

CBCS3 Medical Record Abstract (ERS) Data Dictionary

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Dataset: P3MA.sas7bdat

Program: P3MA.sas

A case may have multiple primary tumors, one tumor per record. Use INDEX_TUMOR=1 to select the record which contains the tumor characteristics to be used in subject-based analysis.

Diagnosis Site Information

Variable Name	Description	Data Source (ERS Database)	Comments
STUDYID	Study ID		
SEQ_PRIM	Sequence of the primary tumor	ERS diagnosis report Field no. 118	<p>If a case has multiple primaries, use this to identify the tumor and for linkage to other tumor related files.</p> <p>If a case has only 1 breast tumor, SEQ_PRIM=0.</p> <p>If a case has multiple primary tumors, SEQ_PRIM is 1, 2, or 3, etc. The first primary tumor is always breast cancer. The subsequent primary tumors could be invasive breast cancer, CIS, or other cancers.</p> <p>For the 3rd invasive and other cancer. The type of tumor was noted but no detailed medical record abstract was done.</p>

TUMOR_TYPE	<p>Tumor type (in text)</p> <p>1ST-INV 1ST-CIS 2ND-INV 2ND-CIS 3RD-INV OTHER</p>	Derived by CBCS Staff	<p>Starting in the Summer of 2016, second breast primaries are included in the ERS database. Use this variable to distinguish between the first and second breast primary.</p> <p>1ST-INV: the first invasive breast primary tumor; including contralateral or ipsilateral breast tumor that was diagnosed within 6 months of the first primary.</p> <p>1ST-CIS: CIS tumor that was diagnosed within 6 months of the first primary.</p> <p>2ND-INV: second invasive breast primary tumor, defined as breast tumor that was diagnosed >6 months after the first primary.</p> <p>2ND-CIS: CIS tumor that was diagnosed >6 months after the first breast primary.</p> <p>3RD-INV: third invasive breast primary tumor, data will not be abstracted.</p> <p>OTHER: other non-breast tumors</p>
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INDEX_TUMOR	Identify index tumor of the 1 st invasive primary 1 = Index tumor, used in analysis 2 = Non-Index tumor	Determined by PI	This variable is for CBCS staff use only. Data from index tumor is used in subject-based analysis. Fifty-six cases had multiple 1 st invasive primaries. One of them had 3 invasive primaries, 2 were counted as non-index tumors. Missing for second primaries and other tumors.
ACC_NBR	Accession number	ERS diagnosis report Field no. 132	
ACC_YR	Accession year Four-digit year which case was accessioned	ERS diagnosis report Field no. 151	
COMORB_COMP_1 to COMORB_COMP_10	Comorbidity (up to 10 comorbidities)	ERS diagnosis report Field numbers: 2102- 2107, 2203-2206	See list of codes in Codebook (pages 44-49)
DX_DATE_PRIM	Date of diagnosis of primary tumor	ERS diagnosis report Field no. 150	Renamed DX DATE (Field no. 150) from ERS. May be different from DX_DATE if subject has multiple primaries.
DX_DATE	Date of diagnosis of the first invasive breast primary	Derived from DX_DATE_PRIM	If a subject has multiple breast primaries diagnosed at different times, this is the diagnosis date of the first primary. This data is the same in all records for a subject. To get diagnosis date of the 2nd primary, use DX_DATE_PRIM instead.

DATE_ABST	Date abstracted	ERS diagnosis report Field no. 126	This is the date abstract is started and put into ERS. It is usually put in after FU1, as we start most abstracting after we have fu1 information. It will never change even when subsequent information is added.
TOPO	Site of tumor	ERS diagnosis report Field no. 133	See list of codes in Codebook (page 50).
LAT	Laterality 0 = Not a paired site 1 = Right 2 = Left 3 = One side, unspecified 4 = Bilateral 9 = Paired, side not specified	ERS diagnosis report Field no. 152	
MORPHO	Histology	ERS diagnosis report Field no. 153	See list of codes in Codebook (page 51).
GRADE	Tumor grade 1 = Well differentiated 2 = Moderately differentiated 3 = Poorly differentiated 4 = Undifferentiated/Anaplastic differentiated 9 = Not determined	ERS diagnosis report Field no. 134	This is different from the CGRADE variable from the Centralized Histopathology Review. The CGRADE variable is the preferred one to use in analysis.
SIZE	Tumor size (3 digits in millimeters) 000 = No primary identified 998 = Inflammatory carcinoma; diffuse, widespread, ¾ or more of breast 990= microinvasion, microscopic focus of invasive tumor, invasive tumor is less than or equal to 1 mm 999 = Unknown	ERS diagnosis report Field no. 119	Can also record size of inflammatory carcinoma.

ESTSIZE	Tumor size 1 = ≤ 2 cm 2 = >2 – 5 cm 3 = >5 cm	Recoded from SIZE.	SIZE=998 classified as “>5 cm” per Melissa.
ND_POS	Number of positive nodes (2-digit) 00 = All nodes examined negative 01-89 = 1-89 nodes are positive 90 = 90 or more nodes are positive 95 = Positive aspiration of lymph nodes performed 97 = Positive nodes documented, number not specified 98 = No nodes examined 99 = Unknown	ERS diagnosis report Field no. 155	
ND_XAM	Number of nodes examined (2-digit) 00 = No nodes examined 01-89 = 1-89 nodes examined 90 = 90 or more nodes examined 95 = Aspiration of regional lymph nodes performed 96 = Regional LN removal documented as Sampling and # of LNs unknown 97 = Regional LN removal documented as dissection and # of LNs unknown 98 = Regional LN removed but # of LNs Unknown and not documented as sampling or dissection 99 = Unknown	ERS diagnosis report Field no. 156	This is the same as nodes removed.

NODES_MALIG	<p>Number of nodes positive for malignancy</p> <p>00 = All nodes examined negative</p> <p>01-89 = 1-89 nodes are positive</p> <p>90 = 90 or more nodes are positive</p> <p>95 = Positive aspiration of lymph nodes performed</p> <p>97 = Positive nodes documented, number not specified</p> <p>98 = No nodes examined</p> <p>99 = Unknown</p>	Recoded from ND_POS and N_STAGE.	<p>This variable is almost identical with ND_POS except the value 98 for some cases.</p> <p>If N_STAGE=0 (no lymph node mets) and ND_POS=98 (nodes not examined), assume all nodes negative (NODES_MALIG=0). This is consistent with the definition in CBCS 1 & 2.</p>
NODESTAT	<p>Node status for a tumor</p> <p>1 = Positive</p> <p>2 = Negative</p>	Recoded from ND_POS and N_STAGE.	<p>Positive is defined as one of the followings:</p> <ol style="list-style-type: none"> 1) Number of nodes positive for malignancy >0 2) Staging - Lymph node metastasis <p>Note: For some clinically staged cases, NODESTAT is positive but ND_POS=0. These cases were considered node positive at time of diagnosis based on imaging studies, or palpation by managing physician. At the time of diagnosis, no nodes were taken. However, after the chemotherapy subsequent surgery in which nodes are taken that may not show any positive ones, which is when 0 is entered under ND_POS.</p>
EXTN	Tumor extension/involvement (3 digit code)	ERS diagnosis report Field no. 135	See list of codes in Codebook (page 52).

