct carcinoma is a tumor frequently arising in intrahepatic bile ducts of liver (C22.1).

Rule I. Intentionally, there is no Rule I in ICD-O-3. There is a Rule 1 in ICD-O-1 and ICD-O-2, and to keep "Rule 1" separate from "Rule I," the editors of ICD-O-3 elected to intentionally not include a Rule I.

Rule J (10). ***Compound morphology diagnoses:*** **Change the order of word roots in a compound term if the term is not listed in ICD-O.** Not all forms of compound words are listed in ICD-O-3. For example, "myxofibrosarcoma" is not in ICD-O-3 but "fibromyxosarcoma" is. The coder must check various permutations of the prefixes if the first one is not found.

Rule K (11). ***Coding multiple morphology terms:*** **When no single code includes all diagnostic terms, use the numerically higher code number if the diagnosis of a single tumor includes two modifying adjectives with different code numbers.** If a term has two or more modifying adjectives which have different code numbers, code to the one with the highest code number, as it is usually more specific.

Paired Organ (Laterality)

Record the one-digit code to denote the side of the body. The laterality code describes the primary site only and should be coded independently for each primary.

CODE	DESCRIPTION
0	Not a paired organ
1	Right is origin of primary
2	Left is origin of primary
3	Only one side involved, right or left origin not specified
4	Bilateral involvement, side of origin unknown, stated to be single primary. *Including*: Both ovaries involved simultaneously with a single histology; Bilateral retinoblastomas; and Bilateral Wilms' tumors.
9	Paired site, but lateral origin unknown; midline tumor

Laterality at diagnosis describes this primary site only.

Use code "3" if laterality is unknown but tumor is confined to a single side of the paired organ.

Use code "9" when there is a midline tumor or when there is a paired site but laterality is unknown because disease is extensive.

Example: Medical oncology referral states "patient has a solitary 2 cm carcinoma in the upper pole of the kidney." Code laterality as "3," because laterality is not specified but tumor is known not to be present in both sides of a paired site.

Example: Admitting history states that patient has positive sputum cytology but is being treated with radiation to painful bony metastases. Code laterality as "9," because there is no information concerning laterality in the implied diagnosis of lung cancer and the case is metastatic.

Example: Patient has a melanoma just above the umbilicus excised as an outpatient. Use laterality code "9," midline.

Both sides of a paired organ may be simultaneously involved with tumors. If the tumors are of the same histologic type, the patient may have one or two primaries. Consult the managing physician or the registry advisor. If there are two primaries, complete two abstracts. Code each primary to the appropriate laterality and stage. If there is one primary, prepare one abstract and code laterality to the side of origin. If there is a single primary and the side of origin cannot be identified, code laterality as "4" and prepare a single abstract.

Record laterality for unknown primary site (C80.9) lymphoma (C77.-) and hematopoietic and reticuloendothelial systems (C42.-) as 0 (not a paired organ). Laterality codes of 1 - 9 *must* be used for the following sites, except where noted.

ICD-O-3	**SITE**
C07.9	Parotid gland
C08.0	Submandibular gland
C08.1	Sublingual gland
C09.0	Tonsillar fossa
C09.1	Tonsillar pillar
C09.8	Overlapping lesion of tonsil
C09.9	Tonsil, NOS
C30.0	Nasal cavity (excluding nasal cartilage and nasal septum)
C30.1	Middle ear
C31.0	Maxillary sinus
C31.2	Frontal sinus
C34.0	Main bronchus (excluding carina)
C34.1-C34.9	Lung
C38.4	Pleura

ICD-O-3	SITE
C40.0	Long bones of upper limb and scapula
C40.1	Short bones of upper limb
C40.2	Long bones of lower limb
C40.3	Short bones of lower limb
C41.3	Rib and clavicle (excluding sternum)
C41.4	Pelvic bones (excluding sacrum, coccyx and symphysis pubis)
C44.1	Skin of eyelid
C44.2	Skin of external ear
C44.3	Skin of other and unspecified parts of face
C44.5	Skin of trunk
C44.6	Skin of upper limb and shoulder
C44.7	Skin of lower limb and hip
C47.1	Peripheral nerves and autonomic nervous system of upper limb and shoulder
C47.2	Peripheral nerves and autonomic nervous system of lower limb and hip
C49.1	Connective, subcutaneous and other soft tissues of upper limb and shoulder
C49.2	Connective, subcutaneous and other soft tissues of lower limb and hip
C50.0-C50.9	Breast
C56.9	Ovary
C57.0	Fallopian tube
C62.0-C62.9	Testis
C63.0	Epididymis
C63.1	Spermatic cord
C64.9	Kidney, NOS
C65.9	Renal pelvis
C66.9	Ureter

ICD-O-3	SITE
C69.0-C69.9	Eye and lacrimal gland
C70.0	Cerebral meninges, NOS (excluding diagnoses prior to 2004)
C71.0	Cerebrum (excluding diagnoses prior to 2004)
C71.1	Frontal lobe (excluding diagnoses prior to 2004)
C71.2	Temporal lobe (excluding diagnoses prior to 2004)
C71.3	Parietal lobe (excluding diagnoses prior to 2004)
C71.4	Occipital lobe (excluding diagnoses prior to 2004)
C72.2	Olfactory nerve (excluding diagnoses prior to 2004)
C72.3	Optic nerve (excluding diagnoses prior to 2004)
C72.4	Acoustic nerve (excluding diagnoses prior to 2004)
C72.5	Cranial nerve, NOS (excluding diagnoses prior to 2004)
C74.0-C74.9	Adrenal gland
C75.4	Carotid body

Number of Primaries

The set of rules to be applied in determining the number of primaries depend on the year of diagnosis and, for diagnosis year 2007 have become considerably more complex. In general, regardless of the year of diagnosis, the rules rely on the number of tumors present, the primary site and laterality (if applicable), the histology and the time interval between diagnoses. The following is a summary of the rules that should be used by diagnosis year:

YEAR	REFERENCE(S)
1/1/93 to 12/31/97	SEER Program Code Manual, Revised, page 7 to 36 (http://seer.cancer.gov/manuals/codeman.pdf)
1/1/93 to 12/31/02	Registry Operations and Data Standards (ROADS), pages 17 to 21 and Appendix B (http://www.facs.org/cancer/coc/roads/roads1996.pdf)
1/1/98 to 12/31/03	SEER Program Code Manual, Third Edition, pages 7 to 37 (http://seer.cancer.gov/manuals/codeman.pdf)
1/1/01 to present, hemato-poietic	National Cancer Institute Abstracting and Coding Guide for the Hematopoietic Diseases (https://cissecure.nci.nih.gov/ncipubs/details.asp?pid=1094) and Facility Oncology Registry Data Standards (FORDS), Appendix B (http://www.facs.org/cancer/coc/fordsmanual.html)

YEAR	REFERENCE(S)
1/1/03 to 12/31/03	Facility Oncology Registry Data Standards (FORDS) Original (2003) , pages 10 to 14 (http://www.facs.org/cancer/coc/fords/fordsoriginal2003.pdf)
1/1/03 to 12/31/03	Facility Oncology Registry Data Standards (FORDS), pages 15 to 20 (http://www.facs.org/cancer/coc/fords/fordsrevised0605.pdf)
1/1/04 to 12/31/06	SEER Program Coding and Staging Manual 2004, pages 7 to 19 (http://seer.cancer.gov/manuals/2004Revision%201/SPM_2004_maindoc.r1.pdf)
2007	2007 Multiple Primary and Histology Coding Rules (http://seer.cancer.gov/tools/mphrules/)

Note: When page numbers are given, they refer to the page numbers that appear in the document (i.e., on the "page"), not the page of the PDF. PDF pagination includes title pages, front-matter and other pages that are not usually included in hard-copy pagination.

ICD-O-3 Rules for Diagnoses Prior to 1/1/07

Multiple Primary and Histology Rules for Diagnoses Prior to 1/1/07

Determining Multiple Primaries: Solid Malignant Tumors

(See separate sections for hematopoietic primaries and benign and borderline primary intracranial and central nervous system tumors (CNS)

Terms
The words "**tumor**," "**neoplasm**," "**mass**," and "**lesion**" are used interchangeably throughout this manual.

The terms "**original**" and "**initial**" are synonymous**.**

Definitions:

Focal: Limited to one specific area

Foci/focus: The starting point of a disease process, a single cell.

Laterality describes the right or left side of the body or the right or left of a paired organ such as the right kidney or the left kidney. Unilateral describes a single organ/side. Bilateral describes both organs/sides.

Metachronous tumors are multiple tumors or lesions that occur greater than two months from the original/initial diagnosis.

Multicentric: A primary tumor with satellites in surrounding tissue.

Multifocal: Multiple tumors arising from two or more locations.

Non-synchronous (**Metachronous**) tumors are multiple masses or lesions that occur greater than two months from the original/initial diagnosis.

Paired Organ: Two separate organs, a right and a left. For example right breast and left breast.

Primary site is the anatomical portion of the body where the cancer originated.

Simultaneous tumors are multiple tumors identified at the time of diagnosis.

Synchronous tumors are multiple tumors diagnosed within two months of the original/initial diagnosis.

Single primary describes one distinctive reportable cancer.

Single Tumor is a single lesion. A single tumor may **invade regional** organs by traveling along the mucosa or extending through the organ wall into **regional** tissue or organ A single tumor may have **multiple or mixed** histologies.

> ***Example 1:*** Colon primary: a large tumor originating in the ascending colon with intramucosal spread into the transverse colon. Abstract as a single primary and record the primary site as ascending colon.
>
> ***Example 2:*** The patient has multiple papillary urothelial bladder tumors with in situ spread into the ureters. Abstract as a single primary and record the primary site as bladder. (Mucosal spread of a urinary tract tumor may be called "field affect" or "regional diathesis").

How to Determine Same vs. Different Primary Site (Based on ICD-O-3 Topography Code)

1. The **third numeric digit** after the 'C' describes a subsite of the organ; it is **not used** to define individual (different) sites.

   Example: C50_ is the code for breast and the third numeric digit, C50<u>5</u> describes a subsite of the breast, the lower-outer quadrant.

   ***Exceptions*:** For the following sites, a difference in the third numeric digit designates a different primary site:
   - ***Colon (C18_)***
   - ***Anus and anal canal (C21_)***
   - ***Bones, joints, and articular cartilage (C40_-C41_)***
   - ***Melanoma of skin (C44_)***
   - ***Peripheral nerves and autonomic nervous system (C47_)***
   - ***Connective, subcutaneous and other soft tissues (C49_)***

Example: If the patient has a melanoma on the skin of the scalp (C444) and another melanoma on the calf of the right leg (C447), these are two different primary sites because the third numeric digit of the site code is different.

2. If the **first two numeric digits** after the C are **identical**, it is the **same site**.

   Example: If there is a tumor in the lower outer quadrant of the right breast (C505) and a separate tumor in the upper outer quadrant of the right breast, (C504), it is the same site.

   Possible exception: **Paired organ**: There are specific rules for paired organs. See the Multiple Primary Rules.

3. If there is any difference in the first two numeric digits after the C, it is a **different** site.

   Example: Stomach, NOS (C169) and small intestine, NOS (C179) are different sites because the second numeric digit is not identical.

   Exception: **ICD-O-1** and **ICD-O-2/ICD-O-3 groupings**: The second edition of the *International Classification of Diseases for Oncology* (ICD-O-2) split several site codes into categories having differences in the second numeric digit after the C. The second and third edition ICD-O topography codes are identical. The SEER Program continues to use most of the ICD-O-1 subcategory site groupings to prevent artificial changes in site-specific incidence. When the patient has **multiple independent** tumors, any combination of site codes within the same row in the table are the same primary site. Use this table for in situ and/or invasive tumors. (Do not use this table for a single tumor with extension into another site).

SEER Site Grouping Table

The purpose of the table in this manual is to group sites that are treated as a single site when abstracting a case.

ICD-O-3 CODE	SITE GROUPINGS	CODE TO
C01 C02	Base of tongue Other and unspecified parts of tongue	C029 Tongue, NOS
C05 C06	Palate Other and unspecified parts of mouth	C069 Mouth, NOS
C07 C08	Parotid gland Other and unspecified major salivary glands	C089 Major salivary glands, NOS
C09 C10	Tonsil Oropharynx	C109 Oropharynx, NOS
C12 C13	Pyriform sinus Hypopharynx	C139 Hypopharynx, NOS
C23 C24	Gallbladder Other and unspecified parts of the biliary tract	C249 Biliary tract, NOS
C30 C31	Nasal cavity and middle ear Accessory sinuses	C319 Accessory sinuses, NOS
C33 C34	Trachea Bronchus and lung	C349 Lung, NOS
C37 C380 C381-3 C388	Thymus Heart Mediastinum Overlapping lesion of heart,, mediastinum, and pleura	C383 Mediastinum, NOS
C51 C52 C577 C578-9	Vulva Vagina Other specified female genital organs Unspecified female genital organs	C579 Female genital, NOS

ICD-O-3 CODE	SITE GROUPINGS	CODE TO
C569 C570 C571 C572 C573 C574	Ovary Fallopian tube Broad ligament Round ligament Parametrium Uterine adnexa	Code C569 (ovary) when ovary is one of the involved sites Code C579 (female genital, NOS) when only non-ovarian sites are involved.
C60 C63	Penis Other and unspecified male genital organs	C639 Male genital, NOS
C64 C65 C66 C68	Kidney Renal pelvis Ureter Other and unspecified urinary organs	Code C649 when one of the involved organs is kidney Code C689 (Urinary system, NOS) when only non-kidney sites are involved
C74 C75	Adrenal gland Other endocrine glands and related structures	C759 Endocrine gland, NOS

Note: This table is **not** identical to the table in ICD-O-3. Two combinations of sites are listed in the ICD-O-3 but not in the SEER table: C19 (rectosigmoid) and C20 (rectum) and C40 (bones of limbs) and C41 (bones of other sites). Multiple tumors in the rectosigmoid and rectum are different sites. Multiple tumors in C40 and C41 are different sites.

How to Determine Same vs. Different Histology (Based on ICD-O-3 Histology Codes)

1. If the **first three digits of the ICD-O-3 histology codes are the same,** it is the same histology.

   Exception: The ICD-O-3 histology code for non-small cell carcinoma (8046) is a separate morphology group from the small cell histologies (codes 8040 – 8045). Even though the first three digits are the same, they are different histologies.

Multiple Primary Rules for Solid Tumors

Definitions

Simultaneous tumors are identified at the time of diagnosis.

Synchronous tumors are diagnosed within two months of the original/initial diagnosis.

The multiple primary rules are presented in two formats, text and table. Note that the rule numbers in both formats are identical.

Use the following rules to determine whether to report a single primary or multiple primaries. Coding rules for the data items mentioned such as primary site, histology, laterality, etc. are not described in detail in this section; refer to the instructions for coding each data item elsewhere in this manual.

Rules for Single Tumor

Rule 1: **A single lesion composed of one histologic type is a single primary, even if the lesion crosses site boundaries.**

Example 1: A single lesion involving the tongue and floor of mouth is one primary.

Example 2: A single, large mucinous adenocarcinoma involving the sigmoid and descending colon segments is one primary.

Rule 2: A single lesion composed of multiple (different) histologic types is a single primary even if it crosses site boundaries.

The most frequent combinations of histologic types are listed in ICD-O-3. For example, combination terms such as "adenosquamous carcinoma (8560/3)" or "small cell-large cell carcinoma (8045/3)" are included. A single lesion composed of mixed or multiple histologies is a single primary.

Example 1: A single lesion containing both embryonal cell carcinoma and teratoma is a single primary and would be coded to 9081/3, mixed embryonal carcinoma and teratoma.

Example 2: A single lesion of the liver composed of neuroendocrine carcinoma (8246/3) and hepatocellular carcinoma (8170/3) is a single primary and would be coded to the more specific histology, neuroendocrine carcinoma 8246/3.

Rules for Multiple Tumors

Rule 3a: Simultaneous multiple lesions of the same histologic type within the same site (i.e., multi*focal* tumors in a single organ or site) are a single primary. If one lesion has a behavior code of in situ /2 and the other lesion has a behavior code of malignant /3, this is a single primary whose behavior is malignant /3.

Example 1: At nephrectomy, two separate, distinct foci of renal cell carcinoma are found in the specimen, in addition to the 3.5 cm primary renal cell carcinoma. Abstract as a single primary.

Example 2: At mastectomy for removal of a 2 cm invasive ductal carcinoma, an additional 5 cm area of intraductal carcinoma was noted. Abstract as one invasive primary.

Rule 3b: If a new cancer of the same histology as an earlier one is diagnosed in the same site within two months, this is a single primary cancer.

Example: Adenocarcinoma in adenomatous polyp (8210) in sigmoid colon removed by polypectomy in December 2004. At segmental resection in January 2005, an adenocarcinoma in a tubular adenoma (8210) adjacent to the previous polypectomy site was removed. *Count as one primary.*

Rule 4: If both sides of a paired organ are involved with the same histologic type within two months of the initial diagnosis

a. It is one primary if the physician states the tumor in one organ is metastatic from the other.

i. Code the laterality to the side in which the primary originated
ii. Code the laterality as 4 if it is unknown which in which side the primary originated

b. Code as multiple primaries if the physician states these are independent primaries or when there is no physician statement that one is metastatic from the other.

Exception 1: Simultaneous bilateral involvement of the **ovaries** with the same histology is one primary and laterality is coded '4' when it is unknown which ovary was the primary site.

Exception 2: Bilateral **retinoblastomas** are a single primary with laterality of '4'.

Exception 3: Bilateral **Wilms** tumors are always a single primary with laterality of '4.'

Rule 5: If a tumor with the same histology is identified in the same site at least two months after the initial/original diagnosis **(metachronous)**, this is a **separate primary.**

***Exception 1*:** This is a single primary only when the physician documents that the initial/original tumor gave rise to the later tumor.

Example 1: Infiltrating duct carcinoma of the upper outer quadrant of the right breast diagnosed March 2004 and treated with lumpectomy. Previously unidentified mass in left inner quadrant right breast noted in July 2004 mammogram. This was removed and found to be infiltrating duct carcinoma. Abstract the case as two primaries.

Example 2: During the workup for a squamous cell carcinoma of the vocal cord, a second squamous cell carcinoma is discovered in the tonsillar fossa. Abstract as two primaries.

Exception 2: Effective with cases diagnosed January 1995 and later, if an in situ tumor is followed by an invasive cancer in the same site more than two months apart, report as two primaries even if stated to be a recurrence. The invasive primary should be reported with the date of the *invasive* diagnosis. (***Note:*** The purpose of this guideline is to ensure that the case is counted as an incident case (i.e., invasive) when incidence data are analyzed.)

SEER registries must use the COC data item Type of First Recurrence to determine multiple primaries when the first primary is in situ followed by an invasive 'recurrence' (according to COC) that has to be reported to SEER as a new invasive primary. The principal codes that must be reviewed are shown below.

COC Data Item - Type of First Recurrence
If the tumor was originally diagnosed as in situ and the recurrence code is 16, 17, 26, 27, 36, or 46 then the 'recurrence' must be reported as a new case.

16 Local recurrence of an in situ tumor, NOS
17 Both local and trocar recurrence of an in situ tumor.
26 Regional recurrence of an in situ tumor, NOS.
27 Recurrence of an in situ tumor in adjacent tissue or organ(s) and in regional lymph nodes at the same time.
36 Both regional recurrence of an in situ tumor in adjacent tissue or organ(s) and/or regional lymph nodes (26 or 27) and local and/or trocar recurrence (16 or 17).
46 Distant recurrence of an in situ tumor.

Exception 3: Report as a single primary and prepare a single abstract for the first invasive lesion:

- Multiple invasive adenocarcinomas of the prostate (C619)
- Multiple invasive blader cancers (C670 – C679) with histology codes 8120-8131

Example 1: Urothelial bladder tumor removed by transurethral resection of the bladder (TURB). At three month check-up, a new urothelial tumor is removed. Abstract as one primary of the bladder.

Example 2: Patient has elevated PSA and a needle biopsy that shows adenocarcinoma in the right lobe of the prostate. Patient and clinician opt for "watchful waiting." Four months later, PSA

is higher and patient has a second biopsy, which shows adenocarcinoma in the left lobe. Abstract as one primary of the prostate.

Exception 4: Kaposi sarcoma (9140) is reported only once and is coded to the site in which it arises. Code the primary site to skin (C44_) when Kaposi sarcoma arises in skin and another site simultaneously.. If no primary site is stated, code the primary site to skin, NOS (C449).

Rule 6: Multiple synchronous lesions of different histologic types within a single paired or unpaired organ are separate primaries.

Example 1: A patient undergoes a partial gastrectomy for adenocarcinoma of the body of the stomach. In the resected specimen, the pathologist finds both adenocarcinoma and nodular non-Hodgkin lymphoma. Abstract two primaries.

Exception 1: Multiple lesions in a single site occurring within two months: if one lesion is carcinoma, NOS, adenocarcinoma, NOS, sarcoma, NOS, or melanoma, NOS and the second lesion is more specific, such as large cell carcinoma, mucinous adenocarcinoma, spindle cell sarcoma, or superficial spreading melanoma, abstract as a single primary and code the histology to the more specific term.

Exception 2: For colon and rectum tumors:

a. When an adenocarcinoma (8140/_; in situ or invasive) arises in the same segment of the colon or rectum as an adenocarcinoma in a polyp (8210/_, 8261/_, 8263/_), abstract a single primary and code the histology as adenocarcinoma (8140/_).
b. Familial adenomatous polyposis (FAP) (8220) with malignancies arising in polyps in the same or multiple segments of the colon or rectum, abstract as a single primary.

Exception 3: There are certain sites in which multiple foci of tumor and multiple histologic types are commonly found together. These multifocal, multi-histologic tumors occur most frequently in the thyroid (papillary and follicular), bladder (papillary and transitional cell) and breast (combinations of ductal and lobular, and combinations of Paget disease and ductal/intraductal). They are abstracted as a single primary with a mixed histology. In such cases, consult ICD-O-3 for a list of the most frequent histologic combinations.

Example 1: A thyroid specimen contains two separate carcinomas— one papillary and the other follicular. Abstract one primary when the histology is papillary and follicular (8340).

Example 2: Abstract one primary when **multiple bladder** tumors are **papillary urothelial** (8130) and/or **transitional** cell (8120).

Example 3: *A* left mastectomy specimen yields lobular carcinoma in the upper inner quadrant and intraductal carcinoma in the lower inner quadrant. Code one primary.

Example 4: A right mastectomy specimen yields Paget in the nipple and a separate underlying ductal carcinoma. Code one primary. Assign the combination code 8543 (Ductal and Paget disease).

Rule 7: Multiple synchronous lesions of different histologic types in paired organs are multiple primaries. If **one histologic type is reported in one side of a paired organ and a different histologic type is reported in the other paired organ**, these are two primaries unless there is a statement to the contrary.

Example 1: If a ductal tumor occurs in one breast and a lobular tumor occurs in the opposite breast, these are two separate primaries.

Rule 8: Multiple metachronous lesions of different histologic types within a single site are separate primaries.

Rule 9: Multiple lesions of different histologic types occurring in different sites are separate primaries whether occurring simultaneously or at different times.

Example 1: In 1999, the patient had a mucin-producing carcinoma of the transverse colon. In 2002, the patient was diagnosed with an astrocytoma of the frontal lobe of the brain. Abstract as separate primaries.

Example 2: During the workup for a transitional cell carcinoma of the bladder, the patient has a TURP that shows adenocarcinoma of the prostate. Abstract as separate primaries.

Rule 10: Multiple lesions of the same histologic type occurring in different sites are separate primaries unless stated to be metastatic.

Table of Rules to Determine Multiple Primaries for Solid Tumors

RULE	TUMORS	SITE(S)	HISTOLOGY	VARIABLES	TIMING	SINGLE VS. MULTIPLE PRIMARY
1	Single	NA	NA		NA	Single
2	Single	NA	Different		NA	Single
3a	Multiple	Same	Same	Non-paired or only one side of paired organ	Simultaneous or synchronous	Single
3b	Multiple	Same	Same	Non-paired or only one side of paired organ	Simultaneous or synchronous	Single
4	Multiple	Same (bilateral)	Same	Both sides of paired organ involved	Simultaneous or synchronous	Multiple unless physician states one is metastatic. ***Exceptions:*** Bilateral tumors: Ovary (same histology), retinoblastoma, or Wilms tumor are a single primary
5	Multiple	Same	Same		Metachronus	Multiple unless physician states recurrent or metastatic ***Exceptions:*** 1. Report as a **singl**e primary: a. Invasive prostate with histology (8140)

RULE	TUMORS	SITE(S)	HISTOLOGY	VARIABLES	TIMING	SINGLE VS. MULTIPLE PRIMARY
						b. Invasive bladder with histologies (8120-8130) c. Kaposi sarcoma (9140) 2. For all sites: Report as multiple primaries: In situ followed by invasive **even if stated to be recurrence**.
6	Multiple	Same	Different	Single paired or unpaired organ	Simultaneous or synchronous	Multiple ***Exceptions:*** The following are single primaries: 1. One histology is a more specific histology than the other (NOS and specific). 2. Colon: a. (Adeno) carcinoma and (adeno) carcinoma arising in a polyp. b. Familial adenomatous polyposis (FAP) with malignancies arising in polyps. 1. Histology combinations commonly found together a. Thyroid (follicular and papillary) b. Bladder (transitional and papillary) 2. Breast: if two lesions in one breast are:

RULE	TUMORS	SITE(S)	HISTOLOGY	VARIABLES	TIMING	SINGLE VS. MULTIPLE PRIMARY
						a. Lobular and ductal b. Paget disease and ductal or intraductal
7	Multiple	Same	Different	Both sides of paired organ	Simultaneous or synchronous	Multiple ***Exceptions:*** Report as single: 1. If stated to be metastatic
8	Multiple	Same	Different		More than 2 months after original/initial tumor	Multiple
9	Multiple	Different	Different		NA	Multiple
10	Multiple	Different	Same		NA	Multiple unless stated to be metastatic ***Exception:*** Wilms tumor

Multiple Primary Rules for Solid Tumors - Rule Number Conversion Table

This table displays the current Multiple Primary Rules for Solid Tumors by rule number compared to the SEER Program Code Manual 3rd edition rule(s).

CURRENT RULE NUMBER	SPCM 3RD EDITION RULE NUMBER	COMMENT
1	1	
2	2	
3a	4a	
3b	3	Former Rule 3 is now two rules: Rule 3b and Rule 5
4a	6a, ii	
4b	6a, i	
4b, exception 1	6a, exception 1	
4b, exception 2	6a, exception 2	Former Rule 6a, exception 2 is now two exceptions: Rule 4b, exception 2 and Rule 4b, exception 3
4b, exception 3	6a, exception 2	Former Rule 6a, exception 2 is now two exceptions: Rule 4b, exception 2 and Rule 4b, exception 3
5	3	Former Rule 3 is now two rules: Rule 3b and Rule 5
5, exception 1	3	
5, exception 2	3, exception 2	
5, exception 3	3, exception 1	
5, exception 4	3, exception 3	

CURRENT RULE NUMBER	SPCM 3RD EDITION RULE NUMBER	COMMENT
6	5a	
6, exception 1	5, exception 1	
6, exception 2, a	5, exception 1, i and ii	
6, exception 2, b		
7	6b	
8	5a	
9	5b	
10	4b	

Determining Multiple Primaries: Hematopoietic Primaries (Lymphoma and Leukemia)

If the physician clearly states that a hematopoietic diagnosis is a new primary, use that information. If there is no clear information from the physician, use the SEER table "Definitions of Single and Subsequent Primaries for Hematologic Malignancies" to determine multiple primaries. Go to http://seer.cancer.gov/icd-o-3/ to download the SEER table in PDF format.

Determining Multiple Primaries: Benign and Borderline Primary Intracranial and CNS Tumors (C70.0-C72.9, C75.1-C75.3)

Definitions

Same site: The first two numeric digits of the ICD-O-3 topography code are identical.

Different site: The first two numeric digits of the ICD-O-3 topography code are different.

Timing: The amount of time between the original and subsequent tumors is not used to determine multiple primaries because the natural biology of non-malignant tumors is that of expansive, localized growth.

How to Determine Same vs Different Histologies (Based on Histologic Groupings)

When there are **multiple tumors**, use the following table to determine if the tumors are the same histology or different histologies.

Histologic groupings to determine same histology for non-malignant brain tumors

HISTOLOGIC GROUP	ICD-O-3 CODE
Choroid plexus neoplasms	9390/0, 9390/1
Ependymomas	9383, 9394, 9444
Neuronal and neuronal-glial neoplasms	9384, 9412, 9413, 9442, 9505/1, 9506
Neurofibromas	9540/0, 9540/1, 9541, 9550, 9560/0
Neurinomatosis	9560/1
Neurothekeoma	9562
Neuroma	9570
Perineurioma, NOS	9571/0

Instructions for Using Histologic Group Table

1. **Both** histologies are listed **in** the **table**

    a. Histologies that are in the same **grouping** or row in the table are the **same histology**.
    b. ***Note:*** Histologies that are in the same grouping are a progression, differentiation or subtype of a single histologic category.
    c. Histologies listed in **different groupings** in the table are **different histologies**.

2. One or both of the **histologies** is **not** listed **in** the **table**

    a. If the **ICD-O-3 codes** for both histologies have the **identical** first three digits, the histologies are the **same**.
    b. If the first three digits of the **ICD-O-3** histology code are **different**, the histology types are different.

Multiple Primary Rules for Benign and Borderline Primary Intracranial and CNS Tumors

The multiple primary rules are presented in two formats, text and table. Note that the rule numbers in both formats are identical.

Use the following rules to determine whether to report a single primary or multiple primaries. Coding rules for the data items mentioned such as primary site, histology, laterality, etc. are not described in detail here; refer to the instructions for coding each data item.

Note: If there is a **single tumor**, it is always a **single** primary

Rule 1: Multiple non-malignant tumors of the **same histology** that recur in the **same site** and **same side** (laterality) as the original tumor are recurrences (single primary) even after 20 years.

Rule 2: Multiple non-malignant tumors of the **same histology** that recur in the **same site** and it is unknown if it is the same side (laterality) as the original tumor are recurrences (single primary) even after 20 years.

Rule 3: Multiple non-malignant tumors of the same histology in **different sites** of the CNS are separate (multiple) primaries.

Rule 4: Multiple non-malignant tumors of the same histology in **different sides** (laterality) of the CNS are separate (multiple) primaries.

Rule 5: Multiple non-malignant tumors of different histologies are separate (multiple) primaries)

Table of Rules to Determine Multiple Primaries for Benign and Borderline Primary Intracranial and CNS Tumors

RULE #	SITE	LATERALITY	HISTOLOGY	PRIMARY(IES)
1	Same	Same	Same	Single
2	Same	Unknown	Same	Single
3	Different	Any	Same	Multiple
4	Same	Different sides of the same site in the CNS	Same	Multiple
5	Any	Any	Different	Multiple

New Multiple Primary and Histology Coding Rules

Training materials on the 2007 Multiple Primary and Histology Coding Rules are available at http://seer.cancer.gov/tools/mphrules/training.html. A summary of the general rules as they apply to multiple primaries follows:

General Instructions

Equivalent Or Equal Terms

Multicentric, multifocal

Tumor, mass, lesion, neoplasm

Definitions

Note: Use these terms and definitions for all reportable cases *except lymphoma and leukemia primaries (M9590-9989)*.

Bilateral: Relating to the right **and** left sides of the body or of a body structure; bilaterality is **not** an indication of single or multiple primaries.

Clinical Diagnosis: A diagnosis that is not microscopically confirmed. It may be based on information from diagnostic imaging or the clinician's expertise.

Contiguous tumor: A single tumor that involves, invades, or bridges adjacent or connecting sites or subsites.

Focal: An adjective meaning limited to one specific area. A focal cancer is limited to one specific area or organ. The area may be microscopic **or** macroscopic.

Foci: Plural of focus.

Focus: A term used by pathologists to describe a group of cells that can be seen only by a microscope. The cells are noticeably different from the surrounding tissue either by their appearance, chemical stain, or other testing.

Laterality: Indication of which side of a paired organ/site a tumor is located. (See Paired organ/site)

Most representative specimen: The pathologic specimen from the surgical procedure that removed the most tumor tissue.

Multiple primaries: More than one reportable case.

Overlapping tumor: The involved sites are adjacent (next to each other) and the tumor is contiguous.

Paired organ/site: There are two sides, one on the left side of the body and one on the right side of the body. (See Laterality)

Recurrence: This term has two meanings:

1. The reappearance of disease that was thought to be cured or inactive (in remission). Recurrent cancer starts from cancer cells that were not removed or destroyed by the original therapy.
2. A new occurrence of cancer arising from cells that have nothing to do with the earlier (first) cancer. A new or another occurrence, incidence, episode, or report of the same disease (cancer) in a general sense – a new occurrence of cancer.

Single primary: One reportable case.

Unilateral: Relating to one side of the body or one side of a body structure.

Determining Multiple Primaries for Solid Malignant Tumors

Note: The rules do not apply to hematopoietic primaries (lymphoma and leukemia) of any site or to the reportable benign or borderline intracranial or CNS tumors..

A. General Information

1. Use these rules to determine the number of reportable primaries. Do not use these rules to determine case reportablility, stage, or grade.
2. The 2007 multiple primary and histology coding rules replace all previous multiple primary and histology coding rules.
3. The rules are effective for cases diagnosed January 1, 2007 and after. Do not use these rules to abstract cases diagnosed prior toJanuary 1, 2007.
4. Read the General Instructions and the site-specific Equivalent Terms and Definitions before using the multiple primary rules.
5. The multiple primary and histology coding rules are available in three formats: flowchart, text, and matrix. The rules are identical,only the formats differ. Use the rules in the format that is easiest for you to follow.
6. Notes and examples are included with some of the rules to highlight key points or to add clarity to the rules.
7. Do not use a physician's statement to decide whether the patient has a recurrence of a previous cancer or a new primary. Use themultiple primary rules as written unless a pathologist compares the present tumor to the

"original" tumor and states that this tumor is arecurrence of cancer from the previous primary.

8. Use the Determining Multiple Primaries: Hematopoietic Primaries (Lymphoma and Leukemia) rules and table "Definitions of Single and Subsequent Primaries for Hematologic Malignancies" to determine single versus multiple primaries for lymphoma and leukemia cases.

B. How to Use the Multiple Primary Rules

1. Use the Multiple Primary rules to make a decision on the number of primary malignancies to be abstracted for reportable solid malignant tumors.
2. Use the site-specific rules for the following primary sites:
    a. Brain, malignant (intracranial and CNS)
    b. Breast
    c. Colon
    d. Head and neck
    e. Kidney
    f. Lung
    g. Malignant melanoma of the skin
    h. Renal pelvis, ureter, bladder, and other urinary
3. Use the Other Sites rules for solid malignant tumors that occur in primary sites not covered by the site-specific rules.
4. Each module (Unknown if Single or Multiple Tumors, Single Tumor, Multiple Tumors) is an independent, complete set of coding rules. To determine which set of primary site rules to use:
    a. When there is no tumor in the primary site, only metastatic lesions are present:
        I. Use the primary site documented by a physician and use the multiple primary and histology coding rules for that primary site.
        II. If no primary site is documented, code the primary site as unknown and use the general multiple primary and histology coding rules. Use the "Unknown if Single or Multiple Tumors" module to determine multiple primaries and the "Single Tumor" module for coding histology.

b. To choose the appropriate module (Unknown if Single or Multiple Tumors, Single Tumor, Multiple Tumors),

   I. Use the multiple primary and histology coding rules for the primary site

   II. Determine the number of tumors

      i. Do not count metastatic lesions

      ii. When the tumor is only described as multicentric or multifocal and the number of tumors is not mentioned, use the "Unknownif Single or Multiple Tumors" module

      iii. When there is a tumor or tumors with separate microscopic foci, ignore the separate microscopic foci and use the "Single Tumor" or "Multiple Tumor" modules as appropriate

      iv. When the patient has a single tumor, use the "Single Tumor" module.

      v. If there are multiple tumors, use the "Multiple Tumor" module.

   III. See the Equivalent Terms and Definitions for Head and Neck for guidance in coding the primary site

   IV. Use the primary site documented by the physician on the medical record

5. If a single primary, prepare one abstract.
6. If there are multiple primaries, prepare two or more abstracts.
7. Rules are in hierarchical order within each module (Unknown if Single or Multiple Tumors, Single Tumor, and Multiple Tumors). Use the first rule that applies and

STOP.

Histologic Type ICD-O-3

The data item Histologic Type ICD-O-3 describes the microscopic composition of cells and/or tissue for a specific primary. The tumor type or histology is a basis for staging and determination of treatment options. It affects the prognosis and course of the disease.

The *International Classification of Diseases for Oncology*, Third Edition (ICD-O-3) is the standard reference for histology codes for tumors diagnosed in 2001 and later. Do not record the 'M' that precedes the histology code. See sections *Coding Guidelines for Topography and Morphology.* and *Summary of Principal Rules for Using the ICD-O*, Third Edition for guidance in using the ICD-O-3.

Information about the 2007 Histology Coding Rules

Note: Do not use these rules to determine case reportability.

1. The 2007 multiple primary rules **replace all previous** multiple primary **rules**.
2. The rules are **effective** for cases **diagnosed January 1, 2007** and after. Do not use these rules to abstract cases diagnosed prior to January 1, 2007.
3. The histology coding rules are available in **three formats**: flowchart, text, and matrix. The **rules are identical**, only the formats differ. Use the set of rules in the format that is easiest for you to follow.
4. **Notes** and **examples** are included with some of the rules to **highlight key points** or to add **clarity** to the rules.
5. Rules are in **hierarchical** order within each section (Single Tumor and Multiple Tumors Abstracted as a Single Primary).

How to Use the Rules

1. Read the **General Instructions**.
2. Read the **site-specific Equivalent Terms and Definitions**.
3. Use these rules to make a decision on coding the histology for all reportable solid malignant tumors.
4. Use the multiple primary rules to determine whether the patient has a single or multiple primaries before coding the histology.
5. Code the histology for **each** primary in a **separate abstract**.
6. Use the **site-specific rules** for the following primary sites:
    a. Brain, malignant (intracranial and CNS)
    b. Breast
    c. Colon
    d. Head and neck
    e. Kidney

f. Lung

g. Malignant melanoma of the skin

h. Renal pelvis, ureter, bladder, and other urinary

7. Use the **Other Sites rules** for all solid malignant tumors that occur in primary sites **not included** in the site-specific rules.

8. Determine whether the patient has a single tumor or multiple tumors that will be abstracted as a single primary

   a. Do not count metastatic tumors

   b. When the tumor is described as multifocal or multicentric, use the Multiple Tumors module

   c. When there is a tumor or tumors with separate foci of tumor do not count the foci

   d. Only count the tumors that will be used to prepare that abstract. For example, when there are two tumors that will be abstracted as multiple primaries, you would use the Single Tumor modules to determine the histology code for each of the abstracts..

9. **Each section** (Single Tumor and Multiple Tumors Abstracted as a Single Primary) is an independent, **complete set of coding rules**. For example, if the patient has multiple tumors, that will be abstracted as a single primary start with the first rule under the heading Multiple Tumors Abstracted as a Single Primary. Do not use any of the rules under the header Single Tumor.

10. Use the first rule that applies and

STOP.

Priority Order for Using Documents to Code Histology

Medical records frequently include multiple pathology reports and references to histologic diagnosis. Use the following instructions to identify which reports best represent the histology to be coded.

1. Pathology report:

   a. From the **most representative** tumor specimen examined

   b. From the **final diagnosis**

   Note 1: Use information from **addenda** and **comments** associated with the final diagnosis to code the histology.

Note 2: A **revised/amended diagnosis** replaces the original final diagnosis. Code the histology from the revised/amended diagnosis.

Note 3: The new rules **limit** the information **to the final diagnosis**. The old rules allowed coding from information in the microscopic description.You will only use information from the microscopic portion of the pathology report when instructed to do so in one of the site-specific rules.

2. Cytology report.
3. When you do not have either a pathology report or cytology report:
    a. Documentation in the medical record that references pathology or cytology findings
    b. From mention of type of cancer (histology) in the medical record

Ambiguous Terms Used to Code Histology

When any of the ambiguous terms are used to describe a more specific histology, code the more specific histology.

Ambiguous terms that are characteristic (used to code histology)

Apparent(ly)	Favor(s)	Consistent with
Appears	Most likely	Suspect(ed)
Comparable with	Presumed	Suspicious (for)
Compatible with	Probable	Typical (of)

Multiple Primary/Histology New Data Items

The new MP/H Rules include several new data items. In keeping with NPCR requirements, WVCR does not require these items at present, but does recommend that they be reported. Details of the new items follow.

Ambiguous Terminology

This data item identifies all cases, including DCO and autopsy only, which are accessioned based only on ambiguous terminology. Registrars are required to collect cases with ambiguous terminology and it is advantageous to be able to identify those cases in the database.

CODE	LABEL	DEFINITION	TIME FRAME	EXAMPLES
0	Conclusive term	There was a conclusive diagnosis within 60 days of the original diagnosis. Case was accessioned based on conclusive terminology. Includes all diagnostic methods such as clinical diagnosis, cytology, pathology, etc.	Within 60 days of date of initial diagnosis	1. Adenocarcinoma in TURP chips. 2. Mammogram suspicious for DCIS. Excisional biopsy 1 week later positive for DCIS.
1	Ambiguous term only	The case was accessioned based only on ambiguous terminology. There was no conclusive terminology during the first 60 days following the initial diagnosis. Includes all diagnostic methods except cytology. ***Note:*** Cytology is excluded because registrars are not required to collect cases with ambiguous terms describing a cytology diagnosis.	Not applicable	1. Chest MRI shows a malignant appearing lesion in the right upper lobe. Patient refused further workup or treatment. 2. Pt with elevated PSA admitted for TRUS. Biopsy. Pathology: Prostatic chips: Consistent with adenocarcinoma. No further information is available

CODE	LABEL	DEFINITION	TIME FRAME	EXAMPLES
2	Ambiguous term followed by conclusive term	The case was originally assigned a code 1 (was accessioned based only on ambiguous terminology). More than 60 days after the initial diagnosis the information is being updated to show that a conclusive diagnosis was made by any diagnostic method including clinical diagnosis, cytology, pathology, autopsy, etc.	60 days or more after the date of initial diagnosis	The biopsy of the thyroid reads: most likely thyroid cancer. Three months later a biopsy is positive for papillary follicular cancer. The case would have been coded 1 Ambiguous term only. Change the code to 2 Ambiguous term followed by conclusive term.
9	Unknown term	There is no information about ambiguous terminology.	Not applicable	

Ambiguous terminology Terms that have been mandated as reportable when used in a diagnosis. See the reportable list below for a complete listing of those terms. See the 2007 SEER Coding and Staging Manual or the FORDS for detailed instructions on how to use the list.

Examples:

Clinical: a physician's statement that the patient most likely has lung cancer.

Laboratory tests: A CBC suspicious for leukemia.

Pathology: A prostate biopsy compatible with adenocarcinoma

Conclusive terminology A clear and definite statement of cancer. The statement may be from a physician (clinical diagnosis); or may be from a laboratory test, autopsy, cytologic findings, and/or pathology

Examples:

Clinical: a physician's statement that the patient has lung cancer.

Laboratory tests: A CBC diagnostic of acute leukemia.

Cytologic findings: A FNA (fine needle aspiration) with findings of infiltrating duct carcinoma of the breast.

Pathology: A colon biopsy showing adenocarcinoma

Ambiguous terms that are reportable

Apparent(ly)
Appears (effective with cases diagnosed 1/1/1998 and later)
Comparable with (effective with cases diagnosed 1/1/1998 and later)
Compatible with (effective with cases diagnosed 1/1/1998 and later)
Consistent with
Favor(s)
Malignant appearing (effective with cases diagnosed 1/1/1998 and later)
Most likely
Presumed
Probable
Suspect(ed)
Suspicious (for)
Typical (of)

Coding Instructions

1. Use **Code 0** when a case is accessioned based on conclusive terminology. The diagnosis includes clear and definite terminology describing the malignancy within 60 days of the original diagnosis.

   Note: Usually the patient undergoes a diagnostic work-up because there is a suspicion of cancer (ambiguous terminology). For example, a mammogram may show calcifications suspicious for intraductal carcinoma; the date of the mammogram is the date of initial diagnosis. When there is a clear and definite diagnosis within 60 days of that mammogram (date of initial diagnosis) such as the pathology from an excisional biopsy showing intraductal carcinoma, assign a code 0.

2. Use **Code 1** when a case is accessioned based on ambiguous terminology and there is no clear and definite terminology used to describe the malignancy within 60 days of the date of initial diagnosis. The diagnosis may be from a pathology report, a radiology report, an imaging report, or on the medical record.

3. Use **Code 2** when a case is accessioned based on ambiguous terminology followed by clear and definite terminology more than 60 days after the initial diagnosis.

4. Follow-back to a physician or subsequent readmission (following the initial 60 days period) may eventually confirm cancer (conclusive cancer term more than 60 days after ambiguous term). Assign **Code 2**.

5. Leave this data item blank for cases diagnosed prior to 01/01/2007.

Cases accessioned based on ambiguous terminology (**Code 1)** should be excluded from case selection in research studies. Direct patient contact is not recommended.

Date of Conclusive Terminology

For those cases originally accessioned based on ambiguous terminology only, this data item documents the date of a definite statement of malignancy. The abstractor will change the code for the data item "Ambiguous Terminology" from a 1 to a 2 and enter the date that the malignancy was described clearly and definitely in Date of Conclusive Terminology.

Date

Date fields are recorded in the month, day, century, year format (MMDDCCYY) with 99 for unknown month or day and 9999 for unknown year.

Special Codes

CODE	DESCRIPTION
00000000	Accessioned based on ambiguous terminology only (Code 1 in data item "Ambiguous Terminology")
88888888	Not applicable. The case was accessioned based on conclusive diagnosis (Code 0 in data item "Ambiguous Terminology")
99999999	Unknown date; unknown if diagnosis was based on ambiguous terminology or conclusive terminology (Code 9 in data item "Ambiguous Terminology"

Leave this field blank for cases diagnosed prior to 01/01/2007.

Multiplicity Counter

This data item is used to count the number of tumors (multiplicity) reported as a single primary. Do not count metastatic tumors. Use the multiple primary rules for the specific site to determine whether the tumors are a single primary or multiple primaries.

Example 1: The patient has a 2 cm infiltrating duct carcinoma in the LIQ and a 1 cm infiltrating duct carcinoma in the UIQ of the left breast. Accession as a single primary and enter the number 02 in the data item Multiplicity Counter

Example 2: Operative report for TURB mentions multiple bladder tumors. Pathology report: Papillary transitional cell carcinoma present in tissue from bladder neck, dome, and posterior wall. Record 99 (multiple tumors, unknown how many) in Multiplicity Counter.

Example 3: Pathology from colon resection shows a 3 cm adenocarcinoma in the ascending colon. Biopsy of liver shows a solitary metastatic lesion compatible with the colon primary. Record 01 in Multiplicity Counter (do not count the metastatic lesion).

Example 4: Patient has an excisional biopsy of the soft palate. The pathology shows clear margins. Record 01 in the Multiplicity Counter. Within six months another lesion is excised from the soft palate. Use the head and neck multiple primary rules to determine this tumor is not accessioned as a second primary. Change the Multiplicity Counter to code 02 to reflect the fact that there were two separate tumors abstracted as a single primary.

Example 5: CT of chest shows two lesions in the left lung and a single lesion in the right lung. Biopsy of the right lung lesions shows adenocarcinoma. No other workup is done. Using the multiple primary rules for lung, the case is abstracted as a single primary. Enter the number 03 in the data item Multiplicity Counter.

CODE	DESCRIPTION
01	One tumor only
02	Two tumors present
03	Three tumors present
..	
..	
88	Information on multiple tumors not collected/not applicable for this site
99	Multiple tumors present, unknown how many

Coding Instructions

1. Code the number of tumors being abstracted as a single primary.
2. Do not count metastasis.
3. When there is a tumor or tumors with separate single or multiple foci, ignore/do not count the foci
4. Use code 01 when
    a. There is a single tumor in the primary site being abstracted
    b. There is a single tumor with separate foci of tumor
    c. It is unknown if there is a single tumor or multiple tumors and the multiple primary rules instructed you to default to a single tumor
5. Use code 88 for:
    a. Leukemia
    b. Lymphoma
    c. Immunoproliferative disease
    d. Unknown primary
6. Use code 99 when
    a. The original pathology report is not available and the documentation does not specify whether there was a single or multiple tumors in the primary site.
    b. The tumor is described as multifocal or multicentric and the number of tumors is not mentioned.

c. The tumor is described as diffuse.

d. The operative or pathology report describes multiple tumors but does not give an exact number.

Leave this field blank for cases diagnosed prior to 01/01/2007.

Date of Multiple Tumors

This data item is used to identify the month, day and year the patient is diagnosed with multiple tumors reported as a single primary. Use the multiple primary rules for that specific site to determine whether the tumors are a single primary or multiple primaries.

Date

Date fields are recorded in the month, day, century, year format (MMDDCCYY) with 99 for unknown month or day and 9999 for unknown year.

Special Codes

CODE	DESCRIPTION
00000000	Single tumor
88888888	Information on multiple tumors not collected/not applicable for this site
99999999	Unknown date

Coding Instructions

When multiple tumors are present at diagnosis, record the date of diagnosis.

> ***Example 1:*** The patient has multiple tumors; a 2 cm infiltrating duct in the LIQ and a 1 cm infiltrating duct carcinoma in the UIQ of the left breast.
>
> According to the breast multiple primary rules these tumors are accessioned as a single primary. Enter the date of diagnosis in Date of Multiple Tumors.
>
> ***Example 2:*** Operative report for TURB mentions multiple bladder tumors. Pathology report: Papillary transitional cell carcinoma present in tissue from bladder neck, dome, and posterior wall. According to the Bladder, Renal Pelvis, and Ureter multiple primary rules these tumors are accessioned as a single primary. Enter the date of diagnosis in Date if Multiple Tumors.

When subsequent tumor(s) are counted as the same primary.

> ***Example:*** Patient has an excisional biopsy of a single tumor in the soft palate on January 2, 2007. The pathology shows clear margins. Record 01 in Multiplicity Counter. On July 10, 2007 another tumor is excised from the soft palate. The multiple primary rules for head and neck state that this

tumor is the same primary. Change the 01 in Multiplicity Counter to 02 and enter 07102007, the date the second tumor was diagnosed. in Date of Multiple Tumors.

Leave this field blank for cases diagnosed prior to 01/01/2007.

Type of Multiple Tumors Reported as One Primary

This data item is used to identify the type of multiple tumors that are abstracted as a single primary. Ignore metastatic tumors for this data item.

CODE	CODE TEXT	DESCRIPTION	EXAMPLES
00	Single tumor	All **single tumors.** Includes single tumors with both in situ and invasive components	Code 01 in the Multiplicity Counter
10	Multiple benign	At least two benign tumors in same organ/primary site Use this code for reportable tumors in **intracranial** and **CNS** sites only May be used for reportable by agreement cases	
11	Multiple borderline	At least two borderline tumors in the same organ/primary site Use this code for reportable tumors in **intracranial** and **CNS** sites only May be used for reportable by agreement cases	
12	Benign and borderline	At least one benign **AND** at least one borderline tumors in the same organ/primary site Use this code for reportable tumors in **intracranial** and **CNS** sites only May be used for reportable by agreement cases	

CODE	CODE TEXT	DESCRIPTION	EXAMPLES
20	Multiple in situ	At least two in situ tumors in the same organ/primary site	Cystoscopy report documents multiple bladder tumors. Pathology: Flat transitional cell carcinoma of bladder.
30	In situ and invasive	One or more in situ tumor(s) **AND** one or more invasive tumors in the same organ/primary site	
31	Polyp and adenocarcinoma	One or more polyps with either • In situ carcinoma or • invasive carcinoma **AND** one or more frank adenocarcinoma(s) in the same segment of colon, rectosigmoid, and/or rectum	
32	FAP with carcinoma	Diagnosis of familial polyposis (FAP) **AND** carcinoma (in situ or invasive) is present in at least one of the polyps	
40	Multiple invasive	At least two invasive tumors in the same organ	
80	Unk in situ or invasive	Multiple tumors present in the same organ/primary site, unknown if in situ or invasive	
88	NA	Information on multiple tumors not collected/not applicable for this site	Leukemia, lymphoma, immunoproliferative diseases, and unknown primaries. All codes 88 in Multiplicity Counter
99	Unk	Unknown	Code 99 in Multiplicity counter, and DCO cases.

Histologic Type ICD-O-3

The data item Histologic Type describes the microscopic composition of cells and/or tissue for a specific primary. In the rare instance where there is no tissue pathology, code the histology the medical practitioner uses to describe the tumor. The tumor type or histology is a basis for staging and determination of treatment options. It affects the prognosis and course of the disease.

The *International Classification of Diseases for Oncology*, Third Edition (ICD-O-3) is the standard reference for coding the histology for tumors diagnosed in 2001 and later (ICD-O-2 should be used for those diagnosed between 1/1/93 and 12/31/00). Do not record the 'M' that precedes the histology code. Refer to *ICD-O-3* for guidance in coding the histology. See sections *Coding Guidelines for Topography and Morphology.* and *Summary of Principal Rules for Using the ICD-O*, Third Edition.

The histology can be coded only after the determination of multiple primaries has been made.

Synonyms and Equivalent Terms

Mixed, **combined**, and **complex** are **usually** used as synonyms when describing histology.

Definitions

Cancer, NOS (8000) and **carcinoma**, NOS (8010) are not interchangeable.

Carcinoma, NOS (8010) and **adenocarcinoma** (8140) are interchangeable (See ICD-O-3).

Complex (mixed, combined) histology: The pathologist uses **multiple histologic terms** to describe a tumor. The histologic terms are frequently connected by the word "and" (for example ductal and lobular carcinoma).

Different histology: The first three digits of the ICD-O-3 histology code are different.

Different subtypes: The NOS cell types often have multiple subtypes; for example, scirrhous adenocarcinoma (8143), adenocarcinoma, intestinal type (8144), and linitis plastica (8141) are subtypes of Adenocarcinoma, NOS (8140).

