SEER RESEARCH PLUS DATA DESCRIPTION

CASES DIAGNOSED IN 1975-2021

Submission: November 2023

Follow-up Cutoff Date: December 31, 2022

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Diagnosis Years: 1975-2021

Note: The SEER registries included in the linkage have changed over time: Massachusetts, New York and Idaho registry were first included in LINK2020; Texas in LINK2022; and Illinois in LINK2024. As a result, not all variables will be available for all registries and years. The variables that are available for these newer registries are those variables in this data dictionary that are listed as "Research Plus Limited-Field: Yes". There is no SEER death data for Massachusetts and Illinois, all other registries have death data for SEER and Medicare through 12/31/2022 except Detroit which is through 12/31/2021.

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PATIENT ID

NAACCR Item #: 20 SAS Variable Name: Patient_ID Research Plus Limited-Field: Yes

Field Description: This field is used to uniquely identify a person. One person can have multiple primaries but the same Patient ID. See the sequence number for more information about the primary. This is a dummy number and is not the number used by the registry to identify the patient. The same number is not used across all submissions for each patient.

SEER REGISTRY

NAACCR Item #: 40 SAS Variable Name: SEER_registry Research Plus Limited-Field: Yes

Field Description: A unique code assigned to each participating SEER registry. The number identifies the registry sending the record and what population the data are based on. **Only the last two digits are in the file.**

Code	Description	
0000001501	San Francisco-Oakland SMSA (1975+)	
0000001502	Connecticut (1975+)	
0000001520	Detroit (1975+)	
0000001521	Hawaii (1975+)	
0000001522	Iowa (1975+)	
0000001523	New Mexico (1975+)	
0000001525	Seattle (Puget Sound) (1975+)	
0000001526	Utah (1975+)	
0000001527	Metropolitan Atlanta (1975+)	
0000001529	Alaska (1992+)	
0000001531	San Jose-Monterey (1992+)	
0000001535	Los Angeles (1992+)	
0000001537	Rural Georgia (1992+)	
0000001541	Greater California (excl. SF, Los Ang. & SJ) (2000+)	
0000001542	Kentucky (2000+)	
0000001543	Louisiana (2000+)	
0000001544	New Jersey (2000+)	
0000001547	Greater Georgia (excluding Atlanta and Rural GA)	
0000001561	Idaho* (2000+ limited data fields)	
0000001562	New York* (2000+ limited data fields)	
0000001563	Massachusetts* (2000+ limited data fields)	
0000001565	Illinois* (2000+ limited data fields)	
0000001566	Texas* (2000+ limited data fields)	

(Year in parentheses refers to first diagnosis year of data available)

SEER REGISTRY (WITH CA AND GA AS WHOLE STATES)

NAACCR Item #: N/A SAS Variable Name: SEER_registry_with_CA_and_GA_as_whole_states Research Plus Limited-Field: Yes

Field Description: SEER registries from California and Georgia are combined into state-level groupings representing those two entire states

Code	Description	
02	Alaska Natives	
06	California	
09	Connecticut	
13	Georgia	
15	Hawaii	
16	Idaho	
19	Iowa	
21	Kentucky	
22	Louisiana	
25	Massachusetts	
26	Detroit (Metropolitan)	
34	New Jersey	
35	New Mexico	
36	New York	
49	Utah	
53	Seattle (Puget Sound)	
65	Illinois	
66	Texas	

LOUISIANA 2005 – 1^{ST} VS 2^{ND} HALF OF THE YEAR

NAACCR Item #: N/A SAS Variable Name: Louisiana20051stvs2ndhalfofyear Research Plus Limited-Field: Yes

Field Description: This variable can be used to distinguish cases diagnosed in Louisiana between July and December of 2005, when reporting may have been affected by hurricanes Katrina and Rita. See https://seer.cancer.gov/data/hurricane.html

Code	Description
0	Not applicable (not 2005 Louisiana)
1	Louisiana: January-June (includes unknown) 2005
2	Louisiana: July-December 2005

MARITAL STATUS AT DIAGNOSIS

NAACCR Item #: 150 SAS Variable Name: Marital_status_at_diagnosis Research Plus Limited-Field: Yes

Field Description: This data item identifies the patient's marital status at the time of diagnosis for the reportable tumor.

Code	Description	
1	Single (never married)	
2	Married (including common law)	
3	Separated	
4	Divorced	
5	Widowed	
6	Unmarried or domestic partner (same sex or opposite sex or unregistered)	
9	Unknown	
14	Blank	

RACE/ETHNICITY

NAACCR Item #: N/A SAS Variable Name: Race_ethnicity Research Plus Limited-Field: Yes

Field Description: Recode which gives priority to non-white races for persons of mixed races. Note that not all codes were in effect for all years. For more information, see <u>https://seer.cancer.gov/seerstat/variables/seer/race_ethnicity/.</u>

Code	Description	
01	White	
02	Black	
03	American Indian, Aleutian, Alaskan Native or Eskimo (includes all indigenous	
	populations of the Western hemisphere)	
04	Chinese	
05	Japanese	
06	Filipino	
07	Hawaiian	
08	Korean (Effective with 1/1/1988 dx)	
10	Vietnamese (Effective with $1/1/1988 dx$)	
11	Laotian (Effective with 1/1/1988 dx)	
12	Hmong (Effective with 1/1/1988 dx)	
13	Kampuchean (including Khmer and Cambodian) (Effective with 1/1/1988 dx)	
14	Thai (Effective with 1/1/1994 dx)	
15	Asian Indian or Pakistani, NOS (Effective with 1/1/1988 dx)	
16	Asian Indian (Effective with 1/1/2010 dx)	
17	Pakistani (Effective with $1/1/2010 dx$)	
20	Micronesian, NOS (Effective with 1/1/1991)	
21	Chamorran (Effective with 1/1/1991 dx)	
22	Guamanian, NOS (Effective with 1/1/1991 dx)	
25	Polynesian, NOS (Effective with 1/1/1991 dx)	
26	Tahitian (Effective with $1/1/1991 dx$)	
27	Samoan (Effective with 1/1/1991 dx)	
28	Tongan (Effective with 1/1/1991 dx)	
30	Melanesian, NOS (Effective with $1/1/1991 dx$)	
31	Fiji Islander (Effective with 1/1/1991 dx)	
32	New Guinean (Effective with $1/1/1991 dx$)	
96	Other Asian, including Asian, NOS and Oriental, NOS (Effective with 1/1/1991 dx)	
97	Pacific Islander, NOS (Effective with 1/1/1991 dx)	
98	Other	
99	Unknown	

SEER Participants San Francisco, San Jose-Monterey, and Los Angeles are permitted to use codes 14 and 20-97 for cases diagnosed after January 1, 1987. Greater California is permitted to use codes 14 and 20-97 for cases diagnosed after January 1, 1988. Other SEER participants may choose to recode cases diagnosed prior to 1991 using 14 and 20-97 if all cases in the following race codes are reviewed: 96 Other Asian; 97 Pacific Islander, NOS; 98 Other; and 99 unknown.

SEX

NAACCR Item #: 220 SAS Variable Name: Sex Research Plus Limited-Field: Yes

Field Description: Includes 1= Male and 2=Female from Sex [NAACCR Item #220].

Code	Description
1	Male
2	Female
9	Not stated (unknown)

AGE RECODE WITH SINGLE AGES AND 90+

NAACCR Item #: N/A SAS Variable Name: Agerecodewithsingle_ages_and_90. Research Plus Limited-Field: Yes

Field Description: Patient's age at diagnosis with all ages 90 and over grouped together.

AGE RECODE WITH SINGLE AGES AND 85+

NAACCR Item #: N/A SAS Variable Name: Agerecodewithsingle_ages_and_85 Research Plus Limited-Field: Yes

Field Description: Patient's age at diagnosis with all ages over 85 grouped together.

Code	Description
000-084	Actual age in years
85	85+ years
127	Unknown age

AGE RECODE WITH <1 YEAR OLDS AND 90+

NAACCR Item #: N/A SAS Variable Name: Agerecodewith1_year_olds_and_90 Research Plus Limited-Field: Yes

Field Description: The age recode variable is based on Age at Diagnosis (single-year ages). The groupings used in the age recode variable are determined by the age groupings in the population data. This recode has 20 age groups in the age recode variable (< 1 year, 1-4 years, 5-9 years, ..., 90+ years).

Code	Description
00	Age 00
01	Ages 01-04
02	Ages 05-09
03	Ages 10-14
04	Ages 15-19
05	Ages 20-24
06	Ages 25-29
07	Ages 30-34
08	Ages 35-39
09	Ages 40-44
10	Ages 45-49
11	Ages 50-54
12	Ages 55-59
13	Ages 60-64
14	Ages 65-69
15	Ages 70-74
16	Ages 75-79
17	Ages 80-84
18	Ages 85-89
19	Ages 90+

SEQUENCE NUMBER

NAACCR Item #: 380 SAS Variable Name: Sequence_number Research Plus Limited-Field: Yes

Field Description: Sequence Number-Central describes the number and sequence of all reportable malignant, in situ, benign, and borderline primary tumors, which occur over the lifetime of a patient. The sequence number may change over the lifetime of the patient. If an individual previously diagnosed with a single reportable malignant neoplasm is subsequently diagnosed with a second reportable malignant neoplasm, the sequence code for the first neoplasm changes from 00 to 01.

(continued on next page)

(continued from Sequence Number)

This sequence number counts all tumors that were reportable in the year they were diagnosed even if the tumors occurred before the registry existed, or before the registry participated in the SEER Program. The purpose of sequencing based on the patient's *lifetime* is to truly identify the patients for survival analysis who only had one malignant primary in their lifetimes.

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)
59	Fifty-ninth of fifty-nine 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.)

MONTH OF DIAGNOSIS

NAACCR Item #: 390 SAS Variable Name: Month_of_diagnosis Research Plus Limited-Field: Yes

Field Description: The month of diagnosis is the month the tumor was first diagnosed by a recognized medical practitioner, whether clinically or microscopically confirmed. SEER dates on this file do not have the corresponding date flag field included. Blank means unknown.

 $\frac{\text{Allowable values}}{\text{MM} = 01 - 12}$ 14=Blank

YEAR OF DIAGNOSIS

NAACCR Item #: 390 SAS Variable Name: Year_of_diagnosis Research Plus Limited-Field: Yes

Field Description: The year of diagnosis is the year the tumor was first diagnosed by a recognized medical practitioner, whether clinically or microscopically confirmed. Year of Diagnosis: values are 1975-forward but may be a subset depending on the file that is used and the registry that is selected. There are no unknown values in the file.

 $\frac{\text{Allowable values}}{\text{YYYY} = 1975 - \text{forward}}$

YEAR OF FOLLOW-UP RECODE

NAACCR Item #: 1782 SAS Variable Name: Year_of_follow_up_recode Research Plus Limited-Field: No (See page 1; Data is available for older registries and NY, ID and TX)

Field Description: The earlier of the Year of Last Contact (NAACCR #1750) and the study cutoff. (Date of death per Medicare is available for all persons included in the linkage)

YEAR OF DEATH RECODE

NAACCR Item #: N/A SAS Variable Name: Year_of_death_recode Research Plus Limited-Field: No (See page 1; Data is available for older registries and NY, ID and TX)

Field Description: Year of death for patients who died before the study cutoff, as coded in year of follow-up recode. (Date of death per Medicare is available for all persons included in the linkage)

COC ACCREDITED FLAG (2018+)

NAACCR Item #: 2152 SAS Variable Name: CoC_Accredited_Flag_2018 Research Plus Limited-Field: Yes

Field Description: CoC Accredited Flag is assigned at the point and time of data abstraction to label an abstract being prepared for an analytic cancer case at a facility accredited by the Commission on Cancer (CoC). The flag may be assigned manually or can be defaulted by the registry's software.

MONTH OF DIAGNOSIS RECODE

NAACCR Item #: N/A SAS Variable Name: Month_of_diagnosis_recode Research Plus Limited-Field: Yes

Field Description: Estimates month of diagnosis, based on other known dates for that patient, when actual month of diagnosis is unknown.

Code	Description
1	January
2	February
3	March
4	April
5	May
6	June
7	July
8	August
9	September
10	October
11	November
12	December

PRIMARY SITE

NAACCR Item #: 400 SAS Variable Name: Primary_Site Research Plus Limited-Field: Yes

Field Description: This data item identifies the site in which the primary tumor originated. See the *International Classification of Diseases for Oncology*, Third Edition (ICD-O-3) for topography codes. The decimal point is eliminated.

Cases diagnosed 1977-1991 were coded using the *International Classification of Diseases for Oncology*, 1976 Edition (ICD-O-1976). Prior to 1977 diagnoses, cases were coded using the *Manual of Tumor Nomenclature and Coding*, 1968 (MOTNAC).

All cases 1975-1991 were machine-converted to ICD-O-3 codes without complete hand review and may lack the specificity of the ICD-O-3 primary site codes.

LATERALITY

NAACCR Item #: 410 SAS Variable Name: Laterality Research Plus Limited-Field: Yes

Field Description: Laterality describes the side of a paired organ or side of the body on which the reportable tumor originated. Starting with cases diagnosed January 1, 2004 and later, laterality is coded for select invasive, benign, and borderline primary intracranial and CNS tumors.

See <u>http://seer.cancer.gov/manuals/primsite.laterality.pdf</u> for a list of sites for which SEER requires information on laterality.

Code	Description
0	Not a paired site
1	Right: origin of primary
2	Left: origin of primary
3	Only one side involved, right or left origin unspecified
4	Bilateral involvement, lateral origin unknown; stated to be single primary
	• Both ovaries involved simultaneously, single histology
	Bilateral retinoblastomas
	Bilateral Wilms's tumors
5	Paired site: midline tumor
9	Paired site, but no information concerning laterality; midline tumor

HISTOLOGIC TYPE ICD-O-3

NAACCR Item #: 522 SAS Variable Name: Histologic_Type_ICD_O_3 Research Plus Limited-Field: Yes

Field Description: The data item Histologic Type 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 coding the histology for tumors diagnosed in 2001 and later.

All ICD-O-2 histologies for 1975-2000 were converted to ICD-O-3.

BEHAVIOR CODE ICD-O-3

NAACCR Item #: 523 SAS Variable Name: Behavior_code_ICD_O_3 Research Plus Limited-Field: Yes

Field Description: SEER requires registries to collect malignancies with in situ /2 and malignant /3 behavior codes as described in ICD-O-3. SEER requires registries to collect benign /0 and borderline /1 intracranial and CNS tumors for cases diagnosed on or after 1/1/2004. Behavior is the fifth digit of the morphology code after the slash (/). See ICD-O-3 (page 66) for a discussion of the behavior code. Behavior code has had the same definitions in previous versions but may be associated differently with histologies over time. For example, borderline of the ovary were considered malignant in ICD-O-2 but benign in ICD-O-3. cases diagnosed in 1973-2000 were coded in earlier versions and converted to ICD-O-3 and coded directly for 2001+. In situ bladder cases have been converted to malignant in this field. See Behavior recode for consistency over time.

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)

All ICD-O-2 behaviors for 1975-2000 were converted to ICD-O-3.

SCHEMA ID (2018+)

NAACCR Item #: 3800 SAS Variable Name: Schema_ID_2018 Research Plus Limited-Field: Yes

Field Description: This variable allows the linkage of 2018+ Site-Specific Data Items (SSDIs), including grade data items, with the appropriate site/histology grouping.

GRADE CLINICAL (2018+)

NAACCR Item #: 3843 SAS Variable Name: Grade_Clinical_2018 Research Plus Limited-Field: Yes

Field Description: Refer to the most recent Grade Manual for additional site-specific instructions. <u>https://apps.naaccr.org/ssdi/list/</u>

GRADE PATHOLOGICAL (2018+)

NAACCR Item #: 3844 SAS Variable Name: Grade_Pathological_2018 Research Plus Limited-Field: Yes

Field Description: Refer to the most recent Grade Manual for additional site-specific instructions. <u>https://apps.naaccr.org/ssdi/list/</u>

GRADE RECODE (THRU 2017)

NAACCR Item #: 440 SAS Variable Name: Grade_Recode_thru_2017 Research Plus Limited-Field: Yes

Field Description: Set to unknown for breast cases with conflicting data for Nottingham or Bloom-Richardson (BR) Score/Grade in 2010-2017. Based on grade codes in ICD-O-3. Cases diagnosed in 1973-2000 were coded in earlier versions and may lack the specificity of the 2001+ cases that were coded directly, especially for lymphomas/leukemias. For more information See data description: https://seer.cancer.gov/datacoftware/degumentation/gagestat/pay/2024/TaytData EileDeggrintion_pay/2024.pdf

software/documentation/seerstat/nov2024/TextData.FileDescription-nov2024.pdf

Code	Description
1	Grade I; grade i; grade 1; well differentiated; differentiated, NOS
2	Grade II; grade ii; grade 2; moderately differentiated; moderately
	differentiated; intermediate differentiation
3	Grade III; grade iii; grade 3; poorly differentiated; differentiated
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	N K cell (natural killer cell)
9	Unknown, cell type not determined, not stated or not applicable

DERIVED SUMMARY GRADE 2018 (2018+)

NAACCR Item #: 1975 SAS Variable Name: derivedSummaryGrade2018 Research Plus Limited-Field: Yes

Field Description: Derived from Grade Clinical (2018+), Item #=3843 and Grade Pathological (2018+), Item #=3844. Prior to 2018, grade was collected prior to neoadjuvant therapy, which is why Grade Post-therapy Clin (yc) and Grade Post-Therapy (yp) are not part of the calculation.

DIAGNOSTIC CONFIRMATION

NAACCR Item #: 490 SAS Variable Name: Diagnostic_Confirmation Research Plus Limited-Field: Yes

Field Description: This data item 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.

Microscopically Confirmed

WIICIUSC	opically commined
Code	Description
1	Positive histology
2	Positive cytology
3	Positive histology PLUS - positive immunophenotyping
	AND/OR positive genetic studies (Used only for hematopoietic
	and lymphoid neoplasms M-9590/3-9992/3)
4	Positive microscopic confirmation, method not specified

Not Microscopically Confirmed

Code	Description
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

Code	Description
9	Unknown whether microscopically confirmed; death
	certificate only

TYPE OF REPORTING SOURCE

NAACCR Item #: 500 SAS Variable Name: Type_of_Reporting_Source Research Plus Limited-Field: Yes

Field Description: The Type of Reporting Source identifies the source documents used to abstract the case. This is not necessarily the original document that identified the case; rather, it is the source that provided the best information. It is used in survival analysis to eliminate cases which are found at autopsy or the only information is from a death certificate.