MULTIPLICITY_COUNTER	Number of invasive tumor foci 1 – 87 = 1 to 87 or more tumors present 88 = NA for this site 99 = Multiple tumors present, unknown how many	ERS diagnosis report Field no. 3041	
LARGE_LN_META	Largest lymph node metastasis (in cm) Missing if all nodes negative 99 = unknown size of metastasis	ERS diagnosis report Field no. 47	
EXTRANODAL	Extranodal/extracapsular extension Missing if all nodes negative 1 = Present 2 = Absent 3 = Indeterminate 4 = Not stated	ERS diagnosis report Field no. 48	
SITE_DIST1 -- SITE_DIST3	Distant sites at diagnosis (up to 3 sites) 0 = None 1 = Peritoneum 2 = Lung 3 = Pleura 4 = Liver 5 = Bone 6 = CNS 7 = Skin 8 = Distant lymph nodes 9 = Other site/unknown	ERS diagnosis report Field no. 157	

Staging Information

Variable Name	Description	Data Source (ERS Database)	Comments
AJCC_BASIS	AJCC staging basis C = clinical P = pathologic	ERS staging report Field no. 121	
T_STAGE	Tumor stage X = Primary tumor cannot be assessed 0 = No evidence of primary tumor IS = Ca in situ or Paget's disease of nipple with no tumor 1 = Tumor ≤ 2 cm greatest dimension 1MI = Microinvasion ≤ 0.1 cm in greatest dimension 1A = Tumor $>0.1 - 0.5$ cm in greatest dimension 1B = Tumor $>0.5 - 1$ cm in greatest dimension 1C = Tumor $>1 - 2$ cm in greatest dimension 2 = Tumor > 2 cm – 5 cm in greatest dimension 3 = Tumor > 5 cm in greatest dimension 4 = Tumor of any size with direct extension to chest wall or skin 4A = Extension to chest wall 4B = Edema(including peau d'orange) or ulceration of the skin of breast or satellite skin nodules to the same breast 4C = Both 4A and 4B 4D = Inflammatory carcinoma 88 = Not applicable	ERS staging report Field no. 122 or 368	
N_STAGE	Node stage	ERS staging report Field no. 123 or 369	See list of codes in Codebook (page 53).

M_STAGE	Metastasis stage X = Distant metastasis cannot be assessed 0 = No distant metastasis 1 = Distant metastasis	ERS staging report Field no. 123 or 370	
AJCC_GRP	AJCC Stage IS = in situ 1 = Stage I (diagnosed before 1/1/2010) 1A = Stage IA (diagnosed 2010 and beyond) 1B = Stage IB (diagnosed 2010 and beyond) 2A = Stage IIA 2B = Stage IIB 3A = Stage IIIA 3B = Stage IIIB 3C = Stage IIIC 4 = Stage IV 88 = Not applicable 99 = Unknown	ERS staging report Field no. 124 or 371	
STAGE	AJCC Stage 0 = Stage 0 1 = Stage I 2 = Stage II 3 = Stage III 4 = Stage IV	Recoded from AJCC_GRP	0 = IS 1 = 1, 1A, 1B 2 = 2A, 2B 3 = 3A, 3B, 3C 4 = 4
STAGED_BY	Staged by 0 = Not staged 5 = Cancer registrar 8 = Not eligible for staging	ERS staging report Field no. 327 or 372	Variable dropped from dataset – December, 2024.

GEN_STAGE	General stage 0 = in situ 1 = local 2 = regional by direct extension 3 = regional by lymph nodes 4 = regional by both direct extension and lymph node 5 = regional, NOS 7 = distant metastases/ systemic disease 9 = un-staged/unknown	ERS staging report Field no. 120	This variable WON'T be used in analysis.
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Initial Course of Therapy

Information for the first course of therapy only. Data for subsequent treatments can be found in the detailed treatment datasets.

Variable Name	Description	Data Source (ERS Database)	Comments
SYS_SURG_SEQ	<p>Systemic surgery sequence</p> <p>0 = No systemic therapy and/or surgical procedures</p> <p>2 = Systemic therapy before surgery</p> <p>3 = Systemic therapy after surgery</p> <p>4 = Systemic therapy both before and after surgery</p> <p>5 = Intraoperative systemic therapy</p> <p>6 = Intraoperative systemic therapy with other therapy adm before or after</p> <p>9 = Sequence unknown</p>	<p>Treatment RX Data 3 report</p> <p>ERS Field no. 2202</p>	<p>Chemotherapy, hormone, biologic, and other treatment are considered as systemic therapy.</p> <p>SYS_SEQ_SURG</p> <p>0 = No systemic therapy and/or surgical procedures</p> <p>This means subjects who</p> <p>1) have systemic therapy only, and never have surgery as part of 1st course treatment.</p> <p>OR</p> <p>2) Surgery only and no systemic therapy</p> <p>OR</p> <p>3) No surgery and no systemic therapy</p> <p>OR</p> <p>4) If a Cancer Registrar does not know if they had surgery and/or systemic treatment.</p>

Variable Name	Description	Data Source (ERS Database)	Comments
SURGERY_DATE	First surgery date of a tumor, first course only	Derived from surgery date of the first procedure that has SURG (codes 20-90) and/or SLNS (codes 3-7)	Surgery is defined as SURG (codes 20-90) and/or SLNS (codes 3-7). This overrides the surgery date field in the ERS database. The ERS database counts SLNS (code 1, 2) as surgery as well. Missing if no surgery.
SURG_MARGINS	Surgical margins 0 = No residual tumor 1 = Residual tumor, NOS 2 = Microscopic residual tumor 3 = Macroscopic residual tumor 7 = Margins Not Evaluable 8 = No Primary Site Surgery 9 = Unknown/ Not Applicable	Treatment RX Data 2 report. ERS Field no. 161	Obtained from the last surgical procedure.
RSN_NO_SURG	Reason no surgery 0 = Cancer directed surgery performed 1 = Cancer directed surgery not performed, not planned part of treatment 2 = Cancer directed surgery not recommended, contraindicated due to other condition 5 = Cancer directed surgery not performed, patient expired before surgery 6 = Rx recommended, not performed, no reason indicated in record 7 = Patient or guardian refused surgery 8 = Surgery recommended, unknown if done 9 = Unknown	Treatment RX Data 2 report. ERS Field no. 141	