Majority of Tumor:

TERMS THAT MEAN THE MAJORITY OF TUMOR	TERMS THAT DO NOT MEAN THE MAJORITY OF TUMOR
Predominantly	With foci of
With features of	Focus of/focal
Major	Areas of
Type(1)	Elements of
With…..differentiation(1)	Component(1)
Pattern (Only if written in College of American Pathologists [CAP] Protocol) (2)	
Architecture (Only if written in College of American Pathologists [CAP] Protocol) (2)	

(1) Effective 1/1/99
(2) Effective 1/1/03

Note: Examples of CAP protocols for specific primary sites may be found on the website - http://www.cap.org/cancerprotocols/protocols_intro.html

Mixed/combined histology: Different cell types in one tumor; terms used interchangeably. In most cases, the terms mixed and combined are used as synonyms; however the term mixed may designate a specific tumor.

Not Otherwise Specified (NOS): "Not Otherwise Specified."

Same histology: The first three digits of the ICD-O-3 histology code are identical.

Coding Instructions

Refer to "Determining Multiple Primaries" in the first section of this manual to determine the number of primaries. Use all of the information for a single primary to code the histology.

1. If there is no tumor specimen, code the histology described by the medical practitioner.

   Example 1: The patient has a CT scan of the brain with a final diagnosis of glioblastoma multiforme (9440). The patient refuses all

further workup or treatment. Code the histology to glioblastoma multiforme (9440).

***Example 2*:** If the physician says that the patient has carcinoma, code carcinoma, NOS (8010).

2. Use the histology stated in the **final diagnosis** from the pathology report. Use the pathology from the procedure that resected the majority of the primary tumor.

   If a more specific histologic type is definitively described in the microscopic portion of the pathology report or the comment, code the more specific diagnosis.

3. Lymphomas may be classified by the **WHO** Classification, **REAL** system, **Rappaport,** or **Working Formulation**. The WHO Classification is preferred. See page 13 in the ICD-O-3 for a discussion of hematologic malignancies.

4. Cases reported to wvcr cannot have a metastatic (/6) behavior code. If the only pathology specimen is from a metastatic site, code the appropriate histology code and the malignant behavior code /3. The primary site and its metastatic site(s) have the same basic histology.

Histology Coding Rules for Single Tumor

- The rules are in hierarchical order. Rule 1 has the highest priority.
- Use the rules in priority order.
- Use the first rule that applies to the case. (Do not apply any additional rules.)

1. Use a **combination** histology code if one exists, for example:

8255	Renal cell carcinoma, mixed clear cell and chromophobe types
8523	Infiltrating duct carcinoma mixed with other types of carcinoma
8524	Infiltrating lobular carcinoma mixed with other types of carcinoma
8560	Adenosquamous carcinoma
8045	Combined small cell carcinoma, combined small cell-large cell

2. Code the **more specific term** when one of the terms is "NOS" and the other is a more specific description of the same histology

Example 1: Pathology report reads poorly differentiated carcinoma, probably squamous in origin. Code the histology as squamous cell carcinoma rather than the non-specific term "carcinoma."

Example 2: The pathology report from a nephrectomy reads renal cell carcinoma (8312) (renal cell identifies the affected organ system rather than the histologic cell type) in one portion of the report and clear cell carcinoma (8310) (a histologic cell type) in another section of the report. Code clear cell carcinoma (8310); renal cell carcinoma (8312) refers to the renal system rather than the cell type, so renal cell is the less specific code.

Example: Pathology report reads infiltrating ductal carcinoma and cribriform ductal carcinoma in situ. Code the invasive histology 8500/3.

Exception: If the histology of the invasive component is an 'NOS' term (e.g., carcinoma, adenocarcinoma, melanoma, sarcoma), then code the histology of the specific term associated with the in situ component and an invasive behavior code.

3. Code the **majority** of tumor

a. Based on the pathology report description of the tumor.
b. Based on the use of majority terms. See definition for majority terms.

4. Code the **numerically higher** ICD-O-3 code. This is the rule with the lowest priority and shoud be used infrequently.

Histology Coding Rules for Multiple Tumors with Different Behaviors in the Same Organ Reported as a Single Primary

1. Code the histology of the invasive tumor when one lesion is in situ (/2) and the other is invasive (/3).

Example: At mastectomy for removal of a 2 cm invasive ductal carcinoma, an additional 5 cm area of intraductal carcinoma was

noted. Code histology and behavior as invasive ductal carcinoma (8500/3).

Histology Coding Rules for Multiple Tumors in Same Organ Reported as a Single Primary

1. Code the histology when multiple tumors have the same histology.

2. Code the histology to adenocarcinoma (8140/_; in situ or invasive) when there is an adenocarcinoma and an adenocarcinoma in a polyp (8210/_, 8261/_, 8263/) in the same segment of the colon or rectum.

3. Code the histology to carcinoma (8010/_; in situ or invasive) when there is a carcinoma and a carcinoma in a polyp (8210/_) in the same segment of the colon or rectum.

4. Use a **combination** code for the following:
   a. Bladder: Papillary and urothelial (transitional cell) carcinoma (8130)
   b. Breast: Paget Disease and duct carcinoma (8541)
   c. Breast: Duct carcinoma and lobular carcinoma (8522)
   d. Thyroid: Follicular and papillary carcinoma (8340)

5. Code the more specific term when one of the terms is 'NOS' and the other is a more specific description of the same histology.

6. Code all other multiple tumors with different histologies as multiple primaries.

How to determine same vs different histologies for benign and borderline primary intracranial and CNS tumors (C70.0-C72.9, C75.1-C75.3) (Based on histologic groupings)

When there are **multiple tumors**, use the following table to determine if the tumors are the same histology or different histologies.

Histologic groupings to determine same histology for non-malignant brain tumors

HISTOLOGIC GROUP	ICD-O-3 CODE
Choroid plexus neoplasm	9390/0, 9390/1
Ependymoma	9383, 9394, 9444
Neuronal and neuronal-glial neoplasm	9384, 9412, 9413, 9442, 9505, 9506
Neurofibroma	9540/0, 9540/1, 9541, 9550, 9560
Neurinomatosis	9560
Neurothekeoma	9562
Neuroma	9570
Perineurioma, NOS	9571

Instructions for Using Histologic Group Table

1. **Both** histologies are listed **in** the **table**
   a. Histologies that are in the same **grouping** or row in the table are the **same histology**.

      Note: Histologies that are in the same grouping are a progression, differentiation or subtype of a single histologic category.

   b. Histologies listed in **different groupings** in the table

2. One or both of the **histologies** is **not** listed **in** the **table** are **different histologies**.

   a. If the **ICD-O-3 codes** for both histologies have the **identical** first three digits, the histologies are the **same**.
   b. If the first three digits of the **ICD-O-3** histology code are **different**, the histology types are different.

Leukemia/Lymphoma (Chronic Lymphocytic Leukemia [CLL] and Small Lymphocytic Lymphoma [SLL])

Code the diagnosis of chronic lymphocytic leukemia (9823/3) and/or small lymphocytic lymphoma (9670/3) to SLL if there are positive lymph nodes or deposits of lymphoma/leukemia in organs or in other tissue. Code the histology to CLL if there are no physical manifestations of the disease other than a positive blood study or positive bone marrow.

Behavior Code

Codes

CODE	DESCRIPTION
0	Benign (Reportable for intracranial and CNS sites only)
1	Uncertain whether benign or malignant, borderline malignancy, low malignant potential, and uncertain malignant potential (Reportable for intracranial and CNS sites only)
2	Carcinoma in situ; intraepithelial; noninfiltrating; noninvasive
3	Malignant, primary site (invasive)

Coding Instructions

ICD-O-3 Histology/Behavior Code Listing

ICD-O-3 may have only one behavior code, either in situ /2 or malignant /3, listed for a specific histology. If the pathology report describes the histology as in situ /2 and the ICD-O-3 histology code is only listed with a malignant /3 behavior code, assign the histology code listed and change the behavior code to in situ /2. If the pathology report describes histology as malignant /3 and the ICD-O-3 histology code is only listed with an in situ /2 behavior code, assign the histology code listed and change the behavior code to malignant /3. See the Morphology and Behavior Code Matrix discussion on page 29 in ICD-O-3.

Example: The pathology report says large cell carcinoma in situ. The ICD-O-3 lists large cell carcinoma as 8013/3; there is only a malignant listing. Change the /3 to /2 and code the histology and behavior code to 8013/2 as specified by the physician.

Synonyms for in situ

AIN III (C211)	Lentigo maligna (C44_)
Behavior code '2'	Lobular, noninfiltrating (C50_)
Bowen disease (not reportable for C440-C449)	Noninfiltrating
Clark level I for melanoma (limited to epithelium)	Noninvasive
Confined to epithelium	No stromal invasion/involvement
Hutchinson melanotic freckle, NOS (C44_)	Papillary, noninfiltrating or intraductal
Intracystic, non-infiltrating	Precancerous melanosis (C44_)
Intraductal	Queyrat erythroplasia (C60_)
Intraepidermal, NOS	Stage 0 (except Paget's disease (8540/3) of breast and colon or rectal tumors confined to the lamina propria)
Intraepithelial, NOS	VAIN III (C529)
Involvement up to, but not including the basement membrane	VIN III (C51_)

Grade, Differentiation or Cell Indicator

Grade, Differentiation (Codes 1, 2, 3, 4, 9)
Pathologic testing determines the grade, or degree of differentiation, of the tumor. For cancers, the grade is a measurement of how closely the tumor cells resemble the parent tissue (organ of origin). Well differentiated tumor cells closely resemble the tissue from the organ of origin. Poorly differentiated and undifferentiated tumor cells are disorganized and abnormal looking; they bear little or no resemblance to the tissue from the organ of origin.

Pathologists describe the tumor grade by levels of similarity. Pathologists may define the tumor by describing two levels of similarity (two-grade system which may be used for colon); by describing three levels of similarity (three-grade system); or by describing four levels of similarity (four-grade system). The four-grade system describes the tumor as grade I, grade II, grade III, and grade IV (also called well differentiated, moderately differentiated, poorly differentiated, and undifferentiated/anaplastic). These similarities/differences may be based on pattern (architecture), cytology, or nuclear features or a combination of these elements depending upon the grading system that is used. The information from this data item is useful for determining prognosis.

Cell Indicator (Codes 5, 6, 7, 8, 9)
Describes the lineage or phenotype of the cell that became malignant. Cell indicator codes apply to lymphomas and leukemias and for these diagnoses, cell indicator takes precedence over grade/differentiation.

See the ICD-O-3 chapter *Morphology* for further instructions on coding grade.

CODE	DESCRIPTION
1	Grade I; grade i; grade 1; well differentiated; differentiated, NOS
2	Grade II; grade ii; grade 2; moderately differentiated; moderately well differentiated; intermediate differentiation
3	Grade III; grade iii, grade 3; poorly differentiated; dedifferentiated
4	Grade IV; grade iv; grade 4; undifferentiated; anaplastic
5	T-cell; T-precursor
6	B-Cell; Pre-B; B-precursor
7	Null cell; Non T-non B
8	NK cell (natural killer cell) (effective with diagnosis 1/1/1995 and after)
9	Grade/differentiations unknown, not stated, or not applicable

GENERAL CODING RULES

1. The site-specific coding guidelines in Appendix C also include rules for coding grade for the following primary sites: prostate, kidney, lymphoma, leukemia, astrocytoma, and sarcoma.

2. Code the grade from the final diagnosis in the pathology report. If there is more than one path report, and the grades in the final diagnoses differ, code the highest grade for the primary site from any pathology report.

3. If grade is not stated in the final pathology diagnosis, use the information in the microscopic section, addendum, or comment to code grade.

4. If more than one grade is recorded for a single tumor, code the highest grade, even if it is a focus.

   Example: Pathology report reads: Grade II adenocarcinoma with a focus of undifferentiated adenocarcinoma. Code the tumor grade as grade 4.

5. Code the grade from the **primary tumor** only, never from a metastatic site or a recurrence.

6. Code the grade for all **unknown primaries** to 9 (unknown grade) unless grade is explicit by histology (i.e. anaplastic carcinoma (grade = 4).

7. Code the grade of the invasive component when the tumor has **both in situ** and **invasive** portions. If the **invasive** component **grade** is **unknown**, code the grade as unknown (9).

8. Code the information from the **consult** if the specimen is sent to a specialty pathology department for a consult.

9. If there are **multiple pathology consults**, ask the pathologist or physician advisor to determine which information should be used.

10. Do **not code** the grade assigned to **dysplasia**, i.e.: High grade dysplasia (adenocarcinoma in situ) would be coded to 9 (unknown grade).

Coding Grade for Cases without Pathology or Cytology Confirmation

Code the grade of tumor given on a Magnetic Resonance Imaging (MRI) or Positron Emission Tomography (PET) report if there is no tissue diagnosis (pathology or cytology report). Use the MRI or PET grade only when there is no tissue diagnosis.

In Situ Tumors

In situ tumors are not always graded. Code the grade if it is specified for an in situ lesion unless there is an invasive component. Do not code the in situ grade if the tumor has both in situ and invasive components.

Terminology Conversion Table

DESCRIPTION	GRADE	SEER CODE
Differentiated, NOS	I	1
Well differentiated	I	1
Fairly well differentiated	II	2
Intermediate differentiation	II	2
Low grade	I-II	2
Mid differentiated	II	2
Moderately differentiated	II	2
Moderately well differentiated	II	2
Partially differentiated	II	2
Partially well differentiated	I-II	2
Relatively or generally well differentiated	II	2
Medium grade, intermediate grade	II-III	3
Moderately poorly differentiated	III	3
Moderately undifferentiated	III	3
Poorly differentiated	III	3
Relatively poorly differentiated	III	3
Relatively undifferentiated	III	3
Slightly differentiated	III	3
Dedifferentiated	III	3
High grade	III-IV	4
Undifferentiated, anaplastic, not differentiated	IV	4
Non-high grade		9

Two Grade System

Some cancers are graded using a two-grade system, for an example, colon cancer. If the grade is listed as 1/2 or as low grade, assign code 2. If the grade is listed as 2/2 or as high grade, assign code 4.

Two-Grade Conversion Table

GRADE	DIFFERENTIATION / DESCRIPTION	SEER CODE
1/2, I/II	Low grade	2
2/2, II/II	High grade	4

Three-Grade System

There are several sites for which a three-grade system is used, such as peritoneum, endometrium, fallopian tube, prostate, bladder and soft tissue sarcoma. The patterns of cell growth are measured on a scale of 1, 2, and 3 (also referred to as low, medium, and high grade). This system measures the proportion of cancer cells that are growing and making new cells and how closely they resemble the cells of the host tissue. Thus, it is similar to a four-grade system, but simply divides the spectrum into 3 rather than 4 categories (see Three-Grade Conversion Table below). The expected outcome is more favorable for lower grades.

If a grade is written as 2/3 that means this is a grade 2 of a three-grade system. Do not simply code the numerator. Use the following table to convert the grade to SEER codes:

Three-Grade Conversion Table

GRADE	DIFFERENTIATION/DESCRIPTION	SEER CODE
1/3, I/III	Low grade	2
2/3, II/III	Intermediate grade	3
3/3, III/III	High grade	4

Breast Cancer

Priority Order for Coding Breast Cancer Grade

Code grade in the following priority order:

1. Bloom-Richardson scores 3-9 converted to grade (See following table)
2. Bloom Richardson grade (low, intermediate, high)
3. Nuclear grade only
4. Terminology

    a. Differentiation (well differentiated, moderately differentiated, etc).

5. Histologic grade

    a. Grade 1/I/i, grade 2/II/ii, grade 3/III/iii, grade 4/IV/iv

Breast Grading Conversion Table

BR SCORES	BR GRADE	NUCLEAR GRADE	TERMINOLOGY	HISTOLOGIC GRADE	SEER CODE
3-5	Low	1/3; 1/2	Well differentiated	I/III; 1/3	1
6, 7	Intermediate	2/3	Moderately differentiated	II/III; 2/3	2
8, 9	High	2/2; 3/3	Poorly differentiated	III/III; 3/3	3

Bloom-Richardson (BR)

1. **BR** may **also** be **called**: modified Bloom-Richardson, Scarff-Bloom-Richardson, SBR grading, BR grading, Elston-Ellis modification of Bloom Richardson score, the Nottingham modification of Bloom Richardson score, Nottingham-Tenovus, or Nottingham grade
2. BR may be expressed in **scores** (range 3-9)
3. The score is based on three morphologic features of "invasive no-special-type" breast cancers (degree of tubule formation/histologic grade, mitotic activity, nuclear pleomorphism of tumor cells).
4. Use the Breast Grading Conversion Table to convert the score, grade or term into the SEER code
5. BR may be expressed as a **grade** (low, intermediate, high)
6. BR grade is derived from the BR score. Note that the conversion of low, intermediate, and high for breast is different from the conversion used for all other tumors.

Kidney Cancer
Priority Order for Coding Kidney Cancer Grade
Code grade in the following priority order:

1. Fuhrman's grade
2. Nuclear grade
3. Terminology (well diff, mod diff)
4. Histologic grade (grade 1, grade 2)

These prioritization rules do not apply to Wilms tumor (8960). Use the general rules for coding grade for Wilms tumor.

Prostate
Priority Rules for Coding Porstate Cancer Grade

Code grade in the following priority order:

1. Gleason's grade (Use the table to convert Gleason's grade information into the appropriate code)

2. Terminology

   a. Differentiation (well differentiated, moderately differentiated, etc.)

3. Histologic grade

   a. Grade 1/I/i, grade 2/II/ii, grade 3/III/iii, grade 4/IV/iv

4. Nuclear grade only

Gleason's Pattern

Prostate cancers are commonly graded using Gleason's score or pattern. Gleason's grading is based on a 5-component system, meaning it is based on 5 histologic patterns. The pathologist will evaluate the primary (majority) and secondary patterns for the tumor. The pattern is written as a range, with the majority pattern appearing first and the secondary pattern as the last number

Example: A Gleason pattern of 2 + 4 means that the primary pattern is 2 and the secondary pattern is 4.

Gleason's Score

The patterns are added together to create a score.

Example: If the pattern is 2 + 4, the pattern score is 6 (the sum of 2 and 4).

1. If the pathology report contains only **one number**, and that number is **less than or equal to 5,** it is a pattern.

2. If the pathology report contains only **one number**, and that number is **greater than 5**, it is a score.

3. If the pathology report specifies a specific **number out of a total of 10**, the first number given is the score.

   Example: The pathology report says "Gleason's 3/10". The Gleason's score would be 3.

4. If there are **two numbers other than 10**, assume they refer to two patterns. The first number is the primary pattern and the second is the secondary pattern.

   Example: If the pathology report says "Gleason's 3 + 5," the Gleason's score would be 8, the sum of 3 and 5.

Use the following table to convert Gleason's pattern or score into SEER codes:

Gleason Conversion Table

GLEASON'S SCORE	GLEASON'S PATTERN	HISTOLOGIC GRADE	TERMINOLOGY	SEER CODE
2, 3, 4	1, 2	I	Well differentiated	1
5, 6	3	II	Moderately differentiated	2
7, 8, 9, 10	4, 5	III	Poorly differentiated	3

Note: Gleason's score 7 was previously coded to moderately differentiated (2). Effective with cases diagnosed 1/1/2003, Gleason's score 7 is coded to poorly differentiated (3).

Astrocytoma

Grade astrocytomas according to ICD-O-3 rules

1. Do not use the **WHO grade** to code this field.
2. Do not automatically code **glioblastoma multiforme** as grade IV. If no grade is given, code unknown, 9.
3. If **no grade** is given, code unknown, 9.

Sarcoma

If sarcomas are graded low, intermediate or high grade by the pathologist use the three-grade system table.

Lymphoma and Leukemia

1. Do not use the terms "high grade," "low grade," and "intermediate grade" to code differentiation. These terms refer to histology, not grade.

2. The designation of T-cell, B-cell, null cell, or NK cell has **precedence** over any statement of differentiation.

   a. Code ANY statement of **T-cell**, **B-cell**, **null cell**, or **NK cell:**

      T-cell (**code 5**)
      - Cortical T
      - Mature T
      - Pre-T
      - Pro-T
      - T-cell phenotype
      - T-precursor

      B-Cell (**code 6**)
      - B-cell phenotype
      - B-precursor
      - Pre-B
      - Pre-pre-B
      - Pro-B

      Null-Cell; Non-T-non-B (**code 7**)
      - Null-cell
      - Non T-non-B
      - Common cell

      NK (Natural Killer) cell (code 8)
      - NK/T cell

      Cell type not determined, not stated or not applicable (code 9)
      - Combined B cell and T cell

   b. Use any source to code information on cell type whether or not marker studies are documented in the patient record.

      Example: The history portion of the medical record documents that the patient has a T-cell lymphoma. There are no marker studies on the chart. Code the grade as T-cell.

Diagnostic Confirmation

Records the best method used to confirm the presence of the cancer being reported. The data item is not limited to the confirmation at the time of diagnosis; it is the best method of confirmation during the entire course of the disease.

CODE	DESCRIPTION
Microscopically Confirmed	
1	Positive histology
2	Positive cytology
4	Positive microscopic confirmation, method not specified
NOT Microscopically Confirmed	
5	Positive laboratory test/marker study
6	Direct visualization without microscopic confirmation
7	Radiology and other imaging techniques without microscopic confirmation
8	Clinical diagnosis only (other than 5, 6, or 7)
Confirmation Unknown	
9	Unknown whether or not microscopically confirmed; death certificate only

Coding Instructions

1. The codes are in **priority order**; code 1 has the highest priority. Always code the procedure with the lower numeric value when presence of cancer is confirmed with multiple diagnostic methods.

2. Change to a lower code, if at ANY TIME during the course of disease the patient has a diagnostic confirmation which has a higher priority.

3. Assign **code 1** when the microscopic diagnosis is based on

a. Tissue specimens from biopsy, frozen section, surgery, autopsy or D&C
b. Bone marrow specimens (aspiration and biopsy)
c. For leukemia only, positive hematologic findings including peripheral blood smears, CBCs and WBCs

4. Assign **code 2** when the microscopic diagnosis is based on

   a. Examination of cells (rather than tissue) including but not limited to: sputum smears, bronchial brushings, bronchial washings, prostatic secretions, breast secretions, gastric fluid, spinal fluid, peritoneal fluid, pleural fluid, urinary sediment, cervical smears and vaginal smears.
   b. Paraffin block specimens from concentrated spinal, pleural, or peritoneal fluid

5. Assign **code 4** when there is information that the diagnosis of cancer was microscopically confirmed, but the type of confirmation is unknown.

6. Assign **code 5** when the diagnosis of cancer is based on laboratory tests or marker studies which are clinically diagnostic for that specific cancer.

   ***Example 1*:** The presence of alpha-fetoprotein for liver cancer

   Example 2: An abnormal electrophoretic spike for multiple myeloma or Waldenstrom macroglobulinemia.

   Example 3: If the workup for a prostate cancer patient is limited to a highly elevated PSA and the physician diagnoses and/or treats the patient based only on that PSA, code the diagnostic confirmation to 5.

7. Assign **code 6** when the diagnosis is based only on

   a. The surgeon's operative report from a surgical exploration or endoscopy such as colonoscopy, mediastinoscopy, or peritoneoscopy and no tissue was examined.
   b. Gross autopsy findings (no tissue or cytologic confirmation)

8. Assign **code 7** when the only confirmation of malignancy was diagnostic imaging such as computerized axial tomography (CT scans), magnetic resonance imaging (MRI scans), or ultrasounds/sonography.

9. Assign **code 8** when the case was diagnosed by any clinical method not mentioned in preceding codes. The diagnostic confirmation is coded 8 when the only confirmation of disease is a physician's clinical diagnosis.

10. Assign **code 9**: It is unknown if the diagnosis was confirmed microscopically. Death certificate only cases.

Histologic Examination	**Cytologic Examination**	
Biospy material	Sputum	Bronchial washing
Frozen section	Breast Secretion	Prostate secretion
Bone marrow biopsy/aspiration (tissue)	Gastric fluid	Spinal fluid
Operative specimen	Peritoneal fluid	Urinary sediment
Autopsy specimen	Pleural fluid	Cervical & vaginal smears
	Bone marrow aspiration (cells)	Tracheal washing
	Bronchial brushing	

YEAR	REFERENCE(S)
1/1/93 to 12/31/02	Registry Operations and Data Standards (ROADS), page 114 (http://www.facs.org/cancer/coc/roads/roads1996.pdf)
1/1/03 to 12/31/03	Facility Oncology Registry Data Standards (FORDS), Original 2003 page 99 (http://www.facs.org/cancer/coc/fords/fordsoriginal2003.pdf)
1/1/04 to present	Facility Oncology Registry Data Standards (FORDS), page 99 (http://www.facs.org/cancer/coc/fords/fordsrevised0605.pdf)

Note: When page numbers are given, they refer to the page numbers that appear in the document (i.e., on the "page"), not the page of the PDF. PDF pagination includes title pages, front-matter and other pages that are not usually included in hard-copy pagination.

Chapter

10

Abstracting: Reporting Source

TEXT DOCUMENTATION IS REQUIRED.

YOU MUST PROVIDE SUFFICIENT TEXT DOCUMENTATION TO SUBSTANTIATE CODING.

Reporting Source

The code provided here should reflect all of the sources used to abstract the case, not just the source used in ascertainment. Please note that there are changes to the code definitions that became effective with cases diagnosed 1/1/2006.

CODE	1/1/1993 TO 12/31/2005	1/1/2006 FORWARD
1	Hospital inpatient, outpatient or clinic	Hospital inpatient
2		Radiation treatment center or medical oncology center (hospital affiliated or independent)
3	Laboratory only	Laboratory only
4	Physician's office/private medical practitioner	Physician's office/private medical practitioner
5	Nursing/convalescent home/hospice	Nursing/convalescent home/hospice
6	Autopsy only	Autopsy only
7	Death certificate only	Death certificate only
8		Other hospital outpatient units/surgery centers

YEAR	REFERENCE(S)
1/1/93 to 12/31/97	SEER Program Code Manual, Revised, page 62 (http://seer.cancer.gov/manuals/codeman.pdf)
1/1/98 to 12/31/03	SEER Program Code Manual, Third Edition, pages 66 and 67 (http://seer.cancer.gov/manuals/codeman.pdf)
1/1/04 to present	SEER Program Coding and Staging Manual 2004, pages 31 and 32 (http://seer.cancer.gov/manuals/2004Revision%201/SPM_2004_maindoc.r1.pdf)

Note: When page numbers are given, they refer to the page numbers that appear in the document (i.e., on the "page"), not the page of the PDF. PDF pagination includes title pages, front-matter and other pages that are not usually included in hard-copy pagination.

Place of Diagnosis

This text field should be used if the reportable condition was diagnosed at some place other than the reporting facility.

Primary Payer at Diagnosis

The following codes, which differ based on year of diagnosis, are to be used for primary payer at diagnosis:

CODE	1/1/93 TO 12/31/02	1/1/03 TO 12/31/03	1/1/04 TO 12/31/05	1/1/06 TO PRESENT
00	Not insured, NOS			
01	Not insured, charity write off	Not insured, charity write off	Not insured, charity write off	Not insured, charity write off
02	Not insured, self-pay	Not insured, self-pay	Not insured, self-pay	Not insured, self-pay
10	Private insurance	Insurance, NOS	Insurance, NOS	Insurance, NOS
20	Managed care provider, NOS	Private insurance: Managed care, HMO or PPO	Private insurance: Managed care, HMO or PPO	Private Insurance: Managed care, HMO or PPO
21	Health maintenance organization (HMO)			Private insurance: Fee for service
22	Preferred provider organization (PPO)			
30	State funded, NOS			
31	Medicaid	Medicaid other than in 35	Medicaid other than in 35	Medicaid other than in 35
32	Welfare			
35		Medicaid administered through a managed care plan	Medicaid administered through a managed care plan	Medicaid administered through a managed care plan
36		Medicaid with Medicare supplement		
40	Federally funded, NOS			
41	Medicare			

CODE	1/1/93 TO 12/31/02	1/1/03 TO 12/31/03	1/1/04 TO 12/31/05	1/1/06 TO PRESENT
42	Medicare with supplement			
43	CHAMPUS			
44	Military			
45	Veterans Administration			
46	Indian Health Service			
47	Public Health Service			
50		Medicare		
51		Medicare with supplement		
52		Medicare with Medicaid supplement		
53		TRICARE		
54		Military		
55		Veterans Affairs		
56		Indian/Public Health Service		
60			Medicare without supplement, Medicare, NOS	Medicare without supplement, Medicare, NOS
61			Medicare with supplement, NOS	Medicare with supplement, NOS
62			Medicare administered through a managed care plan	Medicare administered through a managed care plan
63			Medicare with private supplement	Medicare with private supplement

CODE	1/1/93 TO 12/31/02	1/1/03 TO 12/31/03	1/1/04 TO 12/31/05	1/1/06 TO PRESENT
64			Medicare with Medicaid eligibility	Medicare with Medicaid eligibility
65				TRICARE
66				Military
67				Veterans Affairs
68				Indian/Public Health Service
88	Insured, NOS			
99	Unknown	Unknown	Unknown	Unknown

YEAR	REFERENCE(S)
1/1/93 to 12/31/02	Registry Operations and Data Standards (ROADS), page 75 (http://www.facs.org/cancer/coc/roads/roads1996.pdf)
1/1/03 to 12/31/03	Facility Oncology Registry Data Standards (FORDS), Original 2003 page 67 and 68 (http://www.facs.org/cancer/coc/fords/fordsoriginal2003.pdf)
1/1/04 to present	Facility Oncology Registry Data Standards (FORDS), pages 67 and 68 (http://www.facs.org/cancer/coc/fords/fordsrevised0605.pdf)

Note: When page numbers are given, they refer to the page numbers that appear in the document (i.e., on the "page"), not the page of the PDF. PDF pagination includes title pages, front-matter and other pages that are not usually included in hard-copy pagination.

Physicians

Currently, hospitals are required to use the physician's state license number in the physician five-digit field. If a physician's number is unknown, a question mark (?) can be typed in the first position of any of the physician fields and press the enter key. The computer will list all physicians with a similar last name. If the physician is listed, choose the appropriate letter and press the enter key. The number will automatically be entered into this field.

Primary Surgeon

Use this data item to identify the surgeon who performed the most definitive surgical procedure. The registry assigns a unique number to the primary surgeon. If the patient did not have cancer-directed surgery, code the surgeon who performed any non cancer-directed surgery or did a surgical consultation. Once the registry has designated a primary surgeon for the patient, the information should not be changed or updated even if the patient receives care from another physician. Administrative, physician, and service referral reports are based on this data item.

Following Physician

The "Following Physician" is the person currently responsible for the patient's medical care. Follow-up letters will be directed to this physician. Change this data item when follow-up becomes the responsibility of another physician.

Other Physicians

Code other physicians involved in the care of the patient.

NATIONAL PROVIDER IDENTIFIER

WVCR anticipates switching to the National Provider Identifiers as such become available. However, NPCR has not, as of this writing, established a timeframe for NPI implementation.

It is expected that a website maintained by the National Plan and Provider Enumeration System (NPPES) at https://nppes.cms.hhs.gov/NPPES/NPIRegistryHome.do will eventually become operational and allow on-line searching for NPIs.

YEAR	REFERENCE(S)
1/1/93 to 12/31/02	Registry Operations and Data Standards (ROADS), pages 76-80 (http://www.facs.org/cancer/coc/roads/roads1996.pdf)
1/1/03 to 12/31/03	Facility Oncology Registry Data Standards (FORDS), Original 2003 pages 76-80 (http://www.facs.org/cancer/coc/fords/fordsoriginal2003.pdf)
1/1/04 to present	Facility Oncology Registry Data Standards (FORDS), pages 76-80 (http://www.facs.org/cancer/coc/fords/fordsrevised0605.pdf)

Note: When page numbers are given, they refer to the page numbers that appear in the document (i.e., on the "page"), not the page of the PDF. PDF pagination includes title pages, front-matter and other pages that are not usually included in hard-copy pagination.

Abstracted By

Record abstractor's three initials.

PLEASE NOTE: If you change the initials you use for abstracting, please inform WVCR so continuity can be maintained.

YEAR	REFERENCE(S)
1/1/93 to 12/31/02	Registry Operations and Data Standards (ROADS), page 89 (http://www.facs.org/cancer/coc/roads/roads1996.pdf)
1/1/03 to 12/31/03	Facility Oncology Registry Data Standards (FORDS), Original 2003 page 207 (http://www.facs.org/cancer/coc/fords/fordsoriginal2003.pdf)
1/1/04 to present	Facility Oncology Registry Data Standards (FORDS), page 207 (http://www.facs.org/cancer/coc/fords/fordsrevised0605.pdf)

Accession Year

The "accession year," also referred to as the "year first seen for this primary," is the year the patient was first seen at the reporting institution for diagnosis and/or treatment of this primary, since the reference date of the registry. *It is not the year that the registrar accessioned the case.* The year first seen for this primary relates only to one primary tumor. A patient with multiple primaries can have a different "accession year" on each abstract.

Abstract Number (Accession Number)

This is a unique six-digit number assigned to each cancer patient by the hospital-based cancer registrar. Abstract numbers are usually assigned on a sequential basis according to the year of admission (date first seen) at the reporting institution for diagnosis and/or treatment of cancer. The accession number does not change with subsequent primaries.

This field is optional for the CDS. If accession number is assigned, it should be on a sequential basis. The year of diagnosis combined with a four-digit number creates a six-digit accession number. If an accession number is not assigned, "999999" must be entered into this field.

YEAR	REFERENCE(S)
1/1/93 to 12/31/02	Registry Operations and Data Standards (ROADS), page 38 (http://www.facs.org/cancer/coc/roads/roads1996.pdf)
1/1/03 to 12/31/03	Facility Oncology Registry Data Standards (FORDS), Original 2003 page 33 (http://www.facs.org/cancer/coc/fords/fordsoriginal2003.pdf)
1/1/04 to present	Facility Oncology Registry Data Standards (FORDS), page 33 (http://www.facs.org/cancer/coc/fords/fordsrevised0605.pdf)

Note: When page numbers are given, they refer to the page numbers that appear in the document (i.e., on the "page"), not the page of the PDF. PDF pagination includes title pages, front-matter and other pages that are not usually included in hard-copy pagination.

Sequence Number

Indicates the sequence of malignant and non-malignant enoplasms over the lifetime of the patient.

In Situ/Malignant as Federally Required based on Diagnosis Year

CODE	DESCRIPTION
00	One primary only in the patient's lifetime
01	First of two or more primaries
02	Second of two or more primaries
..	..
..	(Actual number of this primary)
..	..
35	Thirty-fifth of thirty-five or more primaries
99	Unspecified or unknown sequence number of Federally required in situ or malignant tumors. Sequence number 99 can be used if there is a malignant tumor and its sequence number is unknown. (If there is known to be more than one malignant tumor, then the tumors must be sequenced.)

Non-malignant Tumor as Federally Required based on Diagnosis Year

CODE	DESCRIPTION
60	Only one non-malignant tumor or central registry-defined neoplasm
61	First of two or more non-malignant tumors or central registry-defined neoplasms
62	Second of two or more non-malignant tumors or central registry-defined neoplasms
..	..
87	Twenty-seventh of twenty-seven
88	Unspecified or unknown sequence number of non-malignant tumor or central-registry defined neoplasms. (Sequence number 88 can be used if there is a non-malignant tumor and its sequence number is unknown. If there is known to be more than one non-malignant tumor, then the tumors must be sequenced.)

YEAR	REFERENCE(S)
1/1/93 to 12/31/97	SEER Program Code Manual, Revised, page 82 (http://seer.cancer.gov/manuals/historic/codeman_1992.pdf)
1/1/93 to 12/31/02	Registry Operations and Data Standards (ROADS), page 40 (http://www.facs.org/cancer/coc/roads/roads1996.pdf)
1/1/98 to 12/31/03	SEER Program Code Manual, Third Edition, page 89 (http://seer.cancer.gov/manuals/codeman.pdf)
1/1/03 to 12/31/03	Facility Oncology Registry Data Standards (FORDS) Original (2003) , page 34 (http://www.facs.org/cancer/coc/fords/fordsoriginal2003.pdf)
1/1/04 to present	Facility Oncology Registry Data Standards (FORDS) 2004, page 34 (http://www.facs.org/cancer/coc/fords/fordsrevised0605.pdf)
1/1/04 to present	SEER Program Coding and Staging Manual 2004, page 69 (http://seer.cancer.gov/manuals/2004Revision%201/SPM_2004_maindoc.r1.pdf)

Note: When page numbers are given, they refer to the page numbers that appear in the document (i.e., on the "page"), not the page of the PDF. PDF pagination includes title pages, front-matter and other pages that are not usually included in hard-copy pagination.

Date First Contact

Enter the *earliest date* (mm/dd/ccyy) patient was seen with evidence of disease or cancer treatment, regardless if inpatient or outpatient. If day is unknown, enter "99." If cancer was found on autopsy, enter date of death as date first seen. There must be no suspicion of cancer prior to autopsy.

Medical Record Number

This is an 11-digit field for recording the chart number. If the medical record number is fewer than 11 characters, the RMCDS software will right-justify and will add leading zeros. If the medical record number is the patient's social security number, record all 8's in the medical record number field. Record standard abbreviations for departments that do not use medical record numbers, such as radiation therapy (RT), one-day surgery clinic (SU), etc. If the record is unknown, record UNK.

YEAR	REFERENCE(S)
1/1/93 to 12/31/02	Registry Operations and Data Standards (ROADS), page 43 (http://www.facs.org/cancer/coc/roads/roads1996.pdf)
1/1/03 to 12/31/03	Facility Oncology Registry Data Standards (FORDS), Original 2003 page 36 (http://www.facs.org/cancer/coc/fords/fordsoriginal2003.pdf)
1/1/04 to present	Facility Oncology Registry Data Standards (FORDS), page 36 (http://www.facs.org/cancer/coc/fords/fordsrevised0605.pdf)

Note: When page numbers are given, they refer to the page numbers that appear in the document (i.e., on the "page"), not the page of the PDF. PDF pagination includes title pages, front-matter and other pages that are not usually included in hard-copy pagination.

Class of Case

The primary purpose of this field is to divide hospital cases into analytic and non-analytic categories. Codes are as follows:

CODE	DESCRIPTION
0	First diagnosed at the hospital and all of the first course of therapy elsewhere.
1	First diagnosed and all or part of first course of therapy at that hospital. Includes patients who are not treatable.
2	First diagnosed elsewhere and all or part of the first course of therapy at that hospital or the first course of therapy planned at that hospital.
3	First diagnosed and all of the first course of treatment elsewhere.
5	First diagnosed at autopsy.
6	Diagnosed and received all of their first course of treatment in a staff physician's office.
7	Pathology report only. Patient does not enter the accessioning facility at any time for diagnosis or treatment. This category excludes cases diagnosed at autopsy.
8	Diagnosis by death certificate only.
9	Unknown. Includes unknown if previously diagnosed, unknown if previously treated, and previously diagnosed but date unknown.

PLEASE NOTE THAT, BY WV CODE, ALL CASES, REGARDLESS OF CLASS (I.E., ANALYTIC OR NON-ANALYTIC) ARE TO BE REPORTED TO WVCR.

YEAR	REFERENCE(S)
1/1/93 to 12/31/02	Registry Operations and Data Standards (ROADS), page 91 (http://www.facs.org/cancer/coc/roads/roads1996.pdf)
1/1/03 to 12/31/03	Facility Oncology Registry Data Standards (FORDS), Original 2003 pages 4-6 (http://www.facs.org/cancer/coc/fords/fordsoriginal2003.pdf)
1/1/04 to present	Facility Oncology Registry Data Standards (FORDS), pages 4-6 (http://www.facs.org/cancer/coc/fords/fordsrevised0605.pdf)

Note: When page numbers are given, they refer to the page numbers that appear in the document (i.e., on the "page"), not the page of the PDF. PDF pagination includes title pages, front-matter and other pages that are not usually included in hard-copy pagination.

Chapter

11

Abstracting: Staging

TEXT DOCUMENTATION IS REQUIRED.

YOU MUST PROVIDE SUFFICIENT TEXT DOCUMENTATION TO SUBSTANTIATE CODING.

Rule 64CSR68, section 4.1.j. specifies that staging is to be reported using the method prescribed by the National Cancer Institute's Surveillance, Epidemiology and End Results (SEER) program as well as the method prescribed by the American Joint Commission on Cancer, if the latter is collected by the hospital. For cases diagnosed in 2004 and forward, SEER prescribes the use of Collaborative Staging. Thus Collaborative Staging should be used for cases diagnosed in 2004 and forward in reporting to WVCR.

WVCR is a National Program of Cancer Registries (NPCR) registry, so only those items necessary for the derivation of SEER Summary Stage (i.e., a subset of the Collaborative Staging items) are required to be abstracted. However, because Collaborative Staging is a new and rather complex staging system, Collaborative Staging variables are often being miscoded, resulting in an incorrect derived stage. Because accurate staging data are required, WVCR requests that registrars code SEER Summary Stage as well as the required Collaborative Staging items, use their software to generate a "derived" Summary Stage and, when these do not match, review the coding and make needed corrections. Current experience suggests that nearly all of the discrepancies are attributable to errors in Collaborative Staging coding.

YEAR	REFERENCE(S)
1/1/93 to 12/31/00	SEER Summary Stage 1977
1/1/01 to 12/31/03	SEER Summary Stage 2000
1/1/04 to present	Collaborative Staging (http://www.cancerstaging.org/cstage/manuals.html)

Tumor Size

This field records the largest dimension, or the diameter of the primary tumor, and is recorded in millimeters for solid tumors EXCEPT melanomas of the skin, vulva, penis, scrotum and conjuctive. For those melanomas, record depth of invasion in HUNDREDTHS OF A MILLIMETER.

To convert centimeters to millimeters, multiply the dimension by 10.

For the following sites, record 998 if the actual pathologic size of the tumor is not stated, but the following involvement is stated:

Esophagus (C15)	Entire circumference
Stomach (C16)	Diffuse, widespread, 3/4 or more, linitis plastica
Colorectal (C18.0-C20.9)	Familial/multiple polyposis (histology 8220 or 8221) with a behavior code of 2 or 3
Lung (C34.1-C34.9)	Diffuse, entire lobe of lung
Breast (C50)	Diffuse, including inflammatory carcinoma

Do not add the measurements of the biopsy and resected specimens. If tumor size is not recorded or is not available, code 999 (unknown). Do not add the measurements of prostatic chips or bladder chips to determine tumor size. Record size 999 (unknown). Code 999 for needle biopsy.

CODE	DESCRIPTION
000	Indicates no mass or no tumor found.
001-988	Exact size in millimeters.
989	989 mm or larger; melanomas greater than or equal to 9.89 mm in depth
990	Microscopic focus or foci only, no size given
998	Tumor involvement of specified esophageal, stomach, colorectal, ling and main stem bronchus and breast primaries.
999	Unknown; size not stated; not stated in patient record.

YEAR	REFERENCE(S)
1/1/93 to 12/31/02	Registry Operations and Data Standards (ROADS), pages 121 to 122 (http://www.facs.org/cancer/coc/roads/roads1996.pdf)
1/1/03 to 12/31/03	Facility Oncology Registry Data Standards (FORDS), Original 2003 pages 100 t0 101 (http://www.facs.org/cancer/coc/fords/fordsoriginal2003.pdf)
1/1/04 to present	Facility Oncology Registry Data Standards (FORDS), pages 100 to 101 (http://www.facs.org/cancer/coc/fords/fordsrevised0605.pdf)

Note: When page numbers are given, they refer to the page numbers that appear in the document (i.e., on the "page"), not the page of the PDF. PDF pagination includes title pages, front-matter and other pages that are not usually included in hard-copy pagination.

DETERMINING DESCRIPTIVE TUMOR SIZE
Millimeter Equivalents for Descriptive Terms

FRUITS	mm
Apple	070
Apricot	040
Cherry	020
Date	040
Fig (dried)	040
Grape	020
Grapefruit	100
Kumquat	050
Lemon	080
Olive	020
Orange	090
Peach	060
Pear	090
Plum	030
Tangerine	060

NUTS	mm
Almond	030
Chestnut	040
Chestnut, horse	040
Hazel	020
Hickory	030
Peanut	010
Pecan	030
Walnut	030

VEGETABLES	mm
Bean	010
Bean, lima	020
Pea	991
Pea, split	991

10 mm = 1 cm
1 mm = 1/10 cm
2.5 cm = 1 inch
1 cm = .394 inch

MISCELLANEOUS FOOD	Mm
Doughnut	090
Egg	050
Bantam	040
Goose	070
Hen	030
Pigeon	030
Robin	020
Lentil	991
Millet	991

MONEY	mm
Dime	010
Dollar, half	030
Dollar, silver	040
Nickel	020
Penny	010
Quarter	020

OTHER	mm
Ball, golf	040
Ball, ping-pong	030
Ball, tennis	060
Baseball	070
Eraser on a pencil	991
Fist	090
Marble	010
Matchhead	991

Microscopic focus	990
Described as < 1 cm	991
Described as between	
1 and 2 cm	992
2 and 3 cm	993
3 and 4 cm	994
4 and 5 cm	995

Number of Positive Regional Nodes

"Regional Nodes Positive" describes the number of regional nodes examined by the pathologist and reported as containing tumor. Code *only* regional lymph nodes. Identify regional nodes using the pN classification from the AJCC *Cancer Staging Manual, Sixth Edition*.

Record the number of *regional nodes* confirmed by the pathologist to contain cancer at the time of the resection of the *primary site*. If the number is less than 10, precede the number with a 0 (zero).

Example: Nine positive lymph nodes would be entered as 09.

Record regional nodes for extra nodal lymphomas.

Use code 99 if information about regional nodes is unknown or if it is not applicable for that site or histology. Code 99 (unknown, not stated) should also be used to indicate that lymph node involvement is not applicable for a site, such as brain and other parts of the nervous system, leukemia, nodal lymphomas, multiple myeloma, bone marrow, reticuloendotheliosis, Letterer-Siwe's disease, unknown or ill-defined primary sites.

Use code 97 when the cytology or histology from a lymph node aspiration is positive for malignant cells.

Use code 98 when no nodes are removed or examined.

CODE	DESCRIPTION
00	All nodes examined negative
01-89	1 to 89 nodes positive
90	90 or mode nodes positive
95	Positive aspiration of lymph node(s)
97	Positive nodes documented but number is unspecified
98	No nodes were examined
99	It is unknown whether nodes are positive; not applicable; not stated in patient record

YEAR	REFERENCE(S)
1/1/93 to 12/31/02	Registry Operations and Data Standards (ROADS), page 130 (http://www.facs.org/cancer/coc/roads/roads1996.pdf)
1/1/03 to 12/31/03	Facility Oncology Registry Data Standards (FORDS), Original 2003, page 103 (http://www.facs.org/cancer/coc/fords/fordsoriginal2003.pdf)
1/1/04 to present	Facility Oncology Registry Data Standards (FORDS), page 103 (http://www.facs.org/cancer/coc/fords/fordsrevised0605.pdf)

Note: When page numbers are given, they refer to the page numbers that appear in the document (i.e., on the "page"), not the page of the PDF. PDF pagination includes title pages, front-matter and other pages that are not usually included in hard-copy pagination.

Number of Regional Nodes Examined

Removal of the primary tumor and a lymph node dissection or sampling may be done in one procedure. The nodes may also be removed in a separate procedure. Record in "Regional Nodes Examined" if the lymph node removal is documented in the treatment plan as part of the first course of therapy. Do not record in "Regional Nodes Examined" if the removal of lymph nodes is not a part of the first course of therapy (nodes removed to establish recurrence or progression of disease).

CODE	DESCRIPTION
00	No nodes were examined
01-89	1 to 89 nodes ecamined
90	90 or mode nodes examined
95	No regional nodes were removed but aspiration of regional lymph node(s) was performed
96	Regional lymph nodes removal was documented as a sampling and the number of nodes is unknown/not stated
97	Regional lymph nodes removal was documented as a disection and the number of nodes is unknown/not stated
98	Regional lymph nodes were surgically removed but the number of lymph nodes is unknown/not stated and removal was not documented as a sampling or dissection; nodes were examined but the number is unknown
99	It is unknown whether nodes were examinedl; not applicable; not stated in patient record

YEAR	REFERENCE(S)
1/1/93 to 12/31/02	Registry Operations and Data Standards (ROADS), page 129 (http://www.facs.org/cancer/coc/roads/roads1996.pdf)
1/1/03 to 12/31/03	Facility Oncology Registry Data Standards (FORDS), Original 2003 page 102 (http://www.facs.org/cancer/coc/fords/fordsoriginal2003.pdf)
1/1/04 to present	Facility Oncology Registry Data Standards (FORDS), page 102 (http://www.facs.org/cancer/coc/fords/fordsrevised0605.pdf)

Note: When page numbers are given, they refer to the page numbers that appear in the document (i.e., on the "page"), not the page of the PDF. PDF pagination includes title pages, front-matter and other pages that are not usually included in hard-copy pagination.

Sites of Distant Metastasis

Code only the site(s) of distant metastasis identified during initial diagnosis and workup. Do not update this field over the course of the patient's disease. Do not leave blanks. If there are more than three sites of distant metastasis, code three of the sites. Record a *zero* in this field if there are *no distant metastases*. Record 9 if *carcinomatosis* is present, *for disseminated disease*, *leukemias*, and if the site is *unknown*. *Do not code specific metastatic sites for unknown primaries (C80.9)*. Valid codes are:

CODE	DESCRIPTION
0	None
1	Peritoneum
2	Lung
3	Pleura
4	Liver
5	Bone
6	Central Nervous System (CNS)
7	Skin
8	Distant lymph nodes
9	Other, generalized, carcinomatosis, disseminated, not specified, unknown

Tumor Marker 1

For breast cases, record estrogen receptor status.

For prostate cases, record acid phosphatase (PAP).

For testicular cases, record alpha fetoprotein (AFP or OFP). Use the following ranges in coding

- Range 1: <1,000 ng/ml
- Range 2: 1,000 to 10,000 ng/ml
- Range 3: >10,000 ng/ml

CODE	DESCRIPTION
0	Not done
1	Positive/elevated
2	Negative/normal; within normal limits
3	Borderline; undetermined whether positive or negative
4	Range 1
5	Range 2
6	Range 3
8	Ordered but results not in chart
9	Unknown or no information OR For all cases except breast, prostate and testis, not applicable

YEAR	REFERENCE(S)
1/1/93 to 12/31/03	SEER Program Code Manual, Third Edition, pages 105-107 (http://seer.cancer.gov/manuals/codeman.pdf)

Note: When page numbers are given, they refer to the page numbers that appear in the document (i.e., on the "page"), not the page of the PDF. PDF pagination includes title pages, front-matter and other pages that are not usually included in hard-copy pagination.

Tumor Marker 2

For breast cases, record progestrone receptor status.

For prostate cases, record prostate specific antigen (PSA). Record the highest PSA at the time of diagnosis.

For testicular cases, record human chorionic gonadotropin (hCG). Use the following ranges in coding

- Range 1: <5,000 ng/ml
- Range 2: 5,000 to 50,000 ng/ml
- Range 3: >50,000 ng/ml

If there are serial markers, record the lowest value of hCG after orchiectomy in the first course of treatment.

CODE	DESCRIPTION
0	Not done
1	Positive/elevated
2	Negative/normal; within normal limits
3	Borderline; undetermined whether positive or negative
4	Range 1
5	Range 2
6	Range 3
8	Ordered but results not in chart
9	Unknown or no information OR For all cases except breast, prostate and testis, not applicable

YEAR	REFERENCE(S)
1/1/93 to 12/31/03	SEER Program Code Manual, Third Edition, pages 108-109 (http://seer.cancer.gov/manuals/codeman.pdf)

Note: When page numbers are given, they refer to the page numbers that appear in the document (i.e., on the "page"), not the page of the PDF. PDF pagination includes title pages, front-matter and other pages that are not usually included in hard-copy pagination.

Tumor Marker 3

For testicular cases, record lactate dehydrogenase (LDH). Use the following ranges in coding

- Range 1: <1.5 times the upper limit of normal for LDH assay
- Range 2: 1.5 to 10.0 times the upper limit of normal for LDH assay
- Range 3: >10.0 times the upper limit of normal for LDH assay

CODE	DESCRIPTION
0	Not done
1	Positive/elevated
2	Negative/normal; within normal limits
3	Borderline; undetermined whether positive or negative
4	Range 1
5	Range 2
6	Range 3
8	Ordered but results not in chart
9	Unknown or no information OR For all cases except testis, not applicable

YEAR	REFERENCE(S)
1/1/98 to 12/31/03	SEER Program Code Manual, Third Edition, page 110 (http://seer.cancer.gov/manuals/codeman.pdf)

Note: When page numbers are given, they refer to the page numbers that appear in the document (i.e., on the "page"), not the page of the PDF. PDF pagination includes title pages, front-matter and other pages that are not usually included in hard-copy pagination.

Summary Staging

Summary staging is the most basic way of categorizing how far a cancer has spread from its point of origin. Summary staging has also been called General Staging, California Staging, and SEER Staging. The 2000 version of Summary Stage applies to every anatomic site, including the lymphomas and leukemias. Summary staging uses all information available in the medical record; in other words, it is a combination of the most precise clinical and pathological documentation of the extent of disease.

Summary staging is a required data field for facilities and central registries participating in the National Program of Cancer Registries (NPCR) of the Centers for Disease Control and Prevention. Many central registries report their data by summary stage as the staging categories are broad enough to measure the success of cancer control efforts and other epidemiologic efforts. However, even though summary staging is used frequently in cancer registries, it is not always understood by physicians.