Code	Description
1	Hospital inpatient; Managed health plans with comprehensive, unified medical records (new code definition effective with diagnosis on or after 1/1/2006)
2	Radiation Treatment Centers or Medical Oncology Centers (hospital-affiliated or independent) (effective with diagnosis on or after 1/1/2006)
3	Laboratory Only (hospital-affiliated or independent)
4	Physician's Office/Private Medical Practitioner (LMD)
5	Nursing/Convalescent Home/Hospice
6	Autopsy Only
7	Death Certificate Only
8	Other hospital outpatient units/surgery centers (effective with diagnosis on or after $1/1/2006$)

EOD 10-SIZE (1988-2003)

NAACCR Item #: 780 SAS Variable Name: EOD_10_size_1988_2003 Research Plus Limited-Field: No

Field Description: This item is part of the 10-digit EOD (Item #779). It records the largest dimension of the primary tumor in millimeters. Unknown size=999.

This field is only coded for cases diagnosed 1988-2003. See *SEER Extent of Disease, 1988: Codes and Coding Instructions*, Third Edition for site-specific codes and coding rules, at http://seer.cancer.gov/manuals/EOD10Dig.pub.pdf.

Note: For 2004-2015, similar type of information was collected in CS Tumor Size (2004-2015) in the collaborative stage variables.

EOD 10-EXTENT (1988-2003)

NAACCR Item #: 790 SAS Variable Name: EOD_10_extent_1988_2003 Research Plus Limited-Field: No

Field Description: This item codes the farthest documented extension of tumor away from the primary site, either by contiguous extension or distant metastases. Allowable values = 00-99.

This field is only coded for cases diagnosed 1988-2003. See *SEER Extent of Disease, 1988: Codes and Coding Instructions*, Third Edition for site-specific codes and coding rules, at http://seer.cancer.gov/manuals/EOD10Dig.pub.pdf.

Note: For 2004-2015, similar type of information was collected in CS extension (2004-2015) and CS Mets at DX (2004-2015) in the collaborative stage variables.

EOD 10—PROSTATE PATH EXT (1995-2003)

NAACCR Item #: 800 SAS Variable Name: EOD10Prostatepathext_1995_2003 Research Plus Limited-Field: No

Field Description: This is an additional field for prostate cancer only to reflect information from radical prostatectomy, effective with 1995 diagnoses. The field is left blank for all other primaries. Allowable values = 00-99.

This field is only coded for prostate cases diagnosed 1995-2003. See *SEER Extent of Disease, 1988: Codes and Coding Instructions*, Third Edition for site-specific codes and coding rules, at http://seer.cancer.gov/manuals/EOD10Dig.pub.pdf.

Note: For 2004+, similar type of information was collected in CS SSF 3 in the collaborative stage variables.

EOD 10-NODES (1995-2003)

NAACCR Item #: 810 SAS Variable Name: EOD_10_nodes_1988_2003 Research Plus Limited-Field: No

Field Description: This item records the highest specific lymph node chain that is involved by the tumor. Allowable values = 0-9.

This field is only coded for cases diagnosed 1988-2003. See *SEER Extent of Disease, 1988: Codes and Coding Instructions*, Third Edition for site-specific codes and coding rules, at http://seer.cancer.gov/manuals/EOD10Dig.pub.pdf.

Note: For 2004-2015, similar type of information was collected in CS Lymph Nodes (2004-2015) in the collaborative stage variables.

REGIONAL NODES POSITIVE (1988+)

NAACCR Item #: 820 SAS Variable Name: Regional_nodes_positive_1988 Research Plus Limited-Field: No

Field Description: Records the exact number of regional lymph nodes examined by the pathologist that were found to contain metastases.

Code	Description
00	All nodes examined are negative
01-89	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 number is unspecified
98	No nodes were examined
99	Unknown whether nodes are positive; not applicable; not stated in patient record
126	Blank

REGIONAL NODES EXAMINED (1988+)

NAACCR Item #: 830 SAS Variable Name: Regional_nodes_examined_1988 Research Plus Limited-Field: No

Field Description: 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	Exact number of 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	Unknown whether nodes were examined; not applicable or negative; not stated in patient record
126	Blank

EXPANDED EOD (1) – EXPANDED EOD (13)

NAACCR Item #: 840 SAS Variable Name: Expanded_EOD_1_CP65_1973_1982 --Expanded_EOD_13_CP65_1973_1982 Research Plus Limited-Field: No

Field Description: Detailed site-specific codes for EOD used by SEER for selected sites of cancer for tumors diagnosed 1975-1982, except death-certificate-only cases.

For details, reference the following website: http://seer.cancer.gov/manuals/historic/EOD 1977.pdf

EOD 4 – SIZE (1983-1987) EOD 4 – EXTENT (1983-1987) EOD 4 – NODES (1983-1987)

NAACCR Item #: 860 SAS Variable Name: EOD_4_extent_1983_1987 EOD_4_nodes_1983_1987 EOD_4_size_1983_1987 Research Plus Limited-Field: No

Field Description Codes for site-specific EOD used by SEER for tumors diagnosed from January 1, 1983 to December 31, 1987 for all cancer sites. For details, reference the following website: http://seer.cancer.gov/manuals/historic/EOD_1984.pdf

> First and second digit- EOD 4 – SIZE (1983-1987) Third digit- EOD 4 – EXTENT (1983-1987) Fourth digit- EOD 4 – NODES (1983-1987)

CODING SYSTEM - EOD (1973-2003)

NAACCR Item#: 870 SAS Variable Name: Coding_system_EOD_1973_2003 Research Plus Limited-Field: No

Field Description: Indicates the type of SEER EOD code applied to the tumor.

Code	Description
0	2-Digit Nonspecific Extent of Disease (1973-82)
1	2-Digit Site-Specific Extent of Disease (1973-82)
2	13-Digit (expanded) Site Specific Extent of Disease (1973-82)
3	4-Digit Extent of Disease (1983-87)
4	10-Digit Extent of Disease, 1988 (1988-2003)
6	Blank

TUMOR MARKER 1 (1990-2003)

NAACCR Item #: 1150 SAS Variable Name: Tumor_marker_1_1990_2003 Research Plus Limited-Field: No

Field Description: This data item records prognostic indicators for breast cases (ERA 1990-2003), prostate cases (PAP 1998-2003) and testis cases (AFP 1998-2003).

(Continued on next page)

(Continued from TUMOR MARKER 1 (1990-2003))

Code	Description
0	None Done
1	Positive
2	Negative
3	Borderline; undetermined whether
	positive or negative
8	Ordered, but results not in chart
9	Unknown or no information
14	Blank

For Testicular Cancer Cases (AFP 1998-2003)

Code	Description
0	None Done (SX)
2	Within normal limits (S0)
4	Range 1 (S1) <1,000 ng/ml
5	Range 2 (S2) 1,000 – 10,000 ng/ml
6	Range 3 (S3) >10,000 ng/ml
8	Ordered, but results not in chart
9	Unknown or no information
14	Blank

For All Other Cases

Code	Description
9	Not applicable

All sites except Breast diagnosed 1990-1997 are coded 9.

All diagnoses before January 1, 1990 are coded 9.

All diagnoses after 2003 are blank.

For Breast and Testis cases diagnosed 2004+, this information is collected using CS Site-Specific Factor 1 (NAACCR Item #2880). For Prostate cases diagnosed 2004+, information is no longer collected.

For breast cancer cases, ERA over time is available in ER Status Recode Breast Cancer (1990+).

TUMOR MARKER 2 (1990-2003)

NAACCR Item #: 1160 SAS Variable Name: Tumor_marker_2_1990_2003 Research Plus Limited-Field: No

Field Description: This data item records prognostic indicators for breast cases (PRA 1990-2003) and testis cases (hCG 1998-2003).

For Breast Cancer Cases (PRA 1990-2003)

Code	Description
0	None Done
1	Positive
2	Negative
3	Borderline; undetermined whether
	positive or negative
8	Ordered, but results not in chart
9	Unknown or no information
14	Blank

For Testicular Cancer Cases (hCG 1998-2003)

Code	Description
0	None Done (SX)
2	Within normal limits (S0)
4	Range 1 (S1) <5,000 mlU/ml
5	Range 2 (S2) 5,000 – 50,000 mlU/ml
6	Range 3 (S3) to >50,000 mlU/ml
8	Ordered, but results not in chart
9	Unknown or no information
14	Blank

For All Other Cases

Code	Description
9	Not applicable

All sites except Breast diagnosed 1990-1997 are coded 9.

All diagnoses before January 1, 1990 are coded 9.

All diagnoses after 2003 are blank.

For Breast and Testis cases diagnosed 2004+, this information is collected using CS Site-Specific Factor 2 (NAACCR Item #2890).

For breast cancer cases, PRA over time is available in PR Status Recode Breast Cancer (1990+).

TUMOR MARKER 3 (1998-2003)

NAACCR Item #: 1170 SAS Variable Name: Tumor_marker_3_1990_2003 Research Plus Limited-Field: No

Field Description: This data item records prognostic indicators for testis cases (LDH 1998-2003)

Code	Description
0	None Done (SX)
2	Within normal limits (S0)
4	Range 1 (S1) <1.5 x upper limit of normal for LDH assay
5	Range 2 (S2) 1.5 – 10 x upper limit of normal for LDH assay
6	Range 3 (S3) >10 x upper limit of normal for LDH assay
8	Ordered, results not in chart
9	Unknown or no information
14	Blank

All sites except testis diagnosed 1998-2003 are coded 9.

All diagnoses before 1998 are coded 9.

All diagnoses after 2003 are blank.

For Testis cases diagnosed 2004+, this information is collected using CS Site-Specific Factor 3 (NAACCR Item # 2900).

CS TUMOR SIZE (2004-2015)

NAACCR Item #: 2800 SAS Variable Name: CS_tumor_size_2004_2015 Research Plus Limited-Field: No

Field Description: Information on tumor size. Available for 2004-2015 diagnosis years. Earlier cases may be converted and new codes added which weren't available for use prior to the current version of CS. For more information, see <u>http://seer.cancer.gov/seerstat/variables/seer/ajcc-stage</u>.

Code	Description
000	Indicates no mass or no tumor found; for example, when a
	tumor of a stated primary site is not found, but the tumor has
	metastasized.
001-988	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
996-998	Site-specific codes where needed
999	Unknown; size not stated; not stated in patient record
888	Not applicable
1022	Blank

Examples:

Mammogram shows 2.5 cm breast malignancy
CT of chest shows 4 cm mass in RULCode as 025 (2.5 cm = 25 millimeters)
Code as 040 (4 cm = 40 mm)Thyroidectomy specimen yields 8 mm carcinomaCode as 040 (4 cm = 40 mm)Prostate needle biopsy shows 0.6 mm carcinomaCode as 001 (round up six-tenths of mm)

CS EXTENSION (2004-2015)

NAACCR Item #: 2810 SAS Variable Name: CS_extension_2004_2015 Research Plus Limited-Field: No

Field Description: Information on extension of the tumor. Available for 2004-2015 diagnosis years. Earlier cases may be converted and new codes added which weren't available for use prior to the current version of CS. For more information, see <u>http://seer.cancer.gov/seerstat/variables/seer/ajcc-stage</u>.

Note: This item was originally a 2-digit field and was expanded to 3 digits during conversion. Generally, a zero was added to the right of the existing 2-digit field, except for 99 which became 999.

CS LYMPH NODES (2004-2015)

NAACCR Item #: 2830 SAS Variable Name: CS_lymph_nodes_2004_2015 Research Plus Limited-Field: No

Field Description: Information on involvement of lymph nodes. Available for 2004-2015 diagnosis years. Earlier cases may be converted and new codes added which weren't available for use prior to the current version of CS. For more information, see http://seer.cancer.gov/seerstat/variables/seer/ajcc-stage.

Note: This item was originally a 2-digit field and was expanded to 3 digits during conversion. Generally, a zero was added to the right of the existing 2-digit field, except for 99 which became 999.

CS METS AT DX (2004-2015)

NAACCR Item #: 2850 SAS Variable Name: CS_mets_at_dx_2004_2015 Research Plus Limited-Field: No

Field Description: Information on distant metastasis. Available for 2004-2015 diagnosis years. Earlier cases may be converted and new codes added which weren't available for use prior to the current version of CS. For more information, see <u>http://seer.cancer.gov/seerstat/variables/seer/ajcc-stage</u>.

CS SITE-SPECIFIC FACTOR 1 (2004-2017 varying by schema)

NAACCR Item #: 2880 SAS Variable Name: CSsitespecificfactor120042017va Research Plus Limited-Field: No

Field Description: Each CS site-specific factor (SSF) is schema dependent. They can provide information needed to stage the case, clinically relevant information, or prognostic information. Available for varying years and schemas depending on standard setter requirements. Earlier cases may be converted and new codes added which weren't available for use prior to the current version of CS.

For more information, see https://seer.cancer.gov/seerstat/databases/ssf/

CS SITE-SPECIFIC FACTOR 2 (2004-2017 varying by schema)

NAACCR Item #: 2890 SAS Variable Name: CSsitespecificfactor220042017va Research Plus Limited-Field: No

Field Description: Each CS site-specific factor (SSF) is schema dependent. They can provide information needed to stage the case, clinically relevant information, or prognostic information. Available for varying years and schemas depending on standard setter requirements. Earlier cases may be converted and new codes added which weren't available for use prior to the current version of CS.

For more information, see https://seer.cancer.gov/seerstat/databases/ssf/

CS SITE-SPECIFIC FACTOR 3 (2004-2017 varying by schema)

NAACCR Item #: 2900 SAS Variable Name: CSsitespecificfactor320042017va Research Plus Limited-Field: No

Field Description: Each CS site-specific factor (SSF) is schema dependent. They can provide information needed to stage the case, clinically relevant information, or prognostic information. Available for varying years and schemas depending on standard setter requirements. Earlier cases may be converted and new codes added which weren't available for use prior to the current version of CS.

CS SITE-SPECIFIC FACTOR 4 (2004-2017 varying by schema)

NAACCR Item #: 2910 SAS Variable Name: CSsitespecificfactor420042017va Research Plus Limited-Field: No

Field Description: Each CS site-specific factor (SSF) is schema dependent. They can provide information needed to stage the case, clinically relevant information, or prognostic information. Available for varying years and schemas depending on standard setter requirements. Earlier cases may be converted and new codes added which weren't available for use prior to the current version of CS.

For more information, see https://seer.cancer.gov/seerstat/databases/ssf/

CS SITE-SPECIFIC FACTOR 5 (2004-2017 varying by schema)

NAACCR Item #: 2920 SAS Variable Name: CSsitespecificfactor520042017va Research Plus Limited-Field: No

Field Description: Each CS site-specific factor (SSF) is schema dependent. They can provide information needed to stage the case, clinically relevant information, or prognostic information. Available for varying years and schemas depending on standard setter requirements. Earlier cases may be converted and new codes added which weren't available for use prior to the current version of CS.

For more information, see https://seer.cancer.gov/seerstat/databases/ssf/

CS SITE-SPECIFIC FACTOR 6 (2004-2017 varying by schema)

NAACCR Item #: 2930 SAS Variable Name: CSsitespecificfactor620042017va Research Plus Limited-Field: No

Field Description: Each CS site-specific factor (SSF) is schema dependent. They can provide information needed to stage the case, clinically relevant information, or prognostic information. Available for varying years and schemas depending on standard setter requirements. Earlier cases may be converted and new codes added which weren't available for use prior to the current version of CS.

ADJUSTED CS SITE-SPECIFIC FACTOR 7 (2004-2017 VARYING BY SCHEMA)

NAACCR Item #: 2861 SAS Variable Name: AdjustedCSsitespecificfactor720 Research Plus Limited-Field: No

Field Description: Set to unknown for breast cases with conflicting data for Grade. Each CS site-specific factor (SSF) is schema dependent. They can provide information needed to stage the case, clinically relevant information, or prognostic information. Available for varying years and schemas depending on standard setter requirements. Earlier cases may be converted and new codes added which weren't available for use prior to the current version of CS. For more information, see https://seer.cancer.gov/seerstat/databases/ssf/

CS SITE-SPECIFIC FACTOR 8 (2004-2017 varying by schema)

NAACCR Item #: 2862 SAS Variable Name: CSsitespecificfactor820042017va Research Plus Limited-Field: No

Field Description: Each CS site-specific factor (SSF) is schema dependent. They can provide information needed to stage the case, clinically relevant information, or prognostic information. Available for varying years and schemas depending on standard setter requirements. Earlier cases may be converted and new codes added which weren't available for use prior to the current version of CS.

For more information, see https://seer.cancer.gov/seerstat/databases/ssf/

CS SITE-SPECIFIC FACTOR 9 (2004-2017 varying by schema)

NAACCR Item #: 2863 SAS Variable Name: CSsitespecificfactor920042017va Research Plus Limited-Field: No

Field Description: Each CS site-specific factor (SSF) is schema dependent. They can provide information needed to stage the case, clinically relevant information, or prognostic information. Available for varying years and schemas depending on standard setter requirements. Earlier cases may be converted and new codes added which weren't available for use prior to the current version of CS.

CS SITE-SPECIFIC FACTOR 10 (2004-2017 varying by schema)

NAACCR Item #: 2864 SAS Variable Name: CSsitespecificfactor1020042017v Research Plus Limited-Field: No

Field Description: Each CS site-specific factor (SSF) is schema dependent. They can provide information needed to stage the case, clinically relevant information, or prognostic information. Available for varying years and schemas depending on standard setter requirements. Earlier cases may be converted and new codes added which weren't available for use prior to the current version of CS.

For more information, see https://seer.cancer.gov/seerstat/databases/ssf/

CS SITE-SPECIFIC FACTOR 11 (2004-2017 varying by schema)

NAACCR Item #: 2865 SAS Variable Name: CSsitespecificfactor1120042017v Research Plus Limited-Field: No

Field Description: Each CS site-specific factor (SSF) is schema dependent. They can provide information needed to stage the case, clinically relevant information, or prognostic information. Available for varying years and schemas depending on standard setter requirements. Earlier cases may be converted and new codes added which weren't available for use prior to the current version of CS.

For more information, see https://seer.cancer.gov/seerstat/databases/ssf/

CS SITE-SPECIFIC FACTOR 12 (2004-2017 varying by schema)

NAACCR Item #: 2866 SAS Variable Name: CSsitespecificfactor1220042017v Research Plus Limited-Field: No

Field Description: Each CS site-specific factor (SSF) is schema dependent. They can provide information needed to stage the case, clinically relevant information, or prognostic information. Available for varying years and schemas depending on standard setter requirements. Earlier cases may be converted and new codes added which weren't available for use prior to the current version of CS.