Radiation

Variable Name	Description	Data Source (ERS Database)	Comments
RAD_START_DATE	First course therapy, radiation start date	Treatment RX Data 2 report. ERS Field no. 832	Missing if no radiation in the first course of treatment.
RSN_NO_RAD	First course treatment, reason no radiation treatment 0 = Radiation done 1 = Rad not recommended; not planned as 1st course 2 = Contraindicated due to other causes 5 = Patient died prior to planned RT 6 = Recommended- Reason unknown no rad 7 = Patient/guardian refused 8 = Radiation recommended, unk if done 9 = Unknown, death cert and autopsy only	Treatment RX Data 2 report. ERS Field no. 549	

Chemotherapy

Variable Name	Description	Data Source (ERS Database)	Comments
CHEMO_START_DATE	First course therapy, chemotherapy start date	Treatment RX Data 3 report. ERS Field no. 838	Missing if no chemotherapy in the first course of treatment.
CHEMO_CODE	Chemo code 00 = none, not part of 1st course therapy 01 = chemo as 1st course rx, type and number of agents not documented 02 = chemo, single agent as 1st course tx 03 = chemo, multi agents as 1st course tx 82 = Chemo not recommended, contraindicated due to risk factors 85 = Chemo not done, patient expired 86 = chemo not done, was recommended, not stated 87 = chemo not done, was recommended, patient/family member refused 88 = chemo recommended, unknown if given 99 = unknown/ death certificate only	Treatment RX Data 3 report. ERS Field no. 839	Codes 82-99 not used.
RSN_NO_CHEMO	First course treatment, reason no chemotherapy 0 = Chemo done 1 = Chemo not recommended 2 = Contraindicated due to other causes 6 = Reason unknown 7 = Patient refused 8 = Recommended, unknown if done 9 = Unknown, death cert only cases	Treatment RX Data 3 report. ERS Field no. 550	

Hormone Therapy

Variable Name	Description	Data Source (ERS Database)	Comments
HORM_START_DATE	First course therapy, hormone start date	Treatment RX Data 3 report. ERS Field no. 845	Missing if no hormone therapy in the first course of treatment.
HORM_CODE	First course therapy, hormone code 00 = none, not part of 1st course therapy 01 = Hormone therapy administered as 1st course rx 82 = Hormone therapy not recommended, ——— contraindicated due to risk factors 85 = Hormone therapy not done, patient ——— expired 87 = Hormone therapy not done, was ——— recommended, patient/family member ——— refused 88 = Hormone therapy recommended, ——— unknown if done 99 = unknown/ death certificate only	Treatment RX Data 3 report. ERS Field no. 846	Codes 82-99 not used.
RSN_NO_HORM	First course therapy, reason no hormone 0 = Hormone done 1 = Hormone not recommended 2 = Contraindicated due to other causes; autopsy only cases 6 = Reason unknown 7 = Patient/guardian refused 8 = Recommended, unknown if done 9 = Unknown, death certificate only cases	Treatment RX Data 3 report. ERS Field no. 551	

Biologics Therapy

Variable Name	Description	Data Source (ERS Database)	Comments
BIO_START_DATE	First course therapy, biologics start date	Treatment RX Data 3 report. ERS Field no. 848 (IMMUNO START DATE)	Missing if no biologics therapy in the first course of treatment.
BIO_CODE	First course therapy, biologics code 00 = none, not part of 1st course therapy 01 = Biologics administered as 1st course rx 82 = Biologics not recommended, —— contraindicated due to risk factors 85 = Biologics not done, patient expired 86 = Biologics not done, was recommended, —— not stated 87 = Biologics not done, was recommended, —— patient/family member refused 88 = Biologics recommended, unk if done 99 = unknown/ death certificate only	Treatment RX Data 3 report. ERS Field no. 849 (BRM CODE)	Codes 82-99 not used.

Other Treatment

Variable Name	Description	Data Source (ERS Database)	Comments
OTH_RX_START_DATE	First course therapy, other treatment start date	Treatment RX Data 3 report. ERS Field no. 851	Missing if no other treatment in the first course of therapy.
OTH_RX_CODE	First course therapy, other treatment code 0 = No other cancer-directed therapy 1 = other cancer-directed treatment /bisphosphonates including SWOG 0307 trial 2 = other experimental treatment 3 = double blind study, code not broken 6 = unproved treatment 7 = patient refused 8 = recommended, unknown if given 9 = unknown	Treatment RX Data 3 report. ERS Field no. 852	Codes 2-9 not used.
RSN_NO_OTHER	First course, reason no other treatment 0 = Other treatment done 1 = Not recommended 2 = Contraindicated 6 = Unknown 7 = Patient/guardian refused 8 = Recommended, unknown if done 9 = Death certificate cases only	Treatment RX Data 3 report. ERS Field no. 382 (UDEF 11)	

Reconstruction

Variable Name	Description	Data Source (ERS Database)	Comments
RECON_SURG	Reconstruction, immediate 0 = No reconstruction/restoration 1 = Reconstruction, NOS (unknown if flap) 2 = Implant, reconstruction without flap 3 = Reconstruction with flap, NOS 4 = Latissimus dorsi flap 5 = Abdominus recti flap 6 = Flap, NOS + implant 7 = Latissimus dorsi flap + implant 8 = Abdominus recti flap + implant 9 = Unknown, not stated, death cert only	Treatment RX Data 3 report. ERS Field no. 774	
RECON_DELAYED	Reconstruction, delayed	Treatment RX Data 3 report. ERS Field no. 1416	Codes the same as RECON_SURG
RECON_DELAYED_DT	Date of delayed reconstruction	Treatment RX Data 3 report. ERS Field no. 378 (UDEF 7)	
RSN_NO_RECON	Reason no reconstruction 0 = Not recommended 1 = Patient choice 2 = Contraindicated 3 = Patient expired 8 = Planned, unknown if done 9 = Unknown	Treatment RX Data 3 report. ERS Field no. 379 (UDEF 8)	

Ovarian Ablation

Variable Name	Description	Data Source (ERS Database)	Comments
OV_ABLATION	Ovarian ablation 0 = None 1 = With radiotherapy 2 = With surgery 3 = With drug treatment 4 = Other (combination of surgery and drug treatment) 9 = Unknown	Treatment RX Data 3 report. ERS Field no. 1783 (UDEF 17)	
OV_ABLATION_DT	Date of ovarian ablation	Treatment RX Data 3 report. ERS Field no. 1784 (UDEF 18)	

Side Effects

Include side effects from the first and subsequent courses of treatment.