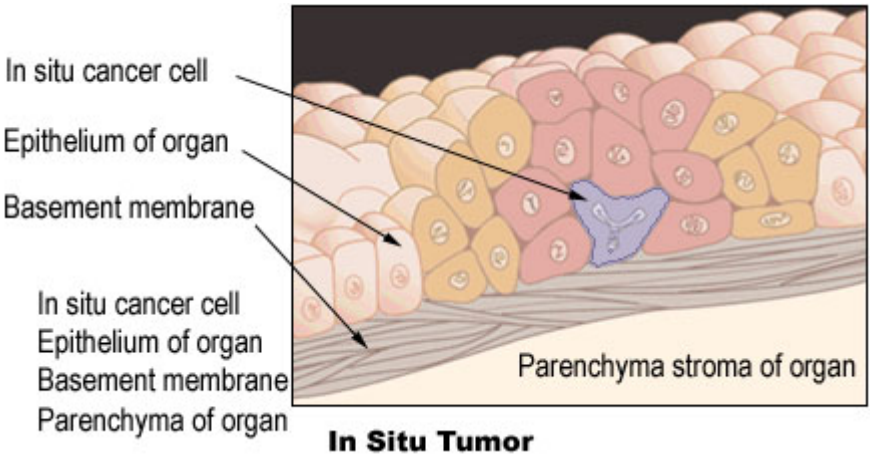
There are five main categories in summary stage, each of which is discussed in detail. In addition, the regional stage is subcategorized by the method of spread.

The code structure is:

CODE	DEFINITION
0	**In situ**
1	**Localized only**
2	**Regional by direct extension only**
3	**Regional lymph nodes involved only**
4	**Regional by BOTH direct extension AND lymph node involvement**
5	**Regional, NOS (Not Otherwise Specified)**
7	**Distant site(s)/node(s) involved**
9	**Unknown if extension or metastasis (unstaged, unknown, or unspecified)** **Death certificate only case**

Guidelines by Stage

In situ (code = 0)

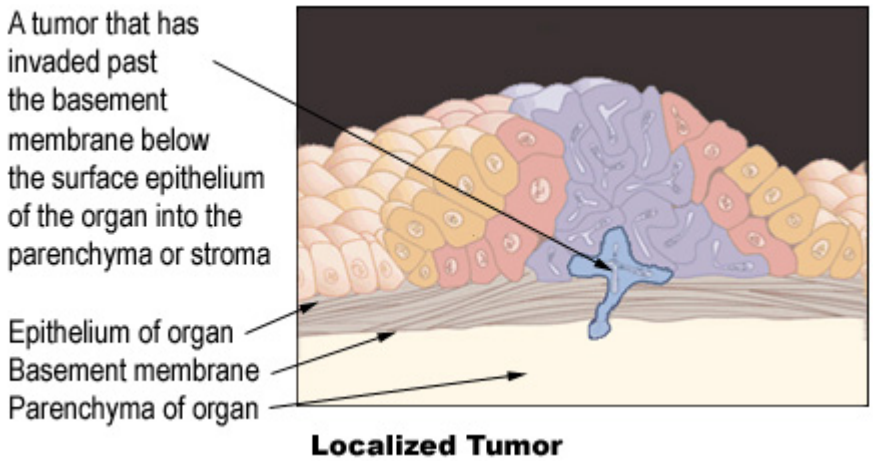


Source: Adapted from an illustration by Brian Shellito of *Scientific American*, as printed in *Cancer in Michigan, The Detroit News,* Nov. 1-2, 1998.

In situ means "in place." The technical definition of in situ is the presence ofmalignant cells within the cell group from which they arose. There is no penetration of the basement membrane of the tissue and no stromal invasion. Generally, a cancer begins in the rapidly dividing cells of the epithelium or lining of an organ and grows from the inside to the outside of the organ. An in situ cancer fulfills all pathologic criteria for malignancy except that it has not invaded the supporting structure of organ on which it arose.

An in situ diagnosis can only be made microscopically, because a pathologist must identify the basement membrane and determine that it has not been penetrated. If the basement membrane has been disrupted (in other words, the pathologist describes the tumor as microinvasive), the case is no longer in situ and is at least localized. Pathologists have many ways of describing in situ cancer, such as non-invasive, pre-invasive, non-infiltrating, intra-epithelial, Stage 0, intraductal, intracystic, no stromal invasion, and no penetration below the basement membrane. Organs and tissues that have no epithelial layer cannot be staged as in situ, since they do not have a basement membrane. Therefore, there cannot be a diagnosis of "sarcoma in situ."

Localized (code = 1)



Source: Adapted from an illustration by Brian Shellito of *Scientific American*, as printed in *Cancer in Michigan, The Detroit News,* Nov. 1-2, 1998.

A localized cancer is a malignancy limited to the organ of origin; it has spread no farther than the organ in which it started. There is infiltration past the basement membrane of the epithelium into the functional part of the organ, but there is no spread beyond the boundaries of the organ. A tumor can be widely invasive or even show metastases within the organ itself and still be considered "confined to organ of origin" or localized in summary stage.

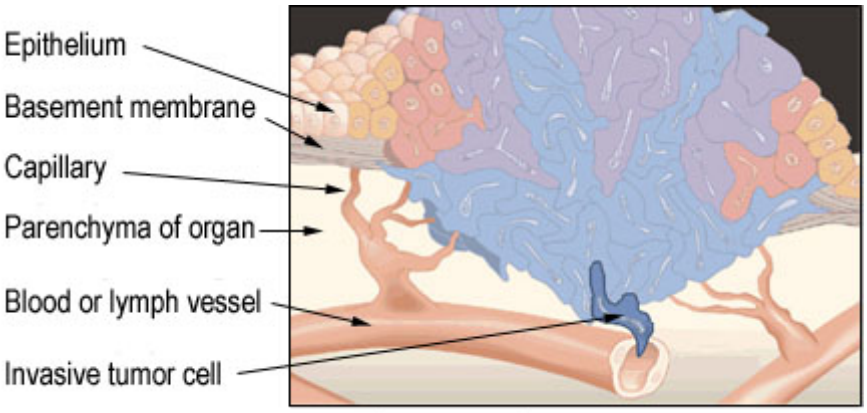
For organs that have definite boundaries (such as prostate, testis, or stomach) or sites where there is a clear line between the organ of origin and the surrounding region (such as breast or bladder), it is usually straightforward to determine whether the cancer is localized. An exception is skin, because it is sometimes difficult to determine where the dermis ends and subcutaneous tissue begins. For most internal organs, it is not possible to determine whether tumor is localized without exploratory surgery. However, the increasing sophistication of many imaging techniques is predicted to eventually make exploratory surgery obsolete.

It is important to know and recognize the names of different structures within the organ (such as lamina propria, myometrium, muscularis) so that a description of invasion or involvement of these structures will not be interpreted as regional spread.

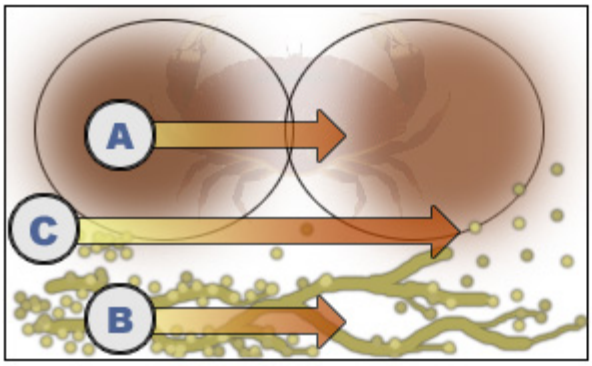
Because summary stage uses both clinical and pathologic information, it is important to read the pathology and operative report(s) for comments on gross evidence of spread, microscopic extension and metastases, as well as diagnostic imaging reports for mention of distant disease. If any of these reports provides evidence that the cancer has spread beyond the boundaries of the organ of origin, the case is not localized. On the other hand, if the pathology report, operative

report and other investigations show no evidence of spread, the tumor may be assumed to be localized.

Regional (code = 2-5)



Invasive (Regional) Tumor



A. Direct extention
B. To regional lymph nodes
C. Combination of A and B

Regional Stages

Source: Adapted from an illustration by Brian Shellito of *Scientific American*, as printed in *Cancer in Michigan, The Detroit News,* Nov. 1-2, 1998.

Regional stage is perhaps the broadest category as well as the most difficult to properly identify. The brief definition of regional stage is tumor extension beyond the limits of the organ of origin. Although the boundary between localized and

regional tumor extension is usually well-identified, the boundary between regional and distant spread is not always clear and can be defined differently by physicians in various specialities.

Cancer becomes regional when there is the potential for spread by more than one lymphatic or vascular supply route. For example, the tumor in the hepatic flexure of the colon with extension along the lumen to the ascending colon is staged as localized because both areas drain to same lymph nodes. On the other hand, a sigmoid tumor extending into the rectum is staged as regional because the tumor now has potential for the tumor cell drainage to both iliac and mesenteric nodes.

The formal (scientific) definition used by surgeons is that area extending from the periphery of an involved organ that lends itself to removal en bloc with a portion of— or an entire— organ with outer limits to include at least the first level nodal basin. However, en bloc resection (removal of multiple organs or tissues in one piece at the same time) is not always feasible or may have been shown not to be necessary. For example, a number of clinical trials have shown that lumpectomy or modified radical mastectomy has equivalent survival to the very disfiguring radical mastectomy for treatment of breast cancer. In contrast, radiation oncologists define the term regional as including any organs or tissues encompassed in the radiation field used to treat the primary site and regional lymph nodes.

Regional stage has several subcategories, each of which is described in detail below.

CODE	DEFINITION
2	**Regional by direct extension only**
3	**Regional lymph nodes involved only**
4	**Regional by BOTH direct extension AND lymph node involvement**
5	**Regional, NOS (Not Otherwise Specified)**

These codes and subcategories describe different methods of regional spread of tumor:

A. Invasion through entire wall of organinto surrounding organs and/or adjacent tissues (code 2, regional by direct extension or contiguous spread)

B. Tumor invasion of walls of lymphatics where cells can travel through lymphatic vessels to nearby lymph nodes where they are "filtered" out and begin to grow in the nodes (code 3, regional to lymph nodes)

C. A combination of direct extension and lymph node involvement (code 4, regional by direct extension and to regional nodes)

A fourth category of regional stage is code 5, regional not otherwise specified. This category may be used when it is unclear whether the tissues are involved by direct extension or lymph nodes, or when the other categories are not applicable, such as for staging Non-Hodgkin and Hodgkin lymphoma of more than one lymph node chain.

Clinicians may use some terms differently than cancer registrars. Therefore, it is important to understand the words used to describe the spread of the cancer and how they are used in staging. For example:

1. "Local" as in "carcinoma of the stomach with involvement of the local lymph nodes." Local nodes are the first group of nodes to drain the primary. Unless evidence of distant spread is present, such a case should be staged as regional, not local.
2. "Metastases" as in "carcinoma of lung with peribronchial lymph node metastases." Metastases in this sense means involvement by tumor. Such a case would still be regional. Learn the names of regional nodes for each primary site.

Regional Lymph Node Involvement

Regional lymph nodes are listed for each site.

1. Consider the farthest specific lymph node chain that is involved by tumor.
2. For lymphomas, any mention of lymph nodes is indicative of involvement and is used to determine the number and location of lymph node chains involved (see lymphoma scheme).
3. For solid tumors, the terms "fixed" or "matted" and "mass in the mediastinum, retroperitoneum, and/or mesentery" (with no specific information as to tissue involved) are considered involvement of lymph nodes.
4. Terms such as "palpable", "visible swelling", and "shotty" should be ignored. Look for a statement of involvement, either clinical or pathological. The terms "enlarged" and "lymphadenopathy" should be ignored for all sites except lung. For lung primaries, these terms are interpreted as regional lymph node involvement.
5. The terms "homolateral" and "ipsilateral" are used interchangeably. Any unidentified nodes included with the resected primary site specimen are to be considered as "Regional Lymph Nodes, NOS."
6. If the only indication of lymph node involvement in the record is the physician's statement of an N category from the TNM staging system or a stage from a site-specific staging system, such as Dukes' C, consider that information in considering regional lymph node involvement.

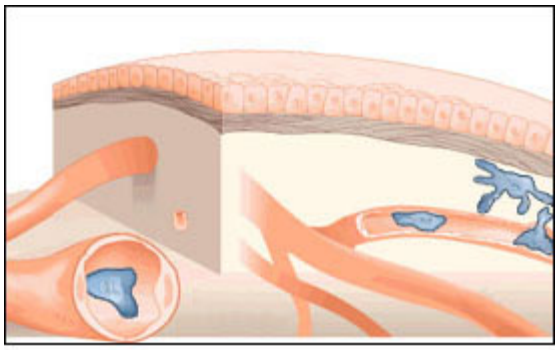
7. If there is a discrepancy between documentation in the medical record and the physician's assignment of TNM, the documentation takes precedence. Cases of this type should be discussed with the physician who assigned the TNM (see General Guideline 9).
8. If a specific chain of lymph nodes is named, but not listed as regional, first determine if the name is synonymous with a listed lymph node. Otherwise, assume distant lymph node(s) are involved.

Note: Regional lymph nodes are not palpable for inaccessible sites such as bladder, kidney, prostate, esophagus, stomach, lung, liver, corpus uteri and ovary. The best description concerning regional lymph nodes will be the surgeon's evaluation at the time of exploratory surgery or definitive surgery.

Distant (code = 7)

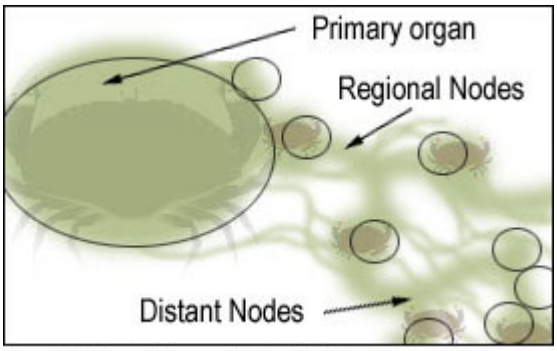
Distant metastases are tumor cells that have broken away from the primary tumor, have travelled to other parts of the body, and have begun to grow at the new location. Distant stage is also called remote, diffuse, disseminated, metastatic, or secondary disease. The point is that in most cases there is no continuous trail of tumor cells between the primary site and the distant site. Cancer cells can travel from the primary site in any of four ways:

1. Extension from primary organ beyond adjacent tissue into next organ; for example, from the lung through the pleura into bone or nerve.



Distant Metastases

Source: Adapted from an illustration by Brian Shellito of *Scientific American*, as printed in *Cancer in Michigan, The Detroit News,* Nov. 1-2, 1998.

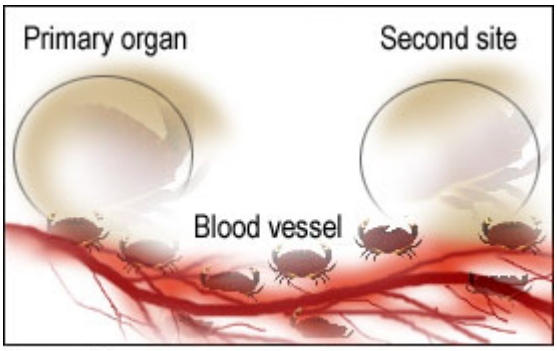


Distant Lymph Node Involvement

Source: Adapted from an illustration by Brian Shellito of *Scientific American*, as printed in *Cancer in Michigan, The Detroit News,* Nov. 1-2, 1998.

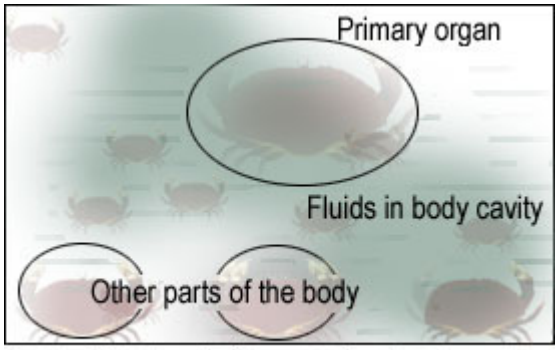
2. Travel in lymph channels beyond the first (regional) drainage area. Tumor cells can be filtered, trapped and begin to grow in any lymph nodes in the body.

3. Hematogenous or blood-borne metastases. Invasion of blood vessels within the primary tumor (veins are more susceptible to invasion than thicker-walled arteries) allows escape of tumor cells or tumor emboli which are transported through the blood stream to another part of the body where it lodges in a capillary or arteriole. At that point the tumor penetrates the vessel wall and grows back into the surrounding tissue.



Blood-borne metastases

Source: Adapted from an illustration by Brian Shellito of *Scientific American*, as printed in *Cancer in Michigan, The Detroit News,* Nov. 1-2, 1998.



Implantation metastases

Source: Adapted from an illustration by Brian Shellito of *Scientific American*, as printed in *Cancer in Michigan, The Detroit News,* Nov. 1-2, 1998.

4. Spread through fluids in a body cavity. Example: malignant cells rupture the surface of the primary tumor and are released into the thoracic or peritoneal cavity. They float in the fluid and can land on and begin to grow on any tissue reached by the fluid. This type of spread is also called implantation or seeding metastases. Some tumors form large quantities of fluid called ascites that can be removed, but the fluid rapidly re-accumulates. However, the presence of fluid or ascites does not automatically indicate dissemination. There must be cytologic evidence of malignant cells.

Common sites of distant spread are liver, lung, brain, and bones, but they are not listed specifically for each scheme. These organs receive blood flow from all parts of body and thus are a target for distant metastases. However, if the primary site is adjacent to the liver, lung, brain or bone, it is important to review the summary staging scheme for the primary site to assure that the stage is not regional by direct extension. An example would be liver involvement from a primary in the gallbladder. It is likely that this is regional by direct extension rather than distant stage, since the gallbladder is adjacent to liver. Read the diagnostic imaging reports to determine whether the cancer involves the surface of the secondary organ, which would be regional by direct extension, or whether the cancer is inside the secondary organ. If the latter is the case, the only way it could have developed in the secondary organ is if the tumor cells arrived there via the blood stream (distant hematogenous metastases). Another way to remember the difference between regional direct extension and distant metastases is whether the secondary site has tumor ***on*** the surface (most likely direct extension) or ***in*** the organ (blood-borne metastases). Hematopoietic, reticuloendothelial, immunoproliferative, and myeloproliferative neoplasms are considered distant except as noted in the staging scheme.

Unknown if Extension or Metastasis (code = 9)

If the primary site is unknown (C80.9), then the summary stage must be unknown.

There will be cases for which sufficient evidence is not available to adequately assign a stage. Examples include occasions when the patient expires before workup is completed, when a patient refuses a diagnostic or treatment procedure, and when there is limited workup due to the patient's age or a simultaneous contraindicating condition. If sufficient information does not exist, the case is unstageable.

This code should be assigned very sparingly. If at all possible, contact the physician to see if there is more information about the case which is not in the record, such as diagnostic studies performed prior to admission or documentation in the physician's office record.

Death certificate only cases are coded to '9', unknown.

General Guidelines

1. For each site, summary stage is based on a combined clinical and operative/pathological assessment. Gross observations at surgery are particularly important when all malignant tissue is not removed. In the event of a discrepancy between pathology and operative reports concerning excised tissue, priority is given to the pathology report.
2. Summary stage should include all information available through completion of surgery(ies) in the first course of treatment or within four months of diagnosis in the absence of disease progression, whichever is longer.
3. Summary stage information obtained after treatment with radiotherapy, chemotherapy, hormonal therapy, or immunotherapy has begun may be included unless it is beyond the time frame given in guideline 2 above.
4. Exclude any metastasis known to have developed after the diagnosis was established.
5. Clinical information, such as description of skin involvement for breast cancer and distant lymph nodesfor any site, can change the stage. Be sure to review the clinical information carefully to assure accurate summary stage. If the operative/pathology information disproves the clinical information, code the operative/pathology information.
6. All schemes apply to all histologies unless otherwise noted. Exceptions to this, for example, include all lymphomas and Kaposi sarcoma which should be staged using the histology schemes regardless of the primary site.
7. Autopsy reports are used in coding summary stage just as are pathology reports, applying the same rules for inclusion and exclusion.
8. Death Certificate Only cases and unknown primaries are coded '9' for summary stage.
9. The summary stage may be described only in terms of T (tumor), N (node) and M (metastasis) characteristics. In such cases, record the summary stage code that corresponds to the TNM information. If there is a discrepancy between documentation in the medical record and the physician's assignment of TNM, the documentation takes precedence. Cases of this type should be discussed with the physician who assigned the TNM.
10. Site-specific guidelines take precedence over general guidelines. Always consider the information pertaining to a specific site.

GUIDELINES FOR SUMMARY STAGING

For efficient assignment of the summary stage code, here are some additional guidelines. Three of the summary staging categories can be ruled out quickly: in situ, distant, and localized.

In situ

1. Rule out in situ stage disease. Carcinomas and melanomas are the only types of cancer that can be classified as in situ. Only carcinomas have a basement membrane. Sarcomas are never described as in situ. A pathologist must examine the primary organ and state that the tumor is in situ. If the cancer is anything except a carcinoma or melanoma, it cannot be in situ.
2. If there is any evidence of invasion (or extension to), nodal involvement or metastatic spread, the case is not in situ even if the pathology report so states. This is a common error in staging cervical cancer where the path report states that the cancer is "in situ with microinvasion"— such a case would be staged as localized.

Distant

3. Rule out distant disease. If metastases can be documented, there is no need to spend a great deal of time identifying local or regional spread. If distant metastases are recorded on x-ray or needle biopsy, the stage is already determined and the patient does not need to undergo a lot of other tests.
4. Hematopoietic diseases, such as leukemia and multiple myeloma, are considered disseminated or distant at time of diagnosis.
5. Rule out distant spread by reading the operative report for comments about seeding, implants, liver nodules, or other indications of metastases. Read diagnostic reports for references to distant disease.
6. If nodes, organs, or adjacent tissues are not specifically mentioned in the description of the various categories, attempt to cross-reference the term you have with those outlined. If there is no match, assume the site in question represents distant disease.

Localized

7. Rule out that the cancer is "confined to the organ of origin." In order for a lesion to be classified as localized, it must not extend beyond the outer limits of the organ and there must be no evidence of metastases anywhere else.
8. Terms such as "blood vessel invasion" or "perineural lymphatic invasion" do not necessarily indicate that the cancer has spread beyond the primary organ. If tumor at the primary site has invaded lymph or blood vessels, there is the potential for malignant cells to be transported throughout the

body. Step 1 (invasion), has occurred, but not necessarily steps 2 (transport of cancer cells) and 3 (growth at the secondary site). The case may still be localized.

9. Vascular invasion within the primary is not a determining factor in changing the stage unless there is definite evidence of tumor at distant sites.

Regional

10. If in situ, local and distant categories have been ruled out, the stage is regional.
11. For carcinomas, if there are lymph nodes involved with the tumor, the stage is at least regional.
12. For tissues, structures, and lymph nodes, assume ipsilateral unless stated to be contralateral or bilateral.

Unknown if Extension or Metastasis

If there is not enough information in the record to categorize a case, it must be recorded as unstageable.

HOW TO ASSIGN SUMMARY STAGE

Answers to four basic questions will determine the correct code for summary stage.

1. **Where did the cancer start?**

In what organ or tissue did the tumor originate? Is there a specific subsite of the organ involved? Information about the "primary site" will usually come from the physical examination, a diagnostic imaging report, the operative report or the pathology report. Code the primary site according to the rules in the *International Classification of Diseases for Oncology, Third Edition*. In addition to recording this code in the primary site field on the cancer abstract, this code will be useful later in the staging process.

2. **Where did the cancer go?**

Once the primary site is known, determine what other organs or structures are involved. Review the physical examination, diagnostic imaging reports, operative report(s), pathology report(s), and laboratory tests to identify any structures that are involved by cancer cells. Any of these reports can provide a piece of information that might change the stage. Note whether there is lymphatic or vascular invasion and/or spread, which organs are involved, whether there is a single focus or multiple foci of tumor. It is important to know the names of the substructures within the primary site as well as the names of surrounding organs and structures. Note the names of any tissues that are reported to be involved by cancer cells. Refer to the word list on page ? to determine whether a tissue is involved or not involved.

3. **How did the cancer get to the other organ or structure?**

Did the cancer spread to the new site in a continuous line of tumor cells from the primary site? If the pathologist can identify a trail of tumor cells from one organ to another, the stage may be regional by direct extension or distant by direct extension. Did the cancer spread by breaking away from the primary cancer and floating to the new site in the blood stream or body fluids? If there is no direct trail of tumor cells from the primary organ to the new site, the stage is probably distant (except for ovary).

4. **What are the stage and correct code for this cancer?**

    a. Open the SEER Summary Staging Manual 2000 to the staging scheme that includes the ICD-O-3 primary site/histology code identified earlier. Staging schemes for all primary sites are in ICD-O-3 code order with the exception of those that are based on histology.

    b. Review the staging scheme looking for the names of the structures and organs that were reported as involved. If more than one

structure or organ is involved, select the highest category that includes an involved structure.

Examples:

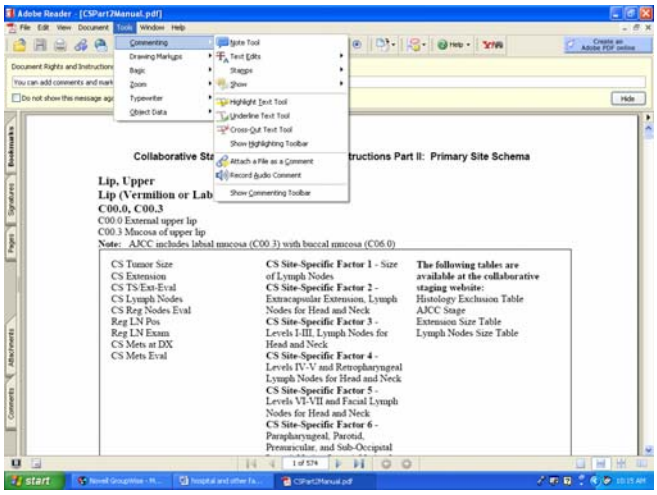
- If all reports are negative for spread of the cancer and the pathologist states that the cancer is noninvasive or non-infiltrating, code the stage as 0, in situ.
- If all reports are negative for spread of the cancer and the pathologist states that the cancer is invasive or infiltrating, code the stage as 1, localized.
- If other organs or structures are involved, assign the highest code associated with an involved structure.

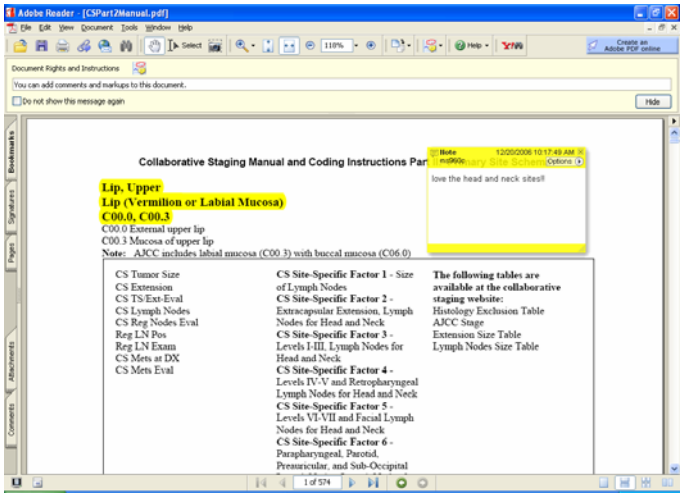
Collaborative Staging

For instructions on how to highlight, comment and otherwise mark-up your electronic copy of the CS manual, see Appendix I.

AN IMPORTANT NOTE ABOUT THE CURRENT COLLABORATIVE STAGING MANUAL

The Collaborative Staging Manuals are being released in a format that, if you have Adobe Acrobat Reader 7.0 or higher (available as a free download), you can highlight, make notes, etc., in the electronic copy of your manual. For instructions on how to make use of this feature, see Appendix I.





AN IMPORTANT NOTE ABOUT COLLABORATIVE STAGING

Although certain cases may be excluded from Collaborative Staging for the purposes of deriving TNM staging (e.g., pediatric cases, cases of certain histologies or certain sites), these cases are NOT excluded from Collaborative staging for the purposes of deriving SEER Summary Stage (see, for example, Appendix 5, page I-81 which states "Summary Stage will be generated."). These cases should therefore be subjected to Collaborative Staging in order to comply with West Virginia Rule 64CSR68, section 4.1.j.

GENERAL GUIDELINES

1. Collaborative Staging System applies to cases diagnosed on or after January 1, 2004. Collaborative Stage is not used for cases diagnosed prior to January 1, 2004.
2. Data for stage is collected on all cancer cases, (all sites and all histologies) regardless of whether the case has been microscopically confirmed.
3. Diagnostic confirmation is collected in a separate data item.
4. Summary Stage 1977 and 2000 are generated for all sites and histologies.
5. TNM elements and stage group are only generated for some sites and apply to all histologies defined by AJCC.
6. Cases not microscopically confirmed should be coded from the scheme for the site the clinician considers most likely to be the primary.
7. The timing rule is the same for TNM 6th Edition, SS 2000, and Collaborative Staging. Staging is based on information gathered through completion of surgery(ies) in first course of treatment or all information available within four months of the date of diagnosis (in the absence of disease progression), whichever is longer.
8. Metastasis known to have developed after the diagnosis was established should be excluded when determining the farthest extent of disease at diagnosis.
9. The codes are ordered in a hierarchy so that increasing numbers generally indicate increasing degrees of tumor involvement. For each field, code the highest applicable number. Exception: Codes for Unknown and Not Applicable are a lower priority over codes with lower numbers.
10. Coding is based on the best available clinical and pathologic information.
11. For the fields CS Tumor Size, CS Extension, CS Lymph Nodes, and CS Mets at DX, Collaborative Staging records the farthest extent of disease

based on combined clinical and operative/pathological assessment. Gross observations at surgery are important when all malignant tissue is not removed. In the event of a discrepancy between pathology and operative reports, pathology report is given priority. If there is no pre-op treatment, pathologic information takes priority; if there is pre-op treatment, clinical information takes priority in most cases. Clinical information, such as description of involvement of skin, or size of primary lesion or distant lymph nodes can change a stage and should be reviewed carefully to assure accurate coding.

12. When the patient does not receive pre-operative therapy (that is systemic chemotherapy, hormone, immunotherapy, and radiation therapy), and the operative/pathology report information disproves the clinical information, code the operative/pathology information.
13. When the patient does receive pre-operative cancer directed therapy, the greatest extent of disease should be recorded, whether determined clinically or pathologically.
14. The fields CS Tumor Size/Ext Eval, CS Reg Nodes Eval, and CS Mets Eval, document the methods used to determine tumor size and extension, lymph node involvement and distant metastasis, as well as the status of pre-operative treatment.
15. Site specific and histology specific guidelines take precedence over general guidelines. Always read the information pertaining to a specific site or histology.
16. Autopsy reports are used in coding Collaborative Stage in the same manner as pathology reports, applying the same inclusions and exclusions.
17. Death Certificate Only cases are usually coded as either unknown (9,99,999), or not applicable (8,88,888) in all CS fields.
18. Site-Specific Factors (SSF) are included in every scheme, and are incorporated into the algorithms when additional information is necessary to derive tumor (T), lymph node (N), metastasis (M), or TNM stage group, or where the factor is considered to be of clinical or prognostic importance. Information formerly coded as tumor markers, such as estrogen receptor for breast is coded in a site-specific factor. For sites/histologies where they are not used they are coded as "not applicable"
19. The fields "Regional Lymph Nodes Positive" and "Regional Lymph Nodes Examined" are based on pathologic (microscopic) information only.
20. Clinical information may be used in coding CS fields, minimizing the use of coding "unknown", instead coding "none" for regional lymph nodes or distant metastases. This applies primarily to localized or early (T1, T2)

stage in the TNM system. This applies to situations where there is no reason to doubt that the tumor is local, based on the clinical information available. By coding regional lymph nodes as negative and/or coding distant metastasis as none rather than coding these fields as unknown, the CS computer algorithms will derive a stage group that includes the best information available.

21. CS records the farthest extent of disease based on combined clinical and operative / pathologic assessment. Gross observations at surgery are important when all malignant tissue is not removed. In the event of a discrepancy between path and op reports, the pathology report takes priority. If there is no pre-operative treatment, pathologic information takes priority; if there is a pre-operative treatment, clinical information takes priority in most cases. Clinical information can change a stage and should be reviewed carefully to assure accurate coding. For example, skin involvement in a breast cancer case and / or clinically assessed distant lymph nodes can change a stage.

CS Tumor Size

This field records the largest dimension, or the diameter of the primary tumor, and is always recorded in millimeters. To convert centimeters to millimeters, multiply the dimension by 10.

The table below shows the allowable values for the 3-digit Tumor Size field in Collaborative Staging, using colon as an example.

CODE	DESCRIPTION
000	Indicates no mass or no tumor found.
001-998	Exact size in millimeters.
989	989 millimeters or larger.
990	Microscopic focus or foci only; no size of focus is given.
991	Described as less than 1 cm.
992	Described as less than 2 cm.
993	Described as less than 3 cm.
994	Described as less than 4 cm.
995	Described as less than 5 cm.
	SITE SPECIFIC CODES WHERE NEEDED
998	Familial polyposis (M8220/8221)
999	Unknown; size not stated; not stated in patient record.

1. Refer to general guidelines for Collaborative Staging regarding timing rules for data collection.
2. Refer to site-specific instructions for additional information. Site-specific instructions replace or over-ride general instructions. Where there are no site-specific instructions, general instructions apply.
3. Record tumor size information in the following order:

a. Record tumor size from the pathology report, if it is available, when the patient receives no radiation or systemic treatment prior to surgery.

> Example: Chest x-ray shows 3.5 cm mass; the pathology report from the surgery states that the same mass is malignant and measures 2.8 cm. Record tumor size as 028.

b. If the patient receives pre-operative (neoadjuvant) systemic therapy (chemotherapy, hormone therapy, immunotherapy) or radiation therapy, code the largest tumor size whether prior to or following treatment.

> Example: Patient has a 2.2 cm mass in the oropharynx; fine needle aspiration of mass confirms squamous cell carcinoma. Patient receives course of neoadjuvant combination chemotherapy. Pathologic size of tumor after total resection is 0.8 cm. Record tumor size as 022.

c. Information on size from imaging/radiographic techniques can be used to code size when there is no more specific size information from a pathology or operative report, but it should be taken as low priority, just above a physical exam.

d. If there is a difference in reported tumor size among imaging and radiographic techniques, record the largest tumor size reported in the record.

4. Record the exact size of the primary tumor for all sites except those for which it is stated to be not applicable. If no size is given, code as 999.

   a. Always code the size of the primary tumor, not the size of the polyp, ulcer, cyst, or distant metastasis. However, if the tumor is described as a "cystic mass," and only the size of the entire mass is given, code the size of the entire mass, since the cysts are part of the tumor itself.

   b. Record the largest dimension or diameter of tumor, whether it is from an excisional biopsy specimen or the complete resection of the primary tumor.

   > Example: A 3.3 cm tumor would be 33 millimeters and would be coded as 033.

Example: Tumor is described as 2.4 x 5.1 x 1.8 cm in size. Record tumor size as 051.

c. Record the size of the invasive component, if given.

d. If both an in situ and an invasive component are present, and the invasive component is measured, record the size of the invasive component even if it is smaller.

Example: Tumor is mixed in situ and invasive adenocarcinoma, total 3.7 cm in size, of which 1.4 cm is invasive. Record tumor size as 014.

e. Additional rule for breast primaries: If the size of the invasive component is not given, record the size of the entire tumor from the surgical report, pathology report, radiology report or clinical examination.

Example: Infiltrating duct carcinoma with extensive in situ component; total size 2.3 cm. Record tumor size as 023.

Example: Duct carcinoma in situ covering a 1.9 cm area with focal areas of invasive ductal carcinoma. Record tumor size as 019. Note: For breast cancer, document how the size of the tumor was determined in Site Specific Factor field 6.

f. For in situ lesions, code the size as stated.

g. Microscopic residual tumor does not affect overall tumor size.

h. Do not add pieces or chips together to create a whole; they may not be from the same location, or they may represent only a very small portion of a large tumor.

i. If an excisional biopsy is performed and residual tumor at time of resection of the primary is found to be larger than the excisional biopsy, code the size of the residual tumor.

j. For an incisional needle biopsy, code tumor size as 999. Do not code the tumor size from a needle biopsy unless there is no residual tumor found on further resection.

k. **Record tumor size (lateral dimension) for malignant melanoma. Depth of invasion will be coded in a site-specific factor.**

5. Special codes

   a. Tumor dimension is to be recorded for all primary sites, except as noted below. Other information previously collected in this field in other staging systems, such as depth of invasion for melanoma, has been moved to the Site-Specific Factors for those sites.

   b. If size is not reported, code as 999, which means unknown size, not applicable, or not documented in the patient record.

   c. The descriptions in code 998 take precedence over any mention of size. Code 998 is used only for the following sites:

      Esophagus (C15.0-C15.5, C15.8-C15.9): Entire circumference.

      Stomach (C16.0-C16.6, C16.8-C16.9): Diffuse, widespread—¾ or more, linitis plastica.

      Colorectal (M-8220/8221 with /2 or /3): Familial/multiple polyposis.

      Lung and main stem bronchus (C34.0-C34.3, C34.8-C34.9): Diffuse, entire lobe or lung.

      Breast (C50.0-C50.6, C50.8-C50.9): Inflammatory carcinoma; Diffuse, widespread—¾ or more of breast.

   d. Code 990, Microscopic focus or foci only; no size is given, should be used when no gross tumor is seen and tumor is only identified microscopically.

      Note: the terms microscopic focus, microfocus, and microinvasion are NOT the same as macroscopic focal or focus. A macroscopic focus or foci indicates a very small or isolated area or pinpoint or spot of tumor that may be visible grossly.

Example: Cervix conization: severe dysplasia with focal areas of microinvasion. Code tumor size as 990 microscopic focus, no size given.

e. Codes 991 through 995 are non-specific size descriptions which for some sites could still be used to determine a T category. If a specific size is given, code the more precise size in the range 001- 989.

f. Other special codes in the range 996 to 997 are used on a site-specific basis. Refer to the individual site schemes for further information and definitions.

Note: For the following diagnoses and/or primary sites, size is not applicable. Record as code 999.

Hematopoietic neoplasms, Immunoproliferative diseases, and Disseminated Langerhans cell histiocytosis (Letterer-Siwe disease).

Malignant lymphoma (Hodgkin lymphoma and non-Hodgkin lymphoma)

Leukemia, Multiple myeloma, and other plasma cell tumors

Mast cell tumors, Myeloproliferative diseases Myelodysplastic syndromes, Unknown and ill-defined primary sites (C76.0–76.5, C76.7–76.8, C80.9, C42._ and C77._)

g. The source of the tumor size (radiographs, endoscopy, pathology specimen, etc.) is documented in the TS/Ext Eval field.

CS Extension

CS Extension identifies contiguous growth of the primary tumor within the organ or direct extension into neighboring organs. For two sites, ovary and corpus uteri, discontinuous metastasis is coded in the CS extension field. Site-specific schemes contain detailed codes and coding instructions.

CS Tumor Extension allows the data to be collapsed into the AJCC T component and Stage Group, Summary Stage 1977, and Summary Stage 2000 (localized or regional direct extension), and provides flexibility for consistency over time.

1. Record the farthest documented extension of the primary tumor.
2. Do not include discontinuous metastases to distant sites except for ovary and corpus uteri.
3. Distant metastasis must be coded in the CS Mets at Dx field.
4. Record extension information in the following order:

    a. Record extension from the pathology report, when no neoadjuvant radiation or systemic therapy is given.
    b. If neoadjuvant therapy is given, code farthest extension whether prior to or following treatment.
    c. Imaging/radiographic information can be used when no pathology or operative report information is available and takes priority over physical exam information.
    d. Physical examination information may be used when no path, operative or imaging information is available.
    e. Microscopic residual disease or positive tumor margins does not increase extension code.
    f. If an involved organ is not listed, approximate the location and code with similar tissues.
    g. Refer to the ambiguous terminology list for terms that constitute involvement or extension.
    h. If information in the medical record is ambiguous or incomplete regarding the extent of tumor spread, this may be inferred from the T category stated by the physician. If only indication for extension is the physician's statement of T category, record the numerically lowest equivalent extension code for that T category.
    i. If there is nodal or metastatic involvement, extension can not be "in situ." Use the code for "Localized, NOS" if there is no better information.

CS Tumor Size/Extension Evaluation

The CS Tumor Size/Extension Evaluation code records how the codes for the two data items, CS Tumor Size and CS Extension, were determined based on the diagnostic methods employed.

This data item is used in Collaborative Stage to identify whether the T category of AJCC TNM was clinically or pathologically established and by what methods.

Evaluation fields were developed to allow the computer algorithm to derive the TNM Stage.

CODE	DESCRIPTION & STAGING BASIS
0	No surgical resection done. Evaluation based on physical examination, imaging examination, or other non-invasive clinical evidence. No autopsy evidence used.
1	No surgical resection done. Evaluation based on endoscopic examination, diagnostic biopsy, including fine needle aspiration biopsy, or other invasive techniques. No autopsy evidence used.
2	No surgical resection done, but evidence derived from autopsy (tumor was suspected or diagnosed prior to autopsy).
3	Surgical resection performed WITHOUT pre-surgical systemic treatment or radiation OR surgical resection performed, unknown if pre-surgical systemic treatment or radiation performed. Evaluation based on evidence acquired before treatment, supplemented or modified by the additional evidence acquired during and from surgery, particularly from pathologic examination of the resected specimen.
5	Surgical resection performed WITH pre-surgical systemic treatment or radiation; tumor size/extension based on clinical evidence.
6	Surgical resection performed WITH pre-surgical systemic treatment or radiation, BUT tumor size/extension based on pathologic evidence.
8	Evidence from autopsy only (tumor was unsuspected or undiagnosed prior to autopsy).

CODE	DESCRIPTION & STAGING BASIS
9	Unknown if surgical resection done, Not assessed; cannot be ssessed. Unknown if assessed, Not documented in patient record. For sites with no TNM scheme: not applicable.

CS Lymph Nodes

The CS Lymph Nodes code identifies the regional lymph nodes involved with cancer at diagnosis.

This data item is used to derive the AJCC N component and stage grouping, Summary Stage 1977 and Summary Stage 2000.

Regional lymph nodes are listed for each site. Those closest to the primary site have lower codes than those farther away.

Information in the data fields "Regional Lymph Nodes Positive" and "Regional Lymph Nodes Examined" is related to this field.

The CS Lymph Nodes field uses both general codes and site specific codes.

CODE	DESCRIPTION
00	None: no regional lymph node involvement
	SITE SPECIFIC CODES WHERE NEEDED
80	Lymph Nodes, NOS
90	Unknown; regional lymph nodes cannot be assessed; not stated in the patient record.

1. Record the farthest specific regional lymph node chain that is involved by tumor either clinically or pathologically.

    a. Regional lymph nodes are listed for each site. The regional lymph nodes closest to the primary site have lower codes than nodes farther away. In addition, for some sites, regional lymph nodes are further classified by size, laterality, and number of involved nodes. Record the highest applicable code.

    Example
    Peribronchial lymph nodes are positive on fine needle aspiration biopsy. Contralateral mediastinal mass noted on CT scan but not biopsied. Patient chooses radiation therapy as primary treatment.

    Use the code for contralateral mediastinal lymph node involvement as it is higher than the code for peribronchial lymph nodes.

b. Record involved regional lymph nodes from the pathology report, if it is available, when the patient receives no radiation or systemic treatment prior to surgery.

c. If there is a discrepancy between clinical information and pathologic information about the same lymph nodes, the pathologic information takes precedence.

Example
Axillary lymphadenopathy stated as "suspicious for involvement" noted on physical exam. After axillary dissection, all lymph nodes are negative.

Code CS Lymph Nodes as 0, no regional lymph node involvement.

d. If there is direct extension of the primary tumor into a regional lymph node, record the involved node in this field.

e. If the patient receives preoperative (neoadjuvant) systemic therapy (chemotherapy, hormone therapy, immunotherapy) or radiation therapy, code the farthest involved regional lymph nodes, whether this is based on information prior to surgery or following treatment.

2. Use code 00 for lymph node involvement when the CS Extension is coded in situ, even if no lymph nodes are removed, since "in situ" by definition means noninvasive. If there is evidence of nodal involvement associated with a tumor described as in situ, it would indicate that an area of invasion was simply missed, and it is NOT an in situ lesion.

3. For solid tumors, the terms "fixed" or "matted" and "mass in the hilum, mediastinum, retroperitoneum, and/or mesentery" (with no specific information as to tissue involved) are considered involvement of lymph nodes.

    a. Any other terms, such as "palpable," "enlarged," "visible swelling," "shotty," or "lymphadenopathy" should be ignored (except for adenopathy, enlargement, and mass in the hilum or mediastinum for lung primaries) unless there is a statement of involvement by the clinician.

    b. For lymphomas, any mention of lymph nodes is indicative of involvement.

    c. Regional lymph nodes are not palpable for inaccessible sites such as bladder, kidney, prostate, esophagus, stomach, lung, liver, corpus uteri and ovary. The best description concerning regional lymph nodes will be on imaging studies or the surgeon's evaluation at the time of exploratory surgery or definitive surgery. If regional lymph nodes for these inaccessible sites are not mentioned on

imaging or exploratory surgery, they are presumed to be clinically negative.

d. The terms "homolateral," "ipsilateral," and "same side" are used interchangeably.

e. Any unidentified nodes included with the resected primary site specimen are to be coded as regional lymph nodes, NOS.

f. Where more specific categories are provided, the codes for "regional lymph node(s), NOS" and "lymph nodes, NOS" should be used only after an exhaustive search for more specific information.

4. When size of involved regional lymph nodes is required, code from pathology report, if given.

    a. Code the size of the metastasis, not the entire node, except as noted in site-specific instructions. The size of the metastasis within the lymph node can be inferred if the size for the entire node falls within one of the codes, for example a single involved node 1.5 cm in size can be coded to "single lymph node less than 2 cm" because the metastasis cannot be larger than 1.5 cm.

5. If the only indication of lymph node involvement in the record is the physician's statement of an N category from the TNM staging system or a stage from a site-specific staging system, such as Dukes' C, record the numerically lowest equivalent CS lymph node code for that category.

    a. If there is a discrepancy between documentation in the medical record and the physician's assignment of TNM, the documentation takes precedence. Cases of this type should be discussed with the physician who assigned the TNM.

    b. If the information in the medical record is ambiguous or incomplete regarding the extent to which the tumor has spread, lymph node involvement may be inferred from the N category stated by the physician.

6. For colon, rectosigmoid and rectum primaries, if there is a statement about tumor nodules(s) in the pericolic or perirectal fat, use the following guidelines for coding regional lymph node involvement: Code as regional lymph node involvement if the nodule is smooth contour. Code as tumor extension if the nodule has an irregular contour.

CS Nodes Positive

This data item records the exact number of regional lymph nodes examined by the pathologist and found to contain metastasis.

This data item is used to derive the AJCC N component of stage grouping for certain primary sites, Summary Stage 1977 and Summary Stage 2000.

CODE	DESCRIPTION
00	All nodes examined are negative.
01–89	1-89 nodes are positive. (Code exact number of nodes positive)
90	90 or more nodes are positive.
95	Positive aspiration of lymph node(s) was performed.
97	Positive nodes are documented, but the number is unspecified.
98	No nodes were examined.
99	It is unknown whether nodes are positive; not applicable; not stated in patient record.

Regional lymph nodes positive is used to derive the AJCC N component and stage grouping for certain primary sites.

1. Record information about only regional lymph nodes in this field. Involved distant lymph nodes should be coded in the "CS Mets at Dx" field.
2. This field is based on pathology information only. If no LNs were removed for examination, or if a lymph nodes drainage area was removed but no LNs were found, code as 98.
3. Record the total number of lymph nodes removed and found to be positive by pathologic examination, cumulative through all first course procedures.
4. Use code 99 for primary sites Placenta, Brain, Cerebral Meninges, Lymphoma, Hematopoietic, Reticuloendothelial, Immunoproliferative and Myeloproliferative, Ill-defined Sites and Unknown Primary neoplasms.
5. If no nodes examined, code as 98.
6. Positive aspiration is coded to 95.

7. Any combination of positive aspirated, biopsied, sampled or dissected nodes is coded to 97.
8. Do not count positive distant nodes.

CS Nodes Examined

This data item records the total number of regional lymph nodes that were removed and examined by the pathologist.

CODE	DESCRIPTION
00	No nodes were examined.
01–89	1-89 nodes were examined. (Code the exact number of regional lymph nodes examined.)
90	90 or more nodes were examined.
95	No regional nodes were removed, but aspiration of regional nodes was performed.
96	Regional lymph node removal was documented as a sampling, and the number of nodes is unknown/not stated.
97	Regional lymph node removal was documented as a dissection, and the number of nodes is unknown/not stated.
98	Regional lymph nodes were surgically removed, but the number of lymph nodes is unknown/not stated and not documented as a sampling or dissection; nodes were examined, but the number is unknown.
99	It is unknown whether nodes were examined; not applicable or negative; not stated in patient record.

This data item is used to derive the AJCC N component and stage grouping.

1. Record information about only regional lymph nodes in this field. Distant nodes are coded in the "CS Mets at Dx" field.
2. Record the total number of regional lymph nodes removed and examined by the pathologist, cumulative from all lymph node removal procedures through the completion of surgeries in the first course of treatment.

3. This field is based on pathology information only. If no lymph nodes were removed for examination, or if a lymph node drainage area was removed but no lymph nodes found, code as 00.
4. If a lymph node biopsy was performed, code the number of nodes removed, if known. If the number of LNs removed by biopsy is not known, use code 96.
5. Use code 99 for primary sites Placenta, Brain, Cerebral Meninges, Lymphoma, Hematopoietic, Reticuloendothelial, Immunoproliferative and Myeloproliferative, Ill-defined Sites and Unknown Primary neoplasms.
6. No change from current SEER codes or rules.
7. Count total regional nodes removed and examined by pathologist
8. Cumulative through all first course procedures.
9. If no nodes examined, code as 00.
10. If no nodes in specimen, code as 00.
11. Aspiration of regional LN is coded to 95.
12. Any combination of positive aspirated, biopsied, sampled or dissected nodes is coded to 98.
13. Do not count distant nodes.

CS Lymph Node Evaluation

The data field for CS Lymph Node Evaluation records how the code for the item "CS Lymph Nodes" was determined based on the diagnostic methods employed.

This data item is used in Collaborative Stage to identify whether the N of AJCC TNM was clinically or pathologically diagnosed.

CODE	DESCRIPTION & STAGING BASIS
0	No regional lymph nodes removed for examination. Evaluation based on physical examination, imaging, or other non-invasive clinical evidence. No autopsy evidence used.
1	No regional lymph nodes removed for examination. Evaluation based on endoscopic examination, diagnostic biopsy including fine needle aspiration of lymph node(s) or other invasive techniques. No autopsy evidence used.
2	No regional lymph nodes removed for examination, but evidence derived from autopsy (tumor was suspected or diagnosed prior to autopsy).
3	Regional lymph nodes removed for examination (removal of at least 1 lymph node) WITHOUT pre-surgical systemic treatment or radiation OR lymph nodes removed for examination, unknown if pre-surgical systemic treatment or radiation performed.
5	Regional lymph nodes removed for examination WITH pre-surgical systemic treatment or radiation, and lymph node evaluation based on clinical evidence.
6	Regional lymph nodes removed for examination WITH pre-surgical systemic treatment or radiation, BUT lymph node evaluation based on pathologic evidence.
8	Evidence from autopsy; tumor was unsuspected or undiagnosed prior to autopsy.
9	Unknown if lymph nodes removed for examination Not assessed; cannot be assessed. Unknown if assessed. Not documented in patient record. For sites that have no TNM staging: Not applicable.

CS Metastasis at Diagnosis

This data field identifies the distant site(s) of metastatic involvement at diagnosis.

CODE	DESCRIPTION
00	No; none
10	Distant lymph node(s)
40	Distant metastases except code 10 Distant metastasis, NOS Carcinomatosis SITE-SPECIFIC CODES WHERE NEEDED
50	(40) + (10)
99	Unknown; distant metastasis cannot be assessed; not stated in patient record

1. This field represents distant metastases (the TNM M component or distant stage in Summary Staging)
   at the time of diagnosis. In other words, when the patient was diagnosed, tumor had already spread indirectly (through vascular or lymph channels) to a site remote from the primary tumor.
2. Metastasis known to have developed after the extent of disease was established (also referred to as progression of disease) should not be recorded in the CS Mets at DX field.
3. Record CS Mets at DX as Code 00 rather than Code 99 when the clinician proceeds with standard treatment of the primary site for localized or early (T1, T2) stage, since this action presumes that there are no distant metastasis that would otherwise alter the treatment approach. Code 99 can and should be used in situations where there is reasonable doubt that the tumor is no longer localized and there is no documentation of distant metastases.
4. If the only indication of extension in the record is the physician's statement of an M category from the TNM staging system or a stage from a site-specific staging system, such as Dukes' D, record the numerically

lowest equivalent extension code for that M category. In most cases, this will be 40, Distant metastasis, NOS.

5. If the information in the medical record is ambiguous or incomplete regarding the extent to which the tumor has spread, the extent of disease may be inferred from the M category stated by the physician.
6. Some site or histology schemes include a designation of M1, NOS. The NOS is added when there is further breakdown of the category into subsets (such as M1a, M1b, M1c), but the correct subset cannot be determined.

CS Metastasis at Diagnosis Evaluation

This data item records how the code for the data item "CS Mets at DX" was determined based on the diagnostic methods employed.

CODE	DESCRIPTION & STAGING BASIS
0	No pathologic examination of metastatic tissue performed. Evaluation of distant metastasis based on physical examination, imaging examination, and/or other non-invasive clinical evidence. No autopsy evidence used.
1	No pathologic examination of metastatic tissue performed. Evaluation of distant metastasis based on endoscopic examination or other invasive technique. No autopsy evidence used.
2	No pathologic examination of metastatic tissue done prior to death, but no carriage return here evidence derived from autopsy (tumor was suspected or diagnosed prior to autopsy).
3	Pathologic examination of metastatic tissue performed WITHOUT pre-surgical systemic treatment or radiation OR pathologic examination of metastatic tissue performed, unknown if pre-surgical systemic treatment or radiation performed.
5	Pathologic examination of metastatic tissue performed WITH pre-surgical systemic treatment or radiation, and extension based on clinical evidence. Clinical.
6	Pathologic examination of metastatic tissue performed WITH pre-surgical systemic treatment or radiation, BUT extension based on pathologic evidence.
8	Evidence from autopsy; tumor was unsuspected or undiagnosed prior to no CR here autopsy.
9	Not assessed; cannot be assessed. Unknown if assessed. Not documented in patient record for sites with no TNM staging: Not applicable.