CS SITE-SPECIFIC FACTOR 13 (2004-2017 varying by schema)

NAACCR Item #: 2867 SAS Variable Name: CSsitespecificfactor1320042017v Research Plus Limited-Field: No

Field Description: Each CS site-specific factor (SSF) is schema dependent. They can provide information needed to stage the case, clinically relevant information, or prognostic information. Available for varying years and schemas depending on standard setter requirements. Earlier cases may be converted and new codes added which weren't available for use prior to the current version of CS.

For more information, see https://seer.cancer.gov/seerstat/databases/ssf/

CS SITE-SPECIFIC FACTOR 15 (2004-2017 varying by schema)

NAACCR Item #: 2869 SAS Variable Name: CSsitespecificfactor1520042017v Research Plus Limited-Field: No

Field Description: Each CS site-specific factor (SSF) is schema dependent. They can provide information needed to stage the case, clinically relevant information, or prognostic information. Available for varying years and schemas depending on standard setter requirements. Earlier cases may be converted and new codes added which weren't available for use prior to the current version of CS.

For more information, see https://seer.cancer.gov/seerstat/databases/ssf/

CS SITE-SPECIFIC FACTOR 16 (2004-2017 varying by schema)

NAACCR Item #: 2870 SAS Variable Name: CSsitespecificfactor1620042017v Research Plus Limited-Field: No

Field Description: Each CS site-specific factor (SSF) is schema dependent. They can provide information needed to stage the case, clinically relevant information, or prognostic information. Available for varying years and schemas depending on standard setter requirements. Earlier cases may be converted and new codes added which weren't available for use prior to the current version of CS.

CS SITE-SPECIFIC FACTOR 25 (2004-2017 varying by schema)

NAACCR Item #: 2879 SAS Variable Name: CSsitespecificfactor2520042017v Research Plus Limited-Field: No

Field Description: Each CS site-specific factor (SSF) is schema dependent. They can provide information needed to stage the case, clinically relevant information, or prognostic information. Available for varying years and schemas depending on standard setter requirements. Earlier cases may be converted and new codes added which weren't available for use prior to the current version of CS.

DERIVED AJCC T, 6th ED (2004-2015)

NAACCR Item #: 2940 SAS Variable Name: DerivedAJCC_T_6th_ed_2004_2015 Research Plus Limited-Field: No

Field Description: This is the AJCC "T" component that is derived from CS coded fields, using the CS algorithm, effective with 2004-2015 diagnosis years. For more information, see <u>variable documentation</u>.

Code	Description
99	ТХ
00	Т0
01	Та
05	Tis
06	Tispu (Urethra only)
07	Tispd (Urethra only)
10	T1
11	T1mic
19	T1 NOS
12	T1a
13	Tlal
14	T1a2
15	T1b
16	T1b1
17	T1b2
18	T1c
20	T2
29	T2 NOS
21	T2a
22	T2b
23	T2c
30	T3
39	T3 NOS
31	T3a
32	T3b
33	T3c
40	T4
49	T4 NOS
41	T4a
42	T4b
43	T4c
44	T4d
80	Tla NOS
81	T1b NOS
88	Not applicable
126	Blank
DERIVED AJCC N, 6th ED (2004-2015)

NAACCR Item #: 2960 SAS Variable Name: DerivedAJCC_N_6th_ed_2004_2015 Research Plus Limited-Field: No

Field Description: This is the AJCC "N" component that is derived from CS coded fields, using the CS algorithm, effective with 2004-2015 diagnosis years. For more information, see <u>variable documentation</u>.

Code	Description
99	NX
00	N0
01	N0(i-)
02	N0(i+)
03	N0(mol-)
04	N0(mol+)
10	N1
19	N1 NOS
11	Nla
12	N1b
13	N1c
18	N1mi
20	N2
29	N2 NOS
21	N2a
22	N2b
23	N2c
30	N3
39	N3 NOS
31	N3a
32	N3b
33	N3c
88	Not applicable
126	Blank

DERIVED AJCC M, 6th ED (2004-2015)

NAACCR Item #: 2980 SAS Variable Name: DerivedAJCC_M_6th_ed_2004_2015 Research Plus Limited-Field: No

Field Description: This is the AJCC "M" component that is derived from CS coded fields, using the CS algorithm, effective with 2004-2015 diagnosis years. For more information, see <u>variable documentation</u>.

Code	Description
99	MX
00	M0
10	M1
11	M1a
12	M1b
13	M1c
19	M1 NOS
88	Not applicable
126	Blank

DERIVED AJCC STAGE GROUP, 6th ED (2004-2015)

NAACCR Item #: 3000 SAS Variable Name: DerivedAJCCStageGroup6thed2004 Research Plus Limited-Field: No

Field Description: This is the AJCC "Stage Group" component that is derived from CS detailed site-specific codes, using the CS algorithm, effective with 2004-2015 diagnosis years. For more information, see <u>variable documentation</u>.

Code	Description
00	Stage 0
01	Stage 0a
02	Stage 0is
10	Stage I
11	Stage I NOS
12	Stage IA
13	Stage IA1
14	Stage IA2
15	Stage IB
16	Stage IB1
17	Stage IB2
18	Stage IC

Code	Description
19	Stage IS
23	Stage ISA (lymphoma only)
24	Stage ISB (lymphoma only)
20	Stage IEA (lymphoma only)
21	Stage IEB (lymphoma only)
22	Stage IE (lymphoma only)
30	Stage II
31	Stage II NOS
32	Stage IIA
33	Stage IIB
34	Stage IIC
35	Stage IIEA (lymphoma only)
36	Stage IIEB (lymphoma only)
37	Stage IIE (lymphoma only)
38	Stage IISA (lymphoma only)
39	Stage IISB (lymphoma only)
40	Stage IIS (lymphoma only)
41	Stage IIESA (lymphoma only)
42	Stage IIESB (lymphoma only)
43	Stage IIES (lymphoma only)
50	Stage III
51	Stage III NOS
52	Stage IIIA
53	Stage IIIB
54	Stage IIIC
55	Stage IIIEA (lymphoma only)
56	Stage IIIEB (lymphoma only)
57	Stage IIIE (lymphoma only)
58	Stage IIISA (lymphoma only)
59	Stage IIISB (lymphoma only)
60	Stage IIIS (lymphoma only)
61	Stage IIIESA (lymphoma only)
62	Stage IIIESB (lymphoma only)
63	Stage IIIES (lymphoma only)
70	Stage IV
71	Stage IV NOS
72	Stage IVA
73	Stage IVB
74	Stage IVC
88	Not applicable
90	Stage Occult
99	Stage Unknown
126	Blank

(Continued from DERIVED AJCC STAGE GROUP, 6th ED (2004-2015))

SEER COMBINED SUMMARY STAGE 2000 (2004-2017)

NAACCR Item #: N/A SAS Variable Name: SEERCombinedSummaryStage2000200 Research Plus Limited-Field: Yes

Field Description: Combination of NAACCR Items #759 and #3020. For 2004-2015 cases, it is copied from Derived SS2000 and for 2016+, it is the best available between Derived SS2000 and SEER Summary Stage 2000. All benign/borderline cases are set to NA.

COMBINED SUMMARY STAGE (2004+)

NAACCR Item #: N/A SAS Variable Name: Combined_Summary_Stage_2004 Research Plus Limited-Field: Yes

Field Description: Combined Summary Stage field to facilitate stage analyses over time. Created from SEER Combined Summary Stage 2000 (2004-2017) & Derived Summary Stage 2018 (2018+). For more information including sites, years and registries for which it isn't calculated, see <u>https://seer.cancer.gov/seerstat/variables/seer/lrd-stage/</u>

CS VERSION INPUT ORIGINAL (2004-2015)

NAACCR Item #: 2935 SAS Variable Name: CSversioninputoriginal20042015 Research Plus Limited-Field: No

Field Description: This item indicates the number of the version used to initially code CS fields. The first two digits represent the major version number; the second two digits represent minor version changes; and the last two digits represent even less significant changes, such as corrections of typographical errors that do not affect coding or derivation of results.

This data item along with CS version input current gives info on what document to use for the CS codes. For more information, see http://seer.cancer.gov/seerstat/variables/seer/ajcc-stage.

CS VERSION DERIVED (2004-2015)

NAACCR Item #: 2936 SAS Variable Name: CS_version_derived_2004_2015 Research Plus Limited-Field: No

Field Description: This item indicates the number of the version of the CS used most recently to derive the CS output fields. The first two digits represent the major version number; the second two digits represent minor version changes; and the last two digits represent even less significant changes, such as corrections of typographical errors that do not affect coding or derivation of results.

CS VERSION INPUT CURRENT (2004-2015)

NAACCR Item #: 2937 SAS Variable Name: CSversioninputcurrent2004_2015 Research Plus Limited-Field: No

Field Description: This item indicates the number of the version of the CS after input fields have been updated or recoded. The first two digits represent the major version number; the second two digits represent minor version changes; and the last two digits represent even less significant changes, such as corrections of typographical errors that do not affect coding or derivation of results.

This data item along with CS version input original gives info on what document to use for the CS codes. For more information, see http://seer.cancer.gov/seerstat/variables/seer/ajcc-stage.

RX SUMM—SURG PRIM SITE (1998+)

NAACCR Item #: 1290 SAS Variable Name: RX_Summ_Surg_Prim_Site_1998 Research Plus Limited-Field: Yes (2003+)

Field Description: 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. The actual coding schemes for individual sites and diagnosis years can be viewed <u>here</u>

The amount/detail of information has varied over time and caution should be used when looking at trends over time.

General Coding Structure

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
126	Blank
]	For diagnosis years 1998-2002, SEER registries were required to convert field RX
S	Summ—Surg Site 98-02 (NAACCR Item #1646) to RX Summ—Surg Prim Site.

RX SUMM—SCOPE REG LN SUR (2003+)

NAACCR Item #: 1292 SAS Variable Name: RX_Summ_Scope_Reg_LN_Sur_2003 Research Plus Limited-Field: Yes

Field Description: 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 at all facilities.

Changed to Unknown or Not Applicable for breast cancer cases. See <u>http://seer.cancer.gov/seerstat/variables/seer/regional_ln/</u> for more information.

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
14	Blank

RX SUMM-SURG OTH REG/DIS (2003+)

NAACCR Item #: 1294 SAS Variable Name: RX_Summ_Surg_Oth_Reg_Dis_2003 Research Plus Limited-Field: Yes

Field Description: 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
14	Blank

RX SUMM-REG LN EXAMINED (1998-2002)

NAACCR Item #: 1296 SAS Variable Name: RXSummRegLN_Examined_1998_2002 Research Plus Limited-Field: No

Field Description: This data item records the number of regional lymph nodes examined in conjunction with surgery performed as part of the first course of treatment at all facilities. This item is only available for cases diagnosed 1998-2002.

Code	Description
00	No regional lymph nodes examined
01	One regional lymph node examined
02	Two regional lymph nodes examined
	(Actual number of lymph nodes examined)
90	90 or more regional lymph nodes examined
95	No regional lymph nodes examined
96	Regional lymph node removal documented as sampling, and number of lymph nodes unknown/not stated
97	Regional lymph node removal documented as dissection, and number of lymph nodes unknown/not stated
98	Regional lymph nodes surgically removed, but number of lymph nodes unknown/not stated and not documented as sampling or dissection
99	Unknown; not stated; death certificate-only
126	Blank

RX SUMM-SYSTEMIC/SUR SEQ (2007+)

NAACCR Item #: 1639 SAS Variable Name: RX_Summ_Systemic_Sur_Seq_2007 Research Plus Limited-Field: Yes

Field Description: This data item records the sequencing of systemic therapy and surgical procedures given as part of first course of treatment.

Code	Description
0	No systemic therapy and/or surgical procedures; unknown if
	surgery and/or systemic therapy given
2	Systemic therapy before surgery
3	Systemic therapy after surgery
4	Systemic therapy both before and after surgery
5	Intraoperative systemic therapy
6	Intraoperative systemic therapy with other therapy administered
	before and/or after surgery
7	Surgery both before and after systemic therapy
9	Sequence unknown, but both surgery and systemic therapy
	given

RX SUMM—SURG/RAD SEQ

NAACCR Item #: 1380 SAS Variable Name: Radiation_sequence_with_surgery Research Plus Limited-Field: Yes (2006+)

Field Description: This field records the order in which surgery and radiation therapies were administered for those patients who had both surgery and radiation.

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
6	Intraoperative radiation with other radiation given before and/or after surgery
7	Surgery both before and after radiation
9	Sequence unknown, but both surgery and radiation were given

REASON NO CANCER-DIRECTED SURGERY

NAACCR Item #: 1340 SAS Variable Name: Reasonnocancerdirected_surgery Research Plus Limited-Field: Yes (2006+)

Field Description: This data item documents the reason that surgery was not performed.

Code	Description
0	Surgery performed

No surgery

Code	Description
1*	Surgery not recommended
2*	Contraindicated due to other conditions; Autopsy Only case (1973-2002)
5	Patient died before recommended surgery
6	Unknown reason for no surgery
7*	Patient or patient's guardian refused

Unknown if surgery performed

Code	Description
8	Recommended, unknown if done
9	Unknown if surgery performed; Death Certificate Only case; Autopsy only case (2003+)
14	Blank
* 0 1	

*Codes not used prior to 1988. Code '2' used only for Autopsy Only cases prior to 1988.

RADIATION RECODE

NAACCR Item #: N/A SAS Variable Name: Radiation_recode Research Plus Limited-Field: Yes (2003+, excl IL & TX)

Field Description: Created from RX Summ—Radiation, Item #=1360, for 1975-2017 and Phase X Radiation Treatment Modality, Item #s=1506, 1516 and 1526, for 2018+. Unknown has been combined with None. Please consider limitations when using this field: <u>https://seer.cancer.gov/data/treatment.html</u>

Code	Description
0	None/Unknown; 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
6	Other radiation (1973-1987 cases only)
7	Patient or patient's guardian refused radiation therapy
8	Radiation recommended, unknown if administered

CHEMOTHERAPY RECODE (YES, NO/UNK)

NAACCR Item #: N/A SAS Variable Name: Chemotherapy_recode_yes_no_unk Research Plus Limited-Field: Yes (2004+)

Field Description: This field records whether chemotherapy was given. Created from NAACCR Item 1360. Please consider limitations when using this field: <u>https://seer.cancer.gov/data/treatment.html</u>

Code	Description
0	None/Unknown
1	Yes

SITE SPECIFIC SURGERY (1973-1997 VARYING DETAIL BY YEAR AND SITE)

NAACCR Item #: 1640 SAS Variable Name: Sitespecificsurgery19731997var Research Plus Limited-Field: No

Field Description: For detailed information on individual sites and time periods please see: <u>http://seer.cancer.gov/seerstat/variables/seer/surgery/</u>

> This field specifies information on surgery during first course of therapy whether it was cancer-directed or not. (Prior to 1988 SEER did not collect information on surgical procedures if not cancer-directed.) The Reason for No Cancer-directed Surgery field must be used to distinguish among no cancer-directed surgery performed; cancer-directed surgery recommended, unknown if performed; and unknown if cancer-directed surgery performed.

SCOPE OF REG LYMPH ND SURG (1998-2002)

NAACCR Item #: 1647 SAS Variable Name: Scopeofreglymphndsurg1998_2002 Research Plus Limited-Field: No

Field Description: This field describes the removal, biopsy or aspiration of regional lymph node(s) at the time of surgery of the primary site or during a separate surgical event at all facilities for cases diagnosed 1998-2002.

Changed to Unknown or Not Applicable for breast cancer cases. See <u>http://seer.cancer.gov/seerstat/variables/seer/regional_ln/</u> for more information.

See <u>http://seer.cancer.gov/manuals/historic/AppendC.pdf</u> for a list of valid codes.

SURGERY OF OTH REG/DIS SITES (1998-2002)

NAACCR Item #: 1648 SAS Variable Name: Surgeryofothregdissites1998200 Research Plus Limited-Field: No

Field Description: This field records the removal of distant lymph nodes or other tissue(s)/organ(s) beyond the primary site given at all facilities as part of the first course of treatment for cases diagnosed 1998-2002.

See <u>http://seer.cancer.gov/manuals/historic/AppendC.pdf</u> for a list of valid codes.

RECORD NUMBER RECODE

NAACCR Item #: 1775 SAS Variable Name: Record_number_recode Research Plus Limited-Field: Yes

Field Description: This variable sequentially numbers a person's tumors. The ordered values are based on date of diagnosis and then sequence number. This variable is used as part of the algorithm for calculating the survival time recode variables (NAACCR items 1782-1788) and is used for survival, prevalence, and multiple primary – standardized incidence ratio analyses in SEER*Stat.

Code	Description
01	Record number 01 for patient
02	Record number 02 for patient
99	Record number 99 for patient

AGE RECODE WITH <1 YEAR OLDS

NAACCR Item #: N/A SAS Variable Name: Age_recode_with_1_year_olds Research Plus Limited-Field: Yes

Field Description: The age recode variable is based on Age at Diagnosis (single-year ages). The groupings used in the age recode variable are determined by the age groupings in the population data. This recode has 19 age groups in the age recode variable (< 1 year, 1-4 years, 5-9 years, ..., 85+ years).

Code	Description
00	Age 00
01	Ages 01-04
02	Ages 05-09
03	Ages 10-14
04	Ages 15-19
05	Ages 20-24
06	Ages 25-29
07	Ages 30-34
08	Ages 35-39
09	Ages 40-44
10	Ages 45-49
11	Ages 50-54
12	Ages 55-59
13	Ages 60-64
14	Ages 65-69
15	Ages 70-74
16	Ages 75-79
17	Ages 80-84
18	Ages 85+
29	Unknown Age

SITE RECODE ICD-O-3/WHO 2008

NAACCR Item #: N/A SAS Variable Name: Site_recode_ICD_O_3_WHO_2008 Research Plus Limited-Field: Yes

Field Description: A recode based on Primary Site and ICD-O-3 Histology in order to make analyses of site/histology groups easier. For example, the lymphomas are excluded from stomach and Kaposi and mesothelioma are separate categories based on histology. For more information, see <u>http://seer.cancer.gov/siterecode/icdro3_dwhoheme/index.html</u>

SITE RECODE – RARE TUMORS

NAACCR Item #: N/A SAS Variable Name: Site_recode_rare_tumors Research Plus Limited-Field: Yes

Field Description: Cancer type grouping to define clinically relevant, histologically defined rare cancers. For more information, see <u>https://seer.cancer.gov/seerstat/variables/seer/raresiterecode/</u>

BEHAVIOR RECODE FOR ANALYSIS

NAACCR Item #: N/A SAS Variable Name: Behavior_recode_for_analysis Research Plus Limited-Field: Yes

Field Description: This recode was created so that data analyses could eliminate major groups of histologies/behaviors that weren't collected consistently over time, for example benign brain, myelodysplastic syndromes, and borderline tumors of the ovary. Created from ICD-O-3 behavior and histology. For more information, see http://seer.cancer.gov/behavrecode.