Surgery Side Effects

Variable Name	Description	Data Source (ERS Database)	Comments
SURG_SIDE1 – SURG_SIDE5	Surgery side effects (up to 5 variables)	Side effects report. ERS Field nos. 1792-1796 (UDEF 26 – UDEF 30)	Include side effects from the first and subsequent courses of treatment. See list of codes in Codebook (page 54).
SURG_SIDE_DT1 – SURG_SIDE_DT4	Surgery side effect date (up to 4 variables)	Side effects report. ERS Field nos. 1807-1810 (UDEF 41 – UDEF 44)	mm/dd/yyyy

Radiation Side Effects

RAD_SIDE1 – RAD_SIDE5	Radiation side effects (up to 5 variables)	Side effects report. ERS Field nos. 1800-1804 (UDEF 34 – UDEF 38)	Include side effects from the first and subsequent courses of treatment. See list of codes in Codebook (page 55).
RAD_SIDE_OTHER	Other radiation side effect 00 = None 01 = Seroma with treatment 02 = Seroma without treatment	Side effects report. ERS Field no. 1786 (UDEF 20)	

Neoadjuvant Chemotherapy Side Effects

Variable Name	Description	Data Source (ERS Database)	Comments
NEOAJ_SIDE1 – NEOAJ_SIDE7	Neoadjuvant chemotherapy side effects (up to 7 variables)	Side effects report. ERS Field nos. 3106-3112 (UDEF 51 – UDEF 57)	Include side effects from the first and subsequent courses of treatment. See list of codes in Codebook (page 56).
NEOAJ_SIDE_OTHER	Other neoadjuvant chemotherapy side effect	Side effects report. ERS Field nos. 1787 (UDEF 21)	See list of codes in Codebook (page57).

Adjuvant Chemotherapy Side Effects

ADJ_SIDE1 – ADJ_SIDE7	Adjuvant chemotherapy side effects (up to 7 variables)	Side effects report. ERS Field nos. 3113-3119 (UDEF 58 – UDEF 64)	Include side effects from the first and subsequent courses of treatment. Codes the same as NEOAJ_SIDE1. See list of codes in Codebook (page 56).
ADJ_SIDE_OTHER	Other adjuvant chemotherapy side effect	Side effects report. ERS Field nos. 1788 (UDEF 22)	Codes the same as NEOAJ_SIDE_OTHER. See list of codes in Codebook (page 57).

Hormone Side Effects

Variable Name	Description	Data Source (ERS Database)	Comments
HORM_SIDE1 – HORM_SIDE5	Hormone side effects (up to 5 variables)	Side effects report. ERS Field nos. 3120-3124 (UDEF 65 – UDEF 69)	Include side effects from the first and subsequent courses of treatment. See list of codes in Codebook (page 58).
HORM_SIDE_OTHER	Other hormone side effect	Side effects report. ERS Field nos. 1789 (UDEF 23)	See list of codes in Codebook (page 58).

Biologics Side Effects

Side effects from Herceptin or Avastin or other biologics only therapy were captured in biologics side effects.

Side effects from combination of standard chemotherapy and biologics were captured in the chemotherapy side effects variables. It is because the information cannot be teased out from medical records. Doctors cannot tell whether the side effects are from standard chemo or biologics.

BIO_SIDE1 – BIO_SIDE6	Biologics side effects (up to 6 variables)	Side effects report. ERS Field nos. 3125-3130 (UDEF 70 – UDEF 75)	Include side effects from the first and subsequent courses of treatment. Codes the same as NEOADJ_SIDE1. See list of codes in Codebook (page 56).
BIO_SIDE_OTHER	Other biologics side effect	Side effects report. ERS Field nos. 1790 (UDEF 24)	Codes the same as NEOADJ_SIDE_OTHER. See list of codes in Codebook (page 57).

Follow Up

Variable Name	Description	Data Source (ERS Database)	Comments
DT_LST_CONT	Date of last contact	Follow-up report. ERS Field no. 25	This is the last date we had contact of any kind with subject. If PT_STATUS=0 (dead), this is the date of death. In SAS, update this field from ERS with the last follow-up survey completion date if it is before the last survey date.
PT_STATUS	Patient status 0 = Dead 1 = Alive 9 = Unknown	Follow-up report. ERS Field no. 27	
CA_STATUS	Cancer status 1 = Without 2 = With 9 = Unknown	Follow-up report. ERS Field no. 170	If PT_STATUS=0 (dead) and CA_STATUS=2 (with) is recorded for a breast primary, that's mean cause of death is breast cancer.
LAST_FU_ENTERED	Date follow-up entered	Follow-up report. ERS Field no. 1532	This is the date Sue entered the Last Contact into system, this date auto populates.
RECUR_DATE1	First subsequent recurrence date	Follow-up report. ERS Field no. 162	mm/dd/yyyy
RECUR_TYPE1	First subsequent recurrence type	Follow-up report. ERS Field no. 163	See list of codes in Codebook (page 59).

RECUR1_MET1 – RECUR1_MET3	First recurrent metastasis (up to 3 variables) 0 = None 1 = Peritoneum 2 = Lung (limited) 3 = Pleura 4 = Liver 5 = Bone 6 = CNS 7 = Skin 8 = Lymph nodes (distant) 9 = Other	Follow-up report. ERS Field nos. 125, 1523, 1524	
RECUR_DATE2	Second subsequent recurrence date	Follow-up report. ERS Field no. 162	mm/dd/yyyy
RECUR_TYPE2	Second subsequent recurrence type	Follow-up report. ERS Field no. 163	See list of codes in Codebook (page 59).
RECUR2_MET1 – RECUR2_MET3	Second recurrent metastasis (up to 3 variables) 0 = None 1 = Peritoneum 2 = Lung (limited) 3 = Pleura 4 = Liver 5 = Bone 6 = CNS 7 = Skin 8 = Lymph nodes (distant) 9 = Other	Follow-up report. ERS Field nos. 125, 1523, 1524	