For sites with no TNM staging: Not applicable. Clinical.

Codes 0, 1, 5, and 9 indicate a clinical staging basis. Codes 2 and 3 indicate a pathologic staging basis. Code 6 is the intercurrent (y) staging basis, and code 8 is reserved for cases diagnosed at autopsy (the "a" staging basis).

CS Site-Specific Factor 1

Schema for site specific factors are provided in Appendix *

Identifies additional information needed to generate stage, or prognostic factors that have an effect on stage or survival.

CODE	DESCRIPTION
000	None
	SITE/HISTOLOGY-SPECIFIC CODES
999	Unknown; [site-specific title] cannot be assessed; Not documented in patient record

For schemas that do not use this site-specific factor:

CODE	DESCRIPTION
888	Not applicable for this site

INSTRUCTIONS FOR CODING

1. If there is no site/histology-specific factor for a schema, code 888.

2. The following primary sites/histologies use Site Specific Factor 1 to code information. See the site-specific schemas for acceptable codes and their definitions.

SITE/HISTOLOGY	FACTOR
Head and neck*	Size of Lymph Nodes
Colon	Carcinoembryonic Antigen (CEA)
Rectosigmoid, rectum	Carcinoembryonic Antigen (CEA)
Liver	Alpha Fetoprotein (AFP)
Pleura	Pleural Effusion

SITE/HISTOLOGY	FACTOR
Malignant Melanoma of Skin, Vulva, Penis, Scrotum	Measured Thickness (Depth), Breslow's Measurement
Mycosis Fungoides	Peripheral Blood Involvement
Breast	Estrogen Receptor Assay (ERA)
Ovary	Carbohydrate Antigen 125 (CA-125)
Placenta	Prognostic Scoring Index
Prostate	Prostate Specific Antigen (PSA) Lab Vaule
Testis	Alpha Fetoprotein (AFP)
Melanoma of conjunctiva	Measured Thickness (Depth), Breslow's Measurement
Melanoma of choroid	Measured Thickness (Depth), Breslow's Measurement
Melanoma of Iris and Ciliary Body	Measured Thickness (Depth), Breslow's Measurement
Retinoblastoma	Extension Evaluated at Enucleation
Brain	WHO Grade
Other CNS	WHO Grade
Thyroid	Solitary vs. Multifocal
Other Endocrine	WHO Grade
Kaposi Sarcoma	Associated with HIV/AIDS
Lymphoma	Associated with HIV/AIDS

* Head and neck includes the following schemas: upper lip; lower lip; other lip; base of tongue; anterior tongue; upper gum; lower gum and retromolar trigone; other gum; floor of mouth; hard palate; soft palate/uvula; other mouth; buccal mucosa; parotid gland; submandibular gland; other salivary glands; oropharynx; anterior surface of epiglottis; nasopharynx; pyriform sinus/ hypopharynx; other pharynx; nasal cavity; middle ear; maxillary sinus; ethmoid sinus; other sinus; glottic larynx; supraglottic larynx; subglottic larynx; other larynx

3. Code 000 Not done is used when there is a statement in the record that a test was not performed.

a. If there is no report of a lab test in the patient record, code as 999 Unknown; Not documented in patient record.
b. For Kaposi sarcoma, if AIDS status is not documented, code as 999 Unknown rather than 002, Not Present.

CS Site-Specific Factor 2

Schema for site specific factors are provided in Appendix *

Identifies additional information needed to generate stage, or prognostic factors that have an effect on stage or survival.

CODE	DESCRIPTION
000	None
	SITE/HISTOLOGY-SPECIFIC CODES
999	Unknown; [site-specific title] cannot be assessed; Not documented in patient record

For schemas that do not use this site-specific factor:

CODE	DESCRIPTION
888	Not applicable for this site

INSTRUCTIONS FOR CODING

1. If there is no site/histology-specific factor for a schema, code 888.

2. The following primary sites/histologies use Site Specific Factor 2 to code information. See the site-specific schemas for acceptable codes and their definitions.

SITE/HISTOLOGY	FACTOR
Head and neck*	Extracapsular Extension, Lymph Nodes for Head and Neck
Liver	Fibrosis Score
Malignant Melanoma of Skin, Vulva, Penis, Scrotum	Ulceration
Breast	Progesterone Receptor Assay (PRA)
Prostate	Prostate Specific Antigen (PSA)
Testis	Human Chorionic Gonadotropin (HCG)
Lymphoma	Symptoms at Diagnosis

* Head and neck includes the following schemas: upper lip; lower lip; other lip; base of tongue; anterior tongue; upper gum; lower gum and retromolar trigone; other gum; floor of mouth; hard palate; soft palate/uvula; other

mouth; buccal mucosa; parotid gland; submandibular gland; other salivary glands; oropharynx; anterior surface of epiglottis; nasopharynx; pyriform sinus/ hypopharynx; other pharynx; nasal cavity; middle ear; maxillary sinus; ethmoid sinus; other sinus; glottic larynx; supraglottic larynx; subglottic larynx; other larynx

3. Code 000 Not done is used when there is a statement in the record that a test was not performed.

    a. If there is no report of a lab test in the patient record, code as 999 Unknown; Not documented in patient record.
    b. For malignant melanoma of skin, if ulceration not mentioned in the pathology report, code as 000 No ulceration present..

Schema for site specific factors are provided in Appendix *

CS Site-Specific Factor 3

Identifies additional information needed to generate stage, or prognostic factors that have an effect on stage or survival.

CODE	DESCRIPTION
000	None
	SITE/HISTOLOGY-SPECIFIC CODES
999	Unknown; [site-specific title] cannot be assessed; Not documented in patient record

For schemas that do not use this site-specific factor:

CODE	DESCRIPTION
888	Not applicable for this site

INSTRUCTIONS FOR CODING

1. If there is no site/histology-specific factor for a schema, code 888.

1. The following primary sites use Site Specific Factor 3 to code information. See the site-specific schemas for acceptable codes and their definitions.

SITE/HISTOLOGY	FACTOR
Head and neck*	Levels I-III, Lymph Nodes of Head and Neck
Malignant Melanoma of Skin, Vulva, Penis, Scrotum	Clinical Status of Lymph Node Mets
Breast	Number of Positive Ipsilateral Axillary Lymph Nodes
Prostate	CS Extension - Pathologic Extension
Testis	LDH (Lactate Dehydrogenase)
Lymphoma	International Prognostic Index (IPI) Score

* Head and neck includes the following schemas: upper lip; lower lip; other lip; base of tongue; anterior tongue; upper gum; lower gum and retromolar

trigone; other gum; floor of mouth; hard palate; soft palate/uvula; other mouth; buccal mucosa; parotid gland; submandibular gland; other salivary glands; oropharynx; anterior surface of epiglottis; nasopharynx; pyriform sinus/ hypopharynx; other pharynx; nasal cavity; middle ear; maxillary sinus; ethmoid sinus; other sinus; glottic larynx; supraglottic larynx; subglottic larynx; other larynx

3. Code 000 Not done is used when there is a statement in the record that a test was not performed.

    a. If there is no report of a lab test in the health record, code as 999 Unknown; Not documented in patient record.
    b. For the lymphomas, if the IPI score is not stated in the record, code as 999 Unknown; Not documented in patient record. It is not necessary to calculated the IPI score from other information in the record.

FOR HEAD AND NECK SITES ONLY:

4. Use code 9 only when it is unknown if lymph nodes are involved. Within the Site-Specific Factors, do not code 9 in some positions and 0 or 1 in other positions. If specific information is available about the positive or negative status of some but not all nodes in any one level or group, assume that the rest of the nodes in the same Site-Specific Factor are negative and code accordingly.

5. When the only information available is Regional nodes, NOS or Cervical nodes, NOS or Internal jugular lymph nodes, NOS or Lymph nodes, NOS, code 0 in all digits of Site-Specific Factors 3-6.

6. See Coding Regional Lymph Nodes for Head and Neck Sites under CS Lymph Nodes for further information about the regional nodes of the head and neck, including definitions of the levels.

CS Site-Specific Factor 4

Schema for site specific factors are provided in Appendix *

Identifies additional information needed to generate stage, or prognostic factors that have an effect on stage or survival.

CODE	DESCRIPTION
000	None
	SITE/HISTOLOGY-SPECIFIC CODES
999	Unknown; [site-specific title] cannot be assessed; Not documented in patient record

For schemas that do not use this site-specific factor:

CODE	DESCRIPTION
888	Not applicable for this site

INSTRUCTIONS FOR CODING

1. If there is no site/histology-specific factor for a schema, code 888.

2. The following primary sites use Site Specific Factor 4 to code information. See the site-specific schemas for acceptable codes and their definitions.

SITE/HISTOLOGY	FACTOR
Head and neck*	Levels IV-V, Lymph Nodes of Head and Neck
Malignant Melanoma of Skin, Vulva, Penis, Scrotum	Lactate Dehydrogenase (LDH)
Breast	Immunohistochemistry (IHC) of Regional Lymph Nodes
Prostate	Prostate Apex Involvement
Testis	Radical Orchiectomy Performed

* Head and neck includes the following schemas: upper lip; lower lip; other lip; base of tongue; anterior tongue; upper gum; lower gum and retromolar trigone; other gum; floor of mouth; hard palate; soft palate/uvula; other mouth; buccal mucosa; parotid gland; submandibular gland; other salivary glands; oropharynx; anterior surface of epiglottis; nasopharynx; pyriform

sinus/ hypopharynx; other pharynx; nasal cavity; middle ear; maxillary sinus; ethmoid sinus; other sinus; glottic larynx; supraglottic larynx; subglottic larynx; other larynx

3. Code 000 Not done is used when there is a statement in the record that a test was not performed.

    a. If there is no report of a lab test in the health record, code as 999 Unknown; Not documented in patient record.

FOR HEAD AND NECK SITES ONLY:

4. Use code 9 only when it is unknown if lymph nodes are involved. Within the Site-Specific Factors, do not code 9 in some positions and 0 or 1 in other positions. If specific information is available about the positive or negative status of some but not all nodes in any one level or group, assume that the rest of the nodes in the same Site-Specific Factor are negative and code accordingly.

5. When the only information available is Regional nodes, NOS or Cervical nodes, NOS or Internal jugular lymph nodes, NOS or Lymph nodes, NOS, code 0 in all digits of Site-Specific Factors 3-6.

6. See Coding Regional Lymph Nodes for Head and Neck Sites under CS Lymph Nodes for further information about the regional nodes of the head and neck, including definitions of the levels.

CS Site-Specific Factor 5

Schema for site specific factors are provided in Appendix *

Identifies additional information needed to generate stage, or prognostic factors that have an effect on stage or survival.

CODE	DESCRIPTION
000	None
	SITE/HISTOLOGY-SPECIFIC CODES
999	Unknown; [site-specific title] cannot be assessed; Not documented in patient record

For schemas that do not use this site-specific factor:

CODE	DESCRIPTION
888	Not applicable for this site

INSTRUCTIONS FOR CODING

1. If there is no site/histology-specific factor for a schema, code 888.

4. The following primary sites use Site Specific Factor 5 to code information. See the site-specific schemas for acceptable codes and their definitions.
5.

SITE/HISTOLOGY	FACTOR
Head and neck*	Levels VI-VIII, Lymph Nodes of Head and Neck
Breast	Molecular studies of regional lymph nodes
Prostate	Gleason's Primary and Secondary Patterns
Testis	Size of metastases in lymph nodes

* Head and neck includes the following schemas: upper lip; lower lip; other lip; base of tongue; anterior tongue; upper gum; lower gum and retromolar trigone; other gum; floor of mouth; hard palate; soft palate/uvula; other mouth; buccal mucosa; parotid gland; submandibular gland; other salivary glands; oropharynx; anterior surface of epiglottis; nasopharynx; pyriform sinus/ hypopharynx; other pharynx; nasal cavity; middle ear; maxillary

sinus; ethmoid sinus; other sinus; glottic larynx; supraglottic larynx; subglottic larynx; other larynx

6. Code 000 Not done is used when there is a statement in the record that a test was not performed.

    a. If there is no report of a lab test in the health record, code as 999 Unknown; Not documented in patient record.

FOR HEAD AND NECK SITES ONLY:

4. Use code 9 only when it is unknown if lymph nodes are involved. Within the Site-Specific Factors, do not code 9 in some positions and 0 or 1 in other positions. If specific information is available about the positive or negative status of some but not all nodes in any one level or group, assume that the rest of the nodes in the same Site-Specific Factor are negative and code accordingly.

5. When the only information available is Regional nodes, NOS or Cervical nodes, NOS or Internal jugular lymph nodes, NOS or Lymph nodes, NOS, code 0 in all digits of Site-Specific Factors 3-6.

6. See Coding Regional Lymph Nodes for Head and Neck Sites under CS Lymph Nodes for further information about the regional nodes of the head and neck, including definitions of the levels.

CS Site-Specific Factor 6

Schema for site specific factors are provided in Appendix *

Identifies additional information needed to generate stage, or prognostic factors that have an effect on stage or survival.

CODE	DESCRIPTION
000	None
	SITE/HISTOLOGY-SPECIFIC CODES
999	Unknown; [site-specific title] cannot be assessed; Not documented in patient record

For schemas that do not use this site-specific factor:

CODE	DESCRIPTION
888	Not applicable for this site

INSTRUCTIONS FOR CODING

1. If there is no site/histology-specific factor for a schema, code 888.

7. The following primary sites use Site Specific Factor 6 to code information. See the site-specific schemas for acceptable codes and their definitions.

SITE/HISTOLOGY	FACTOR
Head and neck*	Parapharyngeal, Parotid, Preauricular, and Sub-Occipital Lymph Nodes, Lymph Nodes for Head and Neck
Breast	Size of Tumor--Invasive Component
Prostate	Gleason's Score

* Head and neck includes the following schemas: upper lip; lower lip; other lip; base of tongue; anterior tongue; upper gum; lower gum and retromolar trigone; other gum; floor of mouth; hard palate; soft palate/uvula; other mouth; buccal mucosa; parotid gland; submandibular gland; other salivary glands; oropharynx; anterior surface of epiglottis; nasopharynx; pyriform sinus/ hypopharynx; other pharynx; nasal cavity; middle ear; maxillary sinus; ethmoid sinus; other sinus; glottic larynx; supraglottic larynx; subglottic larynx; other larynx

8. Code 000 Not done is used when there is a statement in the record that a test was not performed.

    a. If there is no report of a lab test in the health record, code as 999 Unknown; Not documented in patient record.

FOR HEAD AND NECK SITES ONLY:

4. Use code 9 only when it is unknown if lymph nodes are involved. Within the Site-Specific Factors, do not code 9 in some positions and 0 or 1 in other positions. If specific information is available about the positive or negative status of some but not all nodes in any one level or group, assume that the rest of the nodes in the same Site-Specific Factor are negative and code accordingly.

5. When the only information available is Regional nodes, NOS or Cervical nodes, NOS or Internal jugular lymph nodes, NOS or Lymph nodes, NOS, code 0 in all digits of Site-Specific Factors 3-6.

6. See Coding Regional Lymph Nodes for Head and Neck Sites under CS Lymph Nodes for further information about the regional nodes of the head and neck, including definitions of the levels.

Coding "None" vs. "Unknown" in the Collaborative Staging System, TNM and Summary Stage

In the process of bringing together the principles of Summary Stage, TNM Categories and Stage Groupings, and SEER Extent of Disease coding, the Collaborative Staging System has also attempted to update abstracting rules to deal with the contemporary health care environment, in which the completeness of staging documentation in the medical record has become an issue. In many circumstances, a patient's insurance will not pay for an imaging study or lab test that is expected to be negative but may otherwise be considered part of an 'ideal' cancer staging workup. Similarly, the content of a clinician's notes has changed over time to simply report any symptomatic, suspicious, or involved areas rather than chronicle every body part that is normal. This change in documentation is a source of frustration to data collectors who rely on statements of normalcy or negativity to establish the boundaries of how far the cancer has spread.

When clinical practice changes and data collection guidelines do not, the completeness of the data is affected. The implementation of the Collaborative Staging System introduces a paradigm shift in the collection of information documenting the extent of disease, particularly in the collection of information about regional lymph nodes or distant metastases for primary sites not easily examined by palpation, observation, physical examination, or other clinical methods. These 'inaccessible' primary sites include bladder, kidney, prostate, esophagus, stomach, lung, liver, corpus uteri and ovary.

The Collaborative Staging System allows data collectors to record regional lymph nodes as negative rather than unknown (based on clinical evaluation) when there is no mention of regional lymph node involvement in the physical examination, pre-treatment diagnostic testing or surgical exploration, and the patient receives what would be usual treatment to the primary site (treatment appropriate to the stage of disease as determined by the physician). The basis for this shift in the approach to information missing from the medical record is that typically the clinician reports positive findings and tends to remain silent on some or all negative findings. This new coding guideline also allows data collectors to record distant metastasis clinically as none rather than unknown (again, based on clinical evaluation) when the clinician proceeds with usual treatment of the primary site, since this action presumes the absence of distant metastasis that would otherwise change the treatment approach.

These guidelines apply primarily to localized or early (T1, T2) stage in the TNM system for inaccessible primary sites. The code(s) for unknown information can

and should be used in situations where there is reasonable doubt that the tumor is no longer localized. An example would be when there is clinical evidence that a prostate cancer has penetrated through the capsule into the surrounding tissues (regional direct extension/T3a) and regional lymph node involvement is not mentioned.

For primary sites that can be observed, palpated or examined without instruments, such as breast, oral cavity, skin, salivary gland, thyroid, and other organs, there should be some description of the regional lymph nodes. A statement such as "remainder of examination negative" is sufficient to code regional lymph nodes as clinically negative.

By coding regional lymph nodes as negative and/or coding distant metastasis as none rather than coding these fields as unknown, the Collaborative Staging System computer algorithms will be able to derive a stage group that includes the best information.

In summary, the developers of the CS model believe that it will improve the quality of data being collected by the cancer registry community. Uniform rules and standardized training will make it easier for cancer registry personnel to complete staging tasks.

Chapter

12

Abstracting: Treatment

TEXT DOCUMENTATION IS REQUIRED.

YOU MUST PROVIDE SUFFICIENT TEXT DOCUMENTATION TO SUBSTANTIATE CODING.

Rule 64CSR68, section 4.1.k. mandates the inclusion of information on cancer treatment. Even if the treatment is provided on an outpatient basis at your facility or in a free-standing center associated with your facility, the information is to be reported.

Treatment codes have changed over time and NPCR requirements regarding which sets of treatment codes (i.e., those of NCI or CoC) should be used have also changed over time. The codes in the following sections are all Commission on Cancer codes, in accordance with current NPCR practices.

First Course of Therapy

ALL DISEASES (INCLUDING BENIGN AND BORDERLINE INTRACRANIAL & CNS TUMORS) EXCEPT LEUKEMIA AND HEMATOPOIETIC DISEASES

Definitions

Cancer tissue: Proliferating malignant cells; an area of active production of malignant cells. Cancer tissue includes primary tumor and metastatic sites where cancer tissue grows. Cells in fluid such as pleural fluid or ascitic fluid are not "cancer tissue" because the cells do not grow and proliferate in the fluid.

Disease recurrence: The patient must have had a disease-free interval or remission (the cancer was not clinically evident). Following a disease-free interval, there is documentation that the initial/original tumor gave rise to the later tumor.

First course of therapy: All of the treatments administered to the patient after the original diagnosis of cancer in an attempt to destroy or modify the cancer tissue. See below for detailed information on timing and treatment plan documentation requirements.

Palliative treatment: The World Health Organization describes palliative care as treatment that improves the quality of life by preventing or relieving suffering. Palliative therapy is also part of the first course of therapy when the treatment destroys or modifies cancer tissue. Palliative therapy may also be part of the first course of therapy if it destroys proliferating cancer tissue.

> ***Example:*** The patient was diagnosed with stage IV cancer of the prostate with painful boney metastases. The patient starts radiation treatment intended to shrink the tumor in the bone and relieve the intense pain. The radiation treatments are palliative because they relieve the bone pain; the radiation is also first course of therapy because it destroys proliferating cancer tissue.

Surgical Procedure: Any surgical procedure coded in the fields Surgery of Primary Site, Scope of Regional Lymph Node Surgery, or Surgery of Other Regional or Distant Sites.

Treatment: Procedures that destroy or modify primary (primary site) or secondary (metastatic) cancer tissue.

Treatment failure: The treatment modalities did not destroy or modify the cancer cells. The tumor either became larger (disease progression) or stayed the same size after treatment.

Watchful waiting: A treatment option for patients with slow, indolent diseases, such as prostate cancer and chronic lymphocytic leukemia (CLL). The physician closely monitors the patient and delays treatment until the patient becomes symptomatic or there are other signs of disease progression, such as rising PSA.

Treatment Timing

Use the following instructions in hierarchical order.

1. Use the **documented** first course of therapy from the medical record. First course ends when the treatment plan is **completed**. (No matter how long it takes to complete the plan).

   Example 1: First course of treatment for childhood leukemia typically spans two years from induction, consolidation, to maintenance.

   Example 2: The first course of therapy for a breast cancer patient is surgery, chemotherapy, and radiation. The patient completes surgery and chemotherapy. Bone metastases are diagnosed before the radiation was started. The physician says that the patient will start the radiation treatment as planned. Code the radiation as first course of therapy since it was given in agreement with the treatment plan and the treatment plan was not changed as a result of disease progression.

2. First course of therapy ends when there is documentation of disease progression, recurrence or treatment failure.

   Example 1: The documented treatment plan for sarcoma is chemotherapy, surgery, then radiation or chemotherapy depending upon the pathology from surgery. Scans show the tumor is not regressing after chemotherapy. Plans for surgery are cancelled and a different type of chemotherapy is started. Code only the first chemotherapy as first course. Do not code the second chemotherapy as first course because it is administered after documented treatment failure.

Example 2: The documented treatment plan for a patient with locally advanced breast cancer includes mastectomy, chemotherapy, radiation to the chest wall and axilla, and hormone therapy. The patient has the mastectomy and completes chemotherapy. During the course of radiation therapy, the liver enzymes are rising. Workup proves liver metastases. The physician stops the radiation and does not continue with hormone therapy (the treatment plan is altered). The patient is placed on a clinical trial to receive Hercepton for metastatic breast cancer. Code the mastectomy, chemotherapy, and radiation as first course of treatment. Do not code the Hercepton as first course of therapy because it is administered after documented disease progression.

3. When there is **no documentation** of a treatment plan, a progression, recurrence or a treatment failure, first course ends one year after the date of diagnosis. Any treatment given after one year is second course of therapy in the absence of a documented treatment plan or a standard of treatment.

Coding Instructions

1. When physician decides to do watchful waiting for a patient who has prostate cancer, the first course of therapy is no treatment. Code all of the treatment fields to 00, not done. When the disease progresses and the patient is symptomatic; any prescribed treatment is second course.

2. When the patient refuses treatment the first course of therapy is no treatment. Code the treatment fields to refused. If the patient later changes his/her mind and decides to have the prescribed treatment code:

   a. Code the treatment as first course of therapy if it has been less than one year since the cancer was diagnosed and there has been no documented disease progression.

   b. Code the treatment as second course of therapy if it has been more than one year since the original cancer was diagnosed or if there has been documented disease progression.

3. Code all treatment that was started and administered.

   Example: The patient completed only the first dose of a planned 30 day chemotherapy regimen. Code chemotherapy as administered.

4. If a patient has multiple primaries and the treatment given for one primary also affects/treats the other primary, code the treatment for both primary sites.

   Example 1: The patient had prostate and bladder cancer. The bladder cancer was treated with a TURB. The prostate cancer was treated with radiation to the prostate and pelvis. The pelvic radiation includes the regional lymph nodes for the bladder. Code the radiation as treatment for both the bladder and prostate cases.

   Example 2: The patient had a hysterectomy for ovarian cancer. The pathology report reveals a previously unsuspected microinvasive cancer of the cervix. Code the hysterectomy as surgical treatment for both the ovarian and cervix primaries.

5. If a patient has multiple primaries and the treatment given for one primary does NOT affect/treat the other primary, code the treatments only on the site that is affected.

   Example: The patient has colon and tonsil primaries. The colon cancer is treated with a hemicolectomy and the tonsil primary is treated with radiation to the tonsil and regional nodes. Do not code the radiation for the colon. Do not code the hemicolectomy for the tonsil.

6. If a patient is diagnosed with an unknown primary, code the treatment given as first course even if the correct primary is identified later.

   Example: The patient is diagnosed with metastatic carcinoma, unknown primary site. After a full course of chemotherapy, the primary site is identified as prostate. Hormonal treatment is started. Code the chemotherapy as first course of treatment. The hormone therapy is second course.

FIRST COURSE FOR LEUKEMIA AND HEMATOPOIETIC DISEASES (DIAGNOSED 1/2001 AND AFTER)

Leukemia

Leukemia is grouped or typed by how quickly the disease develops and gets worse. **Chronic** leukemia gets worse **slowly**. **Acute** leukemia gets worse **quickly**.

Leukemias are also grouped by the **type** of **white blood cell** that is affected. The groupings are: **lymphoid** leukemia and **myeloid** leukemia.

Definitions

Consolidation: Repetitive cycles of chemotherapy given immediately after the remission.

Induction: Initial intensive course of chemotherapy.

Maintenance: Chemotherapy given for a period of months or years to maintain remission.

Remission: The bone marrow is normocellular with less than 5% blasts, there are no signs or symptoms of the disease, no signs or symptoms of central nervous system leukemia or other extramedullary infiltration, and all of the following laboratory values are within normal limits: white blood cell count and differential, hematocrit/hemoglobin level, and platelet count.

Treatment for leukemia is divided into **three phases**:

1. Remission induction (chemotherapy and/or biologic response modifiers)
2. CNS prophylaxis or consolidation (irradiation to brain, chemotherapy)
3. Remission continuation or maintenance (chemotherapy or bone marrow transplants).

Coding First Course of Therapy for Leukemia and Hematopoietic Diseases:

1. If a patient **has** a partial or complete **remission** during the first course of therapy:

   a. Code all therapy that is "remission-inducing" as first course.

   b. Code all therapy that is "consolidation" as first course.

   c. Code all therapy that is "remission-maintaining" as first course.

   Note: Do not record treatment given after the patient relapses (is no longer in remission).

2. Some patients do not have a remission. A change in the treatment plan indicates a failure to induce remission. If the patient does not have a remission:

   a. Record the treatment given in an attempt to induce a remission.

   b. Do not record treatment administered after the change in treatment plan.

Other Hematopoietic

Record all treatments as described above. The following treatments are coded as "other" in Other Treatment even though they do not "modify, control, remove, or destroy proliferating cancer tissue." Follow the guidelines in the *Abstracting and Coding Guide for the Hematopoietic Diseases* to identify treatments. Some examples of "other" treatment include:

Example 1: **Phlebotomy** may be called blood removal, blood letting, or venisection.

Example 2: **Transfusions** may include whole blood, RBCs, platelets, plateletpheresis, fresh frozen plasma (FFP), plasmapheresis, and cryoprecipitate.

Example 3: **Aspirin** (also known as ASA, acetylsalicylic acid, or by a brand name) is used as a treatment for essential thrombocythemia.

a. Only record aspirin therapy if it is given to thin the blood for symptomatic control of thrombocythemia. Use the following guidelines to determine whether aspirin is administered for thinning of blood for thrombocythemia rather than for pain control or cardiovascular protection:

   i. Aspirin treatment for essential thrombocythemia is low dose, approximately 70-100 mg/day
   ii. The dosage for pain control is approximately 325-1000 mg every 3-4 hours.
   iii. Cardiovascular protection starts at about 160 mg/day.

Date Therapy Initiated

Record the start date of the first course of therapy. This may be the start date of any type of treatment for this tumor; surgery, chemotherapy, radiation therapy, or other types of therapy. Treatment might be given in a hospital or non-hospital setting. Date fields are recorded in the month, day, century, year format (MMDDCCYY) with 99 for unknown day or month and 9999 for unknown year.

Codes for Month

CODE	MONTH	CODE	MONTH	CODE	MONTH
01	January	06	June	11	November
02	February	07	July	12	December
03	March	08	August	99	Unknown month
04	April	09	September		
05	May	10	October		

Codes for Day

01
02
03
..
..
31
99 Unknown day

Codes for Year

Code the four-digit year of therapy initiation
Record 9999 for unknown year

Special Codes

00000000 No date, no first course treatment performed
99999999 Unknown date

Definitions

Cancer-directed therapy: Treatment administered to the patient in an attempt to destroy or modify cancer tissue.

Note: Surgical procedures coded in the data items Scope of Regional Lymph Node Surgery and Surgical Procedure of Other Site are not necessarily cancer-directed therapy.

Coding Instructions

1. Code **00000000** if no therapy was given
   a. If there was no first course therapy. For example, the patient had ONLY biopsy, bypass, or "watchful waiting"
   b. Autopsy only cases
2. Code the **start date** of the first therapy. The first therapy may be coded in thE following data items
   - Surgery of Primary Site
   - Scope of Regional Lymph Node Surger
   - Surgical Procedure of Other Sit
   - Radiation Therapy
   - Chemotherapy
   - Hormone Therapy
   - Immunotherapy,
   - Hematologic Transplant and Endocrine Procedures
   - Other Therapy
3. Code the date of **excisional biopsy** as the date therapy initiated if it is the first treatment. Code the date of a biopsy documented as incisional if further surgery reveals no residual or only microscopic residual.

   Example: Breast core needle biopsy with diagnosis of infiltrating duct carcinoma; subsequent re-excision with no residual tumor noted. Code the date of the needle biopsy as the excisional biopsy date.
4. Code the date unproven therapy was initiated as the date therapy initiated.
5. If the exact **date** of the first treatment is **unknown**, code the date of admission to the hospital for inpatient or outpatient treatment.
6. Code **99999999**

a. It is known the patient had first course therapy, but it is impossible to estimate the date

b. Death certificate only cases

Surgery of Primary Site

Surgery of Primary Site describes a surgical procedure that removes and/or destroys tissue of the primary site performed as part of the initial work-up or first course of therapy.

CODE	DESCRIPTION
00	None; no surgical procedure of primary site; diagnosed at autopsy only
10-19	SITE-SPECIFIC CODES. Tumor destruction; no pathologic specimen or unknown whether there is a pathologic specimen
20-80	SITE-SPECIFIC CODES. Resection; pathologic specimen
90	Surgery, NOS. A surgical procedure to the primary site was done, but no information on the type of surgical procedure is provided.
98	Special codes for hematopoietic, reticuloendothelial, immunoproliferative, myeloproliferative diseases; ill-defined sites; and unknown primaries (See site-specific codes for the sites and histologies), except death certificate only
99	Unknown if surgery performed; death certificate only

Coding Instructions

1. Code 00 if **no surgery** is performed on the primary site or if case was diagnosed at **autopsy, and would not be otherwise coded to 98.**
2. Use the site-specific coding scheme corresponding to the coded primary site.
3. Code the most **invasive, extensive, or definitive** surgery if the patient has multiple surgical procedures of the primary site even if there is no tumor found in the pathologic specimen. The codes in the range of 00-80 are **listed** in hierarchical but not necessarily numerical order. When more than one surgical procedure is performed, code the procedure listed furthest down the list within the codes 10-80.

   Example: Patient has a needle biopsy of prostate that is positive for adenocarcinoma. The patient chooses to have a radical prostatectomy. The pathologic examination of the prostatectomy specimen shows no residual tumor. Code the radical prostatectomy.
4. Code an **excisional biopsy,** even when documented as **incisional**, when:

a. All disease is removed (**margins free**) OR

b. All gross disease is removed and there is only **microscopic residual at the margin**

Note: Do not code an excisional biopsy when there is macroscopic residual disease.

5. Code **total removal of the primary site** when a previous procedure resected a portion of the site and the current surgery removed the rest of the organ. The previous procedure may have been cancer directed or non-cancer directed surgery.

6. Code the removal of regional or distant **tissue/organs** when they are resected in continuity with the primary site (**en bloc)**. Specimens from an en bloc resection may be submitted to pathology separately.

   Example: Code an en bloc removal when the patient has a hysterectomy and an omentectomy.

7. Code surgery for extra-lymphatic lymphoma using the site-specific surgery coding scheme (not lymph node scheme) for the primary site.

8. Code **80** or **90** only when there is no specific information.

9. Code **98** for the following sites unless the case is death certificate only:

   a. Hematopoietic, reticuloendothelial, immunoproliferative, or myeloproliferative disease

      i. Primary sites: C420, C421, C423, or C424 (all histologies)

      ii. Histologies: 9750, 9760-9764, 9800-9820, 9826, 9831-9920, 9931-9964, 9980-9989 (all sites)

      iii. Unknown or ill-defined sites (C760-C768, C809) (all histologies)

10. Assign **code 99** for death certificate only (DCO) cases

Surgical Margins

Records the final status of the surgical margins after resection of the primary tumor.

CODE	DESCRIPTION
0	No residual tumor
1	Residual tumor, NOS
2	Microscopic residual tumor
3	Macroscopic residual tumor
7	Margins not evaluable
8	No primary site surgery
9	Unknown or not applicable

Scope of Regional Lymph Node Surgery

Scope of Regional Lymph Node Surgery describes the procedure of removal, biopsy, or aspiration of **regional** lymph nodes performed during the initial work-up or first course of therapy.

CODE	DESCRIPTION
0	No regional lymph nodes removed or aspirated; diagnosed at autopsy.
1	Biopsy or aspiration of regional lymph node, NOS
2	Sentinel lymph node biopsy [only]
3	Number of regional lymph nodes removed unknown, not stated; regional lymph nodes removed, NOS
4	1 to 3 regional lymph nodes removed
5	4 or more regional lymph nodes removed
6	Sentinel node biopsy and code 3, 4, or 5 at same time or timing not noted
7	Sentinel node biopsy and code 3, 4, or 5 at different times
9	Unknown or not applicable; death certificate only

Coding Instructions

1. Code 0 when regional lymph node removal procedure was not performed.
2. Code regional lymph node procedures in this data item. Record distant lymph node removal in Surgical Procedure of Other Site.
3. Codes 1-7 are **hierarchical**. Code the procedure that is numerically higher.
4. The regional lymph node surgical procedure(s) may be done to **diagnose** cancer, **stage** the disease, or as a part of the initial **treatment**. Record all surgical procedures that remove, biopsy, or aspirate regional lymph node(s) whether or not there were any surgical procedures of the primary site.

   Example: Patient has a sentinel node biopsy of a single lymph node. Assign code 2 (Sentinel lymph node biopsy [only]).

5. The Scope of Regional Lymph Node field is **cumulative**; add the number of all of the lymph nodes removed during each surgical procedure performed as part of the first course of treatment.

   Example: Patient has a positive cervical node biopsy. The pathology report from a subsequent node dissection identifies three cervical nodes. Assign code 5 (4 or more regional lymph nodes removed).

6. If the operative report lists a lymph node dissection, but **no nodes were found by the pathologist,** code the Scope of Regional Lymph Node Surgery to 0 (No lymph nodes removed)

7. If the patient has **two primaries with common regional lymph nodes**, code the removal of regional nodes for both primaries.

   Example: Patient has a cystoprostatectomy and pelvic lymph node dissection for bladder cancer. Pathology identifies prostate cancer as well as the bladder cancer and 4/21 nodes positive for metastatic adenocarcinoma. Code Scope of Regional Lymph Node Surgery to 5 (4 or more regional lymph nodes removed) for both primaries.

8. Assign **code 9** for

   a. Primary sites

      i. Brain (C700-C709) OR

      ii. Spinal cord (C710-C719) OR

      iii. Cranial nerves and other parts of the central nervous system (C720-C729)

   b. Lymphoma with primary site in lymph nodes (C770-C779) AND histology

      i. 9590-9596 OR

      ii. 9650-9719 OR

      iii. 9727-9729

   c. Hematopoietic, reticuloendothelial, immunoproliferative, or myeloproliferative disease

      i. Primary sites: C420, C421, C423, or C424 (all histologies)

      ii. Histologies: 9750, 9760-9764, 9800-9820, 9826, 9831-9920, 9931-9964, 9980-9989 (all sites)

      iii. Unknown or ill-defined sites (C760-C768, C809) (all histologies)

Surgical Procedure of Other Site

Surgical Procedure of Other Site describes the surgical removal of distant lymph node(s) or other tissue(s) or organ(s) beyond the primary site.

CODE	DESCRIPTION
0	None; diagnosed at autopsy
1	Nonprimary surgical procedure performed
2	Nonprimary surgical procedure to other regional sites
3	Non-primary surgical procedure to distant lymph node(s)
4	Nonprimary surgical procedure to distant site
5	Combination of codes 2, 3, or 4
9	Unknown; death certificate only

Coding Instructions

1. Code 0 when no surgical procedures were performed that removed distant lymph node(s) or other tissue(s) or organ(s) beyond the primary site.
2. The codes are **hierarchical**. Code the procedure that is numerically higher.
3. Codes 1-5 have priority over codes 0 and 9
4. Do not code tissue or organs such as an appendix that were removed **incidentally,** and the organ was not involved with cancer.

Note: Incidental removal of organs means that tissue was removed for reasons other than removing cancer or preventing the spread of cancer. Examples of incidental removal of organ(s) would be removal of appendix, gallbladder, etc. during abdominal surgery.

Reason for No Surgery of Primary Site

Records the reason that surgery was not performed on the primary site.

CODE	DESCRIPTION
0	Surgery of the primary site was performed
1	Surgery of the primary site was not performed because it was not part of the planned first-course treatment
2	Surgery of the primary site was not recommended/performed because it was contraindicated due to patient risk factors (comorbid conditions, advanced age, etc.)
5	Surgery of the primary site was not performed because the patient died prior to planned or recommended surgery
6	Surgery of the primary site was not performed; it was recommended by the patient's physician, but was not performed as part of the first course of therapy. No reason was noted in the patient's record.
7	Surgery of the primary site was not performed; it was recommended by the patient's physician, but was refused by the patient, the patient's family member, or the patient's guardian. The refusal was noted in the patient record.
8	Surgery of the primary site was recommended, but it is unknown if it was performed. Further follow up is recommended.
9	It is unknown if surgery of the primary site was recommended or performed; death certificate only cases and autopsy only cases.

Coding Instructions

1. Assign **code 0** when Surgery of Primary Site is coded in the range of 10-90 (the patient did have surgery of primary site)
2. Assign a code in the **range of 1-8** if Surgery of Primary Site is coded 00 or 98.

3. Assign **code 1**
    a. There is no information in the patient's medical record about surgery AND
        i. It is known that surgery is not usually performed for this type and/or stage of cancer OR
        ii. There is no reason to suspect that the patient would have had surgery of primary site.
    b. If the treatment plan offered multiple treatment options and the patient selected treatment that did not include surgery of the primary site Patient elects to pursue no treatment following the discussion of radiation treatment. Discussion does not equal a recommendation.
    c. Only information available is that the patient was referred to a surgeon. Referral

       does not equal a recommendation.
    d. Watchful waiting (prostate)
    e. Patient diagnosed at autopsy
4. Assign **code 6**
    a. When it is known that surgery was recommended AND
    b. It is known that surgery was not performed AND
    c. There is no documentation explaining why surgery was not done.
5. Assign **code 7** (refused) if the patient refused recommended surgery, or made a blanket statement that he/she refused all treatment.
6. Assign **code 8** (unknown) if the treatment plan offered surgery, but it is unknown if the patient actually had the surgery.
7. Assign **code 9**
    a. When there is no documentation that surgery was recommended or performed
    b. Death certificate only.
    c. Autopsy only (Diagnosis 1/1/2003)

Radiation

Record the method of administration of radiation administered as a part of the first course of treatment. Record all radiation that is given, even if it is palliative.

CODE	DESCRIPTION
0	None; diagnosed at autopsy
1	Beam radiation
2	Radioactive implants
3	Radioisotopes
4	Combination of 1 with 2 or 3
5	Radiation, NOS – method or source not specified
7	Patient or patient's guardian refused radiation therapy
8	Radiation recommended, unknown if administered
9	Unknown if radiation administered

Coding Instructions

1. Assign **code 0**
   a. There is no information in the patient's medical record about radiation AND
      i. It is known that radiation is not usually performed for this type and/or stage of cancer OR
      ii. There is no reason to suspect that the patient would have had radiation.
   b. If the treatment plan offered multiple treatment options and the patient selected treatment that did not include radiation
   c. Patient elects to pursue no treatment following the discussion of radiation treatment. Discussion does not equal a recommendation.
   d. Only information available is that the patient was referred to a radiation oncologist. Referral does not equal a recommendation.
   e. Watchful waiting (prostate)

   f. Patient diagnosed at autopsy

2. Assign **code 1** for beam radiation directed to cancer tissue. The source of the beam radiation is not used for coding purposes. Sources may include, but are not limited to: X-ray, Cobalt, linear accelerator, neutron beam, betatron, spray radiation, stereotactic radiosurgery such as gamma knife and proton beam.
3. Assign **code 2** when the radiation is delivered by interstitial implant, molds, seeds, needles or intracavitary applicators. The radioactive material used in implants includes, but is not limited to: cesium, radium, radon, radioactive gold, and iodine.
4. Assign **code 3** when radioactive isotopes are given orally, intracavitary or by intravenous injection. Radioactive isotopes include but are not limited to: I-131 or P-32.
5. If the patient has multiple radiation types, code the dominant type (the greatest dose of radiation).
6. For cases diagnosed prior to 1/1/1998, radiation to the brain and/or central nervous system for lung and leukemia cases was coded in the field Radiation to the Brain and/or Central Nervous System.
7. Assign **code 9**
   a. When there is no documentation that radiation was recommended or performed
   b. Death certificate only.

Translation of Regional Treatment Modality and/or Boost Treatment Modality Field to RX Summ--Radiation

RX SUMM—RADIATION	CODE	REGIONAL TREATMENT MODALITY AND/OR BOOST TREATMENT
0 None	00	No radiation treatment
1 Beam radiation	20	External beam, NOS
	21	Orthovoltage
	22	Cobalt-60, Cesium-137
	23	Photons (2-5 MV)
	24	Photons (6-10 MV)
	25	Photons (11-19 MV)
	26	Photons (>19 MV)
	27	Photons (mixed energies)
	28	Electrons
	29	Photons and electrons mixed
	30	Neutrons, with or without photons/electrons
	31	IMRT
	32	Conformal or 3-D therapy
	40	Protons
	41	Stereotactic radiosurgery, NOS
	42	Linac radiosurgery
	43	Gamma Knife
2 Radioactive implants	50	Brachytherapy, NOS
	51	Brachytherapy, intracavitary, LDR
	52	Brachytherapy, intracavitary, HDR
	53	Brachytherapy, interstitial, LDR
	54	Brachytherapy, interstitial, HDR
	55	Radium

RX SUMM—RADIATION	CODE	REGIONAL TREATMENT MODALITY AND/OR BOOST TREATMENT
3 Radioisotopes	60	Radioisotopes, NOS
	61	Strontium-89
	62	Strontium-90
4 Combination of 1 with 2 or 3	80	Combination modality, specified
	85	Combination modality, NOS
5 Radiation therapy, NOS, method or source unspecified	98	Other, NOS
9 Unknown	99	Unknown

If a code for TX Summ-Radiation is not received from hospital registrars, the code can be derived from the following sources if radiation is not received from hospital registries. The code for RX Summ—Radiation is derived from Rad-Boost RX Modality, Rad-Regional TX Modality, and/or Reason For No Radiation.

RAD—BOOST RX MODALITY	RAD—REGIONAL TX MODALITY	RX SUMM--RADIATION
00	00, 99	0*
00	20-43	1
00	50-55	2
00	60-62	3
00	80-85	4
00	98	5
20-43	00, 20-43, 98, 99	1
20-43	50-55, 60-62, 80-85	4
50-55	00, 50-55, 98, 99	2
50-55	20-43, 80-85	4
50-55	60-62	3
60-62	00, 50-55, 60-62, 98, 99	3
60-62	20-43, 80-85	4
80-85	00-99	4
98	00, 98, 99	5
98, 99	20-43	1
98, 99	50-55	2
98, 99	60-62	3
98, 99	80-85	4
99	00	0*
99	99	9

* Reason No Radiation is reviewed for asterisked items only. If Reason for No Radiation is 7, RX Summ--Radiation is 7; If Reason for No Radiation is 8, RX Summ--Radiation code is 8.

Radiation Sequence with Surgery

This field records the order in which surgery and radiation therapies were administered for those patients who had **both surgery and radiation**. For the purpose of coding Radiation Sequence with Surgery, 'Surgery' is defined as a Surgical Procedure to the Primary Site (codes 10-90) or Scope of Regional Lymph Node Surgery (codes 1-7) or Surgical Procedure of Other Site (codes 1-5).

CODE	DESCRIPTION
0	No radiation and/or surgery as defined above
2	Radiation before surgery
3	Radiation after surgery
4	Radiation both before and after surgery
5	Intraoperative radiation therapy
6	Intraoperative radiation with other radiation given before or after surgery
9	Sequence unknown, but both surgery and radiation were given

Definition

Surgery: Surgical Procedure to the Primary Site (codes 10-90) or Scope of Regional Lymph Node Surgery (codes 1-7) or Surgical Procedure of Other Site (codes 1-5).

Coding Instructions

Assign code 0 when

- The patient did not have either surgery or radiation.
- The patient had surgery but not radiation.
- The patient had radiation but not surgery

Note: For cases diagnosed prior to 1/1/1998, Radiation to the Brain and/or Central Nervous System was counted as radiation when coding this field.

Assign codes 2-9 when first course of therapy consists of both cancer-directed surgery and radiation therapy.

Reason for No Radiation

Records the reason that radiation was not performed on the primary site.

CODE	DESCRIPTION
0	Radiation therapy was administered
1	Radiation therapy was not administered because it was not part of the planned first-course treatment
2	Radiation therapy was not recommended/administered because it was contraindicated due to patient risk factors (comorbid conditions, advanced age, etc.)
5	Radiation therapy was not administered because the patient died prior to planned or recommended therapy.
6	Radiation therapy was not administered; it was recommended by the patient's physician, but was not performed as part of the first course of therapy. No reason was noted in the patient's record.
7	Radiation therapy was not administered; it was recommended by the patient's physician, but was refused by the patient, the patient's family member, or the patient's guardian. The refusal was noted in the patient record.
8	Radiation therapy was recommended, but it is unknown if it was performed.
9	It is unknown if radiation therapy was recommended or administered; death certificate only cases and autopsy only cases.

Chemotherapy

The data item Chemotherapy records the chemotherapy given as a part of the first course of treatment or the reason that chemotherapy was not given. See *SEER Self Instructional Manuals for Tumor Registrars Book 8* for chemotherapy drug codes.

Chemotherapeutic agents are chemicals that affect cancer tissue by means other than hormonal manipulation. The agents inhibit the production of cancer cells by interfering with DNA synthesis and mitosis. They may be divided into three classes with respect to their dependence on the cell cycle.

1. Alkylating agents are **not cell-cycle-specific**. Although they are toxic to all cells, they are especially toxic to proliferating cells.
2. Other drugs are **cell-cycle-specific**. Cells must be proliferating for these drugs to be effective.
3. Cell-cycle-specific drugs may also be **cell-cycle phase-specific**; such drugs are active only in one stage of the cell cycle.

Chemotherapy agents are also grouped by their ingredients and the way they attack the cells. Those groups are:

1. Alkylating
2. Antimetabolites
3. Natural products
4. Other miscellaneous

CODE	DESCRIPTION
00	None, chemotherapy was not part of the planned first course of therapy; diagnosed at autopsy
01	Chemotherapy administered as first course therapy, but the type and number of agents is not documented in the patient record.
02	Single agent chemotherapy administered as first course therapy.
03	Multiagent chemotherapy administered as first course therapy.
82	Chemotherapy was not recommended/administered because it was contraindicated due to patient risk factors (comorbid conditions, advanced age, etc.).
85	Chemotherapy was not administered because the patient died prior to planned or recommended therapy.
86	Chemotherapy was not administered. It was recommended by the patient's physician, but was not administered as part of the first course of therapy. No reason was stated in patient record.
87	Chemotherapy was not administered. It was recommended by the patient's physician, but the treatment was refused by the patient, a patient's family member, or the patient's guardian. The refusal was noted in the patient record.
88	Chemotherapy was recommended, but it is unknown if it was administered.
99	It is unknown whether a chemotherapeutic agent(s) was recommended or administered because it is not stated in the patient record. Death certificate only.

Definitions

Chemotherapy recommended: There was a consult recommending chemotherapy or the attending physician documented that chemotherapy was recommended. A referral to a clinical oncologist does not equal a recommendation.

Multiple agent chemotherapy: Two or more chemotherapeutic agents were administered to destroy cancer tissue during the first course of therapy. The chemotherapeutic agents may or may not have been administered with

other drugs classified as immunotherapy, hormone therapy, ancillary or other treatment.

Single agent chemotherapy: Only one chemotherapeutic agent was administered to destroy cancer tissue during the first course of therapy. The chemotherapeutic agent may or may not have been administered with other drugs classified as immunotherapy, hormone therapy, ancillary, or other treatment.

Coding Instructions

1. Code the chemotherapeutic agents whose actions are chemotherapeutic only; **do not code** the method of **administration**.
2. When chemotherapeutic agents are used as radiosensitizers or radioprotectants, they are given at a much lower dosage and do not affect the cancer. Radiosensitizers and radioprotectants are classified as ancillary drugs. Do not code as chemotherapy.
3. The physician may change a drug during the first course of therapy because the patient cannot tolerate the original agent. If the chemotherapeutic agent that is substituted belongs to the same group (alkylating, antimetabolites, natural products, or other miscellaneous), this is a continuation of the first course of therapy. If treated with a single agent and this agent is changed to another single agent in the same group code remains 02 single agent.
4. Assign **code 00** when
   a. There is no information in the patient's medical record about chemotherapy AND
      i. It is known that chemotherapy is not usually performed for this type and/or stage of cancer OR
      ii. There is no reason to suspect that the patient would have had chemotherapy.
   b. If the treatment plan offered multiple treatment options and the patient selected treatment that did not include chemotherapy
   c. Patient elects to pursue no treatment following the discussion of chemotherapy Discussion does not equal a recommendation.
   d. Only information available is that the patient was referred to a clinical oncologist. Referral does not equal a recommendation.
   e. Watchful waiting (CLL)

f. Patient diagnosed at autopsy

Example: Patient is diagnosed with multiple myeloma. There is no mention of treatment or treatment plans in the medical record. Follow-back finds that the patient died three months after diagnosis. There are no additional medical records or other pertinent information available. Assign code 00 since there is no reason to suspect that the patient had been treated.

5. Do not code combination of ancillary drugs administered with single agent chemotherapeutic agents as multiple chemotherapy. For example the administration of 5-FU (antimetabolite) and Leucovorin (ancillary drug) is coded to single agent (Code 02).
6. Assign **code 82** when the physician would have recommended chemotherapy but did not due to patient risk factors, such as:
   a. Advanced **age**
   b. **Comorbid** condition(s) (heart disease, kidney failure, other cancer, etc.).
7. Assign **code 99**
   a. When there is no documentation that chemotherapy was recommended or performed
   b. Death certificate only.

Hormone Therapy

The data item Hormone Therapy records therapy administered as first course treatment that affects cancer tissue by changing the patient's hormone balance. See *SEER Self Instructional Manuals for Tumor Registrars Book 8* for hormone therapy drug codes.

Hormones may be divided into three categories:

1. Hormones.
2. Antihormones.
3. Adrenocorticotrophic agents

CODE	DESCRIPTION
00	None, hormone therapy was not part of the planned first course of therapy; not usually administered for this type and/or stage of cancer; diagnosed at autopsy only.
01	Hormone therapy administered as first course therapy.
82	Hormone therapy was not recommended/administered because it was contra indicated due to patient risk factors (comorbid conditions, advanced age, etc.).
85	Hormone therapy was not administered because the patient died prior to planned or recommended therapy.
86	Hormone therapy was not administered. It was recommended by the patient's physician, but was not administered as part of the first course of therapy. No reason was stated in the patient record.
87	Hormone therapy was not administered. It was recommended by the patient's physician, but this treatment was refused by the patient, a patient's family member, or the patient's guardian. The refusal was noted in the patient record.
88	Hormone therapy was recommended, but it is unknown if it was administered.
99	It is unknown whether a hormonal agent(s) was recommended or administered. Death certificate only.

Coding Instructions

1. Assign **code 00** when
   a. There is no information in the patient's medical record about hormone therapy AND
      i. It is known that hormone therapy is not usually performed for this type and/or stage of cancer OR
      ii. There is no reason to suspect that the patient would have had hormone therapy
   b. If the treatment plan offered multiple treatment options and the patient selected treatment that did not include hormone therapy
   c. Patient elects to pursue no treatment following the discussion of hormone therapy treatment. Discussion does not equal a recommendation.
   d. Only information available is that the patient was referred to an oncologist. Referral does not equal a recommendation.
   e. Watchful waiting (prostate)
   f. Patient diagnosed at autopsy
2. Assign **code 99**
   a. When there is no documentation that surgery was recommended or performed
   b. Death certificate only.
3. Some types of cancer **thrive and proliferate because** of **hormones** (estrogen, progesterone and testosterone) that naturally occur in the body. These types of cancer may be treated by an **antihormone** or by the surgical removal/radiation of the organ(s) that produce the hormone, such as the testes and ovaries. **Surgical removal** of **organs** for hormone manipulation is not coded in this data item. Code these procedures in the data field Hematologic Transplant and Endocrine Procedures.
4. Other types of cancers are **slowed** or **suppressed** by **hormones**. These cancers are treated by administering hormones.

   Example 1: Endometrial cancer may be treated with progesterone. Code all administration of progesterone to patients with endometrial cancer in this field. Even if the progesterone is given for menopausal symptoms, it has an effect on the growth or recurrence of endometrial cancer.

   Example 2: **Follicular** and papillary cancers of the **thyroid** are often treated with thyroid hormone to suppress serum thyroid-stimulating

hormone (TSH). If a patient with papillary and/or follicular cancer of the thyroid is given a thyroid hormone, code the treatment in this field.

5. Code the hormonal agent given as part of combination chemotherapy, e.g. MOPP, COPP whether it affects the cancer cells or not.

Immunotherapy

The data item Immunotherapy records immunotherapeutic (biological therapy, biotherapy or biological response modifier) agents administered as first course of therapy.