Code	Description
0	Benign
1	Borderline malignancy
2	In situ
3	Malignant
4	Only malignant in ICD-O-3
5	No longer reportable in ICD-O-3
6	Only malignant 2010+

HISTOLOGY RECODE—BROAD GROUPINGS

NAACCR Item #: N/A SAS Variable Name: Histologyrecodebroad_groupings Research Plus Limited-Field: Yes

Field Description: Based on Histologic Type ICD-O-3.

Code	Description
00	8000-8009 : unspecified neoplasms
01	8010-8049 : epithelial neoplasms, NOS
02	8050-8089 : squamous cell neoplasms
03	8090-8119 : basal cell neoplasms
04	8120-8139 : transitional cell papillomas and carcinomas
05	8140-8389 : adenomas and adenocarcinomas
06	8390-8429 : adnexal and skin appendage neoplasms
07	8430-8439 : mucoepidermoid neoplasms
08	8440-8499 : cystic, mucinous and serous neoplasms
09	8500-8549 : ductal and lobular neoplasms
10	8550-8559 : acinar cell neoplasms
11	8560-8579 : complex epithelial neoplasms
12	8580-8589 : thymic epithelial neoplasms
13	8590-8679 : specialized gonadal neoplasms
14	8680-8719 : paragangliomas and glumus tumors
15	8720-8799 : nevi and melanomas
16	8800-8809 : soft tissue tumors and sarcomas, NOS
17	8810-8839 : fibromatous neoplasms
18	8840-8849 : myxomatous neoplasms
19	8850-8889 : lipomatous neoplasms
20	8890-8929 : myomatous neoplasms
21	8930-8999 : complex mixed and stromal neoplasms
22	9000-9039 : fibroepithelial neoplasms
23	9040-9049 : synovial-like neoplasms
24	9050-9059 : mesothelial neoplasms
25	9060-9099 : germ cell neoplasms
26	9100-9109 : trophoblastic neoplasms
27	9110-9119 : mesonephromas
28	9120-9169 : blood vessel tumors
29	9170-9179 : lymphatic vessel tumors

(Continued from	n HISTOLOGY	RECODE-	-BROAD	GROUPINGS)
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Code	Description
30	9180-9249 : osseous and chondromatous neoplasms
31	9250-9259 : giant cell tumors
32	9260-9269 : miscellaneous bone tumors (C40,C41)
33	9270-9349 : odontogenic tumors (C41)
34	9350-9379 : miscellaneous tumors
35	9380-9489 : gliomas
36	9490-9529 : neuroepitheliomatous neoplasms
37	9530-9539: meningiomas
38	9540-9579 : nerve sheath tumors
39	9580-9589 : granular cell tumors & alveolar soft part sarcomas
40	9590-9599 : malignant lymphomas, NOS or diffuse
41	9650-9669 : hodgkin lymphomas
42	9670-9699 : nhl - mature b-cell lymphomas
43	9700-9719 : nhl - mature t and nk-cell lymphomas
44	9720-9729 : nhl - precursor cell lymphoblastic lymphoma
45	9730-9739 : plasma cell tumors
46	9740-9749 : mast cell tumors
47	9750-9759 : neoplasms of histiocytes and accessory lymphoid cells
48	9760-9769 : immunoproliferative diseases
49	9800-9805: leukemias, nos
50	9820-9839 : lymphoid leukemias (C42.1)
51	9840-9939 : myeloid leukemias (C42.1)
52	9940-9949 : other leukemias (C42.1)
53	9950-9969 : chronic myeloproliferative disorders (C42.1)
54	9970-9979 : other hematologic disorders
55	9980-9989 : myelodysplastic syndrome
98	other

ICCC SITE RECODE EXTENDED 3RD EDITION/IARC 2017

NAACCR Item #: N/A SAS Variable Name: ICCCsiterecodeextended3rdediti Research Plus Limited-Field: Yes

Field Description: Based on ICD-O-3. For more information on this International Classification of Childhood Cancer (ICCC) site/histology recode, see https://seer.cancer.gov/iccc. While the recode is normally used for childhood cancers, it is on the file for all ages so that childhood cancers could be compared across age groups. For more information, see https://seer.cancer.gov/iccc/iccc-iarc-2017.html

TNM 7/CS v0204+ Schema (thru 2017)

NAACCR Item #: N/A SAS Variable Name: TNM_7_CS_v0204_Schema_thru_2017 Research Plus Limited-Field: No

Field Description: CS information is collected under the specifications of a particular schema based on site and histology. This recode should be used in any analysis of 7th ed stage and T, N, M.

(Table begins on next page)

Code	Description
001	AdnexaUterineOther
002	AdrenalGland
003	AmpullaVater
004	Anus
005	Appendix
006	BileDuctsDistal
007	BileDuctsIntraHepat
008	BileDuctsPerihilar
009	BiliaryOther
010	Bladder
011	Bone
012	Brain
013	Breast
014	BuccalMucosa
015	CarcinoidAppendix
016	Cervix
017	CNSOther
018	Colon
019	Conjunctiva
020	CorpusAdenosarcoma
021	CorpusCarcinoma
022	CorpusSarcoma
023	CysticDuct
024	DigestiveOther
025	EndocrineOther
026	EpiglottisAnterior
027	Esophagus
028	EsophagusGEJunction
027 028	Esophagus

Code	Description
029	EyeOther
030	FallopianTube
031	FloorMouth
032	Gallbladder
033	GenitalFemaleOther
034	GenitalMaleOther
035	GISTAppendix
036	GISTColon
037	GISTEsophagus
038	GISTPeritoneum
039	GISTRectum
040	GISTSmallIntestine
041	GISTStomach
042	GumLower
043	GumOther
044	GumUpper
045	HeartMediastinum
046	HemeRetic
047	Hypopharynx
048	IllDefinedOther
049	IntracranialGland
050	KaposiSarcoma
051	KidneyParenchyma
052	KidneyRenalPelvis
053	LacrimalGland
054	LacrimalSac
055	LarynxGlottic
056	LarynxOther
057	LarynxSubglottic
058	LarynxSupraglottic
059	LipLower
060	LipOther
061	LipUpper
062	Liver
063	Lung

Code	Description
064	Lymphoma
065	LymphomaOcularAdnexa
066	MelanomaBuccalMucosa
067	MelanomaChoroid
068	MelanomaCiliaryBody
069	MelanomaConjunctiva
070	MelanomaEpiglottisAnterior
071	MelanomaEyeOther
072	MelanomaFloorMouth
073	MelanomaGumLower
074	MelanomaGumOther
075	MelanomaGumUpper
076	MelanomaHypopharynx
077	MelanomaIris
078	MelanomaLarynxGlottic
079	MelanomaLarynxOther
080	MelanomaLarynxSubglottic
081	MelanomaLarynxSupraglottic
082	MelanomaLipLower
083	MelanomaLipOther
084	MelanomaLipUpper
085	MelanomaMouthOther
086	MelanomaNasalCavity
087	MelanomaNasopharynx
088	MelanomaOropharynx
089	MelanomaPalateHard
090	MelanomaPalateSoft
091	MelanomaPharynxOther
092	MelanomaSinusEthmoid
093	MelanomaSinusMaxillary
094	MelanomaSinusOther
095	MelanomaSkin
096	MelanomaTongueAnterior
097	MelanomaTongueBase
098	MerkelCellPenis

Code	Description
099	MerkelCellScrotum
100	MerkelCellSkin
101	MerkelCellVulva
102	MiddleEar
103	MouthOther
104	MycosisFungoides
105	MyelomaPlasmaCellDisorder
106	NasalCavity
107	Nasopharynx
108	NETAmpulla
109	NETColon
110	NETRectum
111	NETSmallIntestine
112	NETStomach
113	Orbit
114	Oropharynx
115	Ovary
116	PalateHard
117	PalateSoft
118	PancreasBodyTail
119	PancreasHead
120	PancreasOther
121	ParotidGland
122	Penis
123	Peritoneum
124	PeritoneumFemaleGen
125	PharyngealTonsil
126	PharynxOther
127	Placenta
128	Pleura
129	Prostate
130	Rectum
131	RespiratoryOther
132	Retinoblastoma
133	Retroperitoneum

Code	Description
134	SalivaryGlandOther
135	Scrotum
136	SinusEthmoid
137	SinusMaxillary
138	SinusOther
139	Skin
140	SkinEyelid
141	SmallIntestine
142	SoftTissue
143	Stomach
144	SubmandibularGland
145	Testis
146	Thyroid
147	TongueAnterior
148	TongueBase
149	Trachea
150	Urethra
151	UrinaryOther
152	Vagina
153	Vulva

TNM 7/CS V0204+ SCHEMA RECODE

NAACCR Item #: N/A SAS Variable Name: TNM_7_CS_v0204_Schema_recode Research Plus Limited-Field: No

Field Description: Allows the identification of categories consistent with TNM 7/CS v0204+ Schema to include cases 2018+. This variable will facilitate the analyses of the 2010+ SSDI recodes, which require consistent cohorts over time. Stomach and Esophagus GE Junction combined into a single grouping.

RACE RECODE (WHITE, BLACK, OTHER)

NAACCR Item #: N/A SAS Variable Name: Race_recode_White_Black_Other Research Plus Limited-Field: Yes

Field Description: Race recode is based on the race variables and the American Indian/Native American IHS link variable. This recode should be used to link to the populations for white, black and other. It is independent of Hispanic ethnicity. For more information, see http://seer.cancer.gov/seerstat/variables/seer/race_ethnicity.

Code	Description
1	White
2	Black
3	Other (American Indian/AK Native, Asian/Pacific Islander)
7	Other unspecified (1991+)
9	Unknown

RACE RECODE (W, B, AI, API)

NAACCR Item #: N/A SAS Variable Name: Race_recode_W_B_AI_API Research Plus Limited-Field: Yes

Field Description: Caution should be exercised when using this variable. For more information, see <u>http://seer.cancer.gov/seerstat/variables/seer/race_ethnicity</u>.

Code	Description
1	White
2	Black
3	American Indian/Alaska Native
4	Asian or Pacific Islander
7	Other unspecified (1991+)
9	Unknown

ORIGIN RECODE NHIA (HISPANIC, NON-HISP)

NAACCR Item #: N/A SAS Variable Name: OriginrecodeNHIAHispanicNonHis Research Plus Limited-Field: Yes

Field Description: Caution should be exercised when using this variable. For more information, see <u>http://seer.cancer.gov/seerstat/variables/seer/race_ethnicity</u>.

Code	Description
0	Non-Spanish-Hispanic-Latino
1	Spanish-Hispanic-Latino

RACE AND ORIGIN RECODE (NHW, NHB, NHAIAN, NHAPI, HISPANIC)

NAACCR Item #: N/A SAS Variable Name: RaceandoriginrecodeNHWNHBNHAIAN Research Plus Limited-Field: Yes

Field Description: Caution should be exercised when using this variable. For more information, see <u>http://seer.cancer.gov/seerstat/variables/seer/race_ethnicity</u>.

SEER HISTORIC STAGE A (1973-2015)

NAACCR Item #: N/A SAS Variable Name: SEERhistoric_stage_A_1973_2015 Research Plus Limited-Field: No

Field Description: Derived from Collaborative Stage (CS) for 2004+ and Extent of Disease (EOD) from 1973-2003. It is a simplified version of stage: in situ, localized, regional, distant, & unknown. Over time several different EOD schemes have been used. Thus caution should be used when doing trend analysis.

For more information including sites and years for which it isn't calculated, see <u>http://seer.cancer.gov/seerstat/variables/seer/lrd-stage</u>.

Code	Description
0	In situ — A noninvasive neoplasm; a tumor which has not penetrated the basement membrane nor extended beyond the epithelial tissue. Some synonyms are intraepithelial (confined to epithelial tissue), noninvasive and noninfiltrating.
1	Localized — An invasive neoplasm confined entirely to the organ of origin. It may include intraluminal extension where specified. For example for colon, intraluminal extension limited to immediately contiguous segments of the large bowel is localized, if no lymph nodes are involved. Localized may exclude invasion of the serosa because of the poor survival of the patient once the serosa is invaded.
2	Regional — A neoplasm that has extended 1) beyond the limits of the organ of origin directly into surrounding organs or tissues; 2) into regional lymph nodes by way of the lymphatic system; or 3) by a combination of extension and regional lymph nodes.
4	Distant — A neoplasm that has spread to parts of the body remote from the primary tumor either by direct extension or by discontinuous metastasis (e.g., implantation or seeding) to distant organs, issues, or via the lymphatic system to distant lymph nodes.
8	Localized/Regional – Only used for Prostate cases.
9	Unstaged — Information is not sufficient to assign a stage.
14	Blank

AJCC STAGE 3rd EDITION (1988-2003)

NAACCR Item #: N/A SAS Variable Name: AJCCstage3rd_edition_1988_2003 Research Plus Limited-Field: No

Field Description: Derived by algorithm from extent of disease (EOD). Not available for all years or for all sites.

For codes and descriptions, see: <u>http://seer.cancer.gov/seerstat/variables/seer/ajcc-stage/3rd.html</u>

SEER MODIFIED AJCC STAGE 3rd ED (1988-2003)

NAACCR Item #: N/A SAS Variable Name: SEERmodifiedAJCCstage3rd198820 Research Plus Limited-Field: No

Field Description: Derived by algorithm from extent of disease (EOD). Not available for all years or for all sites. The modified version stages cases that would be unstaged under strict AJCC staging rules. For example, it assumes NX is N0.

For codes and descriptions, see: http://seer.cancer.gov/seerstat/variables/seer/ajcc-stage/3rd.html

FIRST MALIGNANT PRIMARY INDICATOR

NAACCR Item #: N/A SAS Variable Name: Firstmalignantprimaryindicator Research Plus Limited-Field: Yes

Field Description: Based on all the tumors in SEER. Tumors not reported to SEER are assumed malignant.

Code	Description
0	no
1	yes

STATE

NAACCR Item #: N/A SAS Variable Name: State Research Plus Limited-Field: Yes

Field Description: State FIPS code.

COUNTY

NAACCR Item #: 90 SAS Variable Name: county Research Plus Limited-Field: Yes

Field Description: County of residence at diagnosis. This must be used in conjunction with SEER registry or use State-county variable. For more information, see https://seer.cancer.gov/manuals/2004Revision%201/SPM_AppendixA.pdf.

COUNTY ATRRIBUTES

NAACCR Item #: SAS Variable Names: Medianhouseholdincomeinflation, Rural_Urban_Continuum_Code Research Plus Limited-Field: Yes

Field Description: County attribute data from the U.S. Census are also linked to the SEER*Stat databases. Variables available are dependent on the type of database. For more information, see https://seer.cancer.gov/seerstat/variables/countyattribs/.

PRCDA 2020

NAACCR Item #: N/A SAS Variable Name: PRCDA_2020 Research Plus Limited-Field: Yes

Field Description: This data item identifies whether or not the county of diagnosis is served by purchased/referred care delivery area (PRCDA). The primary use of this field is to be able to limit analyses of AI/AN race to areas served by PRCDA. See <u>https://seer.cancer.gov/seerstat/variables/seer/race_ethnicity</u> OR <u>https://seer.cancer.gov/seerstat/variables/countyattribs/</u>

PRCDA REGION

NAACCR Item #: N/A SAS Variable Name: PRCDA_Region Research Plus Limited-Field: Yes

Field Description: This data item is a grouping of states that is primarily used when working with purchased/referred care delivery area (PRCDA) 2020. See <u>https://seer.cancer.gov/seerstat/variables/seer/race_ethnicity</u> OR <u>https://seer.cancer.gov/seerstat/variables/countyattribs/</u>

Code	Description
1	Alaska
2	East
3	Northern Plains
5	Pacific Coast
6	Southwest

COD TO SITE RECODE

NAACCR Item #: N/A SAS Variable Name: COD_to_site_recode Research Plus Limited-Field: No (See page 1; Data is available for older registries and NY, ID and TX)

Field Description: The underlying cause of death from the death certificate was grouped into a recode similar to the incidence site recode. For more information, see https://seer.cancer.gov/codrecode/1969_d04162012. Study cutoff date has been applied, i.e. coded as alive if death occurred after study cutoff. (Date of death per Medicare is available for all persons included in the linkage)

COD TO SITE REC KM

NAACCR Item #: N/A SAS Variable Name: COD_to_site_rec_KM Research Plus Limited-Field: No (See page 1; Data is available for older registries and NY, ID and TX)

Field Description: This is a recode based on underlying cause of death to designate cause of death into groups similar to the incidence site recode with KS and mesothelioma. For more information, see http://seer.cancer.gov/codrecode/1969+_d04162012. Study cutoff date has been applied, i.e. coded as alive if death occurred after study cutoff. (Date of death per Medicare is available for all persons included in the linkage)

COD TO SITE RECODE ICD-O-3 2023 REVISION

NAACCR Item #: N/A SAS Variable Name: CODtositerecodeICDO32023Revisio Research Plus Limited-Field: No (See page 1; Data is available for older registries and NY, ID and TX)

Field Description: This is a recode based on underlying cause of death to designate cause of death into groups similar to "Site recode ICD-O-3 2023 Revision." For more information, see <u>https://seer.cancer.gov/codrecode/</u>. Study cutoff date has been applied, i.e. coded as alive if death occurred after study cutoff. (Date of death per Medicare is available for all persons included in the linkage)

COD TO SITE RECODE ICD-O-3 2023 REVISION EXPANDED (1999+)

NAACCR Item #: N/A SAS Variable Name: CODtositerecodeICDO32023RevisioA Research Plus Limited-Field: No (See page 1; Data is available for older registries and NY, ID and TX)

Field Description: This is a recode based on underlying cause of death to designate cause of death into groups similar to "Site recode ICD-O-3 2023 Revision Expanded." For more information, see https://seer.cancer.gov/codrecode/. Study cutoff date has been applied, i.e. coded as alive if death occurred after study cutoff. (Date of death per Medicare is available for all persons included in the linkage)

VITAL STATUS RECODE (STUDY CUTOFF USED)

NAACCR Item #: N/A SAS Variable Name: Vitalstatusrecodestudycutoffus Research Plus Limited-Field: No (See page 1; Data is available for older registries and NY, ID and TX)

Field Description: Any patient that dies after the follow-up cut-off date is recoded to alive as of the cut-off date. (Date of death per Medicare is available for all persons included in the linkage)

Code	Description
1	Alive
0	Dead

IHS LINK

NAACCR Item #: 192 SAS Variable Name: IHS_Link Research Plus Limited-Field: Yes

Field Description: Incidence files are periodically linked with Indian Health Service (IHS) files to identify Native Americans. The race recode uses information from this field and race to determine if a person is Native American or not. See http://www.seer.cancer.gov/seerstat/variables/seer/race_ethnicity.