RECUR_DATE3	Third subsequent recurrence date	Follow-up report. ERS Field no. 162	mm/dd/yyyy
RECUR_TYPE3	Third subsequent recurrence type	Follow-up report. ERS Field no. 163	See list of codes in Codebook (page 59).
RECUR3_MET1 – RECUR3_MET3	Third recurrent metastasis (up to 3 variables) 0 = None 1 = Peritoneum 2 = Lung (limited) 3 = Pleura 4 = Liver 5 = Bone 6 = CNS 7 = Skin 8 = Lymph nodes (distant) 9 = Other	Follow-up report. ERS Field nos. 125, 1523, 1524	
FUWT_DATE	FU#1 weight date	Follow up weight report. ERS Field no. 181.	Record the date of weight from the medical record closest to the date follow up 1 survey was collected
FU_WEIGHT	FU #1 weight (lbs) 999 = unknown	Follow up weight report. ERS Field no. 182.	Record weight in pounds.
STATE_RPT	State reporting I = Abstract incomplete N = Abstract complete	Follow-up report. ERS Field no. 200	

Clinical Trials

Variable Name	Description	Data Source (ERS Database)	Comments
TRIAL_START_DATE1 – TRIAL_START_DATE4	Clinical trial start date (up to 4)	Treatment RX Data 3 report. ERS Field no. 1818	mm/dd/yyyy
TRIAL_NAME1 – TRIAL_NAME4	Clinical trial name (up to 4)	Treatment RX Data 3 report. ERS Field no. 1819	See list of codes in Codebook (page 60).

Treatment (First and Subsequent Courses)

Detailed treatment data were obtained from ERS Treatment RX Data 1, Treatment RX Data 2, and Treatment User Data 1 reports. A lot of data manipulations were done to pull appropriate data from these reports. Treatment data were split into 6 different datasets.

Datasets generated from SAS program: RX_DATA.SAS

- 1) Surgery data -- Surgery.sas7bdat
- 2) Radiation -- Radiation.sas7bdat
- 3) Chemotherapy -- Chemo.sas7bdat
- 4) Hormone -- Hormone.sas7bdat
- 5) Biologics -- Biologics.sas7bdat
- 6) Other treatment -- Other_Rx.sas7bdat

Each case may have multiple primaries (SEQ_PRIM); each primary may have multiple records.

For a handful of cases with multiple invasive breast primaries, the treatment data may be recorded differently for each tumor. For example, ID 57695 has first course chemo treatment recorded for the first primary but no data for the other tumor. This is because the second tumor was diagnosed after chemo was administered. Therefore, chemo data would be recorded for the first tumor only.

For bilateral cases with subsequent treatment for recurrences, the only time we would enter chemo/biologic treatments to both entries is if the recurrence is a distant one (code 40 or above). Treatment should be “primary specific”, except for distant mets where it is too hard to tell which invasive tumor spread to the distant sites. That is, if recurrence was local/regional to the right breast, then treatment would be recorded for the right breast only.

Surgery

SAS Dataset: SURGERY.sas7bdat

This dataset contains all surgical procedures, **including biopsies**. Subjects with any surgical procedures are included. Each record contains data for a surgical procedure. A subject may have multiple surgical procedures, hence, multiple records. For bilateral cases, surgical procedure performed may be different between the breasts. **Surgery is defined as SURG (codes 20-90) and/or SLNS (codes 3-7) in CBCS3**. Therefore, some of the procedures in this dataset are not considered surgery in analysis.

Variable Name	Description	Comments
STUDYID	CBCS ID	
SEQ_PRIM	Sequence of the primary tumor	
TUMOR_TYPE	Tumor type (in text) 1ST-INV 1ST-CIS 2ND-INV 2ND-CIS OTHER	Starting in the Summer of 2016, second breast primaries are included in the ERS database. Use this variable to distinguish between the first and second breast primary. "1ST-INV" identify the first primary invasive tumor(s).
INDEX_TUMOR	Flag index tumor 0 = No 1 = index tumor	This variable is for CBCS programmer use only.
F_S	First course/subsequent flag F = First course S = Subsequent	
SURG_DATE	Surgery date of surgical procedure	This variable captures all procedures including biopsies.

SURG	Surgery code	See list of codes in Codebook (pages 61-62).
SLNS	<p>Scope of lymph node surgery</p> <p>0 = None</p> <p>1 = Biopsy or aspiration of regional lymph node, NOS</p> <p>2 = Sentinel lymph node biopsy</p> <p>3 = Number of regional nodes removed unknown or not stated, regional lymph nodes removed, NOS</p> <p>4 = 1-3 lymph nodes removed</p> <p>5 = 4 or more regional lymph nodes removed</p> <p>6 = Sentinel node biopsy and code 3, 4, or 5 at the same time, or timing not stated</p> <p>7 = Sentinel node biopsy and code 3, 4, or 5 at different times</p> <p>9 = Unknown or not applicable</p>	
SURG_REGION_SITES	<p>Surgery of regional sites</p> <p>0 = None</p> <p>1 = Nonprimary surgical procedure performed</p> <p>2 = Nonprimary surgical procedure to other regional sites</p> <p>3 = Nonprimary surgical procedure to distant lymph node(s)</p> <p>4 = Nonprimary surgical procedure to distant site</p> <p>5 = Combination of codes</p> <p>9 = Unknown</p>	Will have data if there is surgery to regional and/or distant sites or subsequent surgery to metastatic site. Won't see data in this field that often.

Radiation

SAS Dataset: RADIATION.sas7bdat

This dataset contains radiation treatment, first and subsequent course (if any). Only subjects with radiation administered are included. Each record contains data for a radiation treatment. Subjects may have multiple radiation treatments, hence, multiple records. For subjects with bilateral tumors, radiation may be administered to only one side of the breast. When radiation was administered to both sides of the breast, treatment data may be different.