Immunotherapy **uses** the body's **immune system**, either directly or indirectly, to fight cancer or to lessen the side effects that may be caused by some cancer treatments. Record only those treatments that are administered to affect the cancer cells.

Immunotherapy is **designed** to:

1. Make **cancer cells** more **recognizable** and therefore more **susceptible** to destruction by the immune system.
2. **Boost** the killing power of **immune** system cells, such as T-cells, NK-cells, and macrophages.
3. **Alter** cancer cells' **growth patterns** of cancer cells to promote behavior like that of healthy cells
4. **Block** or **reverse** the process that **changes** a normal cell or a pre-cancerous cell into a cancerous cell.
5. **Enhance** the body's ability to **repair** or **replace** normal cells damaged or destroyed by other forms of cancer treatment, such as chemotherapy or radiation.
6. **Prevent** cancer cells from **spreading** to other parts of the body.

CODE	DESCRIPTION
00	None, immunotherapy was not part of the planned first course of therapy; not customary therapy for this cancer; diagnosed at autopsy only.
01	Immunotherapy was administered as first course therapy.
82	Immunotherapy was not recommended/administered because it was contraindicated due to patient risk factors (comorbid conditions, advanced age etc.).
85	Immunotherapy was not administered because the patient died prior to planned or recommended therapy.
86	Immunotherapy was not administered; it was recommended by the patient's physician, but was not administered as part of the first-course of therapy. No reason was noted in the patient's record.
87	Immunotherapy was not administered. It was recommended by the patient's physician, but this treatment was refused by the patient, a patient's family member, or the patient's guardian. The refusal was noted in the patient record.
88	Immunotherapy was recommended, but it is unknown if it was administered.
99	It is unknown if immunotherapy was recommended or administered because it is not stated in patient record; death certificate only cases.

Definitions

Types of immunotherapy

Cancer Vaccines: Cancer vaccines are still in the experimental phase and are not coded in this data item. They may be coded in the field Other Therapy. Currently clinical trials use cancer vaccines for brain, breast, colon, kidney, lung, melanoma and ovary.

Interferons: Interferons belong to a group of proteins called cytokines. They are produced naturally by the white blood cells in the body. Interferon-alpha is able to slow tumor growth directly as well as activate the immune system. It is

used for a number of cancers including multiple myeloma, chronic myelogenous leukemia (CML), hairy cell leukemia, and malignant melanoma.

Interleukins (IL-2) are often used to treat kidney cancer and melanoma.

Monoclonal Antibodies: Monoclonal antibodies (Mab) are produced in a laboratory. The artificial antibodies are used in a variety of ways in systemic therapy. Some are injected into the patient to seek out and disrupt cancer cell activities, such as rituximab (Rituxan) for lymphoma and trastuzumab (Herceptin) for breast. When the monoclonal antibody disrupts tumor growth, it is coded as chemotherapy. Other Mabs are linked to radioisotopes (conjugated monoclonal antibodies). The Mab finds and attaches to the target tumor cells and brings with it the radioisotope that actually kills the tumor cell. The monoclonal antibody itself does nothing to enhance the immune system. Conjugated monoclonal antibodies such as tositumomab (Bexxar) or ibritumomab (Zevalin) are coded to the part of the drug that actually kills the cells, usually radioisotopes. A third function of Mabs is to enhance the immune response against the cancer, either by identifying tumor cells that are mimicking normal cells, or by boosting the body's natural defenses that destroy foreign cells. At the present time (2006), there are no FDA-approved monoclonal antibodies that are pure immunotherapy for cancer. Consult SEER*Rx for the treatement category in which each monoclonal antibody should be coded.

Coding Instructions

1. Assign **code 00**
    a. When there is no information in the patient's medical record about immunotherapy AND
        i. It is known that radiation is not usually performed for this type and/or stage of cancer OR
        ii. There is no reason to suspect that the patient would have had immunotherapy.
    b. If the treatment plan offered multiple treatment options and the patient selected treatment that did not include immunotherapy
    c. Patient elects to pursue no treatment following the discussion of immunotherapy. Discussion does not equal a recommendation.
    d. Only information available is that the patient was referred to an oncologist. Referral does not equal a recommendation.
    e. Watchful waiting (prostate)

   f. Patient diagnosed at autopsy

2. Assign **code 87**
   a. If the patient refused recommended immunotherapy.
   b. If the patient made a blanket refusal of all recommended treatment.
   c. If the patient refused all treatment before any was recommended.
3. Assign **code 99**
   a. When there is no documentation that immunotherapy was recommended or performed
   b. Death certificate only.

Hematologic Transplant and Endocrine Procedures

This data item records systemic therapeutic procedure administered as part of the first course of treatment. These procedures include bone marrow transplants (BMT) and stem cell harvests with rescue (stem cell transplant), endocrine surgery and/or radiation performed for hormonal effect (when cancer originates at another site), as well as combination of transplants and endocrine therapy.

CODE	DESCRIPTION
00	None, transplant procedure or endocrine therapy was not a part of the first course of therapy; not customary therapy for this cancer; diagnosed at autopsy only.
10	Bone marrow transplant, NOS. A bone marrow transplant procedure was administered as first course therapy, but the type was not specified.
11	Bone marrow transplant autologous
12	Bone marrow transplant allogeneic
20	Stem cell harvest (stem cell transplant) and infusion as first course therapy.
30	Endocrine surgery and/or endocrine radiation therapy as first course therapy.
40	Combination of transplant procedure with endocrine surgery and/or endocrine radiation (Code 30 in combination with 10, 11, 12, or 20) as first course therapy.
82	Transplant procedure and/or endocrine therapy was not recommended/administered because it was contraindicated due to patient risk factors (comorbid conditions, advanced age, etc.).
85	Transplant procedures and/or endocrine therapy were not administered because the patient died prior to planned or recommended therapy.
86	Transplant procedures and/or endocrine therapy were not administered; it was recommended by the patient's physician, but was not administered as part of first course therapy. No reason was noted in the patient record.

CODE	DESCRIPTION
87	Transplant procedures and/or endocrine therapy were not administered; this treatment was recommended by the patient's physician but was refused by the patient, a patient's family member, or the patient's guardian. The refusal was noted in the patient record.
88	Transplant procedures and/or endocrine therapy was recommended, but it is unknown if it was administered.
99	It is unknown if a transplant procedure or endocrine therapy was recommended or administered because it is not stated in patient record; death certificate only cases.

Definitions

Bone marrow transplant (BMT): Procedure used to restore stem cells that were destroyed by chemotherapy and/or radiation. Replacing the stem cells allows the patient to undergo higher doses of chemotherapy.

BMT Allogeneic: Receives bone marrow or stem cells from a donor.

BMT Autologous: Uses the patient's own bone marrow and/or stem cells. The tumor cells are filtered out and the purified blood and stem cells are returned to the patient.

Note: Used for breast cancer, lymphoma, leukemia, aplastic anemia, myeloma, germ cell tumors, ovarian cancer, and small cell lung cancer.

Conditioning: High-dose chemotherapy with or without radiation administered prior to transplants such as BMT and stem cell to kill cancer cells. This conditioning also destroys normal bone marrow cells so the normal cells need to be replaced (rescue). The high dose chemotherapy is coded in the Chemotherapy field.

Hematopoietic Growth Factors: A group of substances that support hematopoietic (blood cell) colony formation. The group includes erythropoietin, interleukin-3, and colony-stimulating factors (CSFs). The growth-stimulating substances are ancillary drugs and not coded.

Non-Myeloablative Therapy: Uses immunosuppressive drugs pre- and post-transplant to ablate the bone marrow. These are not recorded as therapeutic agents.

Peripheral Blood Stem Cell Transplantation (PBSCT): Rescue that replaces stem cells after conditioning.

Rescue: Rescue is the actual BMT or stem cell transplant done after conditioning.

Stem Cells: Immature cells found in bone marrow, blood stream and umbilical cords. The stem cells mature into blood cells.

Coding Instructions

1. Assign **code 00**
   a. When there is no information in the patient's medical record about transplant procedure or endocrine therapy AND
      i. It is known that transplant procedure or endocrine therapy is not usually performed for this type and/or stage of cancer OR
      ii. There is no reason to suspect that the patient would have had transplant procedure or endocrine therapy.
   b. If the treatment plan offered multiple treatment options and the patient selected treatment that did not include transplant procedure or endocrine therapy
   c. Patient elects to pursue no treatment following the discussion of transplant procedure or endocrine therapy. Discussion does not equal a recommendation.
   d. Only information available is that the patient was referred to an oncologist. Referral does not equal a recommendation.
   e. Watchful waiting (CLL)
   f. Patient diagnosed at autopsy
2. Assign **code 10** if the patient has "mixed chimera transplant (mini-transplant or non-myeloablative transplant). These transplants are a mixture of the patient's cells and donor cells.
3. **Codes 11 and 12** have priority over code 10 (BMT, NOS).

4. Assign **code 12** (allogeneic) for a syngeneic bone marrow transplant (from an identical twin) or for a transplant from any person other than the patient.
5. Assign **code 20** when the patient has a stem cell harvest followed by a rescue or reinfusion (stem cell transplant). If the patient does not have a rescue, code the stem cell harvest as 88, recommended, unknown if administered.
6. Assign **code 30** for endocrine radiation and/or surgery. Endocrine organs are testes and ovaries. Endocrine radiation and/or surgical procedures must be bilateral, or must remove the remaining paired organ for hormonal effect.
7. Assign **code 87**
    a. If the patient **refused** recommended **transplant or endocrine procedure**.
    b. If the patient made a **blanket refusal** of all recommended treatment.
    c. If the patient **refused all treatment** before any was recommended.
8. Assign **code 99**
    a. When there is no documentation that transplant procedure or endocrine therapy was recommended or performed
    b. Death certificate only.

Palliative Procedure

Identifies any care provided in an effort to palliate or alleviate symptoms. Palliative care is performed to relieve symptoms and may include surgery, radiation therapy, systemic therapy (chemotherapy, hormone therapy or other systemic drugs) and/or other pain management therapy.

CODE	DESCRIPTION
0	No palliative care provided. Diagnosed at autopsy.
1	Surgery to alleviate symptoms but no attempt to diagnose, stage or treat the primary tumor is made.
2	Radiation therapy to alleviate symptoms but no attempt to diagnose, stage or treat the primary tumor is made.
3	Chemotherapy, hormone therapy or other systemic drugs to alleviate symptoms but no attempt to diagnose, stage or treat the primary tumor is made.
4	Patient received or was referred for pain management therapy with no other palliative care.
5	Any combination of codes 1, 2, and/or 3 without code 4
6	Any combination of codes 1, 2, and/or 3 with code 4
7	Palliative care was performed or referred, but no information on the type of procedure is available in the patient record. Palliative care was provided that does not fit the descriptions for codes 1-6.
9	It is unknown if palliative care was performed or referred; not stated in patient record.

Other Therapy

Other Therapy identifies other treatment given that cannot be classified as surgery, radiation, systemic therapy, or ancillary treatment.

CODE	DESCRIPTION
0	None
1	Other
2	Other-Experimental
3	Other-Double Blind
6	Other-Unproven
7	Refusal
8	Recommended, unknown if administered
9	Unknown

Coding Instructions

1. Assign **Code 0** when
   a. There is no information in the patient's medical record about other therapy AND
      i. It is known that other therapy is not usually performed for this type and/or stage of cancer OR
      ii. There is no reason to suspect that the patient would have had other therapy.
   b. If the treatment plan offered multiple treatment options and the patient selected treatment that did not include other therapy
   c. Patient elects to pursue no treatment following the discussion of other therapy. Discussion does not equal a recommendation.
   d. Only information available is that the patient was referred for consideration of other therapy. Referral does not equal a recommendation.
   e. Patient diagnosed at autopsy

2. Assign **code 1**
    a. Hematopoietic treatments such as: phlebotomy, transfusions, or aspirin
    b. Patient had cancer treatment that could not be assigned to the previous treatment fields (surgery, radiation, chemotherapy, immunotherapy, or systemic therapy)
3. Assign **code 2** for any experimental or newly developed treatment that differs greatly from proven types of cancer therapy such as a clinical trial.

    Note: Hyperbaric oxygen has been used to treat cancer in clinical trials, but it is also used to promote tissue healing following head and neck surgeries. Do not code the administration of hyperbaric oxygen to promote healing as an experimental treatment.
4. Assign **code 3** when the patient is enrolled in a double blind clinical **trial**. When the trial is complete and the code is broken, review and recode the therapy.
5. Assign **code 6** for **unconventional** methods whether they are the single therapy or given in combination with conventional therapy. Use **code 6** for **alternative** therapy ONLY if

    the patient receives no other type of treatment.
6. Assign **code 8** When other therapy was recommended by the physician but there is no information that the treatment was given.
7. Assign **code 9**
    a. When there is no documentation that other therapy was recommended or performed
    b. Death certificate only.

The following explanations and definitions are quoted from the website for the National Center for Complimentary and Alternative Medicine (NCCAM). Complementary and alternative medicine, as defined by NCCAM, is a group of diverse medical and health care systems, practices, and products that are not presently considered to be part of conventional medicine. While some scientific evidence exists regarding some CAM therapies, for most there are key questions that are yet to be answered through well-designed scientific studies--questions such as whether they are safe and whether they work for the diseases or medical conditions for which they are used.

- **Complementary** medicine is used **together with** conventional medicine. An example of a complementary therapy is using aromatherapy to help lessen a patient's discomfort following surgery.
- **Alternative** medicine is used **in place of** conventional medicine. An example of an alternative therapy is using a special diet to treat cancer instead of undergoing surgery, radiation, or chemotherapy that has been recommended by a conventional doctor.

See complete information on types of complementary and alternative medicine at http://nccam.nih.gov/health/whatiscam/, summarized below:

Acupuncture is a method of healing developed in China at least 2,000 years ago. Today, acupuncture describes a family of procedures involving stimulation of anatomical points on the body by a variety of techniques. American practices of acupuncture incorporate medical traditions from China, Japan, Korea, and other countries. The acupuncture technique that has been most studied scientifically involves penetrating the skin with thin, solid, metallic needles that are manipulated by the hands or by electrical stimulation.

Aromatherapy involves the use of essential oils (extracts or essences) from flowers, herbs, and trees to promote health and well-being.

Ayurveda is a CAM alternative medical system that has been practiced primarily in the Indian subcontinent for 5,000 years. Ayurveda includes diet and herbal remedies and emphasizes the use of body, mind, and spirit in disease prevention and treatment.

Chiropractic is a CAM alternative medical system. It focuses on the relationship between bodily structure (primarily that of the spine) and function, and how that relationship affects the preservation and restoration of health. Chiropractors use manipulative therapy as an integral treatment tool.

Dietary supplements. Congress defined the term "dietary supplement" in the Dietary Supplement Health and Education Act (DSHEA) of 1994. A dietary supplement is a product (other than tobacco) taken by mouth that contains a "dietary ingredient" intended to supplement the diet. Dietary ingredients may include vitamins, minerals, herbs or other botanicals, amino acids, and substances such as enzymes, organ tissues, and metabolites. Dietary supplements come in many forms, including extracts, concentrates, tablets, capsules, gel caps, liquids, and powders. They have special requirements for labeling. Under DSHEA, dietary supplements are considered foods, not drugs.

Electromagnetic fields (EMFs, also called electric and magnetic fields) are invisible lines of force that surround all electrical devices. The Earth also produces EMFs; electric fields are produced when there is thunderstorm activity, and magnetic fields are believed to be produced by electric currents flowing at the Earth's core.

Homeopathic medicine is a CAM alternative medical system. In homeopathic medicine, there is a belief that "like cures like," meaning that small, highly diluted quantities of medicinal substances are given to cure symptoms, when the same substances given at higher or more concentrated doses would actually cause those symptoms.

Massage therapists manipulate muscle and connective tissue to enhance function of those tissues and promote relaxation and well-being.

Naturopathic medicine, or naturopathy, is a CAM alternative medical system. Naturopathic medicine proposes that there is a healing power in the body that establishes, maintains, and restores health. Practitioners work with the patient with a goal of supporting this power, through treatments such as nutrition and lifestyle counseling, dietary supplements, medicinal plants, exercise, homeopathy, and treatments from traditional Chinese medicine.

Osteopathic medicine is a form of conventional medicine that, in part, emphasizes diseases arising in the musculoskeletal system. There is an underlying belief that all of the body's systems work together, and disturbances in one system may affect function elsewhere in the body. Some osteopathic physicians practice osteopathic manipulation, a full-body system of hands-on techniques to alleviate pain, restore function, and promote health and well-being.

Qi gong is a component of traditional Chinese medicine that combines movement, meditation, and regulation of breathing to enhance the flow of qi (an ancient term given to what is believed to be vital energy) in the body, improve blood circulation, and enhance immune function.

Reiki is a Japanese word representing Universal Life Energy. Reiki is based on the belief that when spiritual energy is channeled through a Reiki practitioner, the patient's spirit is healed, which in turn heals the physical body.

Therapeutic Touch is derived from an ancient technique called laying-on of hands. It is based on the premise that it is the healing force of the therapist that affects the patient's recovery; healing is promoted when the body's energies are in balance; and, by passing their hands over the patient, healers can identify energy imbalances.

Traditional Chinese medicine (TCM) is the current name for an ancient system of health care from China. TCM is based on a concept of balanced qi (pronounced "chee"), or vital energy, that is believed to flow throughout the body. Qi is proposed to regulate a person's spiritual, emotional, mental, and physical balance and to be influenced by the opposing forces of yin (negative energy) and yang (positive energy). Disease is proposed to result from the flow of qi being disrupted and yin and yang becoming imbalanced. Among the components of TCM are herbal and nutritional therapy, restorative physical exercises, meditation, acupuncture, and remedial massage.

Systemic/Surgery Sequence

Records the sequencing of systemic therapy and surgical procedures given as a part of the first course of treatment.

CODE	LABEL	DESCRIPTION
0	No systemic therapy and/or surgical procedures	No systemic therapy was given; and/or no surgical procedure of primary site; no scipe of regional lymph node surgery; no surgery to other regional site(s), distant site(s) or distant lymph node(s); or no reconstructive surgery was performed. Diagnosed at autopsy.
2	Systemic therapy before surgery	Systemic therapy was given before surgical procedure of primary site; scope of regional lymph node surgery; surgery to other regional site(s), distant site(s) or distant lymph node(s) was performed
3	Systemic therapy after surgery	Systemic therapy was given after surgical procedure of primary site; scope of regional lymph node surgery; surgery to other regional site(s), distant site(s) or distant lymph node(s) was performed
4	Systemic therapy both before and after surgery	Systemic therapy was given before and after any surgical procedure of primary site; scope of regional lymph node surgery; surgery to other regional site(s), distant site(s) or distant lymph node(s) was performed
5	Intraoperative systemic therapy	Systemic therapy was given during surgical procedure of primary site; scope of regional lymph node surgery; surgery to other regional site(s), distant site(s) or distant lymph node(s).
6	Intraoperative systemic therapy with other therapy administered before or after surgery	Systemic therapy was given during surgical procedure of primary site; scope of regional lymph node surgery; surgery to other regional site(s), distant site(s) or distant lymph node(s) with other systemic therapy administered before or after any surgical procedure of primary site; scope of regional lymph node surgery; surgery to other regional site(s), distant site(s) or distant lymph node(s) was performed

CODE	LABEL	DESCRIPTION
9	Sequence unknown	Administration of systemic therapy and surgical procedure of primary site; scope of regional lymph node surgery; surgery to other regional site(s), distant site(s) or distant lymph node(s) were performed and the sequence of treatment is not stated in the patient record. It is unknown if systemic therapy was administered and/or it is unknown if surgical procedure of primary site; scope of regional lymph node surgery; surgery to other regional site(s), distant site(s) or distant lymph node(s) were performed. Death certificate only.

Chapter

13

Abstracting: Cancer Outcomes

TEXT DOCUMENTATION IS REQUIRED.

YOU MUST PROVIDE SUFFICIENT TEXT DOCUMENTATION TO SUBSTANTIATE CODING.

Date of Last Contact

Codes for Month

CODE	MONTH	CODE	MONTH	CODE	MONTH
01	January	06	June	11	November
02	February	07	July	12	December
03	March	08	August	99	Unknown month
04	April	09	September		
05	May	10	October		

Codes for Day

01
02
03
..
..
31
99 Unknown day

Codes for Year
Code the four-digit year.
Record 9999 for unknown year

DESCRIPTION	DATE CODE
Spring	April
Middle of the year	July
Fall of the year	October
Winter	Try to determine if it means the beginning or edn of the year. Code January or December as indicated.

Vital Status

CODE	STATUS
0	Dead
1	Alive

YEAR	REFERENCE(S)
1/1/93 to 12/31/02	Registry Operations and Data Standards (ROADS), page 264 (http://www.facs.org/cancer/coc/roads/roads1996.pdf)
1/1/03 to 12/31/03	Facility Oncology Registry Data Standards (FORDS), Original 2003 page 200 (http://www.facs.org/cancer/coc/fords/fordsoriginal2003.pdf)
1/1/04 to present	Facility Oncology Registry Data Standards (FORDS), page 200 (http://www.facs.org/cancer/coc/fords/fordsrevised0605.pdf)

Note: When page numbers are given, they refer to the page numbers that appear in the document (i.e., on the "page"), not the page of the PDF. PDF pagination includes title pages, front-matter and other pages that are not usually included in hard-copy pagination.

Autopsy

CODE	STATUS
0	Patient alive
1	Autopsy performed
2	No autopsy performed
9	Patient expired, unknown if autopsy performed

YEAR	REFERENCE(S)
1/1/93 to present	Registry Operations and Data Standards (ROADS), page 273 (http://www.facs.org/cancer/coc/roads/roads1996.pdf)

Note: When page numbers are given, they refer to the page numbers that appear in the document (i.e., on the "page"), not the page of the PDF. PDF pagination includes title pages, front-matter and other pages that are not usually included in hard-copy pagination.

Cause of Death/Underlying Cause of Death

Record the cause of death listed on the death certificate. Use underlying cause of death identified by state vital registration offices.

Some codes have an optional 5th digit which is not used in coding cause of death. If the fourth digit for the underlying cause of death is X, blank or -, fill in with a 9.

CODE	STATUS
0000	Patient alive at last follow-up
	ICDA-8, ICD-9 OR ICD-10 CAUSE OF DEATH CODE
7777	State death certificate or listing not available.
7797	State death certificate or listing available but underlying cause of death not coded

SEER Geocodes for Place of Death are provided in Appendix H.

Place of Death

Code place of death using geocodes in Appendix H.

Code 998 indicates that place of death is outside the US but more specific information is not available.

Code 999 indicates that the place of death is unknown.

Chapter

14

Quality Control

Facility Activities

Facilities are responsible for the following quality control activities:

1. Maintaining complete and up-to-date coding manuals and a library of references sufficient to support abstracting activities.
2. Providing sufficient text to substantiate coding decisions.
3. Running and resolving computer edits prior ro data submission.
4. Maintaining the following standards, based on NAACCR certification standards and NPCR data quality standards:

ISSUE	STANDARD
Completeness	>98%
Timeliness	>95% of cases diagnosed at facility reported within 6 months of diagnosis
Non-specific histologies	< 1.0%
Unknown or missing grade	<10.0% of cases diagnosed at your facility
Unknown diagnostic confirmation	<0.1% of cases diagnosed at your facility
Unknown or non-specific primary	<1.0% of cases diagnosed at your facility
Unknown or missing laterality for cases that should have laterality	<1.0% of cases that should have laterality
Laterality assigned to cases that should NOT have laterality	<0.01%
Unknown or missing stage	<2.0%

ISSUE	STANDARD
Unknown or missing sex	<0.01%
Unknown or missing age at diagnosis	<0.1%
Unknown or missing county at diagnosis	<0.1%
Unknown or missing race	<1.0%
Unknown or missing ethnicity	<1.0%
Unknown or missing Social Security Number	<2.5%
Missing primary payer at diagnosis	<1.0%

WVCR Activities

WVCR is responsible for the following quality control activities:

1. Regular conduct of case-finding and re-abstracting audits in accordance with the NPCR protocol in effect at the time of the audits. Hospitals can expect to be audited at least once every 3 to 5 years. Hospitals with identified quality and/or completeness problems may be audited more frequently.
2. Running and resolution of computerized edits.
3. Visual review of at least 10% of abstracts.
4. Regular feedback to hospitals concerning timeliness, completeness and other aspects of data quality.
5. Provision of centralized training as resources permit.

Chapter

15

New for Cases Diagnosed in 2007

As of this writing, NPCR has announced the following changes for cases diagnosed after 12/31/06:

1. Full adoption of the Multiple Primary and Histology (MP/H) coding rules.

2. Use of the National Provider Identifier (NPI) codes ***as such become available***. It is expected that a website maintained by the National Plan and Provider Enumeration System (NPPES) at https://nppes.cms.hhs.gov/NPPES/NPIRegistryHome.do will eventually become operational and allow on-line searching for NPIs.

3. Reporting primary payer at diagnosis

4. Use of Collaborative Staging version 01.03.00, including ALL site specific factors

APPENDIX A:

Chapter 16-5A-2a of the West Virginia Code and Title 64, West Virginia Administrative Rules, Division of Health, Cancer Registry, Series 68

§16-5A-2a. Cancer and tumor registry.

(a) To the extent funds are available, the director of the division of health shall establish a cancer and tumor registry for the purpose of collecting information concerning the incidence of cancer and nonmalignant intracranial and central nervous system tumors. The information collected by the registry shall be analyzed to prepare reports and perform studies as necessary when such data identifies hazards to public health. Pending appropriate funding, a statewide system shall be phased in and be fully operational by the first day of July, two thousand two, pursuant to the enactment of this section in two thousand one.

(b) All reporting sources, including hospitals, physicians, laboratories, clinics or other similar units diagnosing or providing treatment for cancer and nonmalignant intracranial and central nervous system tumors, shall provide a report of each cancer or tumor case to the cancer and tumor registry in a format specified by the director. The reporting sources shall grant the director or an authorized representative of the registry access to all records which would identify cases of cancer or nonmalignant intracranial and central nervous system tumors or would establish characteristics of cancer or nonmalignant intracranial or central nervous system tumors.

(c) All information reported pursuant to this section is confidential and shall be used for the purpose of determining the sources of malignant neoplasms and nonmalignant intracranial and central nervous system tumors and evaluating measures designed to eliminate, alleviate or ameliorate their effect. A report provided to the cancer and tumor registry disclosing the identity of an individual who was reported as having cancer or tumors shall only be released to reporting sources and persons demonstrating a need which is essential to health related research, except that the release shall be conditioned upon the reporting source and personal identities remaining confidential. No liability of any kind or character for damages or other relief shall arise or be enforced against any reporting source by reason of having provided the information or material to the cancer and tumor registry.

(d) The director of the division of health shall appoint an advisory committee on cancer and tumors with membership consisting of representatives of appropriate agencies, including the West Virginia hospital association; the American cancer society, West Virginia division; the American lung association of West Virginia; the West Virginia medical association; the association of osteopathic medicine; the West Virginia nurses association; the Mary Babb Randolph cancer center; and, at the discretion of the director, any other individuals directly involved. The advisory committee shall provide technical guidance regarding the operation of the cancer registry and shall provide such advice and assistance as needed to carry out effective cancer prevention and control activities. The members of the advisory committee shall serve four-year terms. Vacancies shall be filled in a like manner for the unexpired term.

(e) The director shall promulgate rules related to: (1) The content and design of all forms and reports required by this section; (2) the procedures for disclosure of information gathered by the cancer and tumor registry by monitoring and evaluating health data and from completed risk assessments; and (3) any other matter necessary to the administration of this section.

TITLE 64
LEGISLATIVE RULE
DIVISION OF HEALTH
DEPARTMENT OF HEALTH AND HUMAN RESOURCES

SERIES 68
CANCER REGISTRY

§64-68-1. General.

1.1. Scope. -- This legislative rule establishes standards and procedures for reporting cancer cases to the West Virginia Cancer Registry, maintaining the confidentiality of information in its cancer registry and disclosing information from the cancer registry.

1.2. Authority. -- W. Va. Code §§16-5A-2a(e), 16-1-21(d) and 16-1-7.

1.3. Filing Date. -- April 13, 2000.

1.4. Effective Date. -- July 1, 2000.

§64-68-2. Application and Enforcement.

2.1. Application -- This rule applies to health care providers, health care facilities and persons with access to or in charge of medical records or other sources of cancer-related information.

2.2. Enforcement -- This rule is enforced by the director of the division of health.

§64-68-3. Definitions.

3.1. Abstract - A summary of information relating to the diagnosis and course of disease of an individual case of cancer.

3.2. Cancer - A cellular tumor, the natural course of which is fatal and usually associated with the formation of secondary tumors.

3.3. Cancer Registry - A registry maintained for the collection of information concerning newly diagnosed cancer cases.

3.4. Confidential Information - Information which identifies individual cancer patients, health care facilities, or health care providers.

3.5. Diagnosis - The determination of the nature of a case of disease.

3.6. Director - The director of the division of health of the department of health and human resources or his or her lawful designee.

3.7. Health Care Facility - Any hospital, nursing home, clinic, cancer treatment center, laboratory, or any other facility or institution which provides health care or diagnostic services to individuals.

3.8. Health Care Provider - Any physician, dentist, nurse, or other individual who provides to individuals medical, dental, nursing, or other health care services of any kind.

3.9. Hospital - An entity subject to licensure as a hospital under W. Va. Code §16-5B-1.

3.10. Person - An individual, partnership, corporation or other legal entity.

3.11. Reportable Cancer Case - Any case of cancer diagnosed after December 31, 1992, where the primary tumor is determined to be malignant or carcinoma in situ, with the exception of basal cell or squamous cell carcinomas of the skin and carcinoma in situ of the cervix.

3.12. Reporting Source - A health care facility or provider which diagnoses or provides treatment for cancer.

3.13. West Virginia Cancer Registry - The office within the division of health which collects and maintains information on cancer cases.

§64-68-4. Reporting.

4.1. All reporting sources shall provide the West Virginia Cancer Registry with the following patient-related information on all reportable cancer cases to the extent that the information would be routinely available at a particular type of reporting source:

4.1.a. The last name, first name, and middle initial;

4.1.b. Social security number;

4.1.c. Sex;

4.1.d. Birth date;

4.1.e. Maiden name;

4.1.f. Race/ethnicity;

4.1.g. Address at the time of diagnosis, including street, city, county and zip code;

4.1.h. Date of diagnosis;

4.1.i. A description of the cancer, including site, type, and any other information needed to describe the case clearly;

4.1.j. Stage of disease at diagnosis using:

4.1.j.1. Surveillance, Epidemiology, and End Results (SEER) system; and

4.1.j.2. American Joint Commission on Cancer (AJCC) system if maintained by the reporting source.

4.1.k. The treatment of the cancer and the patient=s medical status;

4.1.l. Date of death, if the patient has died;

4.1.m. Cause of death;

4.1.n. Usual occupation;

4.1.o. Usual industry of employment; and

4.1.p. Other information relevant for the identification of hazards to the public, i.e., the presence of factors placing the patient at risk for development of cancer. Risk factor information includes, but is not limited to: tobacco use, familial history of cancer and alcohol use.

4.2. Each cancer case report shall also include:

4.2.a. The name of the reporting source;

4.2.b. The name of the diagnosing physician; and

4.2.c. Sufficient narrative to determine the accuracy of coding and information.

4.3. Any health care facility diagnosing or treating cancer patients within the state of West Virginia shall submit the required information on all reportable cases of cancer served by that facility to the West Virginia Cancer Registry within six (6) months of diagnosis. Reports shall be submitted monthly via electronic information transfer or paper copy of case abstracts, in a manner or on forms acceptable to the West Virginia Cancer Registry. If the health care facility fails to report in a format prescribed by the director, authorized West Virginia Cancer Registry personnel may enter the health care facility, access the information and report it in the appropriate format. In these cases, if a health care facility is licensed for fifty (50) beds or more, the division of health shall assess the health care facility a service fee for reimbursement of the cost of accessing and reporting the information. The fee shall be based upon the fair market value of the services. The health care facility shall pay the division of health within sixty (60) days of assessment of the fee.

4.4. Health care facilities shall provide authorized West Virginia Cancer Registry personnel access to all medical records which would identify cases of cancer or establish characteristics of cancer to collect the required information on reportable cases of cancer for the purposes of assuring the accuracy and completeness of reported data. Registry staff shall schedule access at reasonable times convenient to the health care facility and registry staff.

The West Virginia Cancer Registry staff shall notify the health care facility a minimum of thirty (30) days in advance of its need to access medical records to allow for the health care facility to prepare records for review.

4.5. The West Virginia Cancer Registry shall collect standardized data usable for research purposes.

§64-68-5. Confidentiality; Disclosure.

5.1. No person who obtains information protected by the provisions of W. Va. Code §16-5A-2a and this rule may disclose confidential information to any other person except in strict compliance with W. Va. Code §16-5A-2a and this rule.

5.2. Any person who obtains information protected by the provisions of W. Va. Code §16-5A-2a and this rule shall sign a statement that he or she fully understands and will maintain the confidentiality of the information.

5.3. The West Virginia Cancer Registry may release information which identifies a specific patient to the reporting source which originally reported the cancer case.

5.4. The West Virginia Cancer Registry may release information which identifies a specific patient whose address at the time of diagnosis was outside West Virginia to the central cancer registry in the state where the patient resides. The West Virginia Cancer Registry shall release the information only to central cancer registries in states which have confidentiality standards equivalent to those of West Virginia and which establish reciprocal reporting with West Virginia. The West Virginia Cancer Registry shall have a written agreement with other state cancer registries to which it releases information which specifically addresses provisions for maintaining confidentiality.

5.5. The West Virginia Cancer Registry may release case data to cancer researchers for the purposes of cancer prevention, control and research.

§64-68-6. Violations and Sanctions.

6.1. Failure to comply with this rule as required subjects a person to the criminal penalties prescribed in W. Va. Code §16-1-18.

§64-68-7. Administrative Due Process.

7.1. Those persons adversely affected by the enforcement of this rule desiring a contested case hearing to determine any rights, duties, interests or privileges shall do so in a manner prescribed in the division of health Rules of Procedure for Contested Case Hearings and Declaratory Rulings, 64 CSR 1.

APPENDIX B:

United States Department of Health and Human Services Findings on the Permissibility of Reporting to Public Health Authorities under HIPAA

and

North American Association of Central Cancer Registries Legal Opinion of Permissibility of Reporting to Central Cancer Registries

United States Department of Health and Human Services Findings on the Permissibility of Reporting to Public Health Authorities under HIPAA

DISCLOSURES FOR PUBLIC HEALTH ACTIVITIES

[*45 CFR 164.512(b)*]

Background

The HIPAA Privacy Rule recognizes the legitimate need for public health authorities and others responsible for ensuring public health and safety to have access to protected health information to carry out their public health mission. The Rule also recognizes that public health reports made by covered entities are an important means of identifying threats to the health and safety of the public at large, as well as individuals. Accordingly, the Rule permits covered entities to disclose protected health information without authorization for specified public health purposes.

How the Rule Works

General Public Health Activities. The Privacy Rule permits covered entities to disclose protected health information, without authorization, to public health authorities who are legally authorized to receive such reports for the purpose of preventing or controlling disease, injury, or disability. This would include, for example, the reporting of a disease or injury; reporting vital events, such as births or deaths; and conducting public health surveillance, investigations, or interventions. See 45 CFR 164.512(b)(1)(i). Also, covered entities may, at the direction of a public health authority, disclose protected health information to a foreign government agency that is acting in collaboration with a public health authority. See 45 CFR 164.512(b)(1)(i). Covered entities who are also a public health authority may use, as well as disclose, protected health information for these public health purposes. See 45 CFR 164.512(b)(2).

A "public health authority" is an agency or authority of the United States government, a State, a territory, a political subdivision of a State or territory, or Indian tribe that is responsible for public health matters as part of its official mandate, as well as a person or entity acting under a grant of authority from, or under a contract with, a public health agency. See 45 CFR 164.501. Examples of a public health authority include State and local health departments, the Food and Drug Administration (FDA), the Centers for Disease Control and Prevention, and the Occupational Safety and Health Administration (OSHA).

Generally, covered entities are required reasonably to limit the protected health information disclosed for public health purposes to the minimum amount necessary to accomplish the public health purpose. However, covered entities are not required to make a minimum necessary determination for public health disclosures that are made pursuant to an individual's authorization, or for disclosures that are required by other law. See 45 CFR 164.502(b). For disclosures to a public health authority, covered entities may reasonably rely on a minimum necessary determination made by the public health authority in requesting the protected health information. See 45 CFR 164.514(d)(3)(iii)(A). For routine and recurring public health disclosures, covered entities may develop standard protocols, as part of their

minimum necessary policies and procedures, that address the types and amount of protected health information that may be disclosed for such purposes. See 45 CFR 164.514(d)(3)(i).

Other Public Health Activities. The Privacy Rule recognizes the important role that persons or entities other than public health authorities play in certain essential public health activities. Accordingly, the Rule permits covered entities to disclose protected health information, without authorization, to such persons or entities for the public health activities discussed below.

- Child abuse or neglect. Covered entities may disclose protected health information to report known or suspected child abuse or neglect, if the report is made to a public health authority or other appropriate government authority that is authorized by law to receive such reports. For instance, the social services department of a local government might have legal authority to receive reports of child abuse or neglect, in which case, the Privacy Rule would permit a covered entity to report such cases to that authority without obtaining individual authorization. Likewise, a covered entity could report such cases to the police department when the police department is authorized by law to receive such reports. See 45 CFR 164.512(b)(1)(ii). See also 45 CFR 512(c) for information regarding disclosures about adult victims of abuse, neglect, or domestic violence.

- Quality, safety or effectiveness of a product or activity regulated by the FDA. Covered entities may disclose protected health information to a person subject to FDA jurisdiction, for public health purposes related to the quality, safety or effectiveness of an FDA-regulated product or activity for which that person has responsibility. Examples of purposes or activities for which such disclosures may be made include, but are not limited to:

  < Collecting or reporting adverse events (including similar reports regarding food and dietary supplements), product defects or problems (including problems regarding use or labeling), or biological product deviations;
  < Tracking FDA-regulated products;
  < Enabling product recalls, repairs, replacement or lookback (which includes locating and notifying individuals who received recalled or withdrawn products or products that are the subject of lookback); and
  < Conducting post-marketing surveillance.

  See 45 CFR 164.512(b)(1)(iii). The "person" subject to the jurisdiction of the FDA does not have to be a specific individual. Rather, it can be an individual or an entity, such as a partnership, corporation, or association. Covered entities may identify the party or parties responsible for an FDA-regulated product from the product label, from written material that

accompanies the product (know as labeling), or from sources of labeling, such as the Physician's Desk Reference.

X Persons at risk of contracting or spreading a disease. A covered entity may
disclose protected health information to a person who is at risk of contracting or spreading a disease or condition if other law authorizes the covered entity to notify such individuals as necessary to carry out public health interventions or investigations. For example, a covered health care provider may disclose protected health information as needed to notify a person that (s)he has been exposed to a communicable disease if the covered entity is legally authorized to do so to prevent or control the spread of the disease. See 45 CFR 164.512(b)(1)(iv).

X Workplace medical surveillance. A covered health care provider who provides a health care service to an individual at the request of the individual's employer, or provides the service in the capacity of a member of the employer's workforce, may disclose the individual's protected health information to the employer for the purposes of workplace medical surveillance or the evaluation of work-related illness and injuries to the extent the employer needs that information to comply with OSHA, the Mine Safety and Health Administration (MSHA), or the requirements of State laws having a similar purpose. The information disclosed must be limited to the provider's findings regarding such medical surveillance or work-related illness or injury. The covered health care provider must provide the individual with written notice that the information will be disclosed to his or her employer (or the notice may be posted at the worksite if that is where the service is provided). See 45 CFR 164.512(b)(1)(v).

EDWARD J. CUNNINGHAM
ROBERT A. STUART, JR.
J. PATRICK JOYCE, JR.
ERIC L. GRONENBACH
JEFFERY W. WILDAY
WILLIAM F. TRAPP
PAUL BOWN
ALMON A. MANSON, JR.
DWIGHT H. O'KEEFE, II
DONALD R. TRACY
EMMET A. FAIRFIELD
DENISE M. DRUHOT
HARVEY H. STEPHENS
JAMES W. BRUNER
LORILICA BUERKETT

ELIZABETH M. ANDERSON

MICHAEL J. DRAKE
CATHERINE A. DIGENOVA-CARTER
HUGH F. DRAKE
TAYLOR R. STEAHLY

OF COUNSEL
HARVEY B. STEPHENS
NORMAN P. JONES
SIMON L. FRIEDMAN
ROBERT W. MAGILL
CHARLES A. CHAPIN

BROWN, HAY & STEPHENS
ATTORNEYS AT LAW
205 S. FIFTH STREET, SUITE 700
SPRINGFIELD, ILLINOIS 62701-1489

ROBERT A. STUART
1941-1999
ROBERT H. STEPHENS
1909-1988

TELEPHONE (217) 544-8491
TELECOPIER (217) 544-9609

ADDRESS CORRESPONDENCE TO:
P.O. BOX 2389
SPRINGFIELD, ILLINOIS 62705-2389
www.bhslaw.com
E-mail Address: jwilday@bhslaw.com

August 15, 2001

RECEIVED
AUG 17 2001
NAACCR

Holly L. Howe, PhD.
Executive Director
North American Association
of Central Cancer Registries
2121 W. White Oaks Dr., Suite C
Springfield, Illinois 62708

Re: ***The Federal Privacy Rule's Application to Central Cancer Registries***

Dear Dr. Howe:

At your request, we have reviewed the letter dated July 13, 2001, which you received from Professor James Hodge of the Georgetown University Law Center. As discussed by Professor Hodge, federal regulations, entitled *Standards for Privacy of Individually Identifiable Health Information* (the "Privacy Rule"), restrict the use and disclosure of health information by health care providers, health plans, and health care clearinghouses.[1] After reviewing the relevant regulations, Professor Hodge concluded that the Privacy Rule does not restrict the disclosure of patient information by a health care provider to a central cancer registry so long as the central cancer registry is a "public health authority." We agree with that conclusion.

On July 6, 2001, the U.S. Department of Health and Human Services ("DHHS") issued its Guidance on the Privacy Rule and on the issue addressed by Professor Hodge.[2] DHHS concluded that disclosures to public health authorities are permitted under the Privacy Rule, and among various Questions and Answers, stated:

---

[1] 45 C.F.R. § 164.500 *et. seq.*

[2] *Guidance on Standards for Privacy of Individually Identifiable Health Information*, issued by the U.S. Department of Health and Human Services, at pg. 54 (July 6, 2001).

Q: Must a health care provider or other covered entity obtain permission from a patient prior to notifying public health authorities of the occurrence of a reportable disease?

A: No. All states have laws that require providers to report cases of specific diseases to public health officials. The Privacy Rule allows disclosures that are required by law. Furthermore, disclosures to public health authorities that are authorized by law to collect or receive information for public health purposes are also permissible under the Privacy Rule. In order to do their job of protecting the health of the public, it is frequently necessary for public health officials to obtain information about the persons affected by a disease. In some cases they may need to contact those affected in order to determine the cause of the disease to allow for actions to prevent further illness.

> The Privacy Rule continues to allow for the existing practice of sharing [protected health information] with public health authorities that are authorized by law to collect or receive such information to aid them in their mission of protecting the health of the public. Examples of such activities include those directed at the reporting of disease or injury, reporting deaths and births, investigating the occurrence and cause of injury and disease, and monitoring adverse outcomes related to food, drugs, biological products and dietary supplements. (emphasis added).

As explained by DHHS in its Guidance, the Privacy Rule allows disclosure of information to public health authorities. With respect to the disclosure of information to central cancer registries, and as noted by Professor Hodge, whether the Privacy Rule restricts the disclosure of information depends on whether each central cancer registry falls within the definition of a "public health authority." A public health authority is defined as:

> an agency or authority of the United States, a State or territory, a political subdivision of a State or territory, or an Indian tribe, or a person or entity acting under a grant of authority from or contract with such public agency…that is responsible for public health matters as part of the official mandate.[3] (emphasis added).

[3] 45 C.F.R. §164.501

Since state cancer registries come within this definition, the Privacy Rule does not restrict disclosure of patient information to them. For the exemption to apply to a non-governmental registry, however, the registry must operate pursuant to a contract with a public agency or under a grant of authority from a public agency.

Should you have any further questions regarding this issue, please advise.

Very truly yours,

Jeffery M. Wilday

JMW:ddh

APPENDIX C:

Currently Active Acute Care and Critical Access Hospitals in West Virginia

Name	Address	City	Zip	Phone	Type	Reference Year	Code
Beckley ARH Hospital	306 Stanaford Road	Beckley	25801	(304) 255-3456	Acute Care	2000	
Bluefield Regional Medical Center	500 Cherry St	Bluefield	24701	(304) 327-1700	Acute Care	1999	
Boone Memorial Hospital	701 Madison Avenue	Madison	25130	(304) 369-1230	Critical Access		
Braxton County Memorial Hospital	100 Hoylman Drive	Gassaway	26624	(304) 364-5156	Critical Access		
Broaddus Hospital Association, Inc	Mansfield Hill P O Box 930	Philippi	26416	(304) 457-1760	Critical Access		
Cabell-Huntington Hospital Inc	1340 Hal Greer Boulevard	Huntington	25701	(304) 526-2000	Acute Care	1995	
Camden Clark Memorial Hospital	800 Garfield Ave	Parkersburg	26101	(304) 424-2111	Acute Care	1981	
Charleston Area Medical Center	501 Morris Street	Charleston	25301	(304) 388-6203	Acute Care	1985	
City Hospital	P O Box 1418 Dry Run Road	Martinsburg	25401	(304) 264-1000	Acute Care	1988	
Davis Memorial Hospital	P O Box 1484	Elkins	26241	(304) 636-3300	Acute Care	1995	
Fairmont General Hospital	1325 Locust Avenue	Fairmont	26554	(304) 367-7100	Acute Care	1998	
Grafton City Hospital	500 Market Street	Grafton	26354	(304) 265-0400	Critical Access		
Grant Memorial Hosp	Route 55 P O Box 1019	Petersburg	26847	(304) 257-1026	Acute Care		

Greenbrier Valley Medical Center	202 Maplewood Avenue P O Box 497	Ronceverte	24970	(304) 647-4411	Acute Care	1998	
Guyan Valley Hospital	396 Dingess St	Logan	25601	(304) 831-1700	Critical Access		
Hampshire Memorial Hospital	549 Center Avenue	Romney	26757	(304) 822-4561	Critical Access		
Jackson General Hospital	Pinnell St	Ripley	25271	(304) 373-1474	Acute Care		
Jefferson Memorial Hospital	300 South Preston Street	Ranson	25438	(304) 728-1600	Critical Access	1994	
Logan Regional Medical Center	20 Hospital Drive	Logan	25601	(304) 831-1350	Acute Care	1996	
Minnie Hamilton	Route 1 Box 1-A	Grantsville	26147	(304) 354-9244	Critical Access		
Monongalia County General Hospital	1200 JD Anderson Dr	Morgantown	26505	(304) 598-1200	Acute Care	1992	
Montgomery General Hospital, Inc	401 Sixth Avenue	Montgomery	25136	(304) 442-5151	Critical Access		
Morgan Cty War Memorial	109 War Memorial	Berkeley Springs	25411	(304) 258-1234	Critical Access		
Ohio Valley Medical Center	2000 Eoff Street	Wheeling	26003	(304) 234-0123	Acute Care	1984	
Plateau Medical Center	430 Main Street	Oak Hill	25901	(304) 469-8600	Critical Access		
Pleasant Valley Hospital	2520 Valley Drive	Point Pleasant	25550	(304) 675-4340	Acute Care	2000	
Pocahontas Memorial Hospital	RR Box 52 West	Buckeye	24924	(304) 799-7400	Critical Access		
Potomac Valley Hospital	167 South Mineral St	Keyser	26726	(304) 597-1100	Critical Access	2000	

Preston Memorial Hospital	300 S Price Street	Kingwood	26537	(304) 329-1400	Critical Access		
Princeton Community Hospital	12th Street P O Box 1369	Princeton	24740	(304) 487-7260	Acute Care	1990	
Putnam General Hospital	1400 Hospital Drive	Hurricane	25526	(304) 757-1700	Acute Care	2000	
Raleigh General Hospital	1710 Harper Road	Beckley	25801	(304) 256-4100	Acute Care		
Reynolds Memorial Hospital	800 Wheeling Ave	Glen Dale	26038	(304) 843-3230	Acute Care	1994	
Richwood Area Community Hospital	Riverside Addition	Richwood	26261	(304) 846-2573	Critical Access		
Roane General Hospital	200 Hospital Drive	Spencer	25276	(304) 927-4444	Critical Access		
Sisterville General Hospital	314 South Wells Street	Sistersville	26175	(304) 652-2611	Critical Access		
St Francis Hospital	333 Laidley St	Charleston	25301	(304) 347-6500	Acute Care	2000	
St Joseph Hospital	1 Amalia Drive	Buckhannon	26201	(304) 472-2000	Acute Care		
St Josephs Hospital	1824 Murdoch Avenue	Parkersburg	26101	(304) 424-4382	Acute Care		
St Lukes Hospital	1333 Southview Drive Pob 1190	Bluefield	24701	(304) 327-2911	Acute Care		
St Mary's Medical Center	2900 1st Avenue	Huntington	25701	(304) 526-1270	Acute Care	1957	
Stonewall Jackson Memoirial Hospital	Route 4 Box 10	Weston	26452	(304) 269-8080	Acute Care	2000	
Summers County ARH Hospital	Terrace Street P O Box 940	Hinton	25951	(304) 466-1000	Critical Access		
Summersville Memorial Hospital	400 Fairview Heights Road	Summersville	26651	(304) 872-2891	Acute Care		

Thomas Memorial Hospital	4605 Maccorkle Ave SW	South Charleston	25309	(304) 766-3600	Acute Care	1995	
United Hospital Center	P O Box 1680	Clarksburg	26301	(304) 624-2121	Acute Care	1985	
Webster County Memorial Hospital	P O Box 312 (Miller Mountain Drive)	Webster Springs	26288	(304) 847-5682	Critical Access		
Weirton Medical Center	601 Colliers Way	Weirton	26062	(304) 797-6000	Acute Care		
Welch Community Hospital	454 Mcdowell Street	Welch	24801	(304) 436-8461	Acute Care		
West Virginia University Hospitals	Medical Center Drive	Morgantown	26506	(304) 598-4000	Acute Care	1985	
Wetzel County Hospital	#3 East Benjamin Drive	New Martinsville	26155	(304) 455-8000	Acute Care		
Wheeling Hospital	1 Medical Park	Wheeling	26003	(304) 243-3000	Acute Care	1981	
Williamson Memorial Hospital	859 Alderson Street	Williamson	25661	(304) 235-2500	Acute Care	2000	
VAMC Beckley		Beckley			VAMC	1993	
VAMC Clarksburg		Clarksburg			VAMC	2001	
VAMC Huntington		Huntington			VAMC	1997	
VAMC Martinsburg		Martinsburg			VAMC		

APPENDIX D:

United States Postal Service Abbreviations

STATE/POSSESSION	ABBREVIATION
Alabama	AL
Alaska	AK
American Samoa	AS
Arizona	AZ
Arkansas	AR
California	CA
Colorado	CO
Connecticut	CT
Delaware	DE
District Of Columbia	DC
Federated States Of Micronesia	FM
Florida	FL
Georgia	GA
Guam	GU
Hawaii	HI
Idaho	ID
Illinois	IL
Indiana	IN
Iowa	IA
Kansas	KS
Kentucky	KY
Louisiana	LA
Maine	ME
Marshall Islands	MH
Maryland	MD
Massachusetts	MA
Michigan	MI
Minnesota	MN
Mississippi	MS
Missouri	MO
Montana	MT
Nebraska	NE
Nevada	NV
New Hampshire	NH
New Jersey	NJ
New Mexico	NM
New York	NY

STATE/POSSESSION	ABBREVIATION
North Carolina	NC
North Dakota	ND
Northern Mariana Islands	MP
Ohio	OH
Oklahoma	OK
Oregon	OR
Palau	PW
Pennsylvania	PA
Puerto Rico	PR
Rhode Island	RI
South Carolina	SC
South Dakota	SD
Tennessee	TN
Texas	TX
Utah	UT
Vermont	VT
Virgin Islands	VI
Virginia	VA
Washington	WA
West Virginia	WV
Wisconsin	WI
Wyoming	WY

MILITARY "STATE"	ABBREVIATION
Armed Forces Africa	AE
Armed Forces Americas (except Canada)	AA
Armed Forces Canada	AE
Armed Forces Europe	AE
Armed Forces Middle East	AE
Armed Forces Pacific	AP

CANADIAN PROVIMCE	ABBREVIATION
Alberta	AB
British Columbia	BC
Manitoba	MB
New Brunswick	NB
Newfoundland and Labrador	NL
Northwest Territories	NT
Nova Scotia	NS
Nunavut	NU
Ontario	ON
Prince Edward Island	PE
Quebec	QC
Saskatchewan	SK
Yukon	YT

STREET SUFFIXES

PRIMARY NAME	COMMON NAME	ABBREVIATION
A		
Alley	Allee	ALY
Alley	Alley	ALY
Alley	Ally	ALY
Alley	Aly	ALY
Annex	Anex	ANX
Annex	Annex	ANX
Annex	Annx	ANX
Annex	Anx	ANX
Arcade	Arc	ARC
Arcade	Arcade	ARC
Avenue	Av	AVE
Avenue	Ave	AVE
Avenue	Aven	AVE
Avenue	Avenu	AVE
Avenue	Avenue	AVE
Avenue	Avn	AVE
Avenue	Avnue	AVE
B		
Bayoo	Bayoo	BYU
Bayoo	Bayou	BYU
Beach	Bch	BCH
Beach	Beach	BCH
Bend	Bend	BND
Bend	Bnd	BND
Bluff	Blf	BLF
Bluff	Bluf	BLF
Bluff	Bluff	BLF
Bluffs	Bluffs	BLFS
Bottom	Bot	BTM
Bottom	Bottm	BTM
Bottom	Bottom	BTM
Bottom	Btm	BTM
Boulevard	Blvd	BLVD
Boulevard	Boul	BLVD