Code	Description
0	Record sent for linkage, no IHS match
1	Record sent for linkage, IHS match
2	Blank

SUMMARY STAGE 2000 (1998-2017)

NAACCR Item #: N/A SAS Variable Name: Summary_stage_2000_1998_2017 Research Plus Limited-Field: No

Field Description: Summary Stage 2000 is derived from Collaborative Stage (CS) for 2004+ and Extent of Disease (EOD) from 1998-2003. It is a simplified version of stage: in situ, localized, regional, distant, & unknown. Used in the SEER CSR and more recent SEER publications. For more information including sites and years for which it isn't calculated, see <u>http://seer.cancer.gov/seerstat/variables/seer/lrd-stage</u>.

AYA SITE RECODE 2020 REVISION

NAACCR Item #: N/A SAS Variable Name: AYA_site_recode_2020_Revision Research Plus Limited-Field: Yes

Field Description: A site/histology recode that is mainly used to analyze data on adolescent and young adults. The recode was applied to all cases no matter the age in order that age comparisons can be made with these groupings. For more information, see https://seer.cancer.gov/ayarecode/

LYMPHOID NEOPLASM RECODE 2021 REVISION

NAACCR Item #: N/A SAS Variable Name: Lymphoidneoplasmrecode2021Revis Research Plus Limited-Field: Yes

Field Description: A site/histology recode that is mainly used to analyze data on lymphoma subtypes. Based on ICD-O-3. Note that cases diagnosed before 2001 were not coded under ICD-O-3 and were converted to ICD-O-3 and may not have the specificity of cases after 2000 that were coded directly under ICD-O-3. For more information, see <u>https://seer.cancer.gov/lymphomarecode/</u>

SEER BRAIN AND CNS RECODE

NAACCR Item #: N/A SAS Variable Name: SEER_Brain_and_CNS_Recode Research Plus Limited-Field: Yes

Field Description: For analyses of brain/CNS tumors according to major histological categories, based on the 2016 World Health Organization Classification of Tumors of the Central Nervous System (CNS). For more information, see https://seer.cancer.gov/seerstat/variables/seer/brain_cns-recode/

SITE RECODE ICD-O-3 2023 REVISION

NAACCR Item #: N/A SAS Variable Name: SiterecodeICD_O_3_2023_Revision Research Plus Limited-Field: Yes

Field Description: For more information see https://seer.cancer.gov/siterecode/

SITE RECODE ICD-O-3 2023 REVISION EXPANDED

NAACCR Item #: N/A SAS Variable Name: SiterecodeICDO32023RevisionExpa Research Plus Limited-Field: Yes

Field Description: For more information, see https://seer.cancer.gov/siterecode/

ICCC SITE RECODE 3RD EDITION/IARC 2017

NAACCR Item #: N/A SAS Variable Name: ICCCsiterecode3rdeditionIARC20 Research Plus Limited-Field: Yes

Field Description: A site/histology recode that is mainly used to analyze data on children. The recode was applied to all cases no matter the age in order that age comparisons can be made with these groupings. Based on ICD-O-3. Note that cases diagnosed before 2001 were not coded under ICD-O-3 and were converted to ICD-O-3 and may not have the specificity of cases after 2000 that were coded directly under ICD-O-3. For more information on this International Classification of Childhood Cancer (ICCC) site recode, see https://seer.cancer.gov/iccc

SEER CAUSE-SPECIFIC DEATH CLASSIFICATION

NAACCR Item #: N/A SAS Variable Name: SEERcausespecificdeathclassifi Research Plus Limited-Field: No (See page 1; Data is available for older registries and NY, ID and TX)

Field Description: Created for use in cause-specific survival. This variable designates that the person died of their cancer for cause-specific survival. For more information, see <u>http://seer.cancer.gov/causespecific</u>. (Date of death per Medicare is available for all persons included in the linkage)

Code	Description
0	Alive or dead of other cause
1	Dead
8	Dead (missing/unknown COD)
9	N/A

SEER OTHER CAUSE OF DEATH CLASSIFICATION

NAACCR Item #: N/A SAS Variable Name: SEERothercauseofdeathclassific Research Plus Limited-Field: No (See page 1; Data is available for older registries and NY, ID and TX)

Field Description: Created for use in left-truncated life table session. This variable designates that the person died of causes other than their cancer. For more information, see <u>http://seer.cancer.gov/causespecific</u>. (Date of death per Medicare is available for all persons included in the linkage)

Code	Description
0	Alive or dead due to cancer
1	Dead
8	Dead (missing/unknown COD)
9	N/A

CS TUMOR SIZE/EXT EVAL (2004-2015)

NAACCR Item #: 2820 SAS Variable Name: CSTumorSize_Ext_Eval_2004_2015 Research Plus Limited-Field: No

Field Description: Available for 2004-2015, but not required for the entire timeframe. Will be blank in cases not collected. For more information, see <u>http://seer.cancer.gov/seerstat/variables/seer/ajcc-stage</u>.

CS REG NODE EVAL (2004-2015)

NAACCR Item #: 2840 SAS Variable Name: CS_Reg_Node_Eval_2004_2015 Research Plus Limited-Field: No

Field Description: Available for 2004-2015, but not required for the entire timeframe. Will be blank in cases not collected. For more information, see <u>http://seer.cancer.gov/seerstat/variables/seer/ajcc-stage</u>.

CS METS EVAL (2004-2015)

NAACCR Item #: 2860 SAS Variable Name: CS_Mets_Eval_2004_2015 Research Plus Limited-Field: No

Field Description: Available for 2004-2015,, but not required for the entire timeframe. Will be blank in cases not collected. For more information, see <u>http://seer.cancer.gov/seerstat/variables/seer/ajcc-stage</u>.

PRIMARY BY INTERNATIONAL RULES

NAACCR Item #: N/A SAS Variable Name: Primary_by_international_rules Research Plus Limited-Field: Yes

Field Description: Created using IARC multiple primary rules. Did not include benign tumors or non-bladder in situ tumors in algorithm. No tumor information was modified on any records.

Code	Description
0	No
1	Yes
9	Excluded from IARC multiple primary algorithm due to behavior

ER STATUS RECODE BREAST CANCER (1990+)

NAACCR Item #: N/A SAS Variable Name: ERStatusRecodeBreastCancer1990 Research Plus Limited-Field: Yes (2010+)

Field Description: Created with combined information from Tumor marker 1 (1990-2003) (NAACCR Item #1150), with information from CS site-specific factor 1 (2004-2017) (NAACCR Item #2880) and Estrogen Receptor Summary (2018+) (NAACCR Item #3827). Coded for cases coded as Breast in TNM 7/CS v0204+ Schema AND EOD Schema ID AND Site recode ICD-O-3/WHO 2008.

Code	Description
1	Positive
2	Negative
3	Borderline
4	Unknown
9	Recode Not Available

PR STATUS RECODE BREAST CANCER (1990+)

NAACCR Item #: N/A SAS Variable Name: PRStatusRecodeBreastCancer1990 Research Plus Limited-Field: Yes (2010+)

Field Description: Created with combined information from Tumor marker 2 (1990-2003) (NAACCR Item #1160), with information from CS site-specific factor 2 (2004-2017) (NAACCR Item #2890) and Progesterone Receptor Summary (2018+) (NAACCR Item #3915). Coded for cases coded as Breast in TNM 7/CS v0204+ Schema AND EOD Schema ID AND Site recode ICD-O-3/WHO 2008.

Code	Description
1	Positive
2	Negative
3	Borderline
4	Unknown
9	Recode Not Available

CS SCHEMA—AJCC 6TH EDITION

NAACCR Item #: N/A SAS Variable Name: CS_Schema_AJCC_6th_Edition Research Plus Limited-Field: No

Field Description: CS information is collected under the specifications of a particular schema based on site and histology. This recode should be used in any analysis of AJCC 6th ed stage and T, N, M. Based on CS version 1, it should not be used for SSFs collected or modified under CS v02.

Code	Description
01	LipUpper
02	LipLower
03	OthLip
04	BaseTongue
05	AntTongue
06	GumUpper
07	GumLower
08	OthGum
09	FOM
10	HardPalate
11	SoftPalate
12	OthMouth
13	BuccalMucosa
14	ParotidGland
15	SubmandibularGland
16	OthSalivary
17	Oropharynx
18	AntEpiglottis
19	Nasopharynx
20	Hypopharynx
21	OthPharynx
22	Esophagus
23	Stomach
24	SmallIntestine
25	Colon
26	Rectum
27	Anus
28	Liver
29	Gallbladder
30	ExtraHepaticDucts
31	Ampulla
(Continued from CS SCHEMA—AJCC 6TH EDITION)

Code	Description
32	OthBiliary
33	PancreasHead
34	PancreasBodyTail
35	OthPancreas
36	OthDigestive
37	NasalCavity
38	MiddleEar
39	MaxillarySinus
40	EthmoidSinus
41	OthSinus
42	GlotticLarynx
43	SupraLarynx
44	SubLarynx
45	OthLarynx
46	Trachea
47	Lung
48	HeartMediastinum
49	Pleura
50	OthRespiratory
51	Bone
52	Skin
53	SkinEyelid
54	Melanoma
55	MF
56	SoftTissue
57	Peritoneum
58	Breast
59	Vulva
60	Vagina
61	Cervix
62	Corpus
63	Ovary
64	FallopianTube
65	OthAdnexa
66	OthFemaleGen
67	Placenta
68	Penis
69	Prostate
70	Testis
71	OthMaleGen

(Continued on next page)

Code	Description
72	Scrotum
73	Kidney
74	RenalPelvis
75	Bladder
76	Urethra
77	OthUrinary
78	Conjunctiva
79	MelanomaConjunctiva
80	OthEye
81	MelanomaIrisCiliary
82	MelanomaChoroid
83	MelanomaOthEye
84	LacrimalGland
85	Orbit
86	Retinoblastoma
87	Brain
88	OthCNS
89	Thyroid
90	OthEndocrine
91	KS
92	Lymphoma
93	HemeRetic
94	OthIllDef

(Continued from CS SCHEMA—AJCC 6TH EDITION)

LYMPH-VASCULAR INVASION (2004+ VARYING BY SCHEMA)

NAACCR Item #: 1182 SAS Variable Name: LymphvascularInvasion2004varyi Research Plus Limited-Field: No

Field Description: LVI is required for cases originally coded under CSv2 or diagnosed 2010+ for the schemas for penis and testis only. On the research file LVI is shown only for testis because it is needed for AJCC 6th ed staging. For penis, LVI is needed for AJCC 7th ed staging only which isn't calculated until 2010.

Code	Description
0	Lymph-vascular Invasion Not Present (absent)/Not Identified
1	Lymph-vascular Invasion Present/Identified
8	Not Applicable Unknown/Indeterminate
9	Unknown/Indeterminate
14	Blank

SURVIVAL MONTHS

NAACCR Item #: N/A SAS Variable Name: Survival_months Research Plus Limited-Field: No (See page 1; Data is available for older registries and NY, ID and TX)

Field Description: Created using complete dates, including days, therefore may differ from survival time calculated from year and month only. For more information, see <u>http://seer.cancer.gov/survivaltime</u>. (Date of death per Medicare is available for all persons included in the linkage)

Code	Description
000-9998	000-9998 months
9999	Unknown

SURVIVAL MONTHS FLAG

NAACCR Item #: N/A SAS Variable Name: Survival_months_flag Research Plus Limited-Field: No (See page 1; Data is available for older registries and NY, ID and TX)

Field Description: Created using complete dates, including days, therefore may differ from survival time calculated from year and month only. For more information, see <u>http://seer.cancer.gov/survivaltime</u>. (Date of death per Medicare is available for all persons included in the linkage)

Code	Description
0	Complete dates are available and there are 0 days of survival
1	Complete dates are available and there are more than 0 days of survival
2	Incomplete dates are available and there could be zero days of follow-up
3	Incomplete dates are available and there cannot be zero days of follow-up
8	Not calculated because a Death Certificate Only or Autopsy Only case
9	Unknown

DERIVED AJCC T, 7TH ED (2010-2015)

NAACCR Item #: 3400 SAS Variable Name: DerivedAJCC_T_7th_ed_2010_2015 Research Plus Limited-Field: No

Field Description: This is the AJCC "T" component that is derived from CS coded fields, using the CS algorithm, effective with 2010-2015 diagnosis years. See the CS site-specific schema for details: (http://seer.cancer.gov/seerstat/variables/seer/ajcc-stage).

Code	Description
999	TX
000	T0
010	Та
050	Tis
060	Tispu (Urethra only)
070	Tispd (Urethra only)
100	T1
110	T1mic
199	T1 NOS
120	T1a
130	Tlal
140	T1a2
150	T1b
160	T1b1
170	T1b2
180	T1c
181	T1d
200	T2
299	T2 NOS
210	T2a
211	T2a1
212	T2a2
213	T2a NOS
220	T2b
230	T2c
240	T2d
300	T3
399	T3 NOS
310	T3a
320	T3b
330	T3c
400	T4
499	T4 NOS

(Continued on next page)

Code	Description
410	T4a
420	T4b
430	T4c
440	T4d
450	T4e
800	T1a NOS
810	T1b NOS
888	Not applicable
1022	Blank

(Continued from DERIVED AJCC T, 7TH ED (2010-2015))

DERIVED AJCC N, 7TH ED (2010-2015)

NAACCR Item #: 3410 SAS Variable Name: DerivedAJCC_N_7th_ed_2010_2015 Research Plus Limited-Field: No

Field Description: This is the AJCC "N" component that is derived from CS coded fields, using the CS algorithm, effective with 2010-2015 diagnosis years. See the CS site-specific schema for details: (http://seer.cancer.gov/seerstat/variables/seer/ajcc-stage).

Cell	D
Code	Description
999	NX
000	N0
010	N0(i-)
020	N0(i+)
030	N0(mol-)
040	N0(mol+)
100	N1
199	N1 NOS
110	Nla
120	N1b
130	N1c
180	N1mi
200	N2
299	N2 NOS
210	N2a
220	N2b
230	N2c
300	N3

(Continued on next page)

(Continued from DERIVED AJCC N, 7TH ED (2010-2015))

Code	Description
399	N3 NOS
310	N3a
320	N3b
330	N3c
400	N4
888	Not applicable
1022	Blank

DERIVED AJCC M, 7TH ED (2010-2015)

NAACCR Item #: 3420 SAS Variable Name: DerivedAJCC_M_7th_ed_2010_2015 Research Plus Limited-Field: No

Field Description:	This is the AJCC "M" component that is derived from CS coded fields, using	
_	the CS algorithm, effective with 2010-2015 diagnosis years. See the CS site-	
	specific schema for details:	
	(http://seer.cancer.gov/seerstat/variables/seer/ajcc-stage).	

Code	Description
999	MX
000	M0
010	M0(i+)
100	M1
110	M1a
120	M1b
130	M1c
140	M1d
150	M1e
199	M1 NOS
888	Not applicable
1022	Blank

DERIVED AJCC STAGE GROUP, 7TH ED (2010-2015)

NAACCR Item #: 3430 SAS Variable Name: DerivedAJCCStageGroup7thed2010 Research Plus Limited-Field: No

Field Description: This is the AJCC "Stage Group" component that is derived from CS coded fields, using the CS algorithm, effective with 2010-2015 diagnosis years. See the CS site-specific schema for details: (http://seer.cancer.gov/seerstat/variables/seer/ajcc-stage).

Code	Description	
000	Stage 0	
010	Stage 0a	
020	Stage 0is	
100	Stage I	
110	Stage I NOS	
120	Stage IA	
130	Stage IA1	
140	Stage IA2	
121	Stage IA NOS	
150	Stage IB	
160	Stage IB1	
170	Stage IB2	
151	Stage IB NOS	
180	Stage IC	
190	Stage IS	
230	Stage ISA (lymphoma only)	
240	Stage ISB (lymphoma only)	
200	Stage IEA (lymphoma only)	
210	Stage IEB (lymphoma only)	
220	Stage IE (lymphoma only)	
300	Stage II	
310	Stage II NOS	
320	Stage IIA	
321	Stage IIA NOS	
322	Stage IIA1	
323	Stage IIA NOS	
330	Stage IIB	
340	Stage IIC	
350	Stage IIEA (lymphoma only)	
360	Stage IIEB (lymphoma only)	
370	Stage IIE (lymphoma only)	
380	Stage IISA (lymphoma only)	

(Continued on next page)

Code	Description
390	Stage IISB (lymphoma only)
400	Stage IIS (lymphoma only)
410	Stage IIESA (lymphoma only)
420	Stage IIESB (lymphoma only)
430	Stage IIES (lymphoma only)
500	Stage III
510	Stage III NOS
520	Stage IIIA
530	Stage IIIB
540	Stage IIIC
541	Stage IIIC1
542	Stage IIIC2
550	Stage IIIEA (lymphoma only)
560	Stage IIIEB (lymphoma only)
570	Stage IIIE (lymphoma only)
580	Stage IIISA (lymphoma only)
590	Stage IIISB (lymphoma only)
600	Stage IIIS (lymphoma only)
610	Stage IIIESA (lymphoma only)
620	Stage IIIESB (lymphoma only)
630	Stage IIIES (lymphoma only)
700	Stage IV
710	Stage IV NOS
720	Stage IVA
730	Stage IVB
740	Stage IVC
888	Not applicable
900	Stage Occult
999	Stage Unknown
1022	Blank

(Continued from DERIVED AJCC STAGE GROUP, 7TH ED (2010-2015)

7TH EDITION STAGE GROUP RECODE (2016-2017)

NAACCR Item #: N/A SAS Variable Name: V7thEditionStageGroupRecode2016 Research Plus Limited-Field: No

Field Description: Created from NAACCR Item #=3430 for cases where Collaborative Stage was available and #=3614 (2016-2017) for cases with only TNM stage available.