Variable Name	Description	Comments
STUDYID	CBCS ID	
SEQ_PRIM	Sequence of the primary tumor	
TUMOR_TYPE	Tumor type (in text) 1ST-INV 1ST-CIS 2ND-INV 2ND-CIS OTHER	Starting in the Summer of 2016, second breast primaries are included in the ERS database. Use this variable to distinguish between the first and second breast primary. "1ST-INV" identify the first primary invasive tumor(s).
INDEX_TUMOR	Flag index tumor 0 = No 1 = index tumor	This variable is for CBCS programmer use only.
F_S	First course/subsequent flag F = First course S = Subsequent	
RAD_DATE	Radiation start date	mm/dd/yyyy
RAD_END_DT	Radiation end date	mm/dd/yyyy

RAD_RX_CMPL_ST	Radiation completion status 1 = Radiation completed 2 = Radiation not completed, patient health 3 = Radiation not completed, patient expired 4 = Radiation not completed, patient choice 5 = Radiation not completed, family choice 6 = Radiation not completed, complications 7 = Radiation not completed, cytopenia 8 = Radiation not completed, other reasons 9 = Radiation not completed, unknown reasons	
REG_DOSE_CGY	Radiation dose cGy (4-digit field) 8888 = radiation administered and still ongoing 9999 = unknown if administered, date unknown	
REG_MODALITY	Radiation treatment modality	See list of codes in Codebook (page 63).
RAD_BOOST_DOSE	Boost radiation dose cGy 8888 = radiation administered and still ongoing 9999 = unknown if administered, date unknown	
BOOST_MODALITY	Boost radiation treatment modality	Codes the same as REG_MODALITY. See list of codes in Codebook (page 63).
NBR_RXS_VOL	Total # of episodes of radiation (2-digit) 99 = Unknown	Usually presented in the chart as (Reg + Boost)
RAD_SITES	Radiation sites	See list of codes in Codebook (page 64).

Chemotherapy
SAS Dataset: CHEMO.sas7bdat

This dataset contains chemotherapy, neoadjuvant and/or adjuvant; first and subsequent course (if any). Only subjects with chemotherapy are included. **Each record contains data for a chemotherapy drug.** That is, if a subject received multiple chemotherapy agents in a regimen, there would be multiple records per subject. Chemotherapy agents may start on the same date but may have different completion status and/or end dates; or they may start on different dates but have the same end dates.

Variable Name	Description	Comments
STUDYID	CBCS ID	
SEQ_PRIM	Sequence of the primary tumor	
TUMOR_TYPE	Tumor type (in text) 1ST-INV 1ST-CIS 2ND-INV 2ND-CIS OTHER	Starting in the Summer of 2016, second breast primaries are included in the ERS database. Use this variable to distinguish between the first and second breast primary. "1ST-INV" identify the first primary invasive tumor(s).
INDEX_TUMOR	Flag index tumor 0 = No 1 = index tumor	This variable is for CBCS programmer use only.
F_S	First course/subsequent flag F = First course S = Subsequent	

CHEMO	Chemo code 1 = Type and number cycles of agents not documented 2 = Single agent 3 = Multi agents	
CHEMO_DATE	Chemotherapy start date	mm/dd/yyyy
CHEMO_END_DT	Chemotherapy end date	mm/dd/yyyy
CHEMO_NBR_CYCLES	Chemotherapy - number of cycles	
CHEMO_RX_CMPL_ST	Chemotherapy completion status 1 = chemotherapy completed 2 = Not completed, patient health 3 = Not completed, patient expired 4 = Not completed, patient choice 5 = Not completed, family choice 6 = Not completed, complications 7 = Not completed, cytopenia 8 = Not completed, other reasons 9 = Not completed, unknown reason 10 = In progress	

CHEMO_AGENT	Chemotherapy agent (up to 9 alphanumeric) 740 = METHOTREXATE 19893 = 5-FLUOROURACIL/5-FU 26271 = CYCLOPHOSPHAMIDE/CYTOXAN 67574 = VINCRISTINE 119875 = CISPLATIN/CISPLATINUM 123127 = DOXORUBICIN/ADRIAMYCIN 125973 = PACLITAXEL/TAXOL 125973A = ABRAXANE 141540 = VP-16/ETOPOSIDE 241240 = CARBOPLATIN/PARAPLATIN 256942 = EPIRUBICIN/ELLECE 333333 = Chemotherapy, NOS 608210 = NAVELBINE/VINORELBINE 613327 = GEMCITABINE/GEMZAR 628503 = DOCETAXEL/TAXOTERE 684363 = IXABEPILONE/EPOTHILONE/IXEMPRA 707389 = HALAVEN/ERIBULIN 712807 = XELODA/CAPECITABINE 777774 = CYTARABINE LIPOSOME/DEPOCYT 999999 = CHEMOTHERAPY, SUBJECT REPORTED ONLY	
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Hormone Treatment
SAS Dataset: HORMONE.sas7bdat

This dataset contains hormone treatment, first and subsequent course (if any). Only subjects with hormone treatment are included. **Each record contains data for a hormone agent.** That is, if a subject received different hormone drugs, there would be multiple records per subject.

Variable Name	Description	Comments
STUDYID	CBCS ID	
SEQ_PRIM	Sequence of the primary tumor	
TUMOR_TYPE	Tumor type (in text) 1ST-INV 1ST-CIS 2ND-INV 2ND-CIS OTHER	Starting in the Summer of 2016, second breast primaries are included in the ERS database. Use this variable to distinguish between the first and second breast primary. "1ST-INV" identify the first primary invasive tumor(s).
INDEX_TUMOR	Flag index tumor 0 = No 1 = index tumor	This variable is for CBCS programmer use only.
F_S	First course/subsequent flag F = First course S = Subsequent	
HORM_DATE	Hormone treatment start date	mm/dd/yyyy
HORM_END_DT	Hormone treatment end date	mm/dd/yyyy

HORM_RX_CMPL_ST	Hormone treatment completion status 1 = Hormone treatment completed 2 = Not completed, patient health 3 = Not completed, patient expired 4 = Not completed, patient choice 5 = Not completed, family choice 6 = Not completed, complications 7 = Not completed, cytopenia 8 = Not completed, other reasons 9 = Not completed, unknown reason 10 = In progress	
HORM_AGENT	Hormone agent 180973 = TAMOXIFEN/NOLVADEX 345211 = DECADRON 377526 = LUPRON/LEUPROLIDE ACETATE 444444 = FARESTON/TOREMIFINE 606864 = ZOLADEX 706725 = EVISTA/RALOXIFENE 713563 = AROMASIN/EXEMESTANE 719276 = FULVESTRANT/FASLODEX 719344 = ARIMIDEX/ANASTROZOLE 719345 = FEMARA/LETROZOLE 999998 = HORMONE THERAPY, SUBJECT REPORTED ONLY	

Biologics

SAS Dataset: BIOLOGICS.sas7bdat

This dataset contains biologics data, first and subsequent course (if any). Only subjects with biologics are included. **Each record contains data for a biologics drug.** That is, if a subject received multiple biologics agents in a regimen, there would be multiple records per subject. Biologics agents may start on the same date but may have different completion status and/or end dates. Or they may start on different dates but have the same end dates.