PRIMARY NAME	COMMON NAME	ABBREVIATION
Boulevard	Boulevard	BLVD
Boulevard	Boulv	BLVD
Branch	Br	BR
Branch	Branch	BR
Branch	Brnch	BR
Bridge	Brdge	BRG
Bridge	Brg	BRG
Bridge	Bridge	BRG
Brook	Brk	BRK
Brook	Brook	BRK
Brooks	Brooks	BRKS
Burg	Burg	BG
Burgs	Burgs	BGS
Bypass	Byp	BYP
Bypass	Bypa	BYP
Bypass	Bypas	BYP
Bypass	Bypass	BYP
Bypass	Byps	BYP

C

Camp	Camp	CP
Camp	Cmp	CP
Camp	Cp	CP
Canyon	Canyn	CYN
Canyon	Canyon	CYN
Canyon	Cnyn	CYN
Canyon	Cyn	CYN
Cape	Cape	CPE
Cape	Cpe	CPE
Causeway	Causeway	CSWY
Causeway	Causway	CSWY
Causeway	Cswy	CSWY
Center	Cen	CTR
Center	Cent	CTR
Center	Center	CTR
Center	Centr	CTR
Center	Centre	CTR

PRIMARY NAME	COMMON NAME	ABBREVIATION
Center	Cnter	CTR
Center	Cntr	CTR
Center	Ctr	CTR
Centers	Centers	CTRS
Circle	Cir	CIR
Circle	Circ	CIR
Circle	Circl	CIR
Circle	Circle	CIR
Circle	Crcl	CIR
Circle	Crcle	CIR
Circles	Circles	CIRS
Cliff	Clf	CLF
Cliff	Cliff	CLF
Cliffs	Clfs	CLFS
Cliffs	Cliffs	CLFS
Club	Clb	CLB
Club	Club	CLB
Common	Common	CMN
Corner	Cor	COR
Corner	Corner	COR
Corners	Corners	CORS
Corners	Cors	CORS
Course	Course	CRSE
Course	Crse	CRSE
Court	Court	CT
Court	Crt	CT
Court	Ct	CT
Courts	Courts	CTS
Courts	Ct	CTS
Cove	Cove	CV
Cove	Cv	CV
Coves	Coves	CVS
Creek	Ck	CRK
Creek	Cr	CRK
Creek	Creek	CRK
Creek	Crk	CRK
Crescent	Crecent	CRES

PRIMARY NAME	COMMON NAME	ABBREVIATION
Crescent	Cres	CRES
Crescent	Crescent	CRES
Crescent	Cresent	CRES
Crescent	Crscnt	CRES
Crescent	Crsent	CRES
Crescent	Crsnt	CRES
Crest	Crest	CRST
Crossing	Crossing	XING
Crossing	Crssing	XING
Crossing	Crssng	XING
Crossing	Xing	XING
Crossroad	Crossroad	XRD
Curve	Curve	CURV

D

Dale	Dale	DL
Dale	Dl	DL
Dam	Dam	DM
Dam	Dm	DM
Divide	Div	DV
Divide	Divide	DV
Divide	Dv	DV
Divide	Dvd	DV
Drive	Dr	DR
Drive	Driv	DR
Drive	Drive	DR
Drive	Drv	DR
Drives	Drives	DRS

E

Estate	Est	EST
Estate	Estate	EST
Estates	Estates	ESTS
Estates	Ests	ESTS
Expressway	Exp	EXPY
Expressway	Expr	EXPY
Expressway	Express	EXPY

PRIMARY NAME	COMMON NAME	ABBREVIATION
Expressway	Expressway	EXPY
Expressway	Expw	EXPY
Expressway	Expy	EXPY
Extension	Ext	EXT
Extension	Extension	EXT
Extension	Extn	EXT
Extension	Extnsn	EXT
Extensions	Extensions	EXTS
Extensions	Exts	EXTS

F

Fall	Fall	FALL
Falls	Falls	FLS
Falls	Fls	FLS
Ferry	Ferry	FRY
Ferry	Frry	FRY
Ferry	Fry	FRY
Field	Field	FLD
Field	Fld	FLD
Fields	Fields	FLDS
Fields	Flds	FLDS
Flat	Flat	FLT
Flat	Flt	FLT
Flats	Flats	FLTS
Flats	Flts	FLTS
Ford	Ford	FRD
Ford	Frd	FRD
Fords	Fords	FRDS
Forest	Forest	FRST
Forest	Forests	FRST
Forest	Frst	FRST
Forge	Forg	FRG
Forge	Forge	FRG
Forge	Frg	FRG
Forges	Forges	FRGS
Fork	Fork	FRK
Fork	Frk	FRK

PRIMARY NAME	COMMON NAME	ABBREVIATION
Forks	Forks	FRKS
Forks	Frks	FRKS
Fort	Fort	FT
Fort	Frt	FT
Fort	Ft	FT
Freeway	Freeway	FWY
Freeway	Freewy	FWY
Freeway	Frway	FWY
Freeway	Frwy	FWY
Freeway	Fwy	FWY

G

Garden	Garden	GDN
Garden	Gardn	GDN
Garden	Gdn	GDN
Garden	Grden	GDN
Garden	Grdn	GDN
Gardens	Gardens	GDNS
Gardens	Gdns	GDNS
Gardens	Grdns	GDNS
Gateway	Gateway	GTWY
Gateway	Gatewy	GTWY
Gateway	Gatway	GTWY
Gateway	Gtway	GTWY
Gateway	Gtwy	GTWY
Glen	Glen	GLN
Glen	Gln	GLN
Glens	Glens	GLNS
Green	Green	GRN
Green	Grn	GRN
Greens	Greens	GRNS
Grove	Grov	GRV
Grove	Grove	GRV
Grove	Grv	GRV
Groves	Groves	GRVS

PRIMARY NAME	COMMON NAME	ABBREVIATION
H		
Harbor	Harb	HBR
Harbor	Harbor	HBR
Harbor	Harbr	HBR
Harbor	Hbr	HBR
Harbor	Hrbor	HBR
Harbors	Harbors	HBRS
Haven	Haven	HVN
Haven	Havn	HVN
Haven	Hvn	HVN
Heights	Height	HTS
Heights	Heights	HTS
Heights	Hgts	HTS
Heights	Ht	HTS
Heights	Hts	HTS
Highway	Highway	HWY
Highway	Highwy	HWY
Highway	Hiway	HWY
Highway	Hiwy	HWY
Highway	Hway	HWY
Highway	Hwy	HWY
Hill	Hill	HL
Hill	Hl	HL
Hills	Hills	HLS
Hills	Hls	HLS
Hollow	Hllw	HOLW
Hollow	Hollow	HOLW
Hollow	Hollows	HOLW
Hollow	Holw	HOLW
Hollow	Holws	HOLW

I		
Inlet	Inlet	INLT
Inlet	Inlt	INLT
Island	Is	IS
Island	Island	IS
Island	Islnd	IS

PRIMARY NAME	COMMON NAME	ABBREVIATION
Islands	Islands	ISS
Islands	Islnds	ISS
Islands	Iss	ISS
Isle	Isle	ISLE
Isle	Isles	ISLE

J

Junction	Jct	JCT
Junction	Jction	JCT
Junction	Jctn	JCT
Junction	Junction	JCT
Junction	Junctn	JCT
Junction	Juncton	JCT
Junctions	Jctns	JCTS
Junctions	Jcts	JCTS
Junctions	Junctions	JCTS

K

Key	Key	KY
Key	Ky	KY
Keys	Keys	KYS
Keys	Kys	KYS
Knoll	Knl	KNL
Knoll	Knol	KNL
Knoll	Knoll	KNL
Knolls	Knls	KNLS
Knolls	Knolls	KNLS

L

Lake	Lake	LK
Lake	Lk	LK
Lakes	Lakes	LKS
Lakes	Lks	LKS
Land	Land	LAND
Landing	Landing	LNDG
Landing	Lndg	LNDG
Landing	Lndng	LNDG
Lane	La	LN

PRIMARY NAME	COMMON NAME	ABBREVIATION
Lane	Lane	LN
Lane	Lanes	LN
Lane	Ln	LN
Light	Lgt	LGT
Light	Light	LGT
Lights	Lights	LGTS
Loaf	Lf	LF
Loaf	Loaf	LF
Lock	Lck	LCK
Lock	Lock	LCK
Locks	Lcks	LCKS
Locks	Locks	LCKS
Lodge	Ldg	LDG
Lodge	Ldge	LDG
Lodge	Lodg	LDG
Lodge	Lodge	LDG
Loop	Loop	LOOP
Loop	Loops	LOOP

M

Mall	Mall	MALL
Manor	Manor	MNR
Manor	Mnr	MNR
Manors	Manors	MNRS
Manors	Mnrs	MNRS
Meadow	Mdw	MDW
Meadow	Meadow	MDW
Meadows	Mdws	MDWS
Meadows	Meadows	MDWS
Meadows	Medows	MDWS
Mews	Mews	MEWS
Mill	Mill	ML
Mill	Ml	ML
Mills	Mills	MLS
Mills	Mls	MLS
Mission	Mission	MSN
Mission	Missn	MSN

PRIMARY NAME	COMMON NAME	ABBREVIATION
Mission	Msn	MSN
Mission	Mssn	MSN
Motorway	Motorway	MTWY
Mount	Mnt	MT
Mount	Mount	MT
Mount	Mt	MT
Mountain	Mntain	MTN
Mountain	Mntn	MTN
Mountain	Mountain	MTN
Mountain	Mountin	MTN
Mountain	Mtin	MTN
Mountain	Mtn	MTN
Mountains	Mntns	MTNS
Mountains	Mountains	MTNS

N

Neck	Nck	NCK
Neck	Neck	NCK

O

Orchard	Orch	ORCH
Orchard	Orchard	ORCH
Orchard	Orchrd	ORCH
Oval	Oval	OVAL
Oval	Ovl	OVAL
Overpass	Overpass	OPAS

P

Park	Park	PARK
Park	Pk	PARK
Park	Prk	PARK
Parks	Parks	PARK
Parkway	Parkway	PKWY
Parkway	Parkwy	PKWY
Parkway	Pkway	PKWY
Parkway	Pkwy	PKWY
Parkway	Pky	PKWY
Parkways	Parkways	PKWY

PRIMARY NAME	COMMON NAME	ABBREVIATION
Parkways	Pkwys	PKWY
Pass	Pass	PASS
Passage	Passage	PSGE
Path	Path	PATH
Path	Paths	PATH
Pike	Pike	PIKE
Pike	Pikes	PIKE
Pine	Pine	PNE
Pines	Pines	PNES
Pines	Pnes	PNES
Place	Pl	PL
Place	Place	PL
Plain	Plain	PLN
Plain	Pln	PLN
Plains	Plaines	PLNS
Plains	Plains	PLNS
Plains	Plns	PLNS
Plaza	Plaza	PLZ
Plaza	Plz	PLZ
Plaza	Plza	PLZ
Point	Point	PT
Point	Pt	PT
Points	Points	PTS
Points	Pts	PTS
Port	Port	PRT
Port	Prt	PRT
Ports	Ports	PRTS
Ports	Prts	PRTS
Prairie	Pr	PR
Prairie	Prairie	PR
Prairie	Prarie	PR
Prairie	Prr	PR

R

Radial	Rad	RADL
Radial	Radial	RADL
Radial	Radiel	RADL

PRIMARY NAME	COMMON NAME	ABBREVIATION
Radial	Radl	RADL
Ramp	Ramp	RAMP
Ranch	Ranch	RNCH
Ranch	Ranches	RNCH
Ranch	Rnch	RNCH
Ranch	Rnchs	RNCH
Rapid	Rapid	RPD
Rapid	Rpd	RPD
Rapids	Rapids	RPDS
Rapids	Rpds	RPDS
Rest	Rest	RST
Rest	Rst	RST
Ridge	Rdg	RDG
Ridge	Rdge	RDG
Ridge	Ridge	RDG
Ridges	Rdgs	RDGS
Ridges	Ridges	RDGS
River	Riv	RIV
River	River	RIV
River	Rivr	RIV
River	Rvr	RIV
Road	Rd	RD
Road	Road	RD
Roads	Rds	RDS
Roads	Roads	RDS
Route	Route	RTE
Row	Row	ROW
Rue	Rue	RUE
Run	Run	RUN

S

Shoal	Shl	SHL
Shoal	Shoal	SHL
Shoals	Shls	SHLS
Shoals	Shoals	SHLS
Shore	Shoar	SHR
Shore	Shore	SHR

PRIMARY NAME	COMMON NAME	ABBREVIATION
Shore	Shr	SHR
Shores	Shoars	SHRS
Shores	Shores	SHRS
Shores	Shrs	SHRS
Skyway	Skyway	SKWY
Spring	Spg	SPG
Spring	Spng	SPG
Spring	Spring	SPG
Spring	Sprng	SPG
Springs	Spgs	SPGS
Springs	Spngs	SPGS
Springs	Springs	SPGS
Springs	Sprngs	SPGS
Spur	Spur	SPUR
Spurs	Spurs	SPUR
Square	Sq	SQ
Square	Sqr	SQ
Square	Sqre	SQ
Square	Squ	SQ
Square	Square	SQ
Squares	Sqrs	SQS
Squares	Squares	SQS
Station	Sta	STA
Station	Station	STA
Station	Statn	STA
Station	Stn	STA
Stravenue	Stra	STRA
Stravenue	Strav	STRA
Stravenue	Strave	STRA
Stravenue	Straven	STRA
Stravenue	Stravenue	STRA
Stravenue	Stravn	STRA
Stravenue	Strvn	STRA
Stravenue	Strvnue	STRA
Stream	Stream	STRM
Stream	Streme	STRM
Stream	Strm	STRM

PRIMARY NAME	COMMON NAME	ABBREVIATION
Street	St	ST
Street	Str	ST
Street	Street	ST
Street	Strt	ST
Streets	Streets	STS
Summit	Smt	SMT
Summit	Sumit	SMT
Summit	Sumitt	SMT
Summit	Summit	SMT

T

Terrace	Ter	TER
Terrace	Terr	TER
Terrace	Terrace	TER
Throughway	Throughway	TRWY
Trace	Trace	TRCE
Trace	Traces	TRCE
Trace	Trce	TRCE
Track	Track	TRAK
Track	Tracks	TRAK
Track	Trak	TRAK
Track	Trk	TRAK
Track	Trks	TRAK
Trafficway	Trafficway	TRFY
Trafficway	Trfy	TRFY
Trail	Tr	TRL
Trail	Trail	TRL
Trail	Trails	TRL
Trail	Trl	TRL
Trail	Trls	TRL
Tunnel	Tunel	TUNL
Tunnel	Tunl	TUNL
Tunnel	Tunls	TUNL
Tunnel	Tunnel	TUNL
Tunnel	Tunnels	TUNL
Tunnel	Tunnl	TUNL
Turnpike	Tpk	TPKE

PRIMARY NAME	COMMON NAME	ABBREVIATION
Turnpike	Tpke	TPKE
Turnpike	Trnpk	TPKE
Turnpike	Trpk	TPKE
Turnpike	Turnpike	TPKE
Turnpike	Turnpk	TPKE

U

Underpass	Underpass	UPAS
Union	Un	UN
Union	Union	UN
Unions	Unions	UNS

V

Valley	Valley	VLY
Valley	Vally	VLY
Valley	Vlly	VLY
Valley	Vly	VLY
Valleys	Valleys	VLYS
Valleys	Vlys	VLYS
Viaduct	Vdct	VIA
Viaduct	Via	VIA
Viaduct	Viadct	VIA
Viaduct	Viaduct	VIA
View	View	VW
View	Vw	VW
Views	Views	VWS
Views	Vws	VWS
Village	Vill	VLG
Village	Villag	VLG
Village	Village	VLG
Village	Villg	VLG
Village	Villiage	VLG
Village	Vlg	VLG
Villages	Villages	VLGS
Villages	Vlgs	VLGS
Ville	Ville	VL
Ville	Vl	VL

PRIMARY NAME	COMMON NAME	ABBREVIATION
Vista	Vis	VIS
Vista	Vist	VIS
Vista	Vista	VIS
Vista	Vst	VIS
Vista	Vsta	VIS

W

Walk	Walk	WALK
Walks	Walks	WALK
Wall	Wall	WALL
Way	Way	WAY
Way	Wy	WAY
Ways	Ways	WAYS
Well	Well	WL
Wells	Wells	WLS
Wells	Wls	WLS

SECONDARY UNIT DESIGNATOR

DESIGNATOR	ABBREVIATION
Apartment	APT
Basement	BSMT *
Building	BLDG
Department	DEPT
Floor	FL
Front	FRNT *
Hangar	HNGR
Lobby	LBBY *
Lot	LOT
Lower	LOWR *
Office	OFC *
Penthouse	PH *
Pier	PIER
Rear	REAR *
Room	RM
Side	SIDE *
Slip	SLIP
Space	SPC
Stop	STOP
Suite	STE
Trailer	TRLR
Unit	UNIT
Upper	UPPR *

* Does Not Require Secondary Range Number To Follow

APPENDIX E:

United States Postal Service ZIP Codes

ZIP	CITY	COUNTY
25606	Accoville	Logan
26210	Adrian	Upshur
25231	Advent	Jackson
26519	Albright	Preston
24910	Alderson	Greenbrier
25501	Alkol	Lincoln
25810	Allen Junction	Wyoming
25002	Alloy	Fayette
26320	Alma	Tyler
26321	Alum Bridge	Lewis
25003	Alum Creek	Kanawha
25004	Ameagle	Raleigh
25607	Amherstdale	Logan
25811	Amigo	Wyoming
25005	Amma	Roane
24808	Anawalt	McDowell
26323	Anmoore	Harrison
25812	Ansted	Fayette
25502	Apple Grove	Mason
24915	Arbovale	Pocahontas
25007	Arnett	Raleigh
25234	Arnoldsburg	Calhoun
26520	Arthurdale	Preston
25008	Artie	Raleigh
24916	Asbury	Greenbrier
25009	Ashford	Boone
25503	Ashton	Mason
24712	Athens	Mercer
26325	Auburn	Ritchie
26704	Augusta	Hampshire
26705	Aurora	Preston
24917	Auto	Greenbrier
24811	Avondale	McDowell
25608	Baisden	Mingo
26801	Baker	Hardy
25410	Bakerton	Jefferson

ZIP	CITY	COUNTY
25010	Bald Knob	Boone
24918	Ballard	Monroe
25011	Bancroft	Putnam
25504	Barboursville	Cabell
26559	Barrackville	Marion
24813	Bartley	McDowell
24920	Bartow	Pocahontas
26560	Baxter	Marion
26707	Bayard	Grant
25813	Beaver	Raleigh
25801	Beckley	Raleigh
25802	Beckley	Raleigh
26030	Beech Bottom	Brooke
24714	Beeson	Mercer
26250	Belington	Barbour
25015	Belle	Kanawha
26133	Belleville	Wood
26134	Belmont	Pleasants
26656	Belva	Nicholas
25018	Bentree	Clay
26031	Benwood	Marshall
26327	Berea	Ritchie
26298	Bergoo	Webster
25411	Berkeley Springs	Morgan
24815	Berwind	McDowell
26032	Bethany	Brooke
26253	Beverly	Randolph
25019	Bickmore	Clay
26136	Big Bend	Calhoun
25505	Big Creek	Logan
26561	Big Run	Wetzel
24816	Big Sandy	McDowell
26137	Big Springs	Calhoun
25021	Bim	Boone
26610	Birch River	Nicholas
26521	Blacksville	Monongalia

ZIP	CITY	COUNTY
25022	Blair	Logan
26328	Blandville	Doddridge
26817	Bloomery	Hampshire
25024	Bloomingrose	Boone
25025	Blount	Kanawha
25026	Blue Creek	Kanawha
25816	Blue Jay	Raleigh
24701	Bluefield	Mercer
25028	Bob White	Boone
25817	Bolt	Raleigh
25030	Bomont	Clay
25031	Boomer	Fayette
26522	Booth	Monongalia
25665	Borderland	Mingo
26254	Bowden	Tucker
25818	Bradley	Raleigh
24817	Bradshaw	McDowell
24715	Bramwell	Mercer
25506	Branchland	Lincoln
26802	Brandywine	Pendleton
25666	Breeden	Mingo
24818	Brenton	Wyoming
26524	Bretz	Preston
26330	Bridgeport	Harrison
26332	Bristol	Harrison
26138	Brohard	Wirt
26334	Brownton	Barbour
26525	Bruceton Mills	Preston
25611	Bruno	Logan
24924	Buckeye	Pocahontas
26201	Buckhannon	Upshur
24716	Bud	Wyoming
25033	Buffalo	Putnam
25413	Bunker Hill	Berkeley
26710	Burlington	Mineral
26335	Burnsville	Braxton

ZIP	CITY	COUNTY
26562	Burton	Wetzel
25035	Cabin Creek	Kanawha
26855	Cabins	Grant
26337	Cairo	Ritchie
24925	Caldwell	Greenbrier
26660	Calvin	Nicholas
26338	Camden	Lewis
26208	Camden on Gauley	Webster
26033	Cameron	Marshall
25820	Camp Creek	Mercer
25036	Cannelton	Fayette
26662	Canvas	Nicholas
24820	Capels	McDowell
26711	Capon Bridge	Hampshire
26823	Capon Springs	Hampshire
24821	Caretta	McDowell
26563	Carolina	Marion
24927	Cass	Pocahontas
26527	Cassville	Monongalia
25039	Cedar Grove	Kanawha
26611	Cedarville	Gilmer
26339	Center Point	Doddridge
25507	Ceredo	Wayne
25508	Chapmanville	Logan
25414	Charles Town	Jefferson
25301	Charleston	Kanawha
25302	Charleston	Kanawha
25303	Charleston	Kanawha
25304	Charleston	Kanawha
25305	Charleston	Kanawha
25306	Charleston	Kanawha
25309	Charleston	Kanawha
25311	Charleston	Kanawha
25312	Charleston	Kanawha
25313	Charleston	Kanawha
25314	Charleston	Kanawha

ZIP	CITY	COUNTY
25315	Charleston	Kanawha
25317	Charleston	Kanawha
25320	Charleston	Kanawha
25321	Charleston	Kanawha
25322	Charleston	Kanawha
25323	Charleston	Kanawha
25324	Charleston	Kanawha
25325	Charleston	Kanawha
25326	Charleston	Kanawha
25327	Charleston	Kanawha
25328	Charleston	Kanawha
25329	Charleston	Kanawha
25330	Charleston	Kanawha
25331	Charleston	Kanawha
25332	Charleston	Kanawha
25333	Charleston	Kanawha
25334	Charleston	Kanawha
25335	Charleston	Kanawha
25336	Charleston	Kanawha
25337	Charleston	Kanawha
25338	Charleston	Kanawha
25339	Charleston	Kanawha
25350	Charleston	Kanawha
25356	Charleston	Kanawha
25357	Charleston	Kanawha
25358	Charleston	Kanawha
25360	Charleston	Kanawha
25361	Charleston	Kanawha
25362	Charleston	Kanawha
25364	Charleston	Kanawha
25365	Charleston	Kanawha
25375	Charleston	Kanawha
25387	Charleston	Kanawha
25389	Charleston	Kanawha
25392	Charleston	Kanawha
25396	Charleston	Kanawha

ZIP	CITY	COUNTY
25040	Charlton Heights	Fayette
25958	Charmco	Greenbrier
25667	Chattaroy	Mingo
25612	Chauncey	Logan
26034	Chester	Hancock
25235	Chloe	Calhoun
26804	Circleville	Pendleton
26301	Clarksburg	Harrison
26302	Clarksburg	Harrison
26306	Clarksburg	Harrison
25043	Clay	Clay
25044	Clear Creek	Raleigh
24822	Clear Fork	Wyoming
25045	Clendenin	Kanawha
26215	Cleveland	Upshur
25046	Clio	Roane
25047	Clothier	Logan
25823	Coal City	Raleigh
24823	Coal Mountain	Wyoming
26257	Coalton	Randolph
24824	Coalwood	McDowell
25048	Colcord	Raleigh
26566	Colfax	Marion
26035	Colliers	Brooke
25049	Comfort	Boone
25825	Cool Ridge	Raleigh
26615	Copen	Braxton
25614	Cora	Logan
26529	Core	Monongalia
25826	Corinne	Wyoming
25051	Costa	Boone
25239	Cottageville	Jackson
24719	Covel	Wyoming
26206	Cowen	Webster
26342	Coxs Mills	Gilmer
25827	Crab Orchard	Raleigh

ZIP	CITY	COUNTY
26205	Craigsville	Nicholas
26343	Crawford	Lewis
24931	Crawley	Greenbrier
26141	Creston	Wirt
25961	Crichton	Greenbrier
25669	Crum	Wayne
24825	Crumpler	McDowell
24826	Cucumber	McDowell
25510	Culloden	Cabell
24827	Cyclone	Wyoming
26259	Dailey	Randolph
26036	Dallas	Marshall
25831	Danese	Fayette
25832	Daniels	Raleigh
25053	Danville	Boone
25617	Davin	Logan
26260	Davis	Tucker
26142	Davisville	Wood
24828	Davy	McDowell
25054	Dawes	Kanawha
25057	Deep Water	Fayette
25670	Delbarton	Mingo
26531	Dellslow	Monongalia
26714	Delray	Hampshire
26217	Diana	Webster
26617	Dille	Clay
25671	Dingess	Mingo
25059	Dixie	Nicholas
25060	Dorothy	Raleigh
25833	Dothan	Fayette
26667	Drennen	Nicholas
25062	Dry Creek	Raleigh
25061	Drybranch	Kanawha
26263	Dryfork	Randolph
25063	Duck	Clay
25064	Dunbar	Kanawha

ZIP	CITY	COUNTY
25511	Dunlow	Wayne
24934	Dunmore	Pocahontas
26264	Durbin	Pocahontas
25067	East Bank	Kanawha
25512	East Lynn	Wayne
25836	Eccles	Raleigh
24829	Eckman	McDowell
25672	Edgarton	Mingo
25837	Edmond	Fayette
26716	Eglon	Preston
24830	Elbert	McDowell
25070	Eleanor	Putnam
26143	Elizabeth	Wirt
26717	Elk Garden	Mineral
24831	Elkhorn	McDowell
26241	Elkins	Randolph
25071	Elkview	Kanawha
26267	Ellamore	Randolph
26346	Ellenboro	Ritchie
25965	Elton	Summers
24832	English	McDowell
26568	Enterprise	Harrison
26203	Erbacon	Webster
25075	Eskdale	Kanawha
25076	Ethel	Logan
25241	Evans	Jackson
26533	Everettville	Monongalia
26619	Exchange	Braxton
25839	Fairdale	Raleigh
24902	Fairlea	Greenbrier
26554	Fairmont	Marion
26555	Fairmont	Marion
26570	Fairview	Marion
25079	Falling Rock	Kanawha
25419	Falling Waters	Berkeley
24834	Fanrock	Wyoming

ZIP	CITY	COUNTY
26571	Farmington	Marion
25840	Fayetteville	Fayette
26202	Fenwick	Nicholas
26818	Fisher	Hardy
25841	Flat Top	Mercer
26621	Flatwoods	Braxton
26347	Flemington	Taylor
26037	Follansbee	Brooke
26348	Folsom	Wetzel
24935	Forest Hill	Summers
26719	Fort Ashby	Mineral
25514	Fort Gay	Wayne
24936	Fort Spring	Greenbrier
25081	Foster	Boone
26572	Four States	Marion
26623	Frametown	Braxton
24938	Frankford	Greenbrier
26807	Franklin	Pendleton
25082	Fraziers Bottom	Putnam
24724	Freeman	Mercer
26218	French Creek	Upshur
26219	Frenchton	Upshur
26146	Friendly	Tyler
25083	Gallagher	Kanawha
25515	Gallipolis Ferry	Mason
26349	Galloway	Barbour
25243	Gandeeville	Roane
24941	Gap Mills	Monroe
24836	Gary	McDowell
26624	Gassaway	Braxton
25085	Gauley Bridge	Fayette
25244	Gay	Jackson
25517	Genoa	Wayne
25420	Gerrardstown	Berkeley
25843	Ghent	Raleigh
25621	Gilbert	Mingo

ZIP	CITY	COUNTY
26671	Gilboa	Nicholas
26350	Gilmer	Gilmer
25245	Given	Jackson
26268	Glady	Randolph
25086	Glasgow	Kanawha
25088	Glen	Clay
26038	Glen Dale	Marshall
25844	Glen Daniel	Raleigh
26039	Glen Easton	Marshall
25090	Glen Ferris	Fayette
25845	Glen Fork	Wyoming
25846	Glen Jean	Fayette
25847	Glen Morgan	Raleigh
25848	Glen Rogers	Wyoming
25849	Glen White	Raleigh
25421	Glengary	Berkeley
25519	Glenhayes	Wayne
26351	Glenville	Gilmer
25520	Glenwood	Mason
25093	Gordon	Boone
26720	Gormania	Grant
26354	Grafton	Taylor
26574	Grant Town	Marion
26147	Grantsville	Calhoun
26534	Granville	Monongalia
24943	Grassy Meadows	Greenbrier
25422	Great Cacapon	Morgan
24944	Green Bank	Pocahontas
26722	Green Spring	Hampshire
25966	Green Sulphur Springs	Summers
24945	Greenville	Monroe
25521	Griffithsville	Lincoln
25095	Grimms Landing	Mason
26361	Gypsy	Harrison
26222	Hacker Valley	Webster
25423	Halltown	Jefferson

ZIP	CITY	COUNTY
26269	Hambleton	Tucker
25523	Hamlin	Lincoln
25623	Hampden	Mingo
25102	Handley	Kanawha
24839	Hanover	Wyoming
25103	Hansford	Kanawha
26270	Harman	Randolph
25851	Harper	Raleigh
25425	Harpers Ferry	Jefferson
26362	Harrisville	Ritchie
25247	Hartford	Mason
25524	Harts	Lincoln
24841	Havaco	McDowell
26366	Haywood	Harrison
26535	Hazelton	Preston
26627	Heaters	Braxton
25427	Hedgesville	Berkeley
25853	Helen	Raleigh
26224	Helvetia	Randolph
24842	Hemphill	McDowell
25106	Henderson	Mason
26271	Hendricks	Tucker
25624	Henlawson	Logan
24843	Hensley	McDowell
26369	Hepzibah	Harrison
24726	Herndon	Wyoming
25107	Hernshaw	Kanawha
25108	Hewett	Boone
24729	Hiawatha	Mercer
25854	Hico	Fayette
26808	High View	Hampshire
24946	Hillsboro	Pocahontas
25855	Hilltop	Fayette
25967	Hines	Greenbrier
25951	Hinton	Summers
25625	Holden	Logan

ZIP	CITY	COUNTY
25109	Hometown	Putnam
26372	Horner	Lewis
25110	Hugheston	Kanawha
26575	Hundred	Wetzel
25701	Huntington	Cabell
25702	Huntington	Cabell
25703	Huntington	Cabell
25704	Huntington	Wayne
25705	Huntington	Cabell
25706	Huntington	Cabell
25707	Huntington	Cabell
25708	Huntington	Cabell
25709	Huntington	Wayne
25710	Huntington	Cabell
25711	Huntington	Cabell
25712	Huntington	Cabell
25713	Huntington	Cabell
25714	Huntington	Cabell
25715	Huntington	Cabell
25716	Huntington	Cabell
25717	Huntington	Cabell
25718	Huntington	Cabell
25719	Huntington	Cabell
25720	Huntington	Cabell
25721	Huntington	Cabell
25722	Huntington	Cabell
25723	Huntington	Cabell
25724	Huntington	Cabell
25725	Huntington	Cabell
25726	Huntington	Cabell
25727	Huntington	Cabell
25728	Huntington	Cabell
25729	Huntington	Cabell
25755	Huntington	Cabell
25770	Huntington	Cabell
25771	Huntington	Cabell

ZIP	CITY	COUNTY
25772	Huntington	Cabell
25773	Huntington	Cabell
25774	Huntington	Cabell
25775	Huntington	Cabell
25776	Huntington	Cabell
25777	Huntington	Cabell
25778	Huntington	Cabell
25779	Huntington	Cabell
25526	Hurricane	Putnam
26273	Huttonsville	Randolph
24844	Iaeger	McDowell
26576	Idamay	Marion
24845	Ikes Fork	Wyoming
26374	Independence	Preston
25111	Indore	Clay
26375	Industrial	Harrison
25112	Institute	Kanawha
25428	Inwood	Berkeley
26376	Ireland	Lewis
24846	Isaban	McDowell
24847	Itmann	Wyoming
25113	Ivydale	Clay
26377	Jacksonburg	Wetzel
26378	Jane Lew	Lewis
25114	Jeffrey	Boone
24848	Jenkinjones	McDowell
24849	Jesse	Wyoming
26674	Jodie	Fayette
24850	Jolo	McDowell
25856	Jonben	Raleigh
25857	Josephine	Raleigh
25529	Julian	Boone
25969	Jumping Branch	Summers
26824	Junction	Hampshire
26275	Junior	Barbour
24851	Justice	Mingo

ZIP	CITY	COUNTY
25115	Kanawha Falls	Fayette
26228	Kanawha Head	Upshur
25429	Kearneysville	Jefferson
25430	Kearneysville	Jefferson
24731	Kegley	Mercer
24732	Kellysville	Mercer
25248	Kenna	Jackson
25530	Kenova	Wayne
26276	Kerens	Randolph
25674	Kermit	Mingo
26675	Keslers Cross Lanes	Nicholas
26726	Keyser	Mineral
24852	Keystone	McDowell
25534	Kiahsville	Wayne
24950	Kieffer	Greenbrier
25859	Kilsyth	Fayette
24853	Kimball	McDowell
25118	Kimberly	Fayette
25119	Kincaid	Fayette
26578	Kingmont	Marion
26537	Kingwood	Preston
25628	Kistler	Logan
24854	Kopperston	Wyoming
24855	Kyle	McDowell
26731	Lahmansville	Grant
25121	Lake	Logan
25860	Lanark	Raleigh
25862	Lansing	Fayette
24733	Lashmeet	Mercer
25535	Lavalette	Wayne
25864	Layland	Fayette
25252	Le Roy	Jackson
24856	Leckie	McDowell
25251	Left Hand	Roane
26676	Leivasy	Nicholas
25676	Lenore	Mingo

ZIP	CITY	COUNTY
25123	Leon	Mason
25971	Lerona	Mercer
25537	Lesage	Cabell
25972	Leslie	Greenbrier
25865	Lester	Raleigh
25253	Letart	Mason
25431	Levels	Hampshire
24901	Lewisburg	Greenbrier
25124	Liberty	Putnam
24951	Lindside	Monroe
26384	Linn	Gilmer
26629	Little Birch	Braxton
26581	Littleton	Wetzel
25125	Lizemores	Clay
25866	Lochgelly	Fayette
25601	Logan	Logan
25126	London	Kanawha
25868	Lookout	Fayette
25259	Looneyville	Roane
25630	Lorado	Logan
26229	Lorentz	Upshur
26810	Lost City	Hardy
26385	Lost Creek	Harrison
26386	Lumberport	Harrison
25632	Lyburn	Logan
24857	Lynco	Wyoming
25870	Maben	Wyoming
26278	Mabie	Randolph
25871	Mabscott	Raleigh
25873	Mac Arthur	Raleigh
26148	Macfarlan	Ritchie
25130	Madison	Boone
26541	Maidsville	Monongalia
25634	Mallory	Logan
25132	Mammoth	Kanawha
25635	Man	Logan

ZIP	CITY	COUNTY
26582	Mannington	Marion
24859	Marianna	Wyoming
24954	Marlinton	Pocahontas
25401	Martinsburg	Berkeley
25402	Martinsburg	Berkeley
25260	Mason	Mason
26542	Masontown	Preston
25678	Matewan	Mingo
24860	Matheny	Wyoming
26812	Mathias	Hardy
24736	Matoaka	Mercer
24957	Maxwelton	Greenbrier
24861	Maybeury	McDowell
25133	Maysel	Clay
26833	Maysville	Grant
25875	Mc Graws	Wyoming
26040	Mc Mechen	Marshall
25682	Meador	Mingo
25976	Meadow Bridge	Fayette
25977	Meadow Creek	Summers
26404	Meadowbrook	Harrison
26585	Metz	Marion
25134	Miami	Kanawha
26149	Middlebourne	Tyler
25540	Midkiff	Lincoln
25878	Midway	Raleigh
26838	Milam	Hardy
26280	Mill Creek	Randolph
25261	Millstone	Calhoun
25432	Millville	Jefferson
25262	Millwood	Jackson
25541	Milton	Cabell
25879	Minden	Fayette
26120	Mineral Wells	Wood
26121	Mineral Wells	Wood
26150	Mineral Wells	Wood

ZIP	CITY	COUNTY
26405	Moatsville	Barbour
24862	Mohawk	McDowell
25636	Monaville	Logan
26586	Montana Mines	Marion
24737	Montcalm	Mercer
26282	Monterville	Randolph
25136	Montgomery	Fayette
26283	Montrose	Randolph
26836	Moorefield	Hardy
26501	Morgantown	Monongalia
26502	Morgantown	Monongalia
26503	Morgantown	Monongalia
26504	Morgantown	Monongalia
26505	Morgantown	Monongalia
26506	Morgantown	Monongalia
26507	Morgantown	Monongalia
26508	Morgantown	Monongalia
26041	Moundsville	Marshall
25264	Mount Alto	Mason
25139	Mount Carbon	Fayette
26408	Mount Clare	Harrison
25637	Mount Gay	Logan
25880	Mount Hope	Fayette
26678	Mount Lookout	Nicholas
26679	Mount Nebo	Nicholas
25185	Mount Olive	Fayette
26739	Mount Storm	Grant
26151	Mount Zion	Calhoun
26407	Mountain	Ritchie
25882	Mullens	Wyoming
26152	Munday	Calhoun
25544	Myra	Lincoln
26680	Nallen	Fayette
25140	Naoma	Raleigh
26631	Napier	Braxton
25685	Naugatuck	Mingo

ZIP	CITY	COUNTY
25141	Nebo	Clay
25142	Nellis	Boone
24738	Nemours	Mercer
24961	Neola	Greenbrier
26681	Nettie	Nicholas
26743	New Creek	Mineral
26047	New Cumberland	Hancock
25265	New Haven	Mason
26056	New Manchester	Hancock
26155	New Martinsville	Wetzel
26411	New Milton	Doddridge
24867	New Richmond	Wyoming
26410	Newburg	Preston
26050	Newell	Hancock
24866	Newhall	McDowell
25266	Newton	Roane
25686	Newtown	Mingo
25978	Nimitz	Summers
25143	Nitro	Kanawha
25687	Nolan	Mingo
25267	Normantown	Gilmer
25688	North Matewan	Mingo
24869	North Spring	Wyoming
24868	Northfork	McDowell
26285	Norton	Randolph
25901	Oak Hill	Fayette
24739	Oakvale	Mercer
24870	Oceana	Wyoming
25902	Odd	Raleigh
25147	Ohley	Kanawha
26845	Old Fields	Hardy
25638	Omar	Logan
25545	Ona	Cabell
26886	Onego	Pendleton
25148	Orgas	Boone
26412	Orlando	Lewis

ZIP	CITY	COUNTY
25268	Orma	Calhoun
26543	Osage	Monongalia
25149	Ottawa	Boone
25150	Ovapa	Clay
26159	Paden City	Wetzel
25152	Page	Fayette
24871	Pageton	McDowell
26160	Palestine	Wirt
24872	Panther	McDowell
26101	Parkersburg	Wood
26102	Parkersburg	Wood
26103	Parkersburg	Wood
26104	Parkersburg	Wood
26106	Parkersburg	Wood
26287	Parsons	Tucker
25434	Paw Paw	Morgan
25904	Pax	Fayette
24873	Paynesville	McDowell
25639	Peach Creek	Logan
25547	Pecks Mill	Logan
24962	Pence Springs	Summers
26415	Pennsboro	Ritchie
26544	Pentress	Monongalia
26847	Petersburg	Grant
24963	Peterstown	Monroe
26161	Petroleum	Ritchie
25154	Peytona	Boone
26416	Philippi	Barbour
26230	Pickens	Randolph
26750	Piedmont	Mineral
25156	Pinch	Kanawha
26419	Pine Grove	Wetzel
24874	Pineville	Wyoming
25906	Piney View	Raleigh
25979	Pipestem	Summers
25159	Poca	Putnam

ZIP	CITY	COUNTY
25550	Point Pleasant	Mason
25437	Points	Hampshire
25160	Pond Gap	Kanawha
26684	Pool	Nicholas
26162	Porters Falls	Wetzel
25161	Powellton	Fayette
24877	Powhatan	McDowell
25162	Pratt	Kanawha
24878	Premier	McDowell
25555	Prichard	Wayne
25907	Prince	Fayette
24740	Princeton	Mercer
25908	Princewick	Raleigh
25164	Procious	Clay
26055	Proctor	Marshall
25909	Prosperity	Raleigh
26421	Pullman	Ritchie
26852	Purgitsville	Hampshire
26546	Pursglove	Monongalia
25981	Quinwood	Greenbrier
26587	Rachel	Marion
25165	Racine	Boone
25690	Ragland	Mingo
25962	Rainelle	Fayette
25911	Raleigh	Raleigh
25557	Ranger	Lincoln
25438	Ranson	Jefferson
25913	Ravencliff	Wyoming
26164	Ravenswood	Jackson
25691	Rawl	Mingo
24879	Raysal	McDowell
26167	Reader	Wetzel
26289	Red Creek	Tucker
25168	Red House	Putnam
25692	Red Jacket	Mingo
25914	Redstar	Fayette

ZIP	CITY	COUNTY
26547	Reedsville	Preston
25270	Reedy	Roane
24966	Renick	Greenbrier
26422	Reynoldsville	Harrison
25915	Rhodell	Raleigh
26261	Richwood	Nicholas
26753	Ridgeley	Mineral
25169	Ridgeview	Boone
25440	Ridgeway	Berkeley
26755	Rio	Hampshire
25271	Ripley	Jackson
25441	Rippon	Jefferson
26814	Riverton	Pendleton
26588	Rivesville	Marion
25173	Robson	Fayette
24747	Rock	Mercer
26234	Rock Cave	Upshur
25174	Rock Creek	Raleigh
24880	Rock View	Wyoming
26169	Rockport	Wood
24881	Roderfield	McDowell
26757	Romney	Hampshire
24970	Ronceverte	Greenbrier
26636	Rosedale	Gilmer
26424	Rosemont	Taylor
26425	Rowlesburg	Preston
25984	Rupert	Greenbrier
25916	Sabine	Wyoming
25177	Saint Albans	Kanawha
26170	Saint Marys	Pleasants
26426	Salem	Harrison
25559	Salt Rock	Cabell
26430	Sand Fork	Gilmer
25985	Sandstone	Summers
25275	Sandyville	Jackson
25644	Sarah Ann	Logan

ZIP	CITY	COUNTY
25876	Saulsville	Wyoming
25180	Saxon	Boone
25917	Scarbro	Fayette
25560	Scott Depot	Putnam
24974	Secondcreek	Monroe
26236	Selbyville	Upshur
26884	Seneca Rocks	Pendleton
25181	Seth	Boone
25918	Shady Spring	Raleigh
26761	Shanks	Hampshire
25182	Sharon	Kanawha
25183	Sharples	Logan
25442	Shenandoah Junction	Jefferson
25443	Shepherdstown	Jefferson
26173	Sherman	Jackson
26431	Shinnston	Harrison
26434	Shirley	Tyler
25562	Shoals	Wayne
26638	Shock	Gilmer
26058	Short Creek	Brooke
24882	Simon	Wyoming
26435	Simpson	Taylor
24976	Sinks Grove	Monroe
26175	Sistersville	Tyler
25919	Skelton	Raleigh
24883	Skygusty	McDowell
25920	Slab Fork	Raleigh
25444	Slanesville	Hampshire
26291	Slatyfork	Pocahontas
26436	Smithburg	Doddridge
25186	Smithers	Fayette
26437	Smithfield	Wetzel
26178	Smithville	Ritchie
24977	Smoot	Greenbrier
26209	Snowshoe	Pocahontas
25564	Sod	Lincoln

ZIP	CITY	COUNTY
25921	Sophia	Raleigh
25187	Southside	Mason
25922	Spanishburg	Mercer
26438	Spelter	Harrison
25276	Spencer	Roane
25926	Sprague	Raleigh
25986	Spring Dale	Fayette
26763	Springfield	Hampshire
25565	Spurlockville	Lincoln
24884	Squire	McDowell
25927	Stanaford	Raleigh
25279	Statts Mills	Jackson
25928	Stephenson	Wyoming
25645	Stirrat	Logan
25646	Stollings	Logan
26639	Strange Creek	Braxton
26815	Sugar Grove	Pendleton
25567	Sumerco	Lincoln
25931	Summerlee	Fayette
26651	Summersville	Nicholas
25446	Summit Point	Jefferson
25932	Surveyor	Raleigh
26601	Sutton	Braxton
26690	Swiss	Nicholas
24887	Switchback	McDowell
25647	Switzer	Logan
25193	Sylvester	Boone
25201	Tad	Kanawha
24981	Talcott	Summers
26237	Tallmansville	Upshur
25281	Tariff	Roane
25569	Teays	Putnam
26764	Terra Alta	Preston
25934	Terry	Raleigh
25694	Thacker	Mingo
26292	Thomas	Tucker

ZIP	CITY	COUNTY
26440	Thornton	Taylor
24888	Thorpe	McDowell
25936	Thurmond	Fayette
26691	Tioga	Nicholas
25202	Tornado	Kanawha
26059	Triadelphia	Ohio
26443	Troy	Gilmer
26444	Tunnelton	Preston
25203	Turtle Creek	Boone
25204	Twilight	Boone
24889	Twin Branch	McDowell
25205	Uneeda	Boone
24983	Union	Monroe
26866	Upper Tract	Pendleton
26266	Upperglade	Webster
26293	Valley Bend	Randolph
26060	Valley Grove	Ohio
26294	Valley Head	Randolph
25206	Van	Boone
25696	Varney	Mingo
25649	Verdunville	Logan
25650	Verner	Mingo
25938	Victor	Fayette
26105	Vienna	Wood
26238	Volga	Barbour
25697	Vulcan	Mingo
24984	Waiteville	Monroe
26180	Walker	Wood
26447	Walkersville	Lewis
26448	Wallace	Harrison
25285	Wallback	Clay
25286	Walton	Roane
26590	Wana	Monongalia
24892	War	McDowell
26851	Wardensville	Hardy
24894	Warriormine	McDowell

ZIP	CITY	COUNTY
26181	Washington	Wood
26184	Waverly	Wood
25570	Wayne	Wayne
24985	Wayside	Monroe
26288	Webster Springs	Webster
26062	Weirton	Hancock
24801	Welch	McDowell
26070	Wellsburg	Brooke
25287	West Columbia	Mason
25571	West Hamlin	Lincoln
26074	West Liberty	Ohio
26451	West Milford	Harrison
26456	West Union	Doddridge
26452	Weston	Lewis
25651	Wharncliffe	Mingo
25208	Wharton	Boone
26003	Wheeling	Ohio
25989	White Oak	Raleigh
24986	White Sulphur Springs	Greenbrier
25209	Whitesville	Boone
25652	Whitman	Logan
26296	Whitmer	Randolph
25211	Widen	Clay
24895	Wilcoe	McDowell
26767	Wiley Ford	Mineral
26186	Wileyville	Wetzel
25653	Wilkinson	Logan
24991	Williamsburg	Greenbrier
25661	Williamson	Mingo
26187	Williamstown	Wood
26641	Wilsie	Braxton
26461	Wilsonburg	Harrison
25699	Wilsondale	Wayne
26075	Windsor Heights	Brooke
25213	Winfield	Putnam
25214	Winifrede	Kanawha

ZIP	CITY	COUNTY
25942	Winona	Fayette
24896	Wolf Pen	Wyoming
24993	Wolfcreek	Monroe
24751	Wolfe	Mercer
25572	Woodville	Boone
24897	Worth	McDowell
26591	Worthington	Marion
26463	Wyatt	Harrison
25943	Wyco	Wyoming
24898	Wyoming	Wyoming
25573	Yawkey	Lincoln
26865	Yellow Spring	Hampshire
25654	Yolyn	Logan
24899	Yukon	McDowell

APPENDIX F:

FIPS Codes for West Virginia Counties

FIPS	NAME
001	Barbour
003	Berkeley
005	Boone
007	Braxton
009	Brooke
011	Cabell
013	Calhoun
015	Clay
017	Doddridge
019	Fayette
021	Gilmer

FIPS	NAME
023	Grant
025	Greenbrier
027	Hampshire
029	Hancock
031	Hardy
033	Harrison
035	Jackson
037	Jefferson
039	Kanawha
041	Lewis
043	Lincoln

FIPS	NAME
045	Logan
047	McDowell
049	Marion
051	Marshall
053	Mason
055	Mercer
057	Mineral
059	Mingo
061	Monongalia
063	Monroe
065	Morgan

FIPS	NAME
067	Nicholas
069	Ohio
071	Pendleton
073	Pleasants
075	Pocahontas
077	Preston
079	Putnam
081	Raleigh
083	Randolph
085	Ritchie
087	Roane

FIPS	NAME
089	Summers
091	Taylor
093	Tucker
095	Tyler
097	Upshur
099	Wayne
101	Webster
103	Wetzel
105	Wirt
107	Wood
109	Wyoming

APPENDIX G:

Race and Nationality Descriptions from the 2000 Census and Bureau of Vital Statistics

Note: Use these lists only when race is not stated but other information is provided in the medical record.

References:

1. *"Race and Ethnicity Code Set, Version 1.0," Centers for Disease Control and Prevention, March 2000.*
2. *"Instruction manual, part 4: Classification And Coding Instructions For Death Records, 1999-2001," Division of Vital Statistics, National Center for Health Statistics, undated*

Key

† Use this code unless patient is stated to be Native American (Indian)

* Terms listed in reference 2, above.

‡ Description of religious affiliation rather than stated nationality or ethnicity; should be used with caution when determining appropriate race code.

CODE 01 WHITE

Afghan, Afghanistani	European*	Norwegian*
Afrikaner	Finnish*	Other Arab
Albanian	French	Palestinian
Algerian*	French Canadian*	Panamanian†
Amish*	Georgian*	Paraguayan†
Anglo-Saxon*	German	Parsi*
Arab, Arabian	Greek*	Persian*
Argentinian*†	Guatemalan†	Peruvian*†
Armenian	Gypsy*	Polish
Assyrian	Hebrew*‡	Portuguese*
Australian*	Herzegovenian	Puerto Rican (unless specified Black)
Austrian*	Hispanic*	Romanian*
Azores*	Honduran†	Rumanian
Basque*	Hungarian*	Russian*
Bavarian*	Iranian, Iran	Salvadoran†
Bolivian*†	Iraqi	Saudi Arabian*
Bozniak/Bosnian	Irish	Scandanavian*
Brava/Bravo*	Islamic*‡	Scottish, Scotch
Brazilian†	Israeli	Semitic*‡
Bulgarian	Italian	Serbian*
Cajun	Jordanian*	Servian*
Californio	Kurd/Kurdish	Shi'ite‡
Canadian*	Kuwaitian*	Sicilian*
Caucasian*	Ladina/Ladino*	Slavic, Slovakian*
Central American†	Latin American*†	South American†
Chechnyan	Latino	Spanish*, Spaniard
Chicano*	Latvian*	Sunni*‡
Chilean†	Lebanese	Swedish*
Colombian*†	Libyan*	Syrian
Costa Rican*†	Lithuanian*	Tunisian*
Creole*	Maltese*	Turkish, Turk*
Croat/Croatian	Marshenese*	Ukranian*
Crucian*	Mauritian*	United Arab Emirati
Cuban (unless specified as Black)*	Moroccan*	Uruguayan†

Cypriot	Mediterranean*	Venezuelan*†
Czechoslovakian*	Mexican†	Welsh*
Eastern European	Middle Eastern	White
Ebian*	Moroccan*	Yemenite*
Ecuadorian*†	Moslem*‡	Yugoslavian*
Egyptian	Muslim*	Zoroastrian*
English	Near Easterner	
English-French*	Nicaraguan†	
English-Irish*	Nordic*	

CODE 02 BLACK OR AFRICAN AMERICAN

African	Ghanian*	Nigritian
African American	Haitian	Nubian*
Afro-American	Hamitic*	Other African
Bahamian	Jamaican	Santo Domingo*
Barbadian	Kenyan*	Seychelloise*
Bilalian*	Liberian	Sudanese*
Black	Malawian*	Tanzanian*
Botswana	Mugandan*	Tobagoan
Cape Verdean*	Namibian	Togolese*
Dominica Islander (unless specified as White)	Nassau*	Trinidadian
Dominican/Dominican Republic (unless specified as White)	Negro	West Indian
Eritrean*	Nigerian	Zairean
Ethiopian		

CODE 03 AMERICAN INDIAN AND ALASKA NATIVE
(see separate list of tribes)

Alaska Native	Central American Indian	Mexican American Indian
Aleut	Eskimo	South American Indian
American Indian	Meso American Indian	Spanish American Indian

Indian Tribes of the United States, Canada and Mexico (Race Code 03)

Source: National Center for Health Statistics: Appendix C, Instruction Manual, part 4: Classification and Coding Instructions For Death Records, 1999-2001.