BREAST—ADJUSTED AJCC 6TH T (1988-2015)

NAACCR Item #: N/A SAS Variable Name: BreastAdjustedAJCC6thT19882015 Research Plus Limited-Field: No

Field Description: Created from merged EOD 3rd Edition and Collaborative Stage disease information. Currently only available for Breast schema. For more information see <u>http://seer.cancer.gov/seerstat/variables/seer/ajcc-stage/6th.</u>

Code	Description
00	T0
01	Та
05	Tis
06	Tispu
07	Tispd
10	T1
11	T1mic
12	Tla
13	Tlal
14	T1a2
15	T1b
16	T1b1
17	T1b2
18	Tlc
19	T1NOS
20	T2
21	T2a
22	T2b
23	T2c
29	T2NOS
30	T3
31	T3a
32	T3b
33	T3c
39	T3NOS
40	T4
41	T4a
42	T4b
43	T4c
44	T4d
49	T4NOS
60	Any T, Mets
80	T1aNOS

(Continued on next page)

FIELD DESCRIPTIONS

(Continued from BREAST—ADJUSTED AJCC 6TH T (1988-2015)

Code	Description
81	T1bNOS
88	N/A
99	TX Adjusted
126	Blank

BREAST—ADJUSTED AJCC 6TH N (1988-2015)

NAACCR Item #: N/A SAS Variable Name: BreastAdjustedAJCC6thN19882015 Research Plus Limited-Field: No

Field Description: Created from merged EOD 3rd Edition and Collaborative Stage disease information. Currently only available for Breast schema. For more information see <u>http://seer.cancer.gov/seerstat/variables/seer/ajcc-stage/6th.</u>

Code	Description
00	N0
01	N0(i-)
02	N0(i+)
03	N0(mo1-)
04	N0(mo1+)
09	N0NOS
10	N1
11	Nla
12	N1b
13	N1c
18	N1mi
19	N1NOS
20	N2
21	N2a
22	N2b
23	N2c
29	N2NOS
30	N3
31	N3a

(Continued on next page)

Code	Description
32	N3b
33	N3c
39	N3NOS
60	Any N, Mets
70	NXr
80	NXa
88	N/A
99	NX Adjusted
126	Blank

(Continued from BREAST—ADJUSTED AJCC 6TH N (1988-2015))

BREAST—ADJUSTED AJCC 6TH M (1988-2015)

NAACCR Item #: N/A SAS Variable Name: BreastAdjustedAJCC6thM19882015 Research Plus Limited-Field: No

Field Description: Created from merged EOD 3rd Edition and Collaborative Stage disease information. Currently only available for Breast schema. For more information see <u>http://seer.cancer.gov/seerstat/variables/seer/ajcc-stage/6th.</u>

Code	Description
00	M0
10	M1
11	Mla
12	M1b
13	M1c
19	M1NOS
88	N/A
99	MX
126	Blank

BREAST—ADJUSTED AJCC 6TH STAGE (1988-2015)

NAACCR Item #: N/A SAS Variable Name: BreastAdjustedAJCC6thStage1988 Research Plus Limited-Field: No

Field Description: Created from merged EOD 3rd Edition and Collaborative Stage disease information. Currently only available for Breast schema. For more information see <u>http://seer.cancer.gov/seerstat/variables/seer/ajcc-stage/6th.</u>

Code	Description
00	0
01	0a
02	0is
10	Ι
11	INOS
12	IA
13	IA1
14	IA2
15	IB
16	IB1
17	IB2
18	IC
19	IS
20	IEA
21	IEB
22	IE
23	ISA
24	ISB
30	II
31	IINOS
32	IIA
33	IIB
34	IIC
35	IIEA
36	IIEB
37	IIE
38	IISA
39	IISB
40	IIS
41	IIESA

(Continued on next page)

Code	Description
43	IIES
50	III
51	IIINOS
52	IIIA
53	IIIB
54	IIIC
55	IIIEA
56	IIIEB
57	IIIE
58	IIISA
59	IIISB
60	IIIS
61	IIIESA
62	IIIESB
63	IIIES
70	IV
71	IVNOS
72	IVA
73	IVB
74	IVC
88	N/A
90	OCCULT
99	UNK Stage
126	Blank

(Continued from BREAST—ADJUSTED AJCC 6TH STAGE (1988-2015))

DERIVED HER2 RECODE (2010+)

NAACCR Item #: N/A SAS Variable Name: Derived_HER2_Recode_2010 Research Plus Limited-Field: Yes

Field Description: Created with combined information from several CS site-specific factors (2010-2017) and HER2 Overall Summary (2018+) (NAACCR Item #=3855). For more information, see https://seer.cancer.gov/seerstat/databases/ssf/her2-derived.html. Coded for cases coded as Breast in TNM 7/CS v0204+ Schema AND EOD Schema ID.

Code	Description
1	Positive
2	Negative
3	Borderline
4	Unknown
9	Recode Not Available

BREAST SUBTYPE (2010+)

NAACCR Item #: N/A SAS Variable Name: Breast_Subtype_2010 Research Plus Limited-Field: Yes

Field Description:Created with combined information from ER Status Recode Breast Cancer
(1990+), PR Status Recode Breast Cancer (1990+), and Derived HER2
Recode (2010+). For more information, see

https://seer.cancer.gov/seerstat/databases/ssf/breast-subtype.html. Coded for
cases coded as Breast in TNM 7/CS v0204+ Schema AND EOD Schema ID.

Code	Description
1	Her2+/HR+
2	Her2+/HR-
3	Her2-/HR+
4	Triple Negative
5	Unknown
9	Recode Not Available

LYMPHOMAS: ANN ARBOR STAGING (1983-2015)

NAACCR Item #: N/A SAS Variable Name: LymphomaAnnArborStage1983_2015 Research Plus Limited-Field: No

Field Description: For information on how this field is created, visit <u>http://seer.cancer.gov/seerstat/variables/seer/ajcc-stage/ann-arbor/</u>

SEER COMBINED METS AT DX-BONE (2010+)

NAACCR Item #: N/A SAS Variable Name: SEERCombinedMetsatDX_bone_2010 Research Plus Limited-Field: No

Field Description: Created from NAACR Item #2851 (2010-2015) and #1112 (2016+).

Code	Description
0	None; no bone metastases
1	Yes
8	Not applicable
9	Unknown; not documented in patient record
14	Blank

SEER COMBINED METS AT DX-BRAIN (2010+)

NAACCR Item #: N/A SAS Variable Name: SEERCombinedMetsatDXbrain_2010 Research Plus Limited-Field: No

Field Description: Created from NAACR Item #2852 (2010-2015) and #1113 (2016+).

Code	Description
0	None; no brain metastases
1	Yes
8	Not applicable
9	Unknown; not documented in patient record
14	Blank

SEER COMBINED METS AT DX-LIVER (2010+)

NAACCR Item #: N/A SAS Variable Name: SEERCombinedMetsatDXliver_2010 Research Plus Limited-Field: No

Field Description: Created from NAACR Item #2853 (2010-2015) and #1115 (2016+).

Code	Description
0	None; no liver metastases
1	Yes
8	Not applicable
9	Unknown; not documented in patient record
14	Blank

SEER COMBINED METS AT DX-LUNG (2010+)

NAACCR Item #: N/A SAS Variable Name: SEERCombinedMetsatDX_lung_2010 Research Plus Limited-Field: No

Field Description: Created from NAACR Item #2854 (2010-2015) and #1116 (2016+).

Code	Description
0	None; no lung metastases
1	Yes
8	Not applicable
9	Unknown; not documented in patient record
14	Blank

T VALUE - BASED ON AJCC 3rd (1988-2003)

NAACCR Item #: N/A SAS Variable Name: TvaluebasedonAJCC3rd_1988_2003 Research Plus Limited-Field: No

Field Description: Derived by algorithm from extent of disease (EOD). Not available for all years or for all sites.

For codes and descriptions, see: http://seer.cancer.gov/seerstat/variables/seer/ajcc-stage/3rd.html

N VALUE - BASED ON AJCC 3rd (1988-2003)

NAACCR Item #: N/A SAS Variable Name: NvaluebasedonAJCC3rd_1988_2003 Research Plus Limited-Field: No

Field Description: Derived by algorithm from extent of disease (EOD). Not available for all years or for all sites.

For codes and descriptions, see: http://seer.cancer.gov/seerstat/variables/seer/ajcc-stage/3rd.html

M VALUE - BASED ON AJCC 3rd (1988-2003)

NAACCR Item #: N/A SAS Variable Name: MvaluebasedonAJCC3rd_1988_2003 Research Plus Limited-Field: No

Field Description: Derived by algorithm from extent of disease (EOD). Not available for all years or for all sites.

For codes and descriptions, see: http://seer.cancer.gov/seerstat/variables/seer/ajcc-stage/3rd.html

TOTAL NUMBER OF IN SITU/MALIGNANT TUMORS FOR PATIENT

NAACCR Item #: N/A SAS Variable Name: Totalnumberofinsitumalignanttu Research Plus Limited-Field: Yes

Field Description: Count of a patient's total reported in situ/malignant cancers, based on maximum sequence number of any in situ/malignant tumors in SEER through the last released year of diagnosis. This value is the same across all tumors for a person.

Valid values: 00-98; 99 (unknown)

TOTAL NUMBER OF BENIGN/BORDERLINE TUMORS FOR PATIENT

NAACCR Item #: N/A SAS Variable Name: Totalnumberofbenignborderlinet Research Plus Limited-Field: Yes

Field Description: Count of a patient's total reported benign/borderline cancers, based on maximum sequence number of any benign/borderline tumors in SEER through the last released year of diagnosis. This value is the same across all tumors for a person.

Valid values: 00-98; 99 (unknown)

RADIATION TO BRAIN OR CNS RECODE (1988-1997)

NAACCR Item #: N/A SAS Variable Name: RadiationtoBrainorCNSRecode1988 Research Plus Limited-Field: No

Field Description: This variable was only collected for years 1988-1997 for lung and leukemia cases only. It codes for radiation given to the brain or central nervous system at all facilities as part of the first course of therapy, and is a recode of NAACCR Item #1370. This field is blank for cases diagnosed prior to 1988 and after 1997.

Code	Description
0	None/Unknown
1	Radiation
7	Refused
8	Recommended, unknown if administered

TUMOR SIZE OVER TIME RECODE (1988+)

NAACCR Item #: N/A SAS Variable Name: tumorSizeOverTime Research Plus Limited-Field: No

Field Description: Size in millimeters. Created for cancer sites with consistent tumor size fields over time, using fields: EOD-Tumor Size [NAACCR Data Item # 780], 1988-2003, CS Tumor Size [NAACCR Data Item # 2800], 2004-2015, and Tumor Size Summary [NAACCR Data Item # 756], 2016+. Unreasonably large sizes set to unknown.

TUMOR SIZE SUMMARY (2016+)

NAACCR Item #: 756 SAS Variable Name: Tumor_Size_Summary_2016 Research Plus Limited-Field: No

Field Description: The most accurate measurement of a solid primary tumor, usually measured on the surgical resection specimen.

Code	Description
000	No mass/tumor found
001	1 mm or described as less than 1 mm (0.1 cm or less than 0.1 cm)
002-988	Exact size in millimeters (2mm-988mm) (0.2 cm to 98.8 cm)
989	989 millimeters or larger (98.9 cm or larger)
990	Microscopic focus or foci only and no size of focus is given
998	Alternate descriptions of tumor size for specific sites
999	Unknown; size not stated; Not documented in patient record; Size of tumor cannot be assessed; No excisional biopsy or tumor resection done; The only measurement(s) describes pieces or chips; Not applicable
1022	Blank

DERIVED SEER CMB STG GRP (2016-2017)

NAACCR Item #: 3614 SAS Variable Name: DerivedSEERCmbStg_Grp_2016_2017 Research Plus Limited-Field: No

Field Description: The results of the derived algorithmic calculation of Derived SEER Combined Stage Group.

DERIVED SEER COMBINED T (2016-2017)

NAACCR Item #: 3616 SAS Variable Name: DerivedSEERCombined_T_2016_2017 Research Plus Limited-Field: No

Field Description: The results of the derived algorithmic calculation of Derived SEER Combined T.

DERIVED SEER COMBINED N (2016-2017)

NAACCR Item #: 3618 SAS Variable Name: DerivedSEERCombined_N_2016_2017 Research Plus Limited-Field: No

Field Description: The results of the derived algorithmic calculation of Derived SEER Combined N.

DERIVED SEER COMBINED M (2016-2017)

NAACCR Item #: 3620 SAS Variable Name: DerivedSEERCombined_M_2016_2017 Research Plus Limited-Field: No

Field Description: The results of the derived algorithmic calculation of Derived SEER Combined M.

DERIVED SEER COMBINED T SRC (2016-2017)

NAACCR Item #: 3622 SAS Variable Name: DerivedSEERCombinedTSrc20162017 Research Plus Limited-Field: No

Field Description: The source information selected for the derived algorithmic calculation of Derived SEER Combined T #3616.

Code	Description
1	Clinical
2	Pathologic
3	Clinical and pathologic information used
9	Unknown
14	Blank

DERIVED SEER COMBINED N SRC (2016-2017)

NAACCR Item #: 3624 SAS Variable Name: DerivedSEERCombinedNSrc20162017 Research Plus Limited-Field: No

Field Description: The source information selected for the derived algorithmic calculation of Derived SEER Combined N #3618.

Code	Description
1	Clinical
2	Pathologic
3	Clinical and pathologic information used
9	Unknown
14	Blank

DERIVED SEER COMBINED M SRC (2016-2017)

NAACCR Item #: 3626 SAS Variable Name: DerivedSEERCombinedMSrc20162017 Research Plus Limited-Field: No

Field Description: The source information selected for the derived algorithmic calculation of Derived SEER Combined M #3620.

Code	Description
1	Clinical
2	Pathologic
3	Clinical and pathologic information used
9	Unknown
14	Blank

TNM EDITION NUMBER (2016-2017)

NAACCR Item #: 1060 SAS Variable Name: TNM_Edition_Number_2016_2017 Research Plus Limited-Field: No

Field Description: The edition of the AJCC manual used to stage the case. This applies to the manually coded AJCC fields. It does not apply to the Derived AJCC T, N, M and AJCC Stage Group fields [2940, 2960, 2980, and 3000].

SEER used UICC 7th edition as well as AJCC 7th edition rules. UICC 7th edition and AJCC 7th edition TNM categories and stage groups are very similar.

Code	Description
07	Seventh Edition (published 2009), recommended
	for use with cases diagnosed 2010-2017
U7	Seventh Edition with UICC modifications
88	Not applicable (cases that do not have an AJCC
	staging scheme)
14	Blank

METS AT DX-DISTANT LN (2016+)

NAACCR Item #: 1114 SAS Variable Name: Mets_at_DX_Distant_LN_2016 Research Plus Limited-Field: No

Field Description: Identifies whether distant lymph node(s) are an involved metastatic site.

Code	Description
0	None; no distant lymph node metastases
1	Yes; distant lymph node metastases
8	Not applicable
9	Unknown whether distant lymph node(s) are involved metastatic site. Not documented in patient record.
14	Blank

METS AT DX-OTHER (2016+)

NAACCR Item #: 1117 SAS Variable Name: Mets_at_DX_Other_2016 Research Plus Limited-Field: No

Field Description: Identifies any type of distant involvement not captured in the Mets at Dx-Bone [1112], Mets at Dx-Brain [1113], Mets at Dx-Liver [1115], Mets at Dx-Lung [1116], and Mets at Dx-Distant LN [1114] fields. It includes involvement of other specific sites and more generalized metastases such as carcinomatosis. Some examples include but are not limited to the adrenal gland, bone marrow, pleura, malignant pleural effusion, peritoneum, and skin.

Code	Description
0	None; no other metastases
1	Yes; distant metastases in known site(s) other than bone, brain, liver, lung or distant lymph nodes (Note: includes bone marrow involvement for lymphomas)
2	Generalized metastases such as carcinomatosis
8	Not applicable
9	Unknown whether any other metastatic site or generalized metastases. Not documented in patient record.
14	Blank

AJCC ID (2018+)

NAACCR Item #: 995 SAS Variable Name: AJCC_ID_2018 Research Plus Limited-Field: Yes

Field Description: Based on the chapters of the AJCC manual and will be derived primarily from the site/histology fields and other data items as required. IDs are assigned to cases for which AJCC staging is applicable. When staging is not applicable, code 'XX' is used.

EOD SCHEMA ID RECODE (2010+)

NAACCR Item #: N/A SAS Variable Name: EOD_Schema_ID_Recode_2010 Research Plus Limited-Field: Yes

Field Description: Allows the identification of categories consistent with Schema ID to include cases 2010+. This variable will facilitate the analyses of the 2010+ SSDI recodes, which require consistent cohorts over time.

DERIVED EOD 2018 T (2018+)

NAACCR Item #: 785 SAS Variable Name: Derived_EOD_2018_T_2018 Research Plus Limited-Field: No

Field Description: See the most current version of EOD (<u>https://staging.seer.cancer.gov/</u>) for rules and site-specific codes and coding structures.

DERIVED EOD 2018 N (2018+)

NAACCR Item #: 815 SAS Variable Name: Derived_EOD_2018_N_2018 Research Plus Limited-Field: No

Field Description: See the most current version of EOD (<u>https://staging.seer.cancer.gov/</u>) for rules and site-specific codes and coding structures.

DERIVED EOD 2018 M (2018+)

NAACCR Item #: 795 SAS Variable Name: Derived_EOD_2018_M_2018 Research Plus Limited-Field: No

Field Description: See the most current version of EOD (<u>https://staging.seer.cancer.gov</u>) for rules and site-specific codes and coding structures.

DERIVED EOD 2018 STAGE GROUP (2018+)

NAACCR Item #: 818 SAS Variable Name: DerivedEOD2018_Stage_Group_2018 Research Plus Limited-Field: No

Field Description: See the most current version of EOD (<u>https://staging.seer.cancer.gov/</u>) for rules and site-specific codes and coding structures.

EOD PRIMARY TUMOR (2018+)

NAACCR Item #: 772 SAS Variable Name: EOD_Primary_Tumor_2018 Research Plus Limited-Field: No

Field Description: See the most current version of EOD (<u>https://staging.seer.cancer.gov/</u>) for rules and site-specific codes and coding structures.

EOD REGIONAL NODES (2018+)

NAACCR Item #: 774 SAS Variable Name: EOD_Regional_Nodes_2018 Research Plus Limited-Field: No

Field Description: See the most current version of EOD (<u>https://staging.seer.cancer.gov/</u>) for rules and site-specific codes and coding structures.

EOD METS (2018+)

NAACCR Item #: 776 SAS Variable Name: EOD_Mets_2018 Research Plus Limited-Field: No

Field Description: See the most current version of EOD (<u>https://staging.seer.cancer.gov/</u>) for rules and site-specific codes and coding structures.