Variable Name	Description	Comments
STUDYID	CBCS ID	
SEQ_PRIM	Sequence of the primary tumor	
TUMOR_TYPE	Tumor type (in text) 1ST-INV 1ST-CIS 2ND-INV 2ND-CIS OTHER	Starting in the Summer of 2016, second breast primaries are included in the ERS database. Use this variable to distinguish between the first and second breast primary. “ 1ST-INV ” identify the first primary invasive tumor(s).
INDEX_TUMOR	Flag index tumor 0 = No 1 = index tumor	This variable is for CBCS programmer use only.
F_S	First course/subsequent flag F = First course S = Subsequent	

BIO_DATE	Biologics start date	mm/dd/yyyy
BIO_END_DT	Biologics end date	mm/dd/yyyy
BIO_NBR_CYCLES	Biologics - number of cycles	
BIO_RX_CMPL_ST	Biologics completion status 1 = biologics completed 2 = Not completed, patient health 3 = Not completed, patient expired 4 = Not completed, patient choice 5 = Not completed, family choice 6 = Not completed, complications 7 = Not completed, cytopenia 8 = Not completed, other reasons 9 = Not completed, unknown reason 10 = In progress	

BIO_AGENT	<p>Biologics agent (up to 9 alphanumeric)</p> <p>527016 = LAPATINIB/TYKERB</p> <p>555555 = BSI-201 INHIBITOR</p> <p>688097 = HERCEPTIN/TRASTUZUMAB</p> <p>704865 = BEVACIZUMAB/AVASTIN/PLACEBO</p> <p>733504 = AFINITOR/EVEROLIMUS</p> <p>777771 = PANITUMUMAB/VECTIBIX</p> <p>777772 = BKM120 INHIBITOR</p> <p>777773 = PERTUZUMAB/PERJETA</p> <p>777775 = ABT-888 INHIBITOR</p> <p>777776 = MEK INHIBITOR</p> <p>777777 = HKI-272/PLACEBO</p> <p>777778 = T-DM1 (Trastuzumab emtansine)/KADCYLA</p> <p>777779 = GAMMA SECRETASE INHIBITOR</p> <p>777780 = AKT INHIBITOR</p> <p>777781 = IBRANCE KINASE INHIBITOR</p> <p>777782 = PI3K INHIBITOR (BYL719)</p> <p>777783 = ABEMACICLIB CDK INHIBITOR</p> <p>777784 = ATEZOLIZUMAB</p> <p>900003 = REGORAFENIB</p> <p>900004 = REFAMETINIB</p> <p>900005 = CRIZOTINIB INHIBITOR (Xalkori)</p> <p>900006 = PEMBROLIZUMAB (KEYTRUDA)</p> <p>900007 = PLX3397 INHIBITOR (PEXIDARTINIB)</p> <p>900008 = NEDD8I INHIBITOR (MLN4924)</p> <p>900009 = RIBOCICLIB (KISQALI)</p> <p>900010 = OLAPARIB (LYNPARZA)</p> <p>900011 = ALPELISIB (PIQRAY)</p> <p>900012 = KANJINTI (Trastuzumab-anns)</p>	
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Other Treatment

SAS Dataset: OTHER_RX.sas7bdat

This dataset contains data for other treatment, first and subsequent course (if any). Only subjects with other treatment are included. **Each record contains data for a drug.** That is, if a subject received multiple other treatment drugs, there would be multiple records per subject. Other treatment may be started on the same date but may have different completion status and/or end dates. Or they may start on different dates but have the same end dates.

Variable Name	Description	Comments
STUDYID	CBCS ID	
SEQ_PRIM	Sequence of the primary tumor	
TUMOR_TYPE	Tumor type (in text) 1ST-INV 1ST-CIS 2ND-INV 2ND-CIS OTHER	Starting in the Summer of 2016, second breast primaries are included in the ERS database. Use this variable to distinguish between the first and second breast primary. “1ST-INV” identify the first primary invasive tumor(s).
INDEX_TUMOR	Flag index tumor 0 = No 1 = index tumor	This variable is for CBCS programmer use only.
F_S	First course/subsequent flag F = First course S = Subsequent	

OTH_DATE	Other treatment start date	mm/dd/yyyy
OTH_END_DT	Other treatment end date	mm/dd/yyyy
OTH_NBR_CYCLES	Other treatment - number of cycles	Missing in all subjects. Variable may be dropped later.
OTH_RX_CMPL_ST	Other treatment completion status 1 = Other treatment completed 2 = Not completed, patient health 3 = Not completed, patient expired 4 = Not completed, patient choice 5 = Not completed, family choice 6 = Not completed, complications 7 = Not completed, cytopenia 8 = Not completed, other reasons 9 = Not completed, unknown reason 10 = In progress	
OTH_AGENT	Other treatment agent (up to 9 alphanumeric) 111111 = BONIVA/IBANDRONATE SODIUM 222222 = CLODRONATE/CLODRONIC ACID 720699 = PAMIDRONATE/AREIDIA 721517 = ZOMETA/ZOLEDRONATE 888888 = PROLIA/DENOSUMAB/XGEVA SWOG 0307 =Clodronate, Zoledronic Acid, or Ibandronate	

CODEBOOK

COMORB_COMP_1 -- COMORB_COMP_10 (Comorbidities)

42	Human Immunodeficiency virus (hiv) disease	2440	Postsurgical hypothyroidism
91	Colitis, enteritis and gastroenteritis of presumed infectious origin	2441	Other postablative hypothroidism
135	Sarcoidosis	2449	Hypothyroidism
311	Depressive disorder, NEC	2459	Thyroiditis unspecified
340	Multiple sclerosis	2468	Other specified disorders of thyroid
412	Old myocardial infarction	2469	Unspecified disorder of thyroid
496	COPD, chronic airway obstruction, NOS	2500	Diabetes Mellitus Type II without complications
541	Genital herpes	2506	Diabetes mellitus with neurological manifestations
549	Herpes simplex w/o mention of complications	2507	Diabetes mellitus with peripheral circulatory disorders
571	Chronic liver disease and cirrhosis	2508	Diabetes meliitus with other specified manifestations
586	Renal failure unspecified	2509	Diabetes Mellitus with unspecified complication
707	Unspecified viral hepatits C	2512	Hypoglycemia, unspecified
725	Polymyalgia rheumatica	2520	Hyperparathyroidism
769	Respiratory distress syndrome	2564	Polycystic Ovaries
794	Human papillomavirus	2720	Pure hypercholesterolemia
1509	Malignant neoplasm esophagus	2721	Pure hyperglyceridemia
1739	Other malignant neoplasm skin site unspecified	2724	Hyperlipidemia
1820	Malignant neoplasm corpus uteri except isthmus	2731	Monoclonal paraproteinemia
2028	Other lymphomas	2749	Gout, unspecified
2030	Multiple myeloma	2750	Disorders of iron metabolism
2330	Carcinoma in situ breast	2770	Cystic fibrosis
2041	Chronic lymphoid leukemia	2774	Disorders of bilirubin excretion
2189	Leiomyoma of uterus, NOS	2777	Dismetabolic syndrome x
2409	Goiter, unspecified		