Abnaki	Kaska	San Ildefonso
Absentee-Shawnee	Kaw	San Juan
Acoma	Kawai	San Lorenzo
Ak Chin	Keresan Pueblos	San Luis Obispo
Alabama-Coushatt Tribes of Texas	Kern River	San Luiseno
Alsea	Kichai	Sanpoil
Apache	Kickapoo	Sanpoil Nespelem
Arapaho	Kiowa	Sant'ana
Arikara	Kiowa Apache	Santa Barbara
Assiniboin	Kitamat	Santa Clara
Atacapa	Klamath	Santa Ynez
Athapaskan	Klikitat	Santee
Atsina	Koasati	Santee Sioux
Aztec	Kootenai Tribe of Idaho	Santiam
Bear River	Kusa	Sauk and Fox
Beaver	Kutchin	Scaticook
Bella Coola	Kutenai	Sekane
Beothuk	Kwakiutl	Seminole
Blackfoot	Lac Courte Dreille	Seneca
Boold Piegan	Laguna	Seri
Blue Lake	Lakmuit	Shasta
Brotherton	Lipan Apache	Shawnee
Caddo	Lower Brule Sioux	Shinnecock
Cakchiquel-lenca	Luiseno	Shivwits Band of Paiutes

Calapooya	Lummi	Shoshone
Carrier	Maidu	Shoshone-Bannock
Catawba	Makah	Shuswap
Cattaraugus	Malecite	Siouans
Cayuga	Mandan	Sioux
Cayuse	Maricopa	Sisseton
Chasta Costa	Mary's River	Sisseton-Wahpeton Sioux
Chehalis	Mashpee	Siuslaw
Chemehuevi	Mattaponi	Skagit Suiattle
Cherokee	Maya	Skokomish
Chetco	Mayo	Slave
Cheyenne	Mdewakanton Sioux	Smith River
Cheyenne River Sioux	Menominee	Snake
Chickahominy	Menomini	Snohomish
Chickasaw	Mequendodon	Snoqualmi
Chinook	Mescalero Apache	Songish Southern Paiute
Chipewyan	Miami	Squaxin
Chippewa	Micmac	Stockbridge
Chippewa-Ojibwa	Mission Indians	Sumo-Mosquito
Chiricahua Apache	Missouri	Suquamish
Chitimacha	Miwok	Swinomish
Choctaw	Mixe	Taimskin
Chol	Mixtec	Tanana
Chontal	Modoc	Tanoan Pueblos
Chorti	Mohave	Taos
Chuckchansi	Mohawk	Tarahumare
Chumash	Mohegan	Tarascan
Clallam	Molala	Tawakoni
Clatsop	Monachi	Tejon
Clackamus	Mono	Tenino or Warm Springs
Clear Lake	Montagnais	Tesuque
Coast Salish	Montauk	Teton
Cochimi	Muckleshoot	Teton Sioux
Cochiti	Munsee	Tillamook
Cocopa	Nambe	Timucua

Coeur D'Alene Tribe of Idaho	Namsemond	Thlinget
Cocopah	Nanticoke	Tolowa
Columbia	Narragansett	Tonawanda
Colville	Naskapi	Tonkawa
Comox	Natchez	Tonto Apache
Comanche	Navaho	Topinish
Concow	Navajo	Totonac
Conquille	Nez Perce	Tsimshian
Coushatta	Niantic	Tulalip
Covelo	Nipmuck	Tule River Indians
Cow Creek	Nisenan-Patwin	Tunica
Cowichan	Nisqually	Tuscarora
Cowlitz	Nomelaki	Tututni
Coyotero Apache	Nooksak	Umatilla
Cree	Nootka	Umpqua
Creek	Northern Paiute	Upper Chinook
Crow	Oglala Sioux	Ute
Crow Creek Sioux	Okanogan	Waca
Dakota	Omaha	Waicuri-Pericue
Delaware	Oneida	Wailaki
Diegueno	Onondaga	Walapai
Digger	Opata	Walla Walla
Dog Rib	Opato	Wampanoag
Duckwater	Osage	Wapato
Eskimo	Oto	Warm Springs
Euchi	Otoe	Wasco
Eyak	Otomi	Washo
Flathead	Ottawa	Washoe
Fort Hall Res. Tribe of Idaho	Ozette	Western Apache
French Indian	Paiute	Western Shoshone
Gabrieleno	Pamunkey	Whilkut
Galice Creek	Panamint	Wichita
Gay Head	Papago	Wikchamni
Gosiute	Passamaquoddy	Wind River Shoshone
Gros Ventre	Patwin	Winnebago

Haida	Pawnee	Wintu
Han	Pen d'Oreille	Wintun
Hare	Penobscot	Wishram
Hat Creek	Peoria	Wyandotte
Hawasupai	Pequot	Xicaque
Hidatsa	Picuris	Yahooskin
Hoh	Pima	Yakima
Hoopa	Pit River	Yamel
Hopi	Pojoaque	Yana
Houma	Pomo	Yankton
Hualapai	Ponca	Yanktonnais Sioux
Huastec	Poosepatuck	Yaqui
Humboldt Bay	Potawatomi	Yaquina
Hupa	Potomac	Yavapai
Huron	Powhatan	Yawilmani
Illinois	Pueblos	Yellow Knife
Ingalik	Puyallup	Yerington Paiute
Iowa	Quapaw	Yokuts
Iroquois	Quechan	Yokuts-Mono
Isleta	Quileute	Yomba Shoshone
Jemez	Quinaielt	Yuchi
Joshua	Quinault	Yuki
Juaneno	Rappahannock	Yuma
Jicarilla Apache	Rogue River	Yurok
Kaibah	Rosebud Sioux	Zacatec
Kalispel	Sac and Fox	Zapotec
Kanosh Band of Paiutes	Saginaw	Zia
Kansa	Salish	Zoque
Karankawa	Sandia	Zuni
Karok	San Felipe	

ASIAN RACE CODES

CODE	DESCRIPTION	CODE	DESCRIPTION	CODE	DESCRIPTION
96	Amerasian	12	Hmong	96	Nepalese
09	Asian Indian	09	Indian (from India)	05	Okinawan
96	Asian	96	Indo-Chinese	96	Oriental
96	Asiatic	96	Indonesian	96	Other Asian
96	Bangladeshi	05	Iwo Jiman	09	Pakistani
96	Bhutanese	05	Japanese	96	Sikkimese
96	Bornean	96	Javanese	96	Singaporean
96	Bruneian	13	Kampuchean	96	Sri Lankan
96	Burmese	08	Korean	96	Sumatran
13	Cambodian	11	Laotian	04	Taiwanese
96	Celebesian	96	Maldivian	14	Thai
96	Ceram	96	Madagascar	96	Tibetan
96	Ceylonese	96	Malaysian	10	Vietnamese
04	Chinese	96	Mongolian	96	Whello
96	Eurasian	96	Montagnard	96	Yello
06	Filipino				

NATIVE HAWAIIAN AND OTHER PACIFIC ISLANDER CODES

CODE	DESCRIPTION	CODE	DESCRIPTION	CODE	DESCRIPTION
20	Bikinian	20	Marshallese	20	Ponapean
20	Carolinian	30	Melanesian	20	Saipanese
21	Chamorro	20	Micronesian, NOS	27	Samoan
20	Chuukese	7	Native Hawaiian	30	Solomon Islander
25	Cook Islander	97	Nauruan	26	Tahitian
20	Eniwetok, Enewetak	30	New Caledonian	20	Tarawan
31	Fijian	30	New Hebrides	20	Tinian
22	Guamanian	97	Other Pacific Islander	25	Tokelauan
7	Hawaiian	97	Pacific Islander	28	Tongan
20	Kirabati	20	Palauan	20	Trukese
20	Kosraean	32	Papua New Guinean	25	Tuvaluan
20	Kwajalein	7	Part Hawaiian	30	Vanuatuan
97	Maori	20	Pohnpeian	20	Yapese
20	Mariana Islander	25	Polynesian		

98 OTHER RACE, NOT ELSEWHERE CLASSIFIED

Do not use this code for Hispanic, Latino or Spanish, NOS.

99 UNKNOWN

See page D-30 for a listing of terms that cannot be coded to a specific race code, ***code 99****.*

OTHER RACE DESCRIPTIONS

The following descriptions of ethnic origin cannot be coded to a specific race code. Look for other descriptions of race in the medical record. If no further information is available, code as 99 Unknown.

Aruba Islander	Cayman Islander	South African
Azerbaijani	Guyanese	Surinam
Belizean	Indian NOS	Tejano
Bermudan	Mestizo	
Cayenne	Morena	

The following terms self-reported in the 2000 Census cannot be coded to a specific race code. Look for other descriptions of race in the medical record. If no further information is available, code as 99 Unknown.

Biracial	Mixed	Multinational
Interracial	Multiethnic	Multiracial

Note: The following terms cannot be coded to a specific race code. Look for other descriptions of race in the medical record. If no further information is available, code as 99 Unknown.

Aruba Islander	Guyanese	Multinational
Azerbaijani	Indian NOS	Multiracial
Belizean	Interracial	South African
Bermudan	Mestizo	Surinam
Biracial	Mixed	Tejano
Cayenne	Morena	
Cayman Islander	Multiethnic	

APPENDIX H:

SEER Geocodes for Place of Birth

CONTINENTAL UNITED STATES AND HAWAII

000 United States

001 New England States
- 002 Maine
- 003 New Hampshire
- 004 Vermont
- 005 Massachusetts
- 006 Rhode Island
- 007 Connecticut
- 008 New Jersey

010 North Mid-Atlantic States
- 011 New York
- 014 Pennsylvania
- 017 Delaware

020 South Mid-Atlantic States
- 021 Maryland
- 022 District of Columbia
- 023 Virginia
- 024 West Virginia
- 025 North Carolina
- 026 South Carolina

030 Southeastern States
- 031 Tennessee
- 033 Georgia
- 035 Florida
- 037 Alabama
- 039 Mississippi

040 North Central States
- 041 Michigan
- 043 Ohio
- 045 Indiana
- 047 Kentucky

050 Northern Midwest States
- 051 Wisconsin
- 052 Minnesota
- 053 Iowa
- 054 North Dakota
- 055 South Dakota
- 056 Montana

060 Central Midwest States
- 061 Illinois
- 063 Missouri
- 065 Kansas
- 067 Nebraska

070 Southern Midwest States
- 071 Arkansas
- 073 Louisiana
- 075 Oklahoma
- 077 Texas

080 Mountain States
- 081 Idaho
- 082 Wyoming
- 083 Colorado
- 084 Utah
- 085 Nevada
- 086 New Mexico
- 087 Arizona

090 Pacific Coast States
- 091 Alaska
- 093 Washington
- 095 Oregon
- 097 California
- 099 Hawaii

UNITED STATES POSSESSIONS

When SEER geocodes were originally assigned during the 1970s, the United States owned or controlled islands in the Pacific. Since then many of these islands have either been given their independence or had control turned over to another country. In order to maintain consistent information over time, these islands are still to be coded to the original codes. Earlier designations are listed in parentheses.

100 Atlantic/Caribbean Area
- 101 Puerto Rico
- 102 U.S. Virgin Islands
- 109 Other Atlantic/Caribbean Area

110 Canal Zone

120 Pacific Area
- 121 American Samoa
- 122 Kiribati (Canton and Enderbury Islands, Gilbert Islands, Southern Line Islands, Phoenix Islands)
- 123 Micronesia [Federated States of] (Caroline Islands, Trust Territory of Pacific Islands)
- 124 Cook Islands (New Zealand)
- 125 Tuvalu (Ellice Islands)
- 126 Guam
- 127 Johnston Atoll
- 129 Mariana Islands (Trust Territory of Pacific Islands)
  Northern Mariana Islands
- 131 Marshall Islands (Trust Territory of Pacific Islands)
- 132 Midway Islands
- 133 Nampo-Shoto, Southern
- 134 Ryukyu Islands (Japan)
- 135 Swan Islands
- 136 Tokelau Islands (New Zealand)
- 137 Wake Island
- 139 Palau (Trust Territory of Pacific Islands)

NORTH AND SOUTH AMERICA, EXCLUSIVE OF THE UNITED STATES AND ITS POSSESSIONS

210 Greenland

220 Canada
- 221 Maritime provinces
  - Labrador
  - New Brunswick
  - Newfoundland
  - Nova Scotia
  - Prince Edward Island
- 222 Quebec
- 223 Ontario
- 224 Prairie Provinces
  - Alberta
  - Manitoba
  - Saskatchewan
- 225 Northwest Territories
  - Yukon Territory
- 226 British Columbia
- 227 Nunavut (Nunavut became an official Territory of Canada on April 1, 1999)

230 Mexico

240 North American Islands
- 241 Cuba
- 242 Haiti
- 243 Dominican Republic
- 244 Jamaica
- 245 Other Caribbean Islands
  - Anguilla
  - Antigua and Barbuda
  - Antilles, NOS
  - Aruba
  - Barbados
  - British Virgin Islands
  - British West Indies, NOS
  - Caribbean, NOS
  - Cayman Islands
  - Curacao
  - Dominica
  - French West Indies
  - Grenada
  - Grenadines, The Guadeloupe
  - Leeward Island, NOS
  - Martinique
  - Montserrat
  - Netherlands Antilles
  - St. Christopher-Nevis
  - St. Kitts
  - St. Lucia
  - St. Vincent and The Grenadines
  - Trinidad and Tobago
  - Turks Islands Antilles, NOS
  - British West Indes, NOS
  - Carribean, NOS
  - West Indies, NOS
  - Windward Islands, NOS
- 246 Bermuda
- 247 Bahamas, The
- 249 St. Pierre and Miquelon

250 Central America
- 251 Guatemala
- 252 Belize (British Honduras)
- 253 Honduras
- 254 El Salvador
- 255 Nicaragua
- 256 Costa Rica
- 257 Panama

260 North America, NOS

265 Latin America, NOS

300 South America, NOS
- 311 Colombia
- 321 Venezuela
- 331 Guyana (British Guiana)
- 332 Suriname (Dutch Guiana)
  - Netherlands Guiana
- 333 French Guiana
- 341 Brazil
- 345 Ecuador
  - Galapagos Islands
- 351 Peru
- 355 Bolivia
- 361 Chile
- 365 Argentina
- 371 Paraguay
- 375 Uruguay

380 South American Islands
- 381 Falkland Islands

EUROPE

Former or alternative names are in parentheses

Europe, NOS (See code 499) *

400 United Kingdom, NOS
- 401 England
  - Channel Islands
  - Guernsey
  - Isle of Man
  - Jersey
- 402 Wales
- 403 Scotland
  - Orkney Islands
  - Shetland Islands
- 404 Northern Ireland (Ulster)

410 Ireland (Eire)
- Ireland, NOS
- Republic of Ireland

420 Scandinavia
- Lapland, NOS
- 421 Iceland
- 423 Norway
  - Svalbard
- 425 Denmark
  - Faroe (Faeroe) Islands
- 427 Sweden
- 429 Finland

430 Germanic Countries
- 431 Germany
  - East Germany including East Berlin
  - West Germany including West Berlin
  - Federal Republic of Germany
  - German Democratic Republic
  - Germany, East
  - Germany, Federal Republic of
  - Germany, West
- 432 Netherlands
  - Holland
- 433 Belgium
- 434 Luxembourg
- 435 Switzerland
- 436 Austria
- 437 Liechtenstein

440 Romance-language Countries
- 441 France
  - Corsica
  - Monaco
- 443 Spain
  - Andorra
  - Balearic Islands
  - Canary Islands

* *Effective cases diagnosed 1/1/1992.*

- 445 Portugal
  - Azores
  - Cape Verde Islands
  - Madeira Islands
- 447 Italy
  - San Marino
  - Sardinia
  - Sicily
  - Vatican City (Holy See)
- 449 Romania

450 Slavic Countries
- 451 Poland
- 452 (former)Czechoslovakia region
  - Bohemia
  - Czech Republic
  - Moravia
  - Slovak Republic
  - Slovakia
- 453 (former) Yugoslavia region
  - Bosnia-Herzogovina
  - Croatia
  - Dalmatia
  - Jugoslavia
  - Macedonia
  - Montenegro
  - Serbia
  - Slavonia
  - Slovenia
- 454 Bulgaria
- 455 Russia
  - Russian Federation
  - (former) U.S.S.R.
  - Russia, NOS
  - (Russian S.F.S.R.)

456 Ukraine and Moldova
(Bessarabia)
Moldavia
(Moldavian S.S.R.)
(Ukranian S.S.R.)
457 Belarus
(Byelorussian S.S.R.)
(White Russia)
458 Estonia (Estonian S.S.R.)
459 Latvia (Latvian S.S.R.)
461 Lithuania
(Lithuanian S.S.R.)
463 Baltic Republic(s), NOS
(Baltic States, NOS)

470 Other mainland Europe
471 Greece
Crete
475 Hungary
481 Albania
485 Gibraltar

490 Other Mediterranean Islands
491 Malta
495 Cyprus

499 Europe, NOS*
Central Europe, NOS
Eastern Europe, NOS
Northern Europe, NOS
Southern Europe, NOS
Western Europe, NOS

* *Effective cases diagnosed 1/1/1992.*

AFRICA

500 Africa, NOS
Central Africa, NOS
Equatorial Africa, NOS

510 North Africa, NOS
511 Morocco
513 Algeria
515 Tunisia
517 Libya
(Cyrenaica)
(Tripoli)
(Tripolitania)
519 Egypt (United Arab Republic)

520 Sudanese Countries
Burkina Faso (Upper Volta)
Chad
Mali
Mauritania
Niger
Sudan (Anglo-Egyptian Sudan)
Western (Spanish) Sahara

530 West Africa
French West Africa, NOS
531 Nigeria
539 Other West African Countries
Benin (Dahomey)
Cameroon (Kameroon)
Central African Republic (French Equatorial Africa)
Cote d'Ivoire (Ivory Coast)
Congo (Congo-Brazzaville, French Congo)
Equatorial Guinea (Spanish Guinea) (Bioko {Fernando Poo}, Rio Muni)
Gabon
Gambia, The
Ghana
Guinea
Guinea Bissau (Portuguese Guinea)
Liberia
Senegal
Sierra Leone
Togo

540 South Africa
541 Zaire (Congo-Leopoldville, Belgian Congo, Congo Kinshasa)
543 Angola (Sao Tome, Principe, Cabinda)
545 Republic of South Africa (Bophuthatswana, Cape Colony, Ciskei, Natal, Free State {Orange Free State}, Transkei, Transvaal, Venda)
Botswana (Bechuanaland)
Lesotho (Basutoland)
Namibia (South West Africa)
Swaziland
Union of South Africa
547 Zimbabwe (Rhodesia, Southern Rhodesia)
549 Zambia (Northern Rhodesia)
551 Malawi (Nyasaland)
553 Mozambique
555 Madagascar (Malagasy Republic)

570 East Africa
571 Tanzania (Tanganyika, Tanzanyika, Zanzibar)
573 Uganda
575 Kenya
577 Rwanda (Ruanda)
579 Burundi (Urundi)
581 Somalia (Somali Republic, Somaliland)
583 Djibouti (French Territory of the Afars and Issas, French Somaliland)
585 Ethiopia (Abyssinia)
Eritrea

580 African Coastal Islands (previously included in 540)
Comoros
Mauritius
Mayotte
Reunion
St. Helena
Seychelles

600 Asia, NOS*

610 Near East
Mesopotamia, NOS
611 TurkeyAnatolia
Armenia (Turkey)
Asia Minor, NOS

620 Asian Arab Countries
Iraq-Saudi Arabia Neutral Zone
621 Syria
623 Lebanon
625 Jordan (Trans-Jordan, former Arab Palestine)
627 Iraq
629 Arabian Peninsula
Bahrain
Kuwait
Oman
Muscat
Persian Gulf States, NOS
Qatar
Saudi Arabia
United Arab Emirates (Trucial States)
Yemen (Aden, People's Democratic Republic of Yemen, Southern Yemen)
631 Israel and former Jewish Palestine
Gaza
Palestine (Palestinian National Authority--PNA)
Palestine, NOS
West Bank
633 Caucasian Republics of the former U.S.S.R.
Armenia
Azerbaijan (Nagorno-Karabakh)
Azerbaizhan S.S.R
Georgia
634 Other Asian Republics of the former U.S.S.R.
Kazakhstan (Kazakh S.S.R.)
Kyrgystan (Kirghiz S.S.R., Kyrgyz)
Tajikistan (Tadzhik S.S.R.)
Turkmenistan (Turkmen S.S.R.)
Uzbekistan (Uzbek S.S.R.)
637 Iran (Persia)
638 Afghanistan
639 Pakistan (West Pakistan)
640 Mid-East Asia, NOS
Maldives
641 India
Andaman Islands
643 Nepal
Bhutan
Sikkim
645 Bangladesh (East Pakistan)
647 Sri Lanka (Ceylon)
649 Myanmar (Burma)

650 Southeast Asia
651 Thailand (Siam)

660 Indochina
661 Laos
663 Cambodia
Kampuchea
665 Vietnam (Tonkin, Annam, Cochin China)
671 Malaysia
Brunei
Malay Peninsula
North Borneo
Singapore
673 Indonesia (Dutch East Indies)
Borneo
Java
New Guinea, except Australian and North East
Sumatra
675 Philippines (Philippine Islands)

680 East Asia
681 China, NOS
682 China (People's Republic of China)
683 Hong Kong
684 Taiwan (Formosa, Republic of China)
685 Tibet
686 Macao (Macau)
691 Mongolia
693 Japan
695 Korea
North Korea
South Korea

AUSTRALIA AND OCEANIA

711 Australia
Cartier Islands
Cocos (Keeling) Islands
New Guinea, Australian
New Guinea, North East
Norfolk Island
Papau New Guinea

715 New Zealand
Niue

720 Pacific Islands ~
Oceania, NOS
Polynesia, NOS
721 Melanesian Islands
Fiji
Futuna
New Hebrides
Solomon Islands
Vanuatu
Wallis
723 Micronesian Islands ~
Christmas Island
Nauru
725 Polynesian Islands ~
French Polynesia
New Caledonia
Pitcairn Islands
Samoa, Western
Tonga
Western Samoa
750 Antarctica

~ Except possessions of the U.S.A.

PLACE OF BIRTH UNKNOWN

998 Place of Birth stated not to be in United States, but no other information available
999 Place of Birth unknown

References: *CIA World Factbook,* 1995.
U.S. Bureau of the Census Place of Birth Technical Documentation, 1997.

A

585 Abyssinia
629 Aden
583 Afars and Issas
638 Afghanistan
500 Africa
570 Africa, East
510 Africa, North
540 Africa, South
545 Africa, South West
530 Africa, West
580 African Coastal Islands (previously included in 540)
037 Alabama
091 Alaska
481 Albania
224 Alberta
513 Algeria
250 America, Central
265 America, Latin
260 America, North (use a more specific term; see also North America)
300 America, South
121 American Samoa
611 Anatolia
641 Andaman Islands
443 Andorra
520 Anglo-Egyptian Sudan
543 Angola
245 Anguilla
665 Annam
750 Antarctica
245 Antigua
245 Antilles, NOS
245 Antilles, Netherlands
625 Arab Palestine (former)
629 Arabia, Saudi
629 Arabian Peninsula
365 Argentina
087 Arizona
071 Arkansas
611 Armenia (Turkey)
633 Armenia (U.S.S.R.)
245 Aruba
600 Asia, NOS*
680 Asia, East
640 Asia, Mid-East
611 Asia Minor, NOS
610 Asia, Near-East
650 Asia, Southeast
620 Asian Arab Countries
634 Asian Republics of the former U.S.S.R.
109 Atlantic/Caribbean area, other U.S. possessions
100 Atlantic/Caribbean area, U.S. possessions
711 Australia
711 Australian New Guinea
436 Austria
633 Azerbaijan
633 Azerbaizhan S.S.R.
445 Azores

B

247 Bahamas, The
629 Bahrain
443 Balearic Islands
463 Baltic Republic(s), NOS
463 Baltic States, NOS
645 Bangladesh
245 Barbados
245 Barbuda
545 Basutoland
431 Bavaria
545 Bechuanaland
457 Belarus
541 Belgian Congo
433 Belgium
252 Belize
539 Benin
246 Bermuda
456 Bessarabia
643 Bhutan
539 Bioko (Fernando Poo)
452 Bohemia
355 Bolivia
545 Bophuthatswana
673 Borneo
453 Bosnia-Herzogovina
545 Botswana
341 Brazil
226 British Columbia
331 British Guiana
252 British Honduras
245 British Virgin Islands
245 British West Indies, NOS
671 Brunei

454 Bulgaria
520 Burkina Faso (Upper Volta)
649 Burma (see Myanmar)
579 Burundi
457 Byelorussian S.S.R.

C

543 Cabinda
245 Caicos Islands
097 California
663 Cambodia
539 Cameroon
220 Canada
110 Canal Zone
443 Canary Islands
122 Canton Islands
545 Cape Colony
445 Cape Verde Islands
245 Caribbean, NOS
245 Caribbean Islands, other
123 Caroline Islands
711 Cartier Islands
633 Caucasian Republics
245 Cayman Islands
500 Central Africa, NOS
539 Central African Republic
250 Central America
499 Central Europe, NOS
060 Central Midwest States
647 Ceylon (see Sri Lanka)
520 Chad
401 Channel Islands (British)
361 Chile
681 China, NOS
665 China, Cochin
682 China, People's Republic of
684 China, Republic of
723 Christmas Island
545 Ciskei
665 Cochin China
711 Cocos (Keeling) Islands
311 Colombia
083 Colorado
580 Comoros
226 Columbia, British
022 Columbia, District of
539 Congo, NOS
539 Congo-Brazzaville
541 Congo-Leopoldville
541 Congo, Belgian
539 Congo, French
541 Congo Kinshasa
007 Connecticut
124 Cook Islands
441 Corsica
256 Costa Rica
539 Cote d'Ivoire (Ivory Coast)
471 Crete
453 Croatia
241 Cuba
245 Curacao
495 Cyprus
517 Cyrenaica
452 Czechoslovakia
452 Czech Republic

D

539 Dahomey
453 Dalmatia
017 Delaware
425 Denmark
022 District of Columbia
583 Djibouti
449 Dobruja
245 Dominica
243 Dominican Republic
673 Dutch East Indies
332 Dutch Guiana

E

570 East Africa
680 East Asia
431 East Germany
673 East Indies, Dutch
645 East Pakistan
499 Eastern Europe, NOS
345 Ecuador
519 Egypt
410 Eire
254 El Salvador
125 Ellice Islands
122 Enderbury Islands
401 England
122 Enterbury Islands
500 Equatorial Africa, NOS
539 Equatorial Guinea (Spanish Guinea)
585 Eritrea
458 Estonia
458 Estonian S.S.R. (Estonia)
585 Ethiopia
499 Europe, NOS*
470 Europe, other mainland

F

425 Faroe (Faeroe) Islands
381 Falkland Islands
431 Federal Republic of Germany
123 Federated States of Micronesia
539 Fernando Poo
721 Fiji
429 Finland
035 Florida
684 Formosa
441 France
545 Free State (Orange Free State)
539 French Congo
333 French Guiana
725 French Polynesia
583 French Somaliland
530 French West Africa, NOS
245 French West Indies
721 Futuna

G

539 Gabon
345 Galapagos Islands
539 Gambia, The
631 Gaza Strip
033 Georgia (U.S.A.)
633 Georgia (U.S.S.R.)
431 German Democratic Republic
430 Germanic Countries
431 Germany
431 Germany, East
431 Germany, Federal Republic of
431 Germany, West
539 Ghana
485 Gibraltar
122 Gilbert Islands
471 Greece
210 Greenland
245 Grenada
245 Grenadines, The
245 Guadaloupe
126 Guam
251 Guatamala
401 Guernsey
331 Guiana, British
332 Guiana, Dutch
333 Guiana, French
539 Guinea
539 Guinea-Bissau (Portuguese Guinea)
539 Guinea, Equatorial
—— Guinea, New (see New Guinea)
539 Guinea, Portuguese
331 Guyana

H

242 Haiti
099 Hawaii
432 Holland
253 Honduras
252 Honduras, British
683 Hong Kong
475 Hungary

I

421 Iceland
081 Idaho
061 Illinois
641 India
045 Indiana
673 Indies, Dutch East
660 Indochina
673 Indonesia
053 Iowa
637 Iran
627 Iraq
620 Iraq-Saudi Arabian Neutral Zone
410 Ireland (Eire)
410 Ireland, NOS
404 Ireland, Northern
410 Ireland, Republic of
401 Isle of Man
631 Israel
583 Issas
447 Italy
539 Ivory Coast

J

244 Jamaica
423 Jan Mayen
693 Japan
673 Java
401 Jersey
631 Jewish Palestine
127 Johnston Atoll
625 Jordan
453 Jugoslavia

K

539 Kameroon
663 Kampuchea
065 Kansas
634 Kazakh S.S.R.
634 Kazakhstan
047 Kentucky
575 Kenya
634 Kirghiz S.S.R.
122 Kiribati
695 Korea
695 Korea, North
695 Korea, South
629 Kuwait
634 Kyrgystan
634 Kyrgyz

L

221 Labrador
661 Laos
420 Lapland, NOS
265 Latin America, NOS
459 Latvia
459 Latvian S.S.R. (Latvia)
623 Lebanon
245 Leeward Island, NOS
545 Lesotho
539 Liberia
517 Libya
437 Liechtenstein
122 Line Islands, Southern
461 Lithuania
461 Lithuanian S.S.R. (Lithuania)
073 Louisiana
434 Luxembourg

M

686 Macao
686 Macau
453 Macedonia
555 Madagascar
445 Madeira Islands
002 Maine
555 Malagasy Republic
551 Malawi
671 Malay Peninsula
671 Malaysia
640 Maldives
520 Mali
491 Malta
224 Manitoba
129 Mariana Islands
221 Maritime Provinces, Canada
131 Marshall Islands
245 Martinique
021 Maryland
005 Massachusetts
520 Mauritania
580 Mauritius
580 Mayotte
490 Mediterranean Islands, Other
721 Melanesian Islands
610 Mesopotamia, NOS
230 Mexico
041 Michigan
123 Micronesian Islands
640 Mid-East Asia
132 Midway Islands
052 Minnesota
249 Miquelon
039 Mississippi
063 Missouri
456 Moldavia
456 Moldavian S.S.R.
456 Moldova
441 Monaco
691 Mongolia
056 Montana
453 Montenegro
245 Montserrat
452 Moravia
511 Morocco
080 Mountain States
553 Mozambique
629 Muscat
649 Myanmar (see Burma)

N

545 Namibia
133 Nampo-shoto, Southern
545 Natal
723 Nauru
610 Near-East Asia
067 Nebraska
643 Nepal
432 Netherlands
245 Netherlands Antilles
332 Netherlands Guiana
085 Nevada
245 Nevis
221 New Brunswick

725 New Caledonia
001 New England
673 New Guinea, except Australian and North East
711 New Guinea, Australian
711 New Guinea, North East
003 New Hampshire
721 New Hebrides
008 New Jersey
086 New Mexico
011 New York
715 New Zealand
221 Newfoundland
255 Nicaragua
520 Niger
531 Nigeria
715 Niue
510 North Africa, NOS
260 North America, NOS (use more specific term if possible)
240 North American Islands
671 North Borneo (Malaysia)
025 North Carolina
040 North Central States
054 North Dakota
711 North East New Guinea
695 North Korea
010 North Mid-Atlantic States
499 Northern Europe, NOS
404 Northern Ireland
129 Northern Mariana Islands
050 Northern Midwest States
549 Northern Rhodesia
711 Norfolk Island
225 Northwest Territories (Canada)
423 Norway
998 Not United States, NOS
221 Nova Scotia
227 Nunavut
551 Nyasaland

O

720 Oceania
043 Ohio
075 Oklahoma
629 Oman
223 Ontario
545 Orange Free State
095 Oregon
403 Orkney Islands

P

120 Pacific area, U.S. possessions
720 Pacific Islands
123 Pacific Islands, Trust Territory of the (code to specific islands if possible)
090 Pacific Coast States
639 Pakistan
645 Pakistan, East
639 Pakistan, West
139 Palau (Trust Territory of the Pacific Islands)
625 Palestine, Arab
631 Palestine, Jewish
631 Palestine, NOS
631 Palestinian National Authority--PNA
257 Panama
711 Papua New Guinea
371 Paraguay
014 Pennsylvania
629 People's Democratic Republic of Yemen
682 People's Republic of China
637 Persia
629 Persian Gulf States, NOS
351 Peru
675 Philippine Islands
675 Philippines
122 Phoenix Islands
725 Pitcairn Islands
451 Poland
725 Polynesian Islands
445 Portugal
539 Portuguese Guinea
224 Prairie Provinces, Canada
221 Prince Edward Island
543 Principe
101 Puerto Rico

Q

629 Qatar
222 Quebec

R

684 Republic of China
545 Republic of South Africa
580 Reunion
006 Rhode Island
547 Rhodesia
549 Rhodesia, Northern
547 Rhodesia, Southern
539 Rio Muni
440 Romance-language Countries
449 Romania
449 Roumania
577 Ruanda
449 Rumania
455 Russia, NOS
457 Russia, White
455 Russian Federation
455 Russian S.F.S.R.
577 Rwanda
134 Ryukyu Islands (Japan)

S

520 Sahara, Western (Spanish)
121 Samoa, American
725 Samoa, Western
245 St. Christopher-Nevis
580 St. Helena
245 St. Kitts
245 St. Lucia
249 St. Pierre
245 St. Vincent
447 San Marino
543 Sao Tome
447 Sardinia
224 Saskatchewan
629 Saudi Arabia
420 Scandinavia
403 Scotland
539 Senegal
453 Serbia
580 Seychelles
403 Shetland Islands
651 Siam
447 Sicily
539 Sierra Leone
643 Sikkim
671 Singapore
450 Slavic Countries
453 Slavonia
452 Slovak Republic
452 Slovakia
453 Slovenia
721 Solomon Islands
581 Somali Republic
581 Somalia
581 Somaliland
583 Somaliland, French
540 South Africa
545 South Africa, Republic of
545 South Africa, Union of
300 South America
380 South American Islands
026 South Carolina
055 South Dakota
695 South Korea
020 South Mid-Atlantic States
545 South West Africa
650 Southeast Asia
030 Southeastern States
499 Southern Europe, NOS
122 Southern Line Islands
070 Southern Midwest States
133 Southern Nampo-shoto
547 Southern Rhodesia
629 Southern Yemen
—— Soviet Union (see individual republics)
443 Spain
520 Spanish Sahara
647 Sri Lanka (see Ceylon)
520 Sudan (Anglo-Egyptian Sudan)
520 Sudanese Countries
673 Sumatra
332 Suriname
423 Svalbard
135 Swan Islands
545 Swaziland
427 Sweden
435 Switzerland
621 Syria

T

634 Tadzhik S.S.R.
684 Taiwan
634 Tajikistan
571 Tanzania
571 Tanganyika
571 Tanzanyika
031 Tennessee
077 Texas
651 Thailand (Siam)
685 Tibet
245 Tobago
539 Togo
136 Tokelau Islands
725 Tonga
665 Tonkin
625 Trans-Jordan
545 Transkei
545 Transvaal
449 Transylvania
245 Trinidad
517 Tripoli
517 Tripolitania
629 Trucial States
515 Tunisia
611 Turkey
634 Turkmen S.S.R.
634 Turkmenistan
245 Turks Islands
125 Tuvalu

U

573 Uganda
456 Ukraine
456 Ukranian S.S.R.
404 Ulster
545 Union of South Africa
—— Union of Soviet Socialist Republics (U.S.S.R.) (see individual republics)
629 United Arab Emirates
519 United Arab Republic
400 United Kingdom
000 United States
102 U.S. Virgin Islands
999 Unknown
520 Upper Volta
375 Uruguay
579 Urundi
084 Utah
634 Uzbekistan
634 Uzbek S.S.R.

V

721 Vanuatu
447 Vatican City
545 Venda
321 Venezuela
004 Vermont
665 Vietnam
245 Virgin Islands (British)
102 Virgin Islands (U.S.)
023 Virginia

W

137 Wake Island
402 Wales
449 Wallachia
721 Wallis
093 Washington (state)
022 Washington D.C.
530 West Africa, NOS
539 West African Countries, other
631 West Bank
431 West Germany
245 West Indies, NOS (see also individual islands)
639 West Pakistan
024 West Virginia
499 Western Europe, NOS
520 Western (Spanish) Sahara
725 Western Samoa
457 White Russia
245 Windward islands
051 Wisconsin
082 Wyoming

Y

629 Yemen
629 Yemen, People's Democratic Republic of
453 Yugoslavia (former Yugoslavia region)
225 Yukon Territory

Z

541 Zaire
549 Zambia
571 Zanzibar
547 Zimbabwe

APPENDIX I:

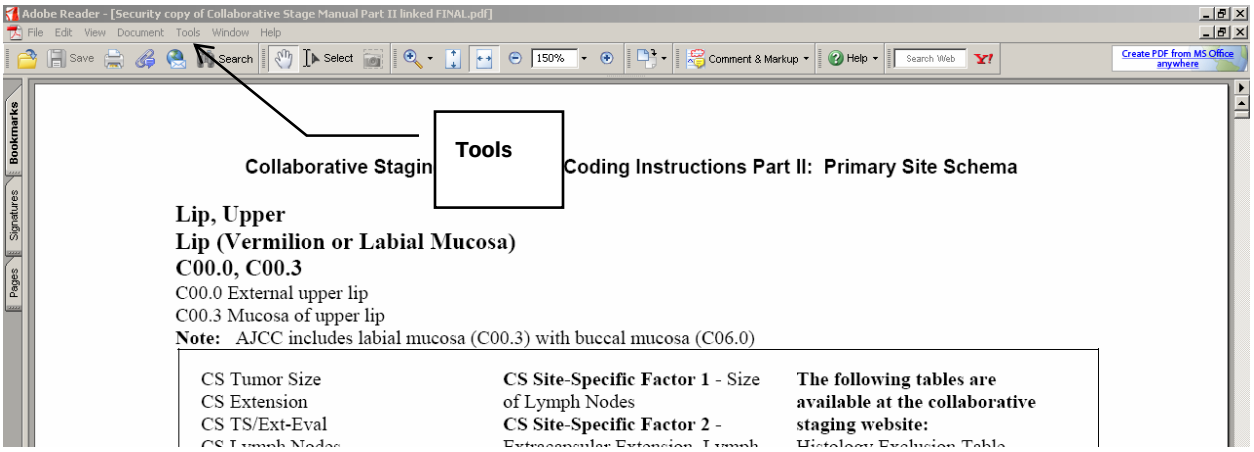
Tips for Customizing the Newest Collaborative Staging Manual

Tips for Using Commenting Tools with the New CS Manual

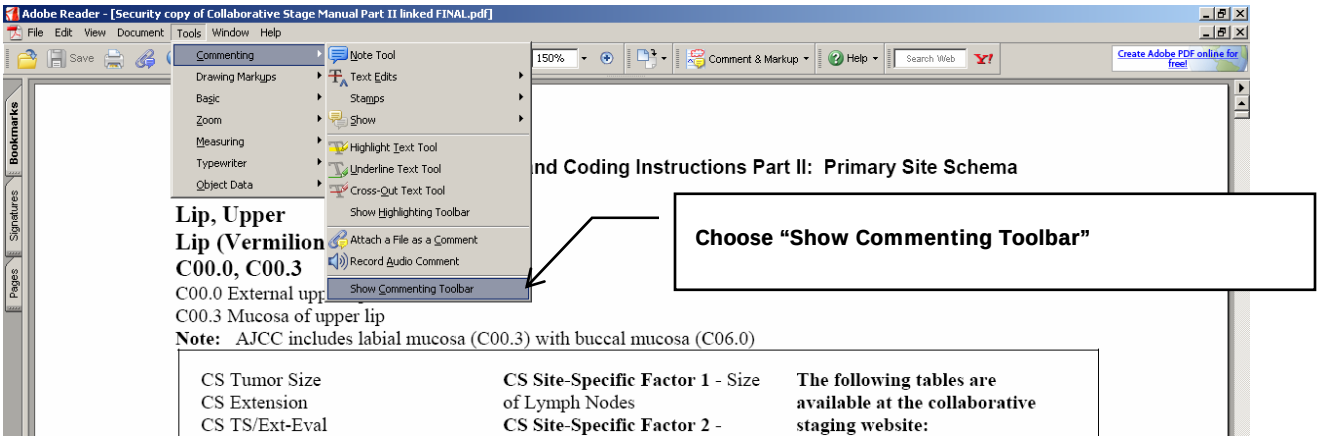
New commenting feature enabled for use with the CS Manual. The AJCC is pleased to announce that we have set up the Collaborative Staging Manual to work with a commenting feature in Adobe Reader 7. This feature enables you to yellow highlight text or to add sticky notes or comments to the manual that you saved on your computer. If you previously made these types of highlights or additions to your paper manual, to assist you in using it, you will now be able to accomplish the same thing in your electronic manual.

Required version of Reader. This feature works with Adobe Reader 7. If you have an older version of Reader, you can download this new version for free. You may need to check with your computer department for assistance or permission, and to ensure that you have at least Windows 2000 with Service Pack 2 or higher to be compatible with Reader 7. Once you have this version of Reader, you are ready to get started.

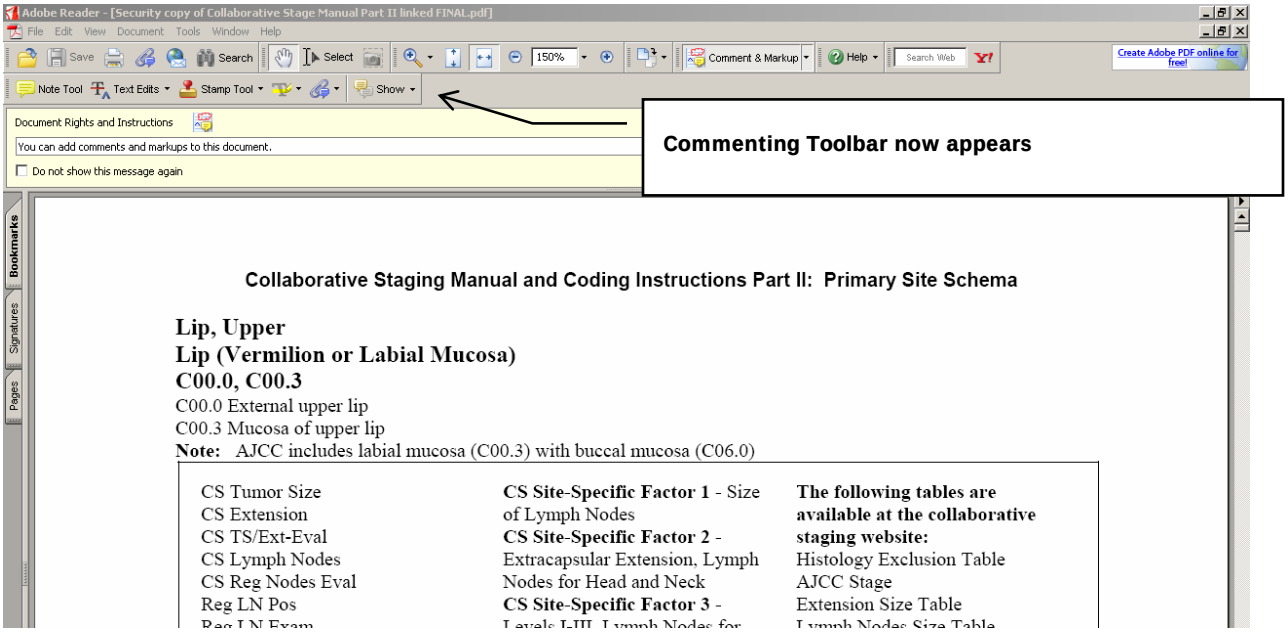
Getting started in using the commenting tools. Open the CS Manual as per the instructions in "Downloading and Using the New CS Manual." Find "Tools" in the menu across the top of the page.



Choose Tools, Commenting, Show Commenting Toolbar.

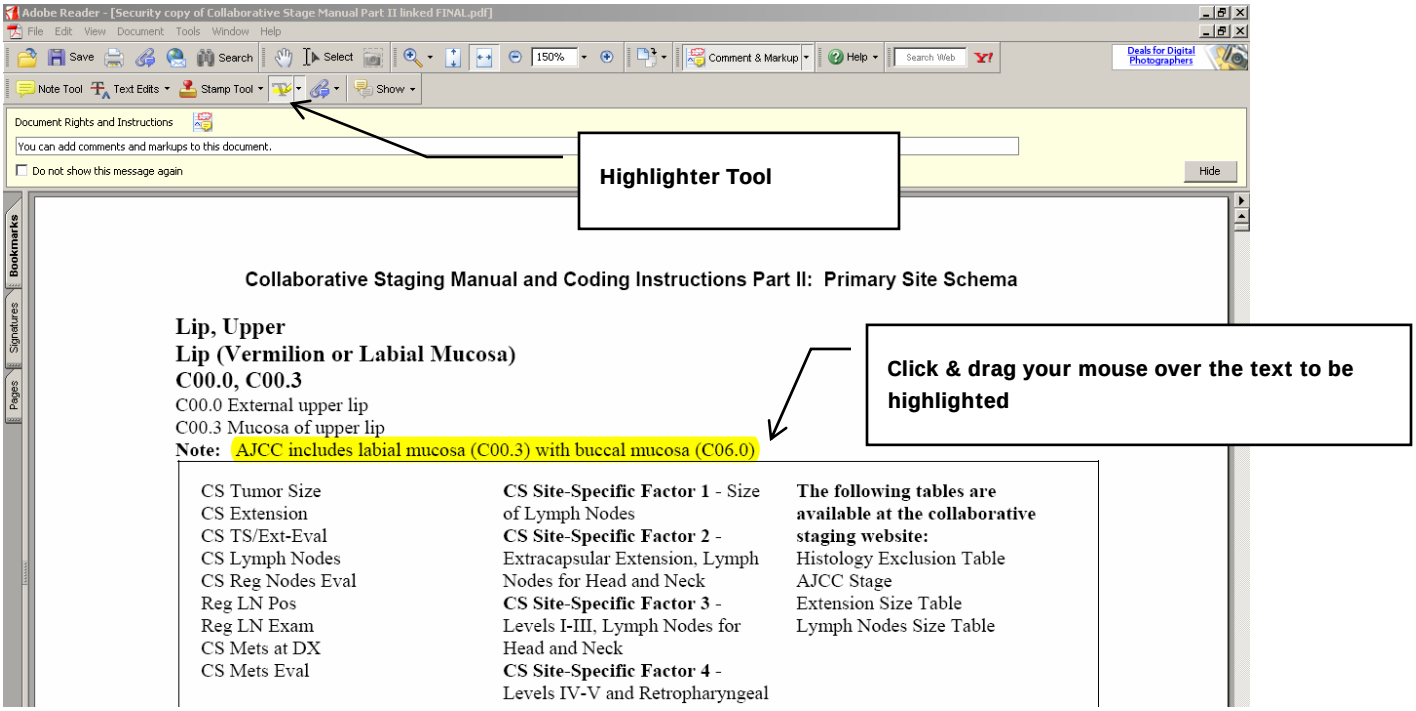


This will place the toolbar on your screen, like this.



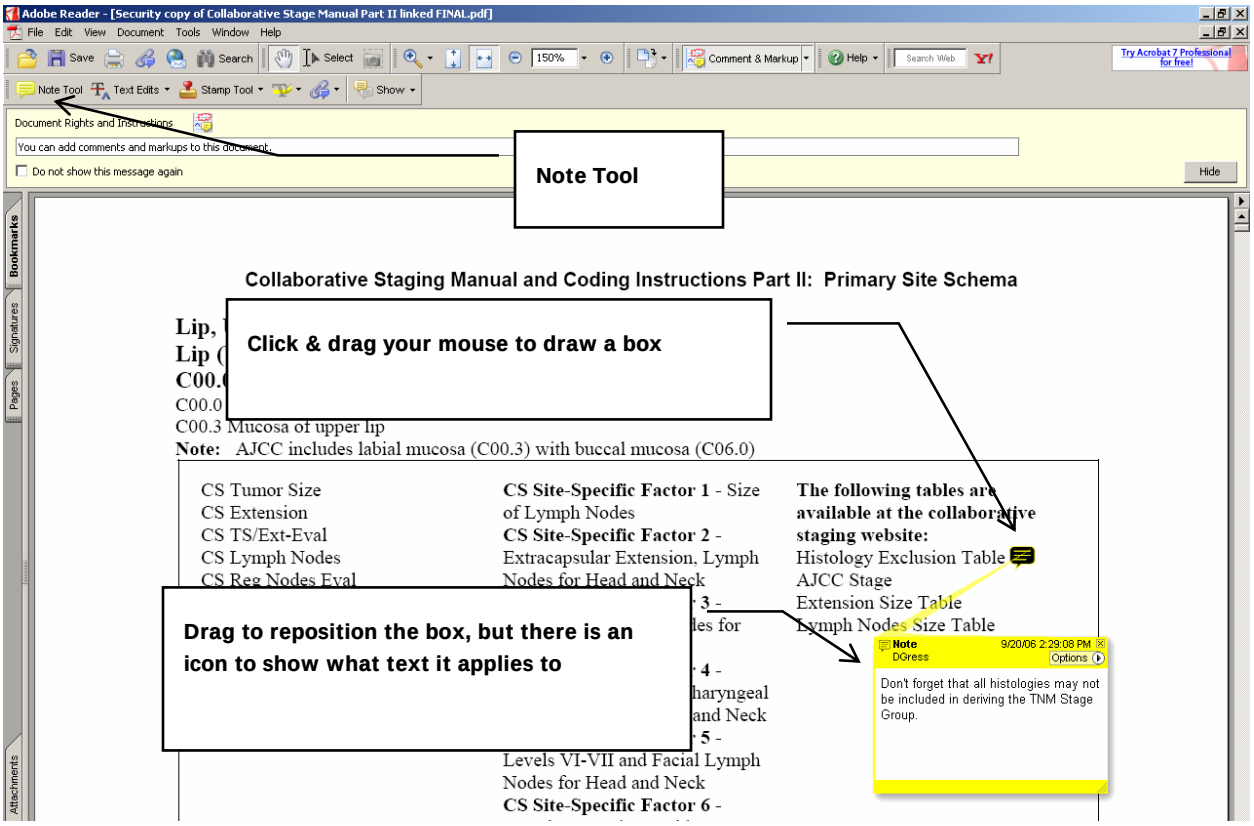
Highlighting. The highlighting tool will be one of your most commonly used items. It allows you to highlight, just like you would on a sheet of paper with a highlighting pen.

Click on the "Highlighter Tool" and then click and drag your mouse over the text that you wish to highlight. To delete a highlight, click on the highlighted text area and hit the delete key.

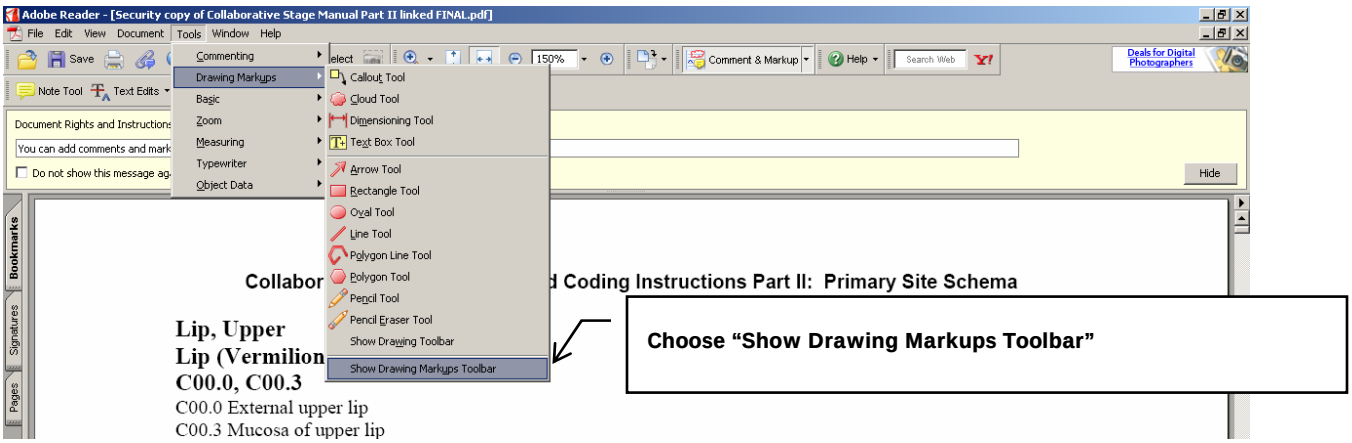


Note Tool. Another common tool is the one to add a sticky note to the page. This is just like using the yellow sticky notes that we all attach to paper.

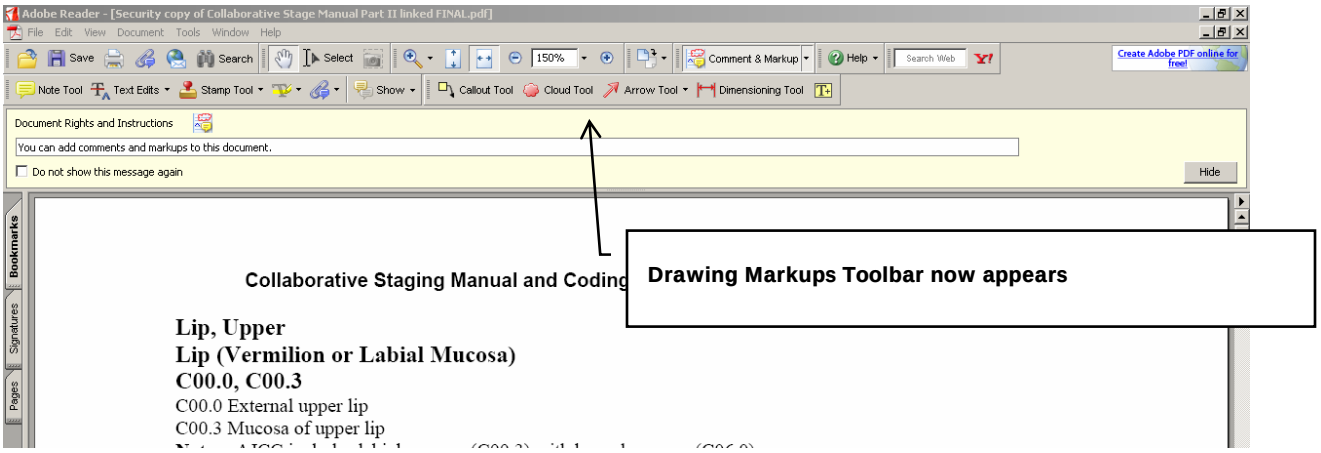
Click on the "Note Tool" and then click on the page and drag your mouse to draw a box on the page. Click on the box with your mouse and you can type text into the box. You can also click and drag the box to a different position on the page where there is more room. You can delete by clicking on the icon and hit the delete key.



Enabling additional tools called the drawing markups. There are additional tools you can use called the drawing markups. We will cover two of them. To place the toolbar on your screen choose Tools, Drawing Markups, Show Drawing Markups Toolbar.