PROSTATE PATHOLOGICAL EXTENSION (2018+)

NAACCR Item #: 3919 SAS Variable Name: ProstatePathologicalExtension20 Research Plus Limited-Field: No

Field Description: See the most current version of EOD (<u>https://staging.seer.cancer.gov/</u>) for rules and site-specific codes and coding structures.

TIME FROM DIAGNOSIS TO TREATMENT IN DAYS RECODE

NAACCR Item #: N/A SAS Variable Name: daysToRxRecode Research Plus Limited-Field: Yes (excl IL & MA)

Field Description: Number of days from diagnosis to date of initial treatment. Calculated using complete dates.

BRAIN MOLECULAR MARKERS (2018+)

NAACCR Item #: 3816 SAS Variable Name: Brain_Molecular_Markers_2018 Research Plus Limited-Field: Yes

Field Description: This data item captures clinically important brain cancer subtypes identified by molecular markers that are not distinguishable by ICD-O-3 codes. Coded for Brain and CNS Other per Schema ID (2018+).

BRESLOW TUMOR THICKNESS (2018+)

NAACCR Item #: 3817 SAS Variable Name: Breslow_Tumor_Thickness_2018 Research Plus Limited-Field: Yes

Field Description: A measure of how deeply a melanoma tumor has grown into the skin. Measurement in millimeters (mm). Coded for Melanoma Skin per Schema ID (2018+).

HIGH RISK CYTOGENETICS (2018+)

NAACCR Item #: 3857 SAS Variable Name: High_Risk_Cytogenetics_2018 Research Plus Limited-Field: No

Field Description: Defined as one or more of t(4;14), t(14;16), or del 17p identified from FISH test results and is part of the staging criteria for plasma cell myeloma. Coded for Plasma Cell Myeloma per Schema ID (2018+).

JAK2 (2018+)

NAACCR Item #: 3862 SAS Variable Name: JAK2_2018 Research Plus Limited-Field: No

Field Description: Janus Kinase 2 (JAK2, JAK 2) is a gene mutation that increases susceptibility to several myeloproliferative neoplasms. Coded for HemeRetic and CNS Other per Schema ID (2018+).

KIT GENE IMMUNOHISTOCHEMISTRY (2018+)

NAACCR Item #: 3865 SAS Variable Name: KITGeneImmunohistochemistry2018 Research Plus Limited-Field: No

Field Description: KIT Gene Immunohistochemistry (IHC) is the expression of the KIT gene in tumor tissue specimens based on immunohistochemical (IHC) stains. Coded for GIST per Schema ID (2018+).

KRAS (2018+)

NAACCR Item #: 3866 SAS Variable Name: KRAS_2018 Research Plus Limited-Field: No

Field Description: Activating mutations in KRAS are an adverse prognostic factor for colorectal carcinoma and predict a poor response to monoclonal anti-EGFR antibody therapy in advanced colorectal carcinoma. Coded for Colon and Rectum per Schema ID (2018+).

METHYLATION OF O6-METHYLGUANINE-METHYLTRANSFERASE (2018+)

NAACCR Item #: 3889 SAS Variable Name: MethylationofO6MethylguanineMet Research Plus Limited-Field: No

Field Description: O6-Methylguanine-Methyltransferase (MGMT) is an enzyme that repairs DNA. Methylation of the MGMT gene reduces production of the MGMT enzyme and the ability of tumor cells to repair damage caused by chemotherapy. Methylation of MGMT is a prognostic and predictive factor for high grade gliomas. Coded for Brain and CNS Other per Schema ID (2018+).

MICROSATELLITE INSTABILITY (MSI) (2018+)

NAACCR Item #: 3890 SAS Variable Name: MicrosatelliteInstabilityMSI201 Research Plus Limited-Field: Yes

Field Description: Microsatellite Instability (MSI) is a form of genetic instability manifested by changes in the length of repeated single- to six-nucleotide sequences (known as DNA microsatellite sequences). High MSI, found in about 15% of colorectal carcinomas, is an adverse prognostic factor for colorectal carcinomas and predicts poor response to 5-FU chemotherapy. Coded for Colon and Rectum per Schema ID (2018+).

SCHEMA DISCRIMINATOR 2: OROPHARYNGEAL P16 (2018+)

NAACCR Item #: 3927 SAS Variable Name: SchemaDiscriminator2Oropharynge Research Plus Limited-Field: Yes

Field Description: Used to discriminate between oropharyngeal tumors that are p16 positive and oropharyngeal tumors that are p16 negative OR p16 status unknown. Coded for Oropharynx HPV-Mediated (p16+) and Oropharynx (p16-) per Schema ID (2018+).

ESTROGEN RECEPTOR SUMMARY (2018+)

NAACCR Item #: 3827 SAS Variable Name: Estrogen_Receptor_Summary_2018 Research Plus Limited-Field: Yes

Field Description: A summary of results of the estrogen receptor (ER) assay. Combined ER and PR positivity is associated with increased response to antiestrogen therapies. Coded for Breast per Schema ID (2018+).

PROGESTERONE RECEPTOR SUMMARY (2018+)

NAACCR Item #: 3915 SAS Variable Name: ProgesteroneReceptorSummary2018 Research Plus Limited-Field: Yes

Field Description: A summary of results of the progesterone receptor (PR) assay. Combined ER and PR positivity is associated with increased response to antiestrogen therapies. Coded for Breast per Schema ID (2018+).

HER2 OVERALL SUMMARY (2018+)

NAACCR Item #: 3855 SAS Variable Name: HER2_Overall_Summary_2018 Research Plus Limited-Field: Yes

Field Description: A summary of results from HER2 testing. The presence of HER2 overexpression in untreated patients is associated with worse prognosis in both node-negative and node-positive patients. Coded for Breast per Schema ID (2018+).

SENTINEL LYMPH NODES EXAMINED (2018+)

NAACCR Item #: 834 SAS Variable Name: SentinelLymphNodesExamined_2018 Research Plus Limited-Field: No

Field Description: The total number of lymph nodes sampled during the sentinel node biopsy and examined by the pathologist. Coded for Breast and Melanoma Skin per Schema ID (2018+).

SENTINEL LYMPH NODES POSITIVE (2018+)

NAACCR Item #: 835 SAS Variable Name: SentinelLymphNodesPositive_2018 Research Plus Limited-Field: No

Field Description: The number of sentinel lymph nodes found to contain metastases. Coded for Breast and Melanoma Skin per Schema ID (2018+).

SITE-SPECIFIC DATA ITEMS (SSDI)

NAACCR Item #: N/A SAS Variable Names: AFPPostOrchiectomyLabValueRecod, AFPPretreatmentInterpretationRe, VisceralandParietalPleuralInvas MultipleMyelomaTerminologyRecod Research Plus Limited-Field: No

Field Description:The Site Specific Data Items can be found here:
https://seer.cancer.gov/seerstat/variables/seer/ssdi/
Each Site-Specific Data Item (SSDI) applies only to selected primary
sites, histologies, and years of diagnosis. Depending on applicability and
standard-setter requirements, SSDIs may be left blank.

CENSUS TRACT 1970/1980/1990

NAACCR Item #: 110 SAS Variable Name: Census_Tract_1990 Research Plus Limited-Field: Yes

Field Description: Identifies the patient's census tract of residence at the time the tumor was diagnosed. Census Tract 70/80/90 is a derived (geocoded) variable based on the Census Boundary files from 1970, 1980, 1990 Decennial Census. See Census Tract 2000 [# 130]; Census Tract 2010 [#135]; Codes are those used by the U.S. Census Bureau for the Year 1970, 1980 or 1990 Census. Refer to variable 'Coding System for Census Tract' to ascertain the decade of reference. For consolidated records, the geocoded state should be based on the best address at diagnosis information identified.

CENSUS TRACT 2000

NAACCR Item #: 130 SAS Variable Name: Census_Tract_2000 Research Plus Limited-Field: Yes

Field Description: Identifies the patient's census tract of residence at the time the tumor was diagnosed. Census Tract 2000 is a derived (geocoded) variable based on the Census Boundary files from 2000. See Census Tract 70/80/90 [#110]; Census Tract 2010 [#135]]. Codes are those used by the U.S. Census Bureau for the Year 2000 Census. For consolidated records, the geocoded state should be based on the best address at diagnosis information identified.

CENSUS TRACT 2010

NAACCR Item #: 135 SAS Variable Name: Census_Tract_2010 Research Plus Limited-Field: Yes

Field Description: Identifies the patient's census tract of residence at the time the tumor was diagnosed. Census Tract 2010 is a derived (geocoded) variables based on the Census Boundary files from 2010. See Census Tract 1970/80/90 [#110]; Census Tract 2000 [#130].Codes are those used by the U.S. Census Bureau for the Year 2010 Census. For consolidated records, the geocoded state should be based on the best address at diagnosis information identified.

CODING SYSTEM FOR CENSUS TRACT 1970/80/90

NAACCR Item #: 120 SAS Variable Name: Census_Coding_System Research Plus Limited-Field: Yes

Field Description: Identified the set of Census Bureau census tract definitions (boundaries) that were used to code the census tract in Census Tract 1970/80/90 [#110] for a specific record.

CENSUS TRACT CERTAINTY 1970/80/90

NAACCR Item #: 364 SAS Variable Name: Census_Tract_Certainty_1990 Research Plus Limited-Field: Yes

Field Description: Code indicating basis of assignment of census tract or block numbering area (BNA) for an individual record. Helpful in identifying cases tracted from incomplete information or P.O. Box. This item is not coded by the hospital. Central registry staff manually assign the code.

(continued on next page)

(continued from CENSUS TRACT CERTAINTY 1970/80/90))

Code	Description
1	Census tract/BNA based on complete and valid street address of residence
2	Census tract/BNA based on residence ZIP + 4
3	Census tract/BNA based on residence ZIP + 2
4	Census tract/BNA based on residence ZIP code only
5	Census tract/BNA based on ZIP code of P.O. Box
6	Census tract/BNA based on residence city where city has only one census tract, or based on residence ZIP code where ZIP code has only one census tract
9	Not assigned, geocoding attempted
Blank	Not assigned, geocoding not attempted

CENSUS TRACT CERTAINTY 2000

NAACCR Item #: 365 SAS Variable Name: Census_Tract_Certainty_2000 Research Plus Limited-Field: Yes

Field Description: Code indicating basis of assignment of census tract for an individual record. Helpful in identifying cases tracted from incomplete information or P.O. Box. This item is not coded by the hospital. Central registry staff assign the code.

Code	Description
1	Census tract/BNA based on complete and valid street address of residence
2	Census tract based on residence ZIP + 4
3	Census tract based on residence ZIP + 2
4	Census tract based on residence ZIP code only
5	Census tract based on ZIP code of P.O. Box
6	Census tract/BNA based on residence city where city has only one census tract, or based on residence ZIP code where ZIP code has only one census tract
9	Not assigned, geocoding attempted
Blank	Not assigned, geocoding not attempted

CENSUS TRACT CERTAINTY 2010

NAACCR Item #: 367 SAS Variable Name: Census_Tract_Certainty_2010 Research Plus Limited-Field: Yes

Field Description: Code indicating basis of assignment of census tract for an individual record. Helpful in identifying cases tracted from incomplete information or P.O. (continued on next page) (continued from CENSUS TRACT CERTAINTY 2010)

Box. This item is not coded by the hospital. Central registry staff assign the code.

Code	Description
1	Census tract/BNA based on complete and valid street address of residence
2	Census tract based on residence ZIP + 4
3	Census tract based on residence ZIP + 2
4	Census tract based on residence ZIP code only
5	Census tract based on ZIP code of P.O. Box
6	Census tract/BNA based on residence city where city has only one census tract, or based on residence ZIP code where ZIP code has only one census tract
9	Not assigned, geocoding attempted
Blank	Not assigned, geocoding not attempted

RURAL URBAN CONTINUUM 1993

NAACCR Item #: 3300 SAS Variable Name: Rural_Urban_Continuum_Code_1993 Research Plus Limited-Field: Yes

Field Description: The Rural-Urban Continuum (1993) codes (usually known as the Beale Codes) separate counties into four metropolitan and six non-metropolitan categories, based on the size their populations and form a classification scheme that distinguishes metropolitan counties by size and non-metropolitan counties by degree of urbanization and proximity to metro areas.

These codes can be derived electronically, using patients' state and county at diagnosis, so registrars do not need to provide them. FIPS state and county code mappings to Beale Codes can be obtained in an Excel file at http://www.ers.usda.gov/data-products/rural-urban-continuum-codes.aspx

Metropolitan Counties (00-03)

Code	Description
00	Central counties of metropolitan areas of 1 million population or more
01	Fringe counties of metropolitan areas of 1 million population or more
02	Counties in metropolitan areas of 250,000-1,000,000 population
03	Counties in metropolitan areas of less than 250,000 population

Nonmetropolitan Counties (04-09)

Code	Description
04	Urban population of 20,000 or more, adjacent to a metropolitan area
05	Urban population of 20,000 or more, not adjacent to a metropolitan area
06	Urban population of 2,500-19,999, adjacent to a metropolitan area
07	Urban population of 2,500-19,999, not adjacent to a metropolitan area
08	Completely rural (no places with a population of 2,500 or more) adjacent to a metropolitan area
09	Completely rural (no places with a population of 2,500 or more) not adjacent to a metropolitan area
98	Program run, but: (1) area is not included in Rural-Urban Continuum code table, or (2) record is for resident outside of state of reporting institution
99	Unknown
Blank	Program not run; record not coded

RURAL URBAN CONTINUUM 2003

NAACCR Item #: 3310 SAS Variable Name: Rural_Urban_Continuum_Code_2003 Research Plus Limited-Field: Yes

Field Description: The Rural-Urban Continuum (2003) codes (usually known as the Beale Codes) separate counties into four metropolitan and six non-metropolitan categories, based on the size their populations and form a classification scheme that distinguishes metropolitan counties by size and non-metropolitan counties by degree of urbanization and proximity to metro areas.

These codes can be derived electronically, using patients' state and county at diagnosis, so registrars do not need to provide them. FIPS state and county code mappings to Beale Codes can be obtained in an Excel file at http://www.ers.usda.gov/data-products/rural-urban-continuum-codes.aspx

Metropolitan Counties (01-03)

inten op	
Code	Description
01	Counties in metro areas of 1 million population or more
02	Counties in metro areas of 250,000 to 1 million population
03	Counties in metro areas of fewer than 250,000 population

Nonmetropolitan Counties (04-09)

Code	Description
04	Urban population of 20,000 or more, adjacent to a metro area
05	Urban population of 20,000 or more, not adjacent to a metro area
06	Urban population of 2,500 to 19,999, adjacent to a metro area
07	Urban population of 2,500 to 19,999, not adjacent to a metro area
08	Completely rural or less than 2,500 urban population, adjacent to a metro area
09	Completely rural or less than 2,500 urban population, not adjacent to a metro area
98	Program run, but: (1) area is not included in Rural-Urban Continuum code table, or (2) record is for resident outside of state of reporting institution
99	Unknown
Blank	Program not run; record not coded

RURAL URBAN CONTINUUM 2013

NAACCR Item #: 3312 SAS Variable Name: Rural_Urban_Continuum_Code_2013 Research Plus Limited-Field: Yes

Field Description: The Rural-Urban Continuum (2013) codes (usually known as the Beale Codes) separate counties into four metropolitan and six non-metropolitan categories, based on the size their populations and form a classification scheme that distinguishes metropolitan counties by size and non-metropolitan counties by degree of urbanization and proximity to metro areas.

These codes can be derived electronically, using patients' state and county at diagnosis, so registrars do not need to provide them. FIPS state and county code mappings to Beale Codes can be obtained in an Excel file at http://www.ers.usda.gov/data-products/rural-urban-continuum-codes.aspx

Metropolitan Counties (01-03)

Code	Description
01	Counties in metro areas of 1 million population or more
02	Counties in metro areas of 250,000 to 1 million population
03	Counties in metro areas of fewer than 250,000 population

Nonmetropolitan Counties (04-09)

Urban population of 20,000 or more, adjacent to a metro area Urban population of 20,000 or more, not adjacent to a metro area
Urban population of 20,000 or more, not adjacent to a metro area
Urban population of 2,500 to 19,999, adjacent to a metro area
Urban population of 2,500 to 19,999, not adjacent to a metro area
Completely rural or less than 2,500 urban population, adjacent to a metro area
Completely rural or less than 2,500 urban population, not adjacent to a metro area
Program run, but: (1) area is not included in Rural-Urban Continuum code table, or (2) record is for resident outside of state of reporting institution
Unknown
Program not run; record not coded

HEALTH SERVICE AREA

NAACCR Item #: N/A SAS Variable Name: Health_Service_Area Research Plus Limited-Field: Yes

Field Description: This variable was derived from the original Health Service Area definitions and is described in more detail on this website: <u>https://seer.cancer.gov/seerstat/variables/countyattribs/hsa.html</u>
HEALTH SERVICE AREA NCI MODIFIED

NAACCR Item #: N/A SAS Variable Name: HealthService_Area_NCI_Modified Research Plus Limited-Field: Yes

Field Description: This variable was derived from the original Health Service Area definitions and is described in more detail on this website: <u>https://seer.cancer.gov/seerstat/variables/countyattribs/hsa.html</u>

COUNTY AT DX GEOCODE 1990

NAACCR Item #: 94 SAS Variable Name: County_at_DX_Geocode_1990 Research Plus Limited-Field: Yes

Field Description: County at Diagnosis 1990 Code for the county of the patient's residence at the time the tumor was diagnosed is a derived (geocoded) variable based on Census Boundary files from 1990 Decennial Census. This code should be used for county and county-based (such as CHSDA) rates and analysis for all cases diagnosed prior to 2000.

Code	Description
001-997	County at diagnosis. Valid FIPS code
998	Known town, city, state or country of residence but county code not known AND a resident outside of the state of reporting institution (must meet all criteria). Use this code for Canadian residents.
999	County unknown. The county of the patient is unknown, or the patient is not a United States resident. County is not documented in the patient's medical record.

COUNTY AT DX GEOCODE 2000

NAACCR Item #: 95 SAS Variable Name: County_at_DX_Geocode_2000 Research Plus Limited-Field: Yes

Field Description: Code for the county of the patient's residence at the time the tumor was diagnosed is a derived (geocoded) variable based on Census Boundary files from 2000 Decennial Census. This code should be used for county and county-based (such as CHSDA) rates and analysis for all cases diagnosed in 2000-2009.

(Continued on the next page)

(Continued from COUNTY AT DX GEOCODE 2000)

Code	Description
001-997	County at diagnosis. Valid FIPS code
998	Known town, city, state or country of residence but county code not known AND a resident outside of the state of reporting institution (must meet all criteria). Use this code for Canadian residents.
999	County unknown. The county of the patient is unknown, or the patient is not a United States resident. County is not documented in the patient's medical record.

COUNTY AT DX GEOCODE 2010

NAACCR Item #: 96 SAS Variable Name: County_at_DX_Geocode_2010 Research Plus Limited-Field: Yes

Field Description: County at Diagnosis 2010 Code for the county of the patient's residence at the time the tumor was diagnosed is a derived (geocoded) variable based on the Census Boundary files from 2010 Decennial Census. This code should be used for county and county-based (such as CHSDA) rates and analysis for all cases diagnosed in 2010-2019.

Code	Description
001-997	County at diagnosis. Valid FIPS code
998	Known town, city, state or country of residence but county code not known AND a resident outside of the state of reporting institution (must meet all criteria). Use this code for Canadian residents.
999	County unknown. The county of the patient is unknown, or the patient is not a United States resident. County is not documented in the patient's medical record.

MONTH OF DEATH RECODE

NAACCR Item #: N/A SAS Variable Name: Month_of_Death_recode Research Plus Limited-Field: Yes

Field Description: Month of Death (Month Not Available for Massachusetts or Illinois)

 $\frac{Allowable values for month}{MM = 01 - 12}$

MONTH OF FOLLOW-UP RECODE

NAACCR Item #: N/A SAS Variable Name: Month_of_follow_up_recode Research Plus Limited-Field: Yes

Field Description: Date of Last Follow-up Recode, study cut off used (Not Available for Massachusetts or Illinois)

 $\frac{Allowable values for month}{MM = 01 - 12}$

Allowable values for year YYYY=1975+

YEAR OF BIRTH

NAACCR Item #: 240 SAS Variable Name: Year_of_birth Research Plus Limited-Field: Yes

Field Description: Birth year.

Allowable values YYYY=1800+

DATE THERAPY STARTED

NAACCR Item #: 1260 SAS Variable Name: month_therapy_started, Year_therapy_started Research Plus Limited-Field: Yes

Field Description: Date of initiation of the first course therapy for the tumor being reported, using the SEER definition of first course.

<u>Allowable values for month</u> MM = 01 - 1214=Blank

Allowable values for year YYYY=1975+

ENHANCED 5% FLAG

NAACCR Item #: N/A SAS Variable Name: enhanced_five_percent_flag Research Plus Limited-Field: Yes

Field Description: Identifies patients who are found in the 5% sample. This variable comes from the MBSF file.

Code	Description
Y	Found in the 5% sample

DATE OF DEATH FLAG CREATED

NAACCR Item #: N/A SAS Variable Name: Date_of_Death_Flag_Created Research Plus Limited-Field: Yes

Field Description: Shows the level of agreement between the SEER and Medicare on the patients death date. Dates of death after 12/22 were treated as not dead for comparison purposes. (Not Available for Massachusetts or Illinois)

Code	Description
0	Not dead by 12/22
1	Dead, both files agree
2	Dead, off by 1-3 months
3	Dead, off by 4-6 months
4	Dead in MEDICARE only
5	Dead in SEER only
6	Dead but number of months could not be calculated due to the fact that month was missing for either SEER or MEDICARE.

DATE OF BIRTH FLAG CREATED

NAACCR Item #: N/A SAS Variable Name: Date_of_Birth_Flag_Created Research Plus Limited-Field: Yes

Field Description: Shows the level of agreement between SEER and Medicare on the patient's birth date.

Code	Description
0	Both files agree on birth date
1	Birth date off by 1-3 months
2	Birth date off by 4-6 months
3	Birth date off by 7-11 months
4	Birth date off by one year
5	Birth date off by 13-23 months
6	Birth date off by 2 years
7	Birth date off by 25-35 months
8	Birth date off by 3 years
9	Birth date off by 37+ months
Blank	Birth date is missing

YOST (ACS 2006-2010)

NAACCR Item #: N/A SAS Variable Name: Yost_ACS_2006_2010 Research Plus Limited-Field: Yes

Field Description: Yost Index calculated from ACS 2006-2010.

Allowable values 8119 – 11901, 65534=Blank

YOST (ACS 2010-2014)

NAACCR Item #: N/A SAS Variable Name: Yost_ACS_2010_2014 Research Plus Limited-Field: Yes

Field Description: Yost Index calculated from ACS 2010-2014.

Allowable values 8122 - 11890, 65534=Blank

YOST (ACS 2013-2017)

NAACCR Item #: N/A SAS Variable Name: Yost_ACS_2013_2017 Research Plus Limited-Field: Yes

Field Description: Yost Index calculated from ACS 2013-2017.

Allowable values 8126 - 11888, 65534=Blank

YOST (ACS 2006-2010) – STATE BASED

NAACCR Item #: N/A SAS Variable Name: Yost_ACS_2006_2010_State_based Research Plus Limited-Field: Yes

Field Description: Yost Index calculated from ACS 2006-2010.

<u>Allowable values</u> 8051 - 11983, 65534=Blank

YOST (ACS 2010-2014) – STATE BASED

NAACCR Item #: N/A SAS Variable Name: Yost_ACS_2010_2014_State_based Research Plus Limited-Field: Yes

Field Description: Yost Index calculated from ACS 2010-2014.

Allowable values 8038 – 11935, 65534=Blank

YOST (ACS 2013-2017) – STATE BASED

NAACCR Item #: N/A SAS Variable Name: Yost_ACS_2013_2017_State_based Research Plus Limited-Field: Yes

Field Description: Yost Index calculated from ACS 2013-2017.

Allowable values 8060 - 11940, 65534=Blank

YOST (ACS 2006-2010) QUINTILE

NAACCR Item #: N/A SAS Variable Name: Yost_ACS_2006_2010_quintile Research Plus Limited-Field: Yes

Field Description: Quintile grouping for the Yost Index calculated from ACS 2006-2010.

Code	Description
1	Group 1 (lowest SES)
2	Group 2
3	Group 3
4	Group 4
5	Group 5 (highest SES)
6	Blanks

YOST (ACS 2010-2014) QUINTILE

NAACCR Item #: N/A SAS Variable Name: Yost_ACS_2010_2014_quintile Research Plus Limited-Field: Yes

Field Description: Quintile grouping for the Yost Index calculated from ACS 2010-2014.

Code	Description
1	Group 1 (lowest SES)
2	Group 2
3	Group 3
4	Group 3 Group 4
5	Group 5 (highest SES)
6	Blanks

YOST (ACS 2013-2017) QUINTILE

NAACCR Item #: N/A SAS Variable Name: Yost_ACS_2013_2017_quintile Research Plus Limited-Field: Yes

Field Description: Quintile grouping for the Yost Index calculated from ACS 2013-2017.

Code	Description
1	Group 1 (lowest SES)
2	Group 2
3	Group 2 Group 3
4	Group 4
5	Group 5 (highest SES)
6	Blanks

YOST (ACS 2006-2010) - STATE BASED QUINTILE

NAACCR Item #: N/A SAS Variable Name: YostACS20062010Statebas Research Plus Limited-Field: Yes

Field Description: Quintile grouping for the state based Yost Index from ACS 2006-2010.

Description
Group 1 (lowest SES)
Group 2
Group 2 Group 3
Group 4
Group 5 (highest SES)
Blanks

YOST (ACS 2010-2014) – STATE BASED QUINTILE

NAACCR Item #: N/A SAS Variable Name: YostACS20102014Statebas Research Plus Limited-Field: Yes

Field Description: Quintile grouping for the state based Yost Index from ACS 2010-2014.

Code	Description
1	Group 1 (lowest SES)
2	Group 2
3	Group 3
4	Group 4
5	Group 5 (highest SES)
6	Blanks

YOST (ACS 2013-2017) - STATE BASED QUINTILE

NAACCR Item #: N/A SAS Variable Name: YostACS20132017Statebas Research Plus Limited-Field: Yes

Field Description: Quintile grouping for the state based Yost Index from ACS 2013-2017.

Code	Description
1	Group 1 (lowest SES)
2	Group 2
3	Group 3
4	Group 4
5	Group 5 (highest SES)
6	Blanks

BILIRUBIN PRETREATMENT TOTAL LAB VALUE RECODE (2018+)

NAACCR Item #: 3813 SAS Variable Name: BilirubinPretreatmentTotalLabVa Research Plus Limited-Field: Yes

Field Description: Coded for Liver Schema ID=00220. Bilirubin level is an indicator of how effectively the liver excretes bile and is required to calculate the Model for End-Stage Liver Disease (MELD) score used to assign priority for liver transplant. Measurement in ng/ml or umol/L.

Code	Description
1-9999	* 000.1-999.9 Floating point conversion (see help for details). Unformatted value +0.
0	0.0 milligram/deciliter (mg/dL); 0.0 micromole/liter (umol/L)
10000	1000+ milligram/deciliter (mg/dL); 1000+ micromole/liter (umol/L)
10001	Test ordered, results not in chart
10002	Not applicable: Information not collected for this case
10003	Not documented; Not assessed or unknown if assessed
10013	Not available (IL 2018+)
10014	Not available (TX 2018-2021)
65534	Blank(s)

BILIRUBIN PRETREATMENT UNIT OF MEASURE RECODE (2018+)

NAACCR Item #: 3814 SAS Variable Name: BilirubinPretreatmentUnitofMeas Research Plus Limited-Field: Yes

Field Description: Coded for Liver Schema ID=00220. Identifies the unit of measure for the bilirubin value measured prior to treatment. Bilirubin is commonly measured in units of Milligrams/deciliter (mg/dL) in the United States and Micromoles/liter (umol/L) in Canada and Europe.

Code	Description
1	Milligrams per deciliter (mg/dL)
2	Micromoles/liter (umol/L)
7	Test ordered, results not in chart
8	Not applicable: Information not collected for this case
9	Not documented; Unit of measure not assessed or unknown if assessed
12	Not available (IL 2018+)
13	Not available (TX 2018-2021)
14	Blank(s)

ONCOTYPE DX BREAST RECURRENCE SCORE

NAACCR Item #: N/A SAS Variable Name: OncotypeDXBreastRecurrenceScore Research Plus Limited-Field: No

Note: Available for diagnosis years 2000-2019 for all registries, except MA and TX. ***Special permission is required to receive this variable**

Codes	
000-100	

ONCOTYPE DX RS GROUP (RS < 18, RS 18-30, RS > 30)

NAACCR Item #: N/A SAS Variable Name: OncotypeDXRSgroupRS18RS1830RS30 Research Plus Limited-Field: No

Note: Available for diagnosis years 2000-2019 for all registries, except MA and TX. ***Special permission is required to receive this variable**

Codes	Description
1	Low
2	Intermediate
3	High

ONCOTYPE DX REASON NO SCORE LINKED

NAACCR Item #: N/A SAS Variable Name: OncotypeDXreasonno_score_linked Research Plus Limited-Field: No

Note: Available for diagnosis years 2000-2019 for all registries, except MA and TX. ***Special permission is required to receive this variable**

Codes	Description
1	Cancelled Test – Cancelled by physician or patients before result was returned
2	Failed Test – Inadequate tissue sample
3	Outside Analysis Criteria
4	Non-Unique – Patient had multiple tumors

ONCOTYPE DX DELIVERED DATE

NAACCR Item #: N/A SAS Variable Name: Oncotype_DX_year_of_test_report, OncotypeDX_month_of_test_report Research Plus Limited-Field: No

Note: Available for diagnosis years 2000-2019 for all registries, except MA and TX. ***Special permission is required to receive this variable**

 $\frac{Allowable values for month}{MM = 01 - 12}$ 14=Blank

Allowable values for year YYYY=2004-2019

ONCOTYPE DX MONTHS SINCE DIAGNOSIS

NAACCR Item #: N/A SAS Variable Name: OncotypeDXmonthssince_diagnosis Research Plus Limited-Field: No

Note: Available for diagnosis years 2000-2019 for all registries, except MA and TX. ***Special permission is required to receive this variable**

Codes	Description
000-996	Valid months
997	Unknown
998	Test before DX

*Unknown occurs when month of diagnosis is unknown and year of diagnosis is not greater than test year.

2015 ADI STATE (DECILE) AND NATIONAL (PERCENTILE) RANKINGS

NAACCR Item #: N/A SAS Variable Name: adi_strank2015, adi_natrank2015 Research Plus Limited-Field: Yes

 Note: Kind AJH, Buckingham W. Making Neighborhood Disadvantage Metrics Accessible: The Neighborhood Atlas. New England Journal of Medicine, 2018. 378: 2456-2458. DOI: 10.1056/NEJMp1802313. PMCID: PMC6051533. AND University of Wisconsin School of Medicine and Public Health. 2015 Area Deprivation Index v3.1. Downloaded from <u>https://www.neighborhoodatlas.medicine.wisc.edu/</u> on 5/31/2023 individual files time stamped as 7/14/2021.

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*Special permission is required to receive this variable

Codes	Description
01-10	Valid for state
001-100	Valid for Nation
KVM	ADI suppressed due to Key Missing Variables
GQ	ADI suppressed due to Group Quarters
PH	ADI suppressed due to low population and/or housing
GQ_PH	ADI suppressed due to both (GQ and PH) suppression criteria.
QDI	ADI suppressed due to Questionable Data Integrity
NA/NONE/Blank	Missing ADI values*

*ADI may be missing for multiple reasons.

- The ADI is calculated at the Census Block Group level based on American Community Survey (ACS) data, but are linked to the SEER-Medicare data using a Census Block Group-9digit zip code crosswalk. The crosswalking method is convenient, but not always exact (i.e., not all 9digit zip codes match to a Census Block Group).
- Zip codes change over time. The zip codes available in the SEER-Medicare data may not be included in the crosswalk. The 2015 ADI crosswalk links Census Block Groups to 9digit zip codes that were in effect in 3rd quarter 2016. The 9digit zip codes available in SEER-Medicare are from 1999+.
- The 9digit zip codes available in SEER-Medicare come from the Medicare enrollment data. Therefore, linkage to the ADI variables is only possible for persons enrolled in Medicare at the time of cancer diagnosis.
- Residential ADI measures are not available for Medicare beneficiaries with nonresidential zip codes (e.g., post office box zip codes) because their residential location is available in the data.

2020 ADI STATE (DECILE) AND NATIONAL (PERCENTILE) RANKINGS

NAACCR Item #: N/A SAS Variable Name: adi_strank2020, adi_natrank2020 Research Plus Limited-Field: Yes

 Note: Kind AJH, Buckingham W. Making Neighborhood Disadvantage Metrics Accessible: The Neighborhood Atlas. New England Journal of Medicine, 2018. 378: 2456-2458. DOI: 10.1056/NEJMp1802313. PMCID: PMC6051533. AND University of Wisconsin School of Medicine and Public Health. 2020 Area Deprivation Index v4.0. Downloaded from <u>https://www.neighborhoodatlas.medicine.wisc.edu/</u> on 3/19/2024 individual files time stamped as 9/14/2023.

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*Special permission is required to receive this variable

Codes	Description
01-10	Valid for state
001-100	Valid for Nation
KVM	ADI suppressed due to Key Missing Variables
GQ	ADI suppressed due to Group Quarters
PH	ADI suppressed due to low population and/or housing
GQ_PH	ADI suppressed due to both (GQ and PH) suppression criteria.
QDI	ADI suppressed due to Questionable Data Integrity
NA/NONE/Blank	Missing ADI values*

*ADI may be missing for multiple reasons.

- The ADI is calculated at the Census Block Group level based on American Community Survey (ACS) data, but are linked to the SEER-Medicare data using a Census Block Group-9digit zip code crosswalk. The crosswalking method is convenient, but not always exact (i.e., not all 9digit zip codes match to a Census Block Group).
- Zip codes change over time. The zip codes available in the SEER-Medicare data may not be included in the crosswalk. The 2015 ADI crosswalk links Census Block Groups to 9digit zip codes that were in effect in 3rd quarter 2016. The 9digit zip codes available in SEER-Medicare are from 1999+.
- The 9digit zip codes available in SEER-Medicare come from the Medicare enrollment data. Therefore, linkage to the ADI variables is only possible for persons enrolled in Medicare at the time of cancer diagnosis.
- Residential ADI measures are not available for Medicare beneficiaries with nonresidential zip codes (e.g., post office box zip codes) because their residential location is available in the data.

2022 ADI STATE (DECILE) AND NATIONAL (PERCENTILE) RANKINGS

NAACCR Item #: N/A SAS Variable Name: adi_strank2022, adi_natrank2022 Research Plus Limited-Field: Yes

 Note: Kind AJH, Buckingham W. Making Neighborhood Disadvantage Metrics Accessible: The Neighborhood Atlas. New England Journal of Medicine, 2018. 378: 2456-2458. DOI: 10.1056/NEJMp1802313. PMCID: PMC6051533. AND University of Wisconsin School of Medicine and Public Health. 2022 Area Deprivation Index v4.0. Downloaded from <u>https://www.neighborhoodatlas.medicine.wisc.edu/</u> on 6/26/2024 individual files time stamped as 5/15/2024.

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*Special permission is required to receive this variable

Codes	Description
01-10	Valid for state
001-100	Valid for Nation
KVM	ADI suppressed due to Key Missing Variables
GQ	ADI suppressed due to Group Quarters
PH	ADI suppressed due to low population and/or housing
GQ_PH	ADI suppressed due to both (GQ and PH) suppression criteria.
QDI	ADI suppressed due to Questionable Data Integrity
NA/NONE/Blank	Missing ADI values*

*ADI may be missing for multiple reasons.

- The ADI is calculated at the Census Block Group level based on American Community Survey (ACS) data, but are linked to the SEER-Medicare data using a Census Block Group-9digit zip code crosswalk. The crosswalking method is convenient, but not always exact (i.e., not all 9digit zip codes match to a Census Block Group).
- Zip codes change over time. The zip codes available in the SEER-Medicare data may not be included in the crosswalk. The 2015 ADI crosswalk links Census Block Groups to 9digit zip codes that were in effect in 3rd quarter 2016. The 9digit zip codes available in SEER-Medicare are from 1999+.
- The 9digit zip codes available in SEER-Medicare come from the Medicare enrollment data. Therefore, linkage to the ADI variables is only possible for persons enrolled in Medicare at the time of cancer diagnosis.
- Residential ADI measures are not available for Medicare beneficiaries with nonresidential zip codes (e.g., post office box zip codes) because their residential location is available in the data.