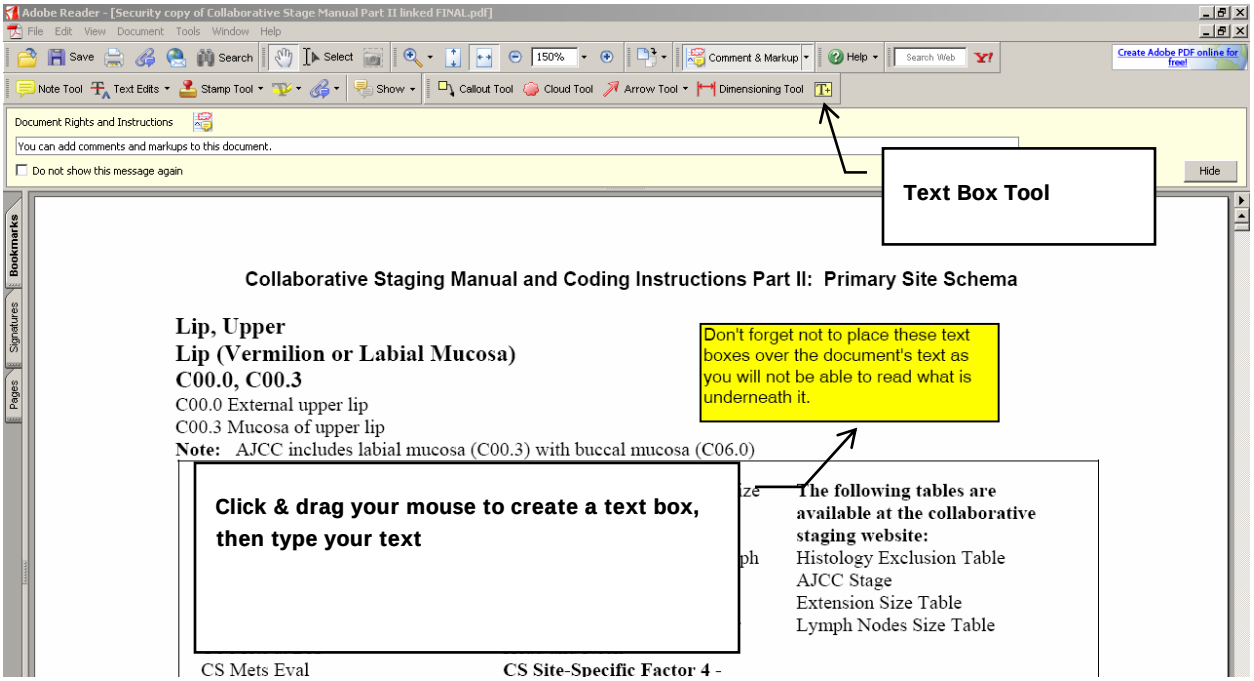


This will place the toolbar on your screen, like this.



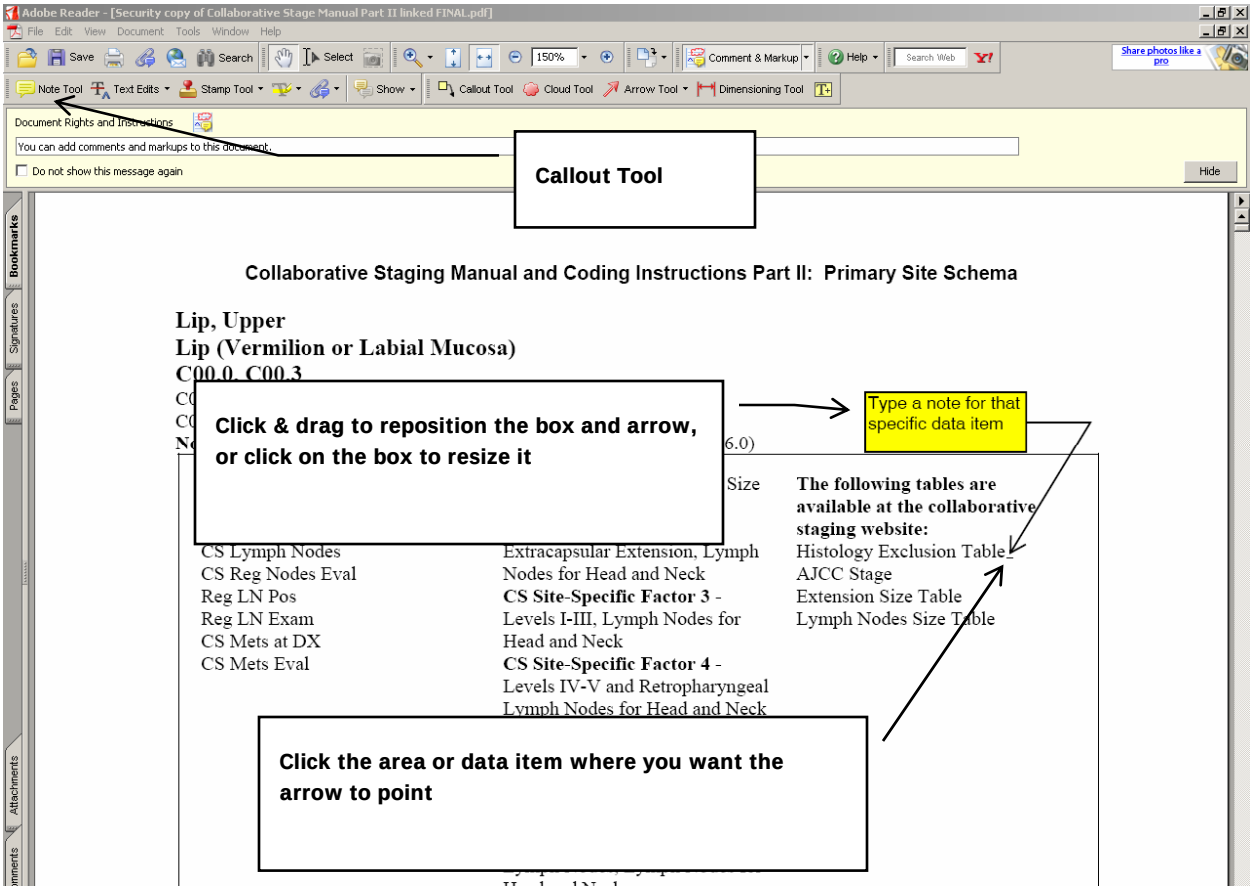
Text box tool. This might be the most useful tool. It places a yellow box on your page where you can type in text. This allows you to place a note on the page. It is different from the note tool in that it does not place an icon to link your text box to an item on the page.

Click on the "Text Box Tool" and then click and drag your mouse over the area where you wish to place the text box. You control the size of the box when you drag the mouse. Be careful not to draw the box over the existing document's text on the page, as the text box will cover it and you will not be able to read the original information. To delete a text box, click on the text box and hit the delete key.

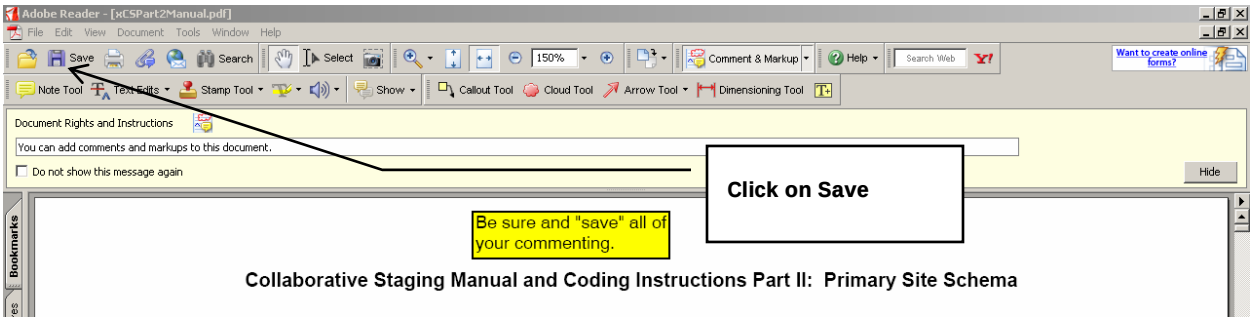


Callout Tool. Another tool in the drawing markups is the callout tool. This allows you to place a yellow box and type text in it, but it also places an arrow on the screen so you can designate to which item on the page your note refers.

Click on the "Callout Tool" and then click next to the item on the page to which your note will refer. This automatically places a yellow box with an arrow to that item. Type your text note in to the box. You can also click on the edge of the box and drag it to a different position on the page or resize it, making sure that it does not obscure any of the existing document's text on that page. You can delete by clicking on the icon and hit the delete key.



Before closing the file containing the CS Manual, click on "Save" to save the commenting that you have added.



APPENDIX J:

Site Specific Factor Codes

Head and Neck

Site Specific Factor 1

Size of Lymph Nodes

Head and neck includes the following schemas: upper lip; lower lip; other lip; base of tongue; anterior tongue; upper gum; lower gum and retromolar trigone; other gum; floor of mouth; hard palate; soft palate/uvula; other mouth; buccal mucosa; parotid gland; submandibular gland; other salivary glands; oropharynx; anterior surface of epiglottis; nasopharynx; pyriform sinus/ hypopharynx; other pharynx; nasal cavity; middle ear; maxillary sinus; ethmoid sinus; other sinus; glottic larynx; supraglottic larynx; subglottic larynx; other larynx

Note: Code the largest diameter, whether measured clinically or pathologically, of any involved regional lymph node(s). Do not code the size of any nodes coded in CS Mets at DX.

CODE	DESCRIPTION
000	No involved regional nodes
001-988	001-988 millimeters (code exact size in millimeters)
989	989 millimeters or larger
990	Microscopic focus or foci only, no size of focus given
991	Described as "less than 1cm"
992	Described as "less than 2cm" or "greater than 1cm" or "between 1cm and 2cm"
993	Described as "less than 3cm" or "greater than 2cm" or "between 2cm and 3cm"
994	Described as "less than 4cm" or "greater than 3cm" or "between 3cm and 4cm"
995	Described as "less than 5cm" or "greater than 4cm" or "between 4cm and 5cm"
996	Described as "less than 6cm" or "greater than 5cm" or "between 5cm and 6cm"
997	Described as "more than 6cm"
999	Regional lymph node(s) involved, size not stated Unknown if regional lymph node(s) involved Not documented in patient record

Head and Neck

Site Specific Factor 2

Extracapsular Extension, Lymph Nodes for Head and Neck

- Note 1: Code the status of extracapsular extension whether assessed clinically or pathologically of any involved regional lymph node(s) coded in the CS Lymph Nodes field. Do not code the status of any nodes coded in CS Mets at DX. Pathologic assessment takes priority over clinical assessment.
- Note 2: According to AJCC (page 24), "Imaging studies showing amorphous spiculated margins of involved nodes or involvement of internodal fat resulting in loss of normal oval-to-round nodal shape strongly suggest extracapsular (extranodal) tumor spread; however, pathologic examination is necessary for documentation of the extent of such disease."

CODE	DESCRIPTION
000	No extracapsular extension
001	Extracapsular extension clinically, not assessed pathologically
005	Extracapsular extension present pathologically
888	Not applicable; no lymph node involvement
999	Regional lymph node(s) involved, size not stated Unknown if regional lymph node(s) involved Not documented in patient record

Head and Neck

Site-Specific Factor 3

Levels I-III, Lymph Nodes for Head and Neck

Head and neck includes the following schemas: upper lip; lower lip; other lip; base of tongue; anterior tongue; upper gum; lower gum and retromolar trigone; other gum; floor of mouth; hard palate; soft palate/uvula; other mouth; buccal mucosa; parotid gland; submandibular gland; other salivary glands; oropharynx; anterior surface of epiglottis; nasopharynx; pyriform sinus/ hypopharynx; other pharynx; nasal cavity; middle ear; maxillary sinus; ethmoid sinus; other sinus; glottic larynx; supraglottic larynx; subglottic larynx; other larynx

Note: Site-Specific Factors 3-6 are used to code the presence or absence of lymph node involvement in each of 7 different levels and other groups defined by AJCC. The definitions of the levels are the same for all applicable head and neck sites. One digit is used to represent lymph nodes of a single level, with the three digits of Site-Specific Factor 3 representing lymph nodes of, respectively, Levels I-III; the digits of Site-Specific Factor 4 representing lymph nodes of Levels IV and V and the retropharyngeal nodes; the digits of Site-Specific Factor 5 representing lymph nodes of Levels VI and VII and the facial nodes; and the digits of Site-Specific Factor 6 representing the remaining Other groups as defined by AJCC. In each digit, a code 1 means Yes, the nodes are involved.

CODE	DESCRIPTION
000	No lymph node involvement in Levels I, II, or III
100	Level I lymph node(s) involved
010	Level II lymph node(s) involved
001	Level III lymph node(s) involved
110	Level I and II lymph nodes involved
101	Level I and III lymph nodes involved
011	Level II and III lymph nodes involved
111	Level I, II and III lymph nodes involved
999	Unknown if regional lymph node(s) involved, not stated Regional lymph nodes cannot be assessed Not documented in patient record

Head and Neck

Site Specific Factor 4

Levels IV-V and Retropharyngeal Lymph Nodes for Head and Neck

- Note: Site-Specific Factors 3-6 are used to code the presence or absence of lymph node involvement in each of 7 different levels and other groups defined by AJCC. The definitions of the levels are the same for all applicable head and neck sites. One digit is used to represent lymph nodes of a single level, with the three digits of Site-Specific Factor 3 representing lymph nodes of, respectively, Levels I-III; the digits of Site-Specific Factor 4 representing lymph nodes of Levels IV and V and the retropharyngeal nodes; the digits of Site-Specific Factor 5 representing lymph nodes of Levels VI and VII and the facial nodes; and the digits of Site-Specific Factor 6 representing the remaining Other groups as defined by AJCC. In each digit, a code 1 means Yes, the nodes are involved.

CODE	DESCRIPTION
000	No lymph node involvement in Levels IV or V or retropharyngeal
001	Retropharyngeal nodes involved
010	Level V lymph node(s) involved
011	Level V and retropharyngeal nodes involved
100	Level IV lymph node(s) involved
101	Level IV and retropharyngeal nodes involved
110	Level IV and V lymph nodes involved
111	Level IV and V and retropharyngeal lymph nodes involved
999	Unknown if regional lymph node(s) involved, not stated Regional lymph nodes cannot be assessed Not documented in patient record

Head and Neck

Site Specific Factor 5

Levels VI-VII and Facial Lymph Nodes for Head and Neck

- Note: Site-Specific Factors 3-6 are used to code the presence or absence of lymph node involvement in each of 7 different levels and other groups defined by AJCC. The definitions of the levels are the same for all applicable head and neck sites. One digit is used to represent lymph nodes of a single level, with the three digits of Site-Specific Factor 3 representing lymph nodes of, respectively, Levels I-III; the digits of Site-Specific Factor 4 representing lymph nodes of Levels IV and V and the retropharyngeal nodes; the digits of Site-Specific Factor 5 representing lymph nodes of Levels VI and VII and the facial nodes; and the digits of Site-Specific Factor 6 representing the remaining Other groups as defined by AJCC. In each digit, a code 1 means Yes, the nodes are involved.

CODE	DESCRIPTION
000	No lymph node involvement in Levels VI or VII or facial nodes
001	Facial (buccinator, nasolabial) lymph node(s) involved
010	Level VII lymph node(s) involved
011	Level VII and facial (buccinator, nasolabial) nodes involved
100	Level VI lymph node(s) involved
101	Level VI and facial (buccinator, nasolabial) nodes involved
110	Level VI and VII lymph nodes involved
111	Level VI and VII and facial (buccinator, nasolabial) lymph nodes involved
999	Unknown if regional lymph node(s) involved, not stated Regional lymph nodes cannot be assessed Not documented in patient record

Head and Neck

Site Specific Factor 6

Parapharyngeal, Parotid, Preauricular, and Sub-Occipital Lymph Nodes, Lymph Nodes for Head and Neck

- Note: Site-Specific Factors 3-6 are used to code the presence or absence of lymph node involvement in each of 7 different levels and other groups defined by AJCC. The definitions of the levels are the same for all applicable head and neck sites. One digit is used to represent lymph nodes of a single level, with the three digits of Site-Specific Factor 3 representing lymph nodes of, respectively, Levels I-III; the digits of Site-Specific Factor 4 representing lymph nodes of Levels IV and V and the retropharyngeal nodes; the digits of Site-Specific Factor 5 representing lymph nodes of Levels VI and VII and the facial nodes; and the digits of Site-Specific Factor 6 representing the remaining Other groups as defined by AJCC. In each digit, a code 1 means Yes, the nodes are involved.

CODE	DESCRIPTION
000	No parapharyngeal, parotid (preauricular, periparotid, and/or intraparotid), or sub-occipital lymph node involvement
001	Sub-occipital lymph node(s) involved
010	Parotid (preauricular, periparotid, and/or intraparotid) lymph node(s) involved
011	Parotid (preauricular, periparotid, and/or intraparotid) and sub-occipital lymph nodes involved
100	Parapharyngeal lymph node(s) involved
101	Parapharyngeal and sub-occipital lymph nodes involved
110	Parapharyngeal and parotid (preauricular, periparotid, and/or intraparotid) lymph nodes involved
111	Parapharyngeal, parotid (preauricular, periparotid, and/or intraparotid), and sub-occipital lymph nodes involved
999	Unknown if regional lymph node(s) involved, not stated Regional lymph nodes cannot be assessed Not documented in patient record

Colon

Rectosigmoid, Rectum

Site Specific Factor 1

Carcinoembryonic Antigen (CEA)

CODE	DESCRIPTION
000	Test not done
010	Positive/elevated
020	Negative/normal; within normal limits
030	Borderline; undetermined whether positive or negative
080	Ordered, but results not in chart
999	Unknown or no information Not documented in patient record

Liver

Site Specific Factor 1

Alpha Fetoprotein (AFP)

CODE	DESCRIPTION
000	Test not done
010	Positive/elevated
020	Negative/normal; within normal limits
030	Borderline; undetermined whether positive or negative
080	Ordered, but results not in chart
999	Unknown or no information Not documented in patient record

Liver

Site Specific Factor 2

Fibrosis Score

- Note: AJCC classifies fibrosis scores 0-4 (none to moderate fibrosis) as F0, and fibrosis scores 5-6 (severe fibrosis or cirrhosis) as F1. Fibrosis score is also called Ishak score.

CODE	DESCRIPTION
000	F0: Fibrosis score 0-4 (none to moderate fibrosis)
001	F1: Fibrosis score 5-6 (severe fibrosis or cirrhosis)
999	Fibrosis score not recorded Insufficient information Not documented in patient record

Pleura

Site Specific Factor 1

Pleural Effusion

CODE	DESCRIPTION
000	No pleural effusion
010	Pleural effusion, non-malignant
020	Pleural effusion, malignant
030	Pleural effusion, NOS
999	Unknown if pleural effusion

Malignant melanoma of skin, vulva, penis, scrotum

Melanoma of conjunctiva

Melanoma of choroid

Melanoma of iris and ciliary body

Site Specific Factor 1

Measured Thickness (Depth), Breslow's Measurement

Note: Code MEASURED THICKNESS (Depth) of tumor (Breslow's measurement), not size. Record actual measurement in hundredths of millimeters from Pathology Department

CODE	DESCRIPTION
000	No mass/tumor found
001-988	0.01 - 9.88 millimeters Code exact measurement in HUNDREDTHS of millimeters. Examples: 001 0.01 millimeter 002 0.02 millimeters 010 0.1 millimeter 074 0.74 millimeters 100 1 millimeters 105 1.05 millimeters 988 9.88 millimeters
989	9.89 millimeters or larger
990	OBSOLETE - Microinvasion; microscopic focus or foci only; no size given NOTE: See code 999
999	Microinvasion; microscopic focus or foci only; no size given Not documented in patient record Unknown; size not stated

Malignant melanoma of skin, vulva, penis, scrotum

Site Specific Factor 2

Ulceration

- Note 1: Melanoma ulceration is the absence of an intact epidermis overlying the primary melanoma based upon histopathological examination.
- Note 2: If there is no documentation or no mention of ulceration in the pathology report, assume ulceration is not present and code 000.

CODE	DESCRIPTION
000	No ulceration present
001	Ulceration present
999	Unknown Not stated Not documented in patient record

Malignant melanoma of skin, vulva, penis, scrotum

Site Specific Factor 3

Clinical Status of Lymph Node Mets

Note: Use code 000, No lymph node metastases, if either: A) there is no lymph node involvement, i.e., CS Lymph Nodes is coded 00, or B) there are satellite nodules or in-transit metastases, but no regional lymph node metastases, i.e., CS Lymph Nodes is coded 13-15.

CODE	DESCRIPTION
000	No lymph node metastases
001	Clinically occult (microscopic) lymph node metastases only
002	Clinically apparent (macroscopic) lymph node metastases
999	Unknown Not stated Not documented in patient record

Mycosis Fungoides

Site Specific Factor 1

Peripheral Blood Involvement

CODE	DESCRIPTION
000	No peripheral blood involvement: Less than 1000 Sezary cells
001	Atypical circulating cells in peripheral blood: Less than 5% Greater than or equal to 1000 Sezary cells
002	Atypical circulating cells in peripheral blood: Greater than 5%
003	% not stated
999	Insufficient information Not documented in patient record

Breast

Site Specific Factor 1

Estrogen Receptor Assay (ERA)

CODE	DESCRIPTION
000	Test not done (test was not ordered and was not performed)
010	Positive/elevated
020	Negative/normal; within normal limits
030	Borderline; undetermined whether positive or negative
080	Ordered, but results not in chart
999	Unknown or no information Not documented in patient record

Breast

Site Specific Factor 2

Progesterone Receptor Assay (PRA)

CODE	DESCRIPTION
000	Test not done (test was not ordered and was not performed)
010	Positive/elevated
020	Negative/normal; within normal limits
030	Borderline; undetermined whether positive or negative
080	Ordered, but results not in chart
999	Unknown or no information Not documented in patient record

Breast

Site Specific Factor 3

Number of Positive Ipsilateral Axillary Lymph Nodes

Note 1: Record this field even if there has been preoperative treatment.

Note 2: Lymph nodes with only isolated tumor cells (ITCs) are NOT counted as positive lymph nodes. Only lymph nodes with metastases greater than 0.2 mm (micrometastases or larger) should be counted as positive. If the pathology report indicates that nodes are positive but size of the metastases is not stated, assume the metastases are greater than 0.2 mm and code the lymph nodes as positive in this field.

Note 3: This field is based on pathologic information only. If no ipsilateral axillary nodes were removed for examination, or if an ipsilateral axillary lymph node drainage area was removed but no lymph nodes were found, code 098.

Note 4. The general coding instructions in Part I for Regional Nodes Positive also apply to this field (although the codes in Regional Nodes Positive are 2 digits rather than 3). When positive ipsilateral axillary lymph nodes are coded in this field, the number of positive ipsilateral axillary lymph nodes must be less than or equal to the number coded in Regional Nodes Positive (i.e., the number of positive ipsilateral axillary nodes will always be a subset of the number of positive regional nodes.)

CODE	DESCRIPTION
000	All ipsilateral axillary nodes examined negative
001-089	1 - 89 nodes positive (code exact number of nodes positive)
090	90 or more nodes positive
095	Positive aspiration of lymph node(s)
097	Positive nodes - number unspecified
098	No axillary nodes examined
099	Unknown if axillary nodes are positive; not applicable Not documented in patient record

Breast

Site Specific Factor 4

Immunohistochemistry (IHC) of Regional Lymph Nodes

- Note 1: Use codes 000-009 only to report results of IHC on otherwise histologically negative lymph nodes on routine H and E stains., i.e., only when CS Lymph Nodes is coded 00. Otherwise code 888 in this field.
- Note 2: Isolated tumor cells (ITC) are defined as single tumor cells or small clusters 0.2 mm, usually detected only by immunohistochemical (IHC) or molecular methods (RT-PCR: Reverse Transcriptase Polymerase Chain Reaction) but which may be verified on H and E stains. ITCs do not usually show evidence of malignant activity (e.g., proliferation or stromal reaction.)
- Note 3: If it is unstated whether or not IHC tests were done, assume they were not done.

CODE	DESCRIPTION
000	Regional lymph nodes negative on H and E, no IHC studies done or unknown if IHC studies done Nodes clinically negative, not examined pathologically
001	Regional lymph nodes negative on H and E, IHC studies done, negative for tumor
002	Regional lymph nodes negative on H and E, IHC studies done, positive for ITCs (tumor cell clusters not greater than 0.2mm)
009	Regional lymph nodes negative on H and E, positive for tumor detected by IHC, size of tumor cell clusters or metastases not stated
888	Not applicable CS Lymph Nodes not coded 00

Breast

Site Specific Factor 5

Molecular Studies of Regional Lymph Nodes

- Note 1: Use codes 000-002 only to report results of molecular studies on otherwise histologically negative lymph nodes on routine H and E stains., i.e., only when CS Lymph Nodes is coded 00. Otherwise code 888 in this field.
- Note 2: Isolated tumor cells (ITC) are defined as single tumor cells or small clusters less than or equal to 0.2 mm, usually detected only by immunohistochemical (IHC) or molecular methods (RT-PCR: Reverse Transcriptase Polymerase Chain Reaction) but which may be verified on H and E stains. ITCs do not usually show evidence of malignant activity (e.g., proliferation or stromal reaction.)
- Note 3: If it is not stated whether molecular tests were done, assume they were not done.

CODE	DESCRIPTION
000	Regional lymph nodes negative on H and E, no RT-PCR molecular studies done or unknown if RT-PCR studies done Nodes clinically negative, not examined pathologically
001	Regional lymph nodes negative on H and E, RT-PCR molecular studies done, negative for tumor
002	Regional lymph nodes negative on H and E, RT-PCR molecular studies done, positive for tumor
888	Not applicable CS Lymph Nodes not coded 00

Breast

Site Specific Factor 6

Size of Tumor--Invasive Component

- Note 1: Record the code that indicates how the pathological tumor size was coded in CS Tumor Size.
- Note 2: For this field, "mixed" indicates a tumor with both invasive and in situ components. Such a "mixed" tumor may be a single histology such as mixed infiltrating ductal and ductal carcinoma in situ or combined histology such as mixed infiltrating ductal and lobular carcinoma in situ. "Pure" indicates a tumor that contains only invasive or only in situ tumor.
- Note 3: This information is collected for analytic purposes and does not affect the stage grouping algorithm. Different codes in this field may explain differences in outcome for patients in the same T category or stage group.

  Example:
  Patient 1 has a "mixed" (see Note 2) tumor measuring 2.5 cm with extensive areas of in situ tumor, and the size of the invasive component is not stated. This would be coded 025 in CS Tumor Size, and would be classified as T2. It would be coded 040 in Site-Specific Factor 6.

  Patient 2 has a purely invasive tumor measuring 2.5 cm. This would also be coded 025 in CS Tumor Size and would also be classified as T2. However, it would be coded 000 in Site-Specific Factor 6.

  Patient 1's tumor would probably have a better survival than Patient 2's tumor, since it would more likely be a T1 lesion if the true dimensions of the invasive component were known.

CODE	DESCRIPTION
000	Entire tumor reported as invasive (no in situ component reported)
010	Entire tumor reported as in situ (no invasive component reported)
020	Invasive and in situ components present, size of invasive component stated and coded in CS Tumor Size
030	Invasive and in situ components present, size of entire tumor coded in CS Tumor Size because size of invasive component not stated AND in situ described as minimal (less than 25%)
040	Invasive and in situ components present, size of entire tumor coded in CS Tumor Size because size of invasive component not stated AND in situ described as extensive (25% or more)

CODE	DESCRIPTION
050	Invasive and in situ components present, size of entire tumor coded in CS Tumor Size because size of invasive component not stated AND proportions of in situ and invasive not known
060	Invasive and in situ components present, unknown size of tumor (CS Tumor Size coded 999)
888	Unknown if invasive and in situ components present, unknown if tumor size represents mixed tumor or a "pure" tumor. (See Note 2.) Clinical tumor size coded.

Ovary

Site Specific Factor 1

Carbohydrate Antigen 125 (CA-125)

CODE	DESCRIPTION
000	Test not done
010	Positive/elevated
020	Negative/normal; within normal limits
030	Borderline; undetermined whether positive or negative
080	Ordered, but results not in chart
999	Not documented in patient record Unknown or no information

Placenta

Site Specific Factor 1

Prognostic Scoring Index Table 1

Note: Clinician scoring is recommended. If any one of the factors is unknown, stop trying to assign score, unless you have already determined with the factors you have - low risk or high risk. The score on the Prognostic Scoring Index is used to substage patients. Substage A (low risk) and Substage B (high risk) are assigned on the basis of a non-anatomic risk factor scoring system:

1. AGE [Score 0: age less than or equal to 40; Score 1: age 40 or more];
2. ANTECEDENT PREG [Score 0: Hydatidiform mole; Score 1: Abortion; Score 2: Term pregnancy];
3. MONTHS FROM INDEX PREG [Score 0: less than 4; Score 1: 4 months and less than 7 months; Score 2: 7 months to 12 months; Score 4: More than 12 months];
4. PRETREATMENT SERUM hCG(IU/ml) [Score 0: <10 to 3rd power, (1,000); Score 1: 10-3rd power to 10-4th power (1,000 to less than 10,000); Score 2: 10-4th power to less than 10-5th power (10,000 to less than 100,000); Score 4: greater than or equal to 10-5th power (100,000 or greater)];
5. LARGEST TUMOR SIZE, INCLUDING UTERUS [Score 0: < 3 cm; Score 1: 3-<5 cm; Score 2: greater than or equal to 5 cm];
6. SITES OF METS [Score 0: Lung only or None; Score 1: Spleen, kidney; Score 2: Gastrointestinal tract; Score 4: Liver, brain];
7. NUMBER OF METS [Score 0: 0; Score 1: 1-4; Score 2: 5-8; Score 4: >8];
8. PREVIOUS FAILED CHEMOTHERAPY [Score 2: Single drug; Score 4: 2 or more drugs]. Sum the score of each prognostic risk factor(s) to determine the final Prognostic Scoring Index in the table below:

CODE	DESCRIPTION
000	Clinician stated no risk factors
001	Clinician stated low risk (sum score of 7 or less) Stated to be substage A, but score not specified
002	Clinician stated high risk (sum score of 8 or greater or NOS) Stated to be substage B, but score not specified
200	Clinician stated to have risk factors, but unknown whether low or high risk
999	Unknown Risk factors cannot be assessed Not documented in patient record

Prostate

Site Specific Factor 1

Prostatic Specific Antigen (PSA) Lab Value

Note 1: Record the highest PSA lab value recorded in the medical record prior to diagnostic biopsy or treatment. Lab value may be recorded in the lab report, history and physical, or clinical statement in the pathology report, etc. For example, a pretreatment PSA of 20.0 ng/ml would be recorded as 200.

Note 2: Lab values for SSFs 1 and 2 should be from the same laboratory test.

CODE	DESCRIPTION
000	Test not done (test was not ordered and was not performed)
001	0.1 or less ng/ml (actual value with implied decimal point)
002-989	0.2 - 98.9 ng/ml (actual value with implied decimal point)
990	99.0 or greater ng/ml
999	Unknown or no information Not documented in patient record

Prostate

Site Specific Factor 2

Prostatic Specific Antigen (PSA)

- Note 1: Use the highest PSA lab value recorded in the medical record prior to diagnostic biopsy or treatment. This lab value may be recorded in the lab report, history and physical, or clinical statement in the pathology report, etc.
- Note 2: Lab values for SSFs 1 and 2 should be from the same laboratory test.

CODE	DESCRIPTION
000	Test not done (test was not ordered and was not performed)
010	Positive/elevated
020	Negative/normal; within normal limits
030	Borderline; undetermined whether positive or negative
080	Ordered, but results not in chart
999	Unknown or no information Not documented in patient record

Prostate

Site Specific Factor 3

CS Extension - Pathologic Extension

Note 1: Include information from prostatectomy in this field and not in CS Extension - Clinical Extension. Use all histologic information including the prostatectomy if it was done within the first course of treatment. Code 097 if there was no prostatectomy performed within the first course of treatment.

Note 2: Limit information in this field to first course of treatment in the absence of disease progression.

Note 3: Involvement of the prostatic urethra does not alter the extension code.

Note 4: When the apical margin, distal urethral margin, bladder base margin, or bladder neck margin is involved and there is no extracapsular extension, use code 040.

Note 5: CODES 031, 033 and 034 have been made OBSOLETE, CODES NO LONGER USED. Information about prostate apex involvement has been moved to Site-Specific Factor 4, Prostate Apex Involvement. AJCC does not use prostate apex involvement in the "T" classification.

Note 6: When prostate cancer is an incidental finding during a prostatectomy for other reasons (for example, a cystoprostatectomy for bladder cancer), use the appropriate code for the extent of disease found (for example, one lobe, or both lobes, or more).

Note 7: "Frozen pelvis" is a clinical term which means tumor extends to pelvic sidewall(s). In the absence of a more detailed statement of involvement, assign this to code 060.

Note 8: AUA stage. Some of the American Urological Association (AUA) stages A-D are provided as guidelines for coding in the absence of more specific information in the medical record. If physician-assigned AUA stage D1-D2 is based on involvement of lymph nodes only, code under CS Lymph Nodes or CS Mets at DX, not CS Extension - Pathologic Extension.

Note 9: For the extension fields for this site, the mapping values for TNM, SS77, and SS2000 and the associated c, p, y, or a indicator are assigned based on the values in CS Extension, CS TS/Eval, and Site-Specific Factor 3. If the value of Site-Specific Factor 3 (Pathologic Extension) is greater than 000 and less than 095 (i.e., prostatectomy was done, extension information is available for staging, and invasive tumor was present in the prostatectomy specimen), the mapping values are taken from the Site-Specific Factor 3 mapping, and the T category is identified as a pT. If Site-Specific Factor 3 (Pathologic Extension) code is 095 or greater (meaning that prostatectomy was not performed, or it was performed but the information is not usable for staging), the mapping values are taken from the CS Extension (Clinical Extension) mapping, and the c, p, y, or a indicator is taken from the TS/Ext Eval mapping. If Site-Specific Factor 3 (Pathologic Extension) code is 000 (in situ), and if CS Extension code (Clincal Extension) is greater than 00 and less than 95 (not in situ) , the mapping values are taken from the CS Extension (Clinical Extension) mapping, and the c, p, y, or a indicator is taken from the TS/Ext Eval mapping. If Site-Specific Factor 3 code is 000 (in situ) and CS Extension code is 00 (in situ) or greater than 94, the mapping values are taken from the Site-Specific Factor 3 mapping, and the T category is identified as a pT.

Note 10: Code 045, extension to seminal vesicle(s) (Stage C2), takes priority over Code 048, extracapsular extension and margins involved, if both are present.

CODE	DESCRIPTION	TNM	SS77	SS2000
000	In situ; non-invasive; intraepithelial	Tis	IS	IS
020	Involvement in one lobe, NOS	T2NOS	L	L
021	Involves one half of one lobe or less	T2a	L	L
022	Involves more than one half of one lobe, but not both lobes	T2b	L	L
023	Involves both lobes	T2c	L	L
030	Localized, NOS Confined to prostate, NOS Intracapsular involvement only Stage B, NOS	T2NOS	L	L
031	OBSOLETE - Into prostatic apex/arising in prostatic apex, NOS (See Note 5 and Site-Specific Factor 4)	T2NOS	L	L
032	Invasion into (but not beyond) prostatic capsule	T2NOS	L	L
033	OBSOLETE - Arising in prostatic apex (See Note 5 and Site-Specific Factor 4)	T2NOS	L	L
034	OBSOLETE - Extending into prostatic apex (See Note 5 and Site-Specific Factor 4)	T2NOS	L	L
040	No extracapsular extension but margins involved (See Note 4)	T2NOS	L	RE
041	Extension to periprostatic tissue (Stage C1): Extracapsular extension (beyond prostatic capsule), NOS Through capsule, NOS	T3a	RE	RE
042	Unilateral extracapsular extension	T3a	RE	RE
043	Bilateral extracapsular extension	T3a	RE	RE

CODE	DESCRIPTION	TNM	SS77	SS2000
045	Extension to seminal vesicle(s) (Stage C2)	T3b	RE	RE
048	Extracapsular extension and margins involved (Excluding seminal vesicle margins-- See code 045)	T3a	RE	RE
050	Extension to or fixation to adjacent structures other than seminal vesicles: Bladder neck Bladder, NOS Fixation, NOS Rectovesical (Denonvillier's) fascia Rectum; external sphincter	T4	RE	RE
052	Levator muscle Skeletal muscle, NOS Ureter	T4	D	RE
060	Extension to or fixation to pelvic wall or pelvic bone "Frozen pelvis", NOS (See Note 6)	T4	D	D
070	Further contiguous extension (Stage D2) including to: Bone Penis Sigmoid colon Soft tissue other than periprostatic tissue Other organs	T4	D	D
095	No evidence of primary tumor	T0	U	U
096	Unknown if prostatectomy done	TX	U	U
097	No prostatectomy done within first course of treatment	TX	U	U

CODE	DESCRIPTION	TNM	SS77	SS2000
098	Prostatectomy performed, but not considered first course of treatment because of for example; disease progression.	TX	U	U
099	Prostatectomy done: Extension unknown Not documented in patient record Primary tumor cannot be assessed	TX	U	U

Prostate

Site Specific Factor 4

Prostate Apex Involvement (OBSOLETE: Prostatic Acid Phosphatase (PAP))

- Note: Historically, apex involvement has affected the stage classification, although it does not affect the AJCC 6th edition. This item allows collection of information about the involvement of the prostate apex with cancer, both clinically and at prostatectomy. In codes 110-550, the first digit represents the clinical status of apex involvement, and the second digit represents apex involvement found at prostatectomy, following these definitions:
  1 - No involvement of prostatic apex
  2 - Into prostatic apex/arising in prostatic apex, NOS
  3 - Arising in prostatic apex
  4 - Extension into prostatic apex
  5 - Apex extension unknown
  When abstracting and coding apex involvement, try to determine if the cancer has extended into the apex from another part of the prostate or has arisen in the apex.

CODE	DESCRIPTION
000	OBSOLETE PAP: Test not done (test was not ordered and was not performed)
010	OBSOLETE PAP: Positive/elevated
020	OBSOLETE PAP: Negative/normal; within normal limits
030	OBSOLETE PAP: Borderline; undetermined whether positive or negative
080	OBSOLETE PAP: Ordered, but results not in chart
110	No involvement of prostatic apex.
120	Clinical apex involvement: No involvement AND Prostatectomy apex involvement: Into/arising in, NOS.
130	Clinical apex involvement: No involvement AND Prostatectomy apex involvement: Arising in
140	Clinical apex involvement: No involvement AND Prostatectomy apex involvement: Extension into
150	Clinical apex involvement: No involvement AND Prostatectomy apex involvement: Unknown

CODE	DESCRIPTION
210	Clinical apex involvement: Into/arising in, NOS AND Prostatectomy apex involvement: No involvement
220	Clinical apex involvement: Into/arising in, NOS AND Prostatectomy apex involvement: Into/arising in, NOS
230	Clinical apex involvement: Into/arising in, NOS AND Prostatecomy apex involvement: Arising in
240	Clinical apex involvement: Into/arising in, NOS AND Prostatectomy apex involvement: Extension into
250	Clinical apex involvement: Into/arising in, NOS AND Prostatectomy apex involvement: Unknown
310	Clinical apex involvement: Arising in AND Prostatectomy apex involvement: No involvement
320	Clinical apex involvement: Arising in AND Prostatectomy apex involvement: Into/arising in, NOS
330	Clinical apex involvement: Arising in AND Prostatectomy apex involvement: Arising in
340	Clinical apex involvement: Arising in AND Prostatectomy apex involvement: Extension into
350	Clinical apex involvement: Arising in AND Prostatectomy apex involvement: Unknown
410	Cllinical apex involvement: Extension into AND Prostatectomy apex involvement: No involvement
420	Clinical apex involvement: Extension into AND Prostatectomy apex involvement: Into/arising in, NOS
430	Clinical apex involvement: Extension into AND Prostatectomy apex involvement: Arising in
440	Clinical apex involvement: Extension into AND Prostatectomy apex involvement: Extension into
450	Clinical apex involvement: Extension into AND Prostatectomy apex involvement: Unknown

CODE	DESCRIPTION
510	Clinical apex involvement: Unknown AND Prostatectomy apex involvement: No involvement
520	Clinical apex involvement: Unknown AND Prostatectomy apex involvement: Into/arising in, NOS
530	Clinical apex involvement: Unknown AND Prostatectomy apex involvement: Arising into
540	Clinical apex involvement: Unknown AND Prostatectomy apex involvement: Extension into
550	Clinical apex involvement: Unknown AND Prostatectomy apex involvement: Unknown
999	OBSOLETE PAP: Unknown or no information. Not documented in patient record

Prostate

Site Specific Factor 5

Gleason's Primary Pattern and Secondary Pattern Value

- Note 1: Usually prostate cancers are graded using Gleason's score or pattern. Gleason's grading for prostate primaries is based on a 5-component system (5 histologic patterns). Prostatic cancer generally shows two main histologic patterns. The primary pattern that is, the pattern occupying greater than 50% of the cancer is usually indicated by the first number of the Gleason's grade and the secondary pattern is usually indicted by the second number. These two numbers are added together to create a pattern score, ranging from 2 to 10. If there are two numbers, assume that they refer to two patterns (the first number being the primary and the second number being the secondary) and sum them to obtain the score. If only one number is given and it is less than or equal to 5, assume that it describes a pattern and uses the number as the primary pattern and code the secondary as '9'. If only one number is given and it is greater than 5, assume that it is a score. If the pathology report specifies a specific number out of a total of 10, the first number given is the score. Example: The pathology report says "Gleason's 3/10". The Gleason's score would be 3.
- Note 2: Following AJCC guidelines for coding multiple Gleason's Scores in prostate cancer, if there is more than one primary and secondary pattern value, the value to be coded is the one based on the larger tumor specimen. Please note that this rule is not the same as the rule for coding grade.

CODE	DESCRIPTION
000	Test not done (test was not ordered and was not performed)
011	Primary pattern 1, secondary pattern 1
012	Primary pattern 1, secondary pattern 2
013	Primary pattern 1, secondary pattern 3
014	Primary pattern 1, secondary pattern 4
015	Primary pattern 1, secondary pattern 5
019	Primary pattern 1, secondary pattern unknown
021	Primary pattern 2, secondary pattern 1
022	Primary pattern 2, secondary pattern 2
023	Primary pattern 2, secondary pattern 3
024	Primary pattern 2, secondary pattern 4
025	Primary pattern 2, secondary pattern 5
029	Primary pattern 2, secondary pattern unknown

CODE	DESCRIPTION
031	Primary pattern 3, secondary pattern 1
032	Primary pattern 3, secondary pattern 2
033	Primary pattern 3, secondary pattern 3
034	Primary pattern 3, secondary pattern 4
035	Primary pattern 3, secondary pattern 5
039	Primary pattern 3, secondary pattern unknown
041	Primary pattern 4, secondary pattern 1
042	Primary pattern 4, secondary pattern 2
043	Primary pattern 4, secondary pattern 3
044	Primary pattern 4, secondary pattern 4
045	Primary pattern 4, secondary pattern 5
049	Primary pattern 4, secondary pattern unknown
051	Primary pattern 5, secondary pattern 1
052	Primary pattern 5, secondary pattern 2
053	Primary pattern 5, secondary pattern 3
054	Primary pattern 5, secondary pattern 4
055	Primary pattern 5, secondary pattern 5
059	Primary pattern 5, secondary pattern unknown
099	Primary pattern unknown, secondary pattern unknown
999	Unknown or no information Not documented in patient record

Prostate

Site Specific Factor 6

Gleason's Score

- Note 1: Usually prostate cancers are graded using Gleason's score or pattern. Gleason's grading for prostate primaries is based on a 5-component system (5 histologic patterns). Prostatic cancer generally shows two main histologic patterns. The primary pattern, that is, the pattern occupying greater than 50% of the cancer, is usually indicated by the first number of the Gleason's grade and the secondary pattern is usually indicted by the second number. These two numbers are added together to create a pattern score, ranging from 2 to 10. If only one number is given and it is less than or equal to 5, code the total score to 999, unknown or no information. If only one number is given and it is greater than 5, assume that it is a score. If there are two numbers, assume that they refer to two patterns (the first number being the primary and the second number being the secondary) and sum them to obtain the score. If the pathology report specifies a specific number out of a total of 10, the first number given is the score. Example: The pathology report says "Gleason's 3/10". The Gleason's score would be 3.
- Note 2: Record the Gleason's score based on the addition of the primary and secondary pattern.
- Note 3: Following AJCC guidelines for coding multiple Gleason's Scores in prostate cancer, if there is more than one primary and secondary pattern value, the value to be coded is the one based on the larger tumor specimen. Please note that this rule is not the same as the rule for coding grade.

CODE	DESCRIPTION
000	Test not done (test was not ordered and was not performed)
002 – 010	Gleason's Score (See Notes 1, 2 and 3)
999	Unknown or no information Not documented in patient record

Testis

Site Specific Factor 1

Alpha Fetoprotein (AFP)

CODE	DESCRIPTION
000	Test not done (SX)
020	Within normal limits (S0)
040	Range 1 (S1) less than 1,000 ng/ml
050	Range 2 (S2) 1,000 -10,000 ng/ml
060	Range 3 (S3) greater than 10,000 ng/ml
080	Ordered, but results not in chart
999	Unknown or no information Not documented in patient record

Testis

Site Specific Factor 2

Human chorionic gonadotropin (hCG)

CODE	DESCRIPTION
000	Test not done (SX)
020	Within normal limits (S0)
040	Range 1 (S1) less than 5,000 mIU/ml
050	Range 2 (S2) 5,000 - 50,000 mIU/ml
060	Range 3 (S3) greater than 50,000 mIU/ml
080	Ordered, but results not in chart
999	Unknown or no information Not documented in patient record

Testis

Site Specific Factor 3

LDH

CODE	DESCRIPTION
000	Test not done (SX)
020	Within normal limits (S0)
040	Range 1 (S1) less than 1.5 x N (N equals the upper limit of normal for LDH)
050	Range 2 (S2) 1.5 - 10 x N (N equals the upper limit of normal for LDH)
060	Range 3 (S3) greater than 10 x N (N equals the upper limit of normal for LDH)
080	Ordered, but results not in chart
999	Unknown or no information Not documented in patient record

Testis

Site Specific Factor 4

Radical Orchiectomy Performed

CODE	DESCRIPTION
000	Radical orchiectomy not performed
001	Radical orchiectomy performed
999	Unknown if radical orchiectomy performed

Testis

Site Specific Factor 5

Size of Metastasis in Lymph Nodes

- Note 1: For CS Lymph Nodes codes 10, 20, 30, 40 and 50, the N category is assigned based on the values in the Site Specific Factor 5 Table below and the Number Lymph Nodes Positive and Size of Lymph Node Metastasis Extra Table.
- Note 2: When coding cases with clinically positive lymph nodes, use Code 001 for clinical N1, Code 002 for clinical N2, and Code 003 for clinical N3.

CODE	DESCRIPTION
000	No lymph node metastasis
001	Lymph node metastasis mass 2 cm or less in greatest dimension AND no extranodal extension of tumor
002	Lymph node metastasis mass more than 2 cm but not more than 5 cm in greatest dimension Extranodal extension of tumor
003	Lymph node metastasis mass more than 5cm in greatest dimension
998	Regional lymph nodes involved, size of lymph node mass not stated
999	Unknown if regional nodes involved Not documented in patient record

Retinoblastoma

Site Specific Factor 1

Extension Evaluated at Enucleation

Note 1: For correct calculation of derived staging fields for this schema, CS Extension and Site-Specific Factor 1, Extension Evaluated at Enucleation, must both be coded, whether or not an enucleation was performed. Information from enucleation is EXCLUDED from CS Extension andcoded only in Site-Specific Factor 1.

Note 2: For the extension fields for this site, the mapping values for TNM, SS77, and SS2000 and the associated c, p, y, or a indicator are assigned based on the values in CS Extension, CS TS/Ext Eval, and Site-Specific Factor 1. If the value of Site-specific Factor 1 is a valid code between 030 and 080 (i.e., enucleation was done and extension information is available for staging), the mapping values are taken from the Site-Specific Factor 1 mapping, and the T category is identified as a pT. Otherwise (i.e., Site-Specific Factor 1 code is not between 030 and 080, or is invalid or blank, meaning that enucleation was not performed, or it was performed but the information is not usable for staging), the mapping values are taken from the CS Extension mapping, and the c, p, y, or a indicator is taken from the TS/Ext Eval mapping.

CODE	DESCRIPTION	TNM	SS77	SS2000
000	No enucleation performed	TX	U	U
030	Tumor(s) confined to retina, NOS	T1	L	L
041	Tumor cells in the vitreous body	T1	L	L
043	Tumor(s) confined to subretinal space No optic nerve or choroidal invasion	T1	L	L
044	Tumor invades optic nerve up to, but not through, level of lamina cribrosa	T2a	L	L
046	Tumor invades choroid focally	T2b	L	L
047	Tumor invades optic nerve up to, but not through, level of lamina cribrosa AND invades the choroid focally	T2c	L	L
048	Optic nerve as far as lamina cribrosa, NOS	T2NOS	L	L
049	Minimal invasion of optic nerve and/or optic coats, NOS	T2NOS	L	L
054	Tumor invades optic nerve through the level of lamina cribrosa but not to line of resection	T3a	RE	RE
056	Tumor massively invades choroid	T3b	RE	RE
057	Tumor invades optic nerve through level of lamina cribrosa but not to line and resection AND massively invades choroid	T3c	RE	RE
059	Significant invasion of optic nerve and/or optic coats, NOS	T3NOS	RE	RE

CODE	DESCRIPTION	TNM	SS77	SS2000
072	Extraocular extension including: Both anteriorly or posteriorly into orbit Optic nerve to line of resection Orbit through sclera Extension into subarachnoidal space of optic nerve Extension to apex of orbit	T4	RE	RE
074	Extraocular extension including into: Brain Brain beyond the chiasm	T4	D	D
075	Other adjacent extraocular extension	T4	RE	RE
080	Further contiguous extension	T4	D	D
095	No evidence of primary tumor	T0	U	U
096	Unknown if enucleation done	TX	U	U
999	Enucleation done: Extension unknown	TX	U	U

Brain

Other CNS

Other endocrine

Site Specific Factor 1

WHO Grade Classification

CODE	DESCRIPTION
010	Grade I
020	Grade II
030	Grade III
040	Grade IV
999	Clinically diagnosed/grade unknown Not documented in medical record Grade unknown, NOS

Thyroid

Site Specific Factor 1

Solitary vs Multifocal

CODE	DESCRIPTION
000	None
001	Solitary tumor
002	Multifocal tumor [AJCC descriptor (m)]
999	Insufficient information Not documented in patient record

Kaposi Sarcoma

Lymphoma

Site Specific Factor 1

Associated with HIV/AIDS

Note: HIV (Human Immunodeficiency Virus) includes types I and II. Older terminology includes HTLV-3 and LAV.

CODE	DESCRIPTION
001	Yes/Present
002	No/Not present
999	Unknown if present or not Insufficient information Not documented in patient record

Lymphoma

Site Specific Factor 2

Systemic Symptoms at Diagnosis

- Note 1. Each stage should be classified as either A or B according to the absence or presence
  of defined constitutional symptoms, such as:
  1. Fevers: Unexplained fever with temperature above 38 degrees C;
  2. Night sweats: Drenching sweats that require change of bedclothes;
  3. Weight loss: Unexplained weight loss of more than 10% of the usual body weight in the 6 months prior to diagnosis.
- Note 2. Pruritus alone does not qualify for B classification, nor does alcohol intolerance, fatigue, or a short, febrile illness associated with suspected infections.

CODE	DESCRIPTION	MODIFIER
000	No B symptoms (Asymptomatic)	A
010	Any B symptoms: Night sweats Unexplained fever (above 38 degrees C) Unexplained weight loss (generally greater than 10% loss of body weight in the six months before admission) B symptoms, NOS	B
020	Pruritis (if recurrent and unexplained)	B
030	(010) + (020)	B
999	Unknown if symptoms; insufficient information Not documented in patient record	Blank

- The "A" or "B" is appended to the stage I-IV as determined in the data item Site Specific Factor 2, Systemic Symptoms at Diagnosis.

Lymphoma

Site Specific Factor 3

IPI Score

Note: Record the IPI (International Prognostic Index) as stated in the medical record.

CODE	DESCRIPTION	RISK GROUP MAP
000	0 points	Low
001	1 point	Low
002	2 points	Low intermediate
003	3 points	High intermediate
004	4 points	High
005	5 points	High
999	Unknown Insufficient information Not documented in patient record	

International Prognostic Index

http://www.oncologychannel.com/nonhodgkins/staging.shtml

The International Prognostic Index (IPI) was designed to further clarify lymphoma staging. The IPI predicts the risk of disease recurrence and overall survival by taking into account factors such as age, stage of disease, general health (also known as performance status), number of extranodal (other than the lymph nodes) sites, and the presence or absence of an elevated serum enzyme named lactate dehydrogenase (LDH).

Example: A patient with the following prognostic factors would have an IPI score of 5, making him or her a "high risk" patient. The individual would have a 40% chance of being relapse-free over the next 5 years, a 44% chance of complete response, and a 26% chance of surviving for 5 years.

- Age over 60 years
- Late-stage disease (Stages 3 and 4)
- More than one extranodal site
- High LDH
- Poor general health

The IPI is used to identify patients who are at low risk for disease recurrence with standard therapy. In addition, the IPI can identify individuals who are at high risk for disease recurrence despite receiving standard therapy. In such cases, the physician may suggest appropriate clinical trials for treatment. Finally, the IPI can sort out intermediate risk patients who should be counseled about the options of conventional versus more aggressive therapy.

International Prognostic Index Scoring

RISK	IPI SCORE	COMPLETE RESPONSE RATE	RELAPSE-FREE 5-YEAR SURVIVAL	OVERALL 5-YEAR SURVIVAL
Low	0-1	87%	70%	73%
Low/ intermediate	2	67%	50%	51%
High/ intermediate	3	55%	49%	43%
High	>4	44%	40%	26%