COMORB_COMP_1 -- COMORB_COMP_10 (Comorbidities) continued

2779	Unspecified disorder of metabolism	3384	Chronic pain syndrome
2780	Overweight and obesity	3458	Other forms of epilepsy and recurrent seizures
2794	Autoimmune disease, not elsewhere classified	3469	Migraine, unspecified
2800	Iron deficiency anemia, secondary to blood loss	3470	Narcolepsy
2809	Iron deficiency anemia, unspecified	3501	Trigeminal nerve disorder unspecified
2810	Pernicious anemia	3569	Idiopathic peripheral neuropathy
2819	Unspecified deficiency anemia	3572	Polyneuropathy in diabetes
2825	Sickle cell trait	3659	Unspecified glaucoma
2852	Anemia of chronic disease	3860	Meniere's disease
2859	Anemia unspecified	3960	Mitral valve stenosis and aortic valve stenosis
2863	Congenital deficiency of other clotting factors	4011	Essential hypertension, benign
2864	Von Willebrand's disease	4019	Hypertension, NOS
2875	Thrombocytopenia, unspecified	4029	Unspecified hypertensive heart disease
2880	Neutropenia	4109	Acute myocardial infarction
2890	Polycythemia secondary	4139	Other and unspecified angina pectoris
2900	Senile Dementia	4140	Coronary atherosclerosis
2953	Schizophrenic disorders, paranoid type	4151	Pulmonary embolism and infarction
2965	Bipolar disorder, current episode depressed	4160	Primary pulmonary hypertension
3003	Obsessive-compulsive disorders	4169	Chronic pulmonary heart disease, NOS
3039	Other and unspecified alcohol dependence	4239	Unspecified disease of Pericardium
3056	Cocaine abuse	4240	Mitral valve disorder
3059	Other mixed or unspecified drug abuse	4241	Aortic valve disorders
30981	Post traumatic stress disorder	4254	Other primary cardiomyopathies
3371	Peripheral autonomic neuropathy in disorders classified elsewhere	4262	Left bundle branch hemiblock

COMORB_COMP_1 -- COMORB_COMP_10 (Comorbidities) continued

4266	Other heart block	5308	Other specified disorders of the esophagus
4270	Paroxysmal supraventricular tachycardia	5312	Herpes zoster Postherpetic trigeminal neuralgia
4278	Other specified cardiac dysrhythmias	5355	Unspecified gastritis and gastroduodenitis
4279	Cardiac dysrhythmia NOS	5363	Gastroparesis
4280	Congestive heart failure, unspecified	5368	Dyspepsia and other specified disorders of function of stomach
4292	Cardiovascular disease, NOS	5410	Genital herpes, unspecified
4299	Heart disease, NOS	5539	Hernia of unspecified site
4349	Cerebral artery occlusion, unspecified	5569	Ulcerative Colitis unspecified
4430	Raynaud's syndrome	5641	Irritable bowel syndrome
4439	Peripheral vascular disease, unspecified	5648	Other specified functional disorders of intestine
4479	Unspecified disorders of arteries	5698	Other specified disorders of intestine
4532	Venous embolism and thrombosis of vena cava	5712	Alcoholic cirrhosis of liver
4549	Asymptomatic varicose veins of lower extremities	5733	Hepatitis unspecified
4571	Other lymphedema	5740	Calculus of gallbladder with acute cholecystitis
4739	Unspecified sinusitis(chronic)	5771	Chronic pancreatitis
4770	Allergic rhinitis due to pollen	5790	Celiac disease
4779	Allergic rhinitis, NOS	5849	Acute renal failure unspecified
4919	Unspecified chronic bronchitis	5856	End stage renal disease
4928	Other emphysema	5859	Chronic kidney disease, NOS
4930	Extrinsic asthma	5939	Unspecified disorder of kidney and ureter
4938	Other forms of asthma	5959	Cystitis unspecified
4939	Asthma	6101	Diffuse cystic mastopathy
5163	Idiopathic Fibrosing alveolitis	6170	Endometriosis of uterus
5272	Sialoadentitis of the salivary glands	6179	Endometriosis, site unspecified

COMORB_COMP_1 -- COMORB_COMP_10 (Comorbidities) continued

6262	Excessive or frequent menstruation	7287	Other fibromatoses
6270	Premenopausal Menorrhagia	7291	Myalgia and myositis, NOS
6480	Diabetes Mellitus in pregnancy	7339	Unspecified disorders of bone and cartilage
6482	Anemia in pregnancy	7385	Other acquired deformity of back or spine
6929	Other dermatitis, unspecified cause	7759	Unspecified endocrine and metabolic disturbances
6944	Pemphigus	7821	Rash and unspecific skin eruption
6945	Pemphigoid	7823	Edema
6954	Lupus erythematosus	7850	Tachycardia, unspecified
6961	Other psoriasis	7852	Undiagnosed cardiac murmurs
7014	Keloid scar	7910	Proteinuria
7101	Scleroderma	23871	Neoplasm of uncertain behavior essential thrombocythemia
7104	Polymyositis	25200	Hyperparathyroidism, unspecified
7109	Unspecified diffuse connective tissue disease	27411	Uric acid nephrolithiasis
7140	Rheumatoid arthritis	27542	Hypercalcemia
7150	Osteoarthrosis generalized	27800	Obesity
7151	Osteoarthrosis localized primary	27801	Morbid obesity
7159	Osteoarthrosis, NOS	28731	Immune thrombocytopenia purpura
7165	Unspecified polyarthropathy or polyarthritis	28981	Primary Hypercoagulable State
7194	Pain in joint	29680	Bipolar disorder, unspecified
7200	Ankylosing spondylitis	30000	Anxiety state NOS
7226	Degenerative Disc Disease NOS	30001	Panic disorder without agoraphobia
7230	Spinal stenosis of cervical region	30002	Generalized anxiety disorder
7249	Other unspecified back disorders	30112	Chronic depressive personality disorder
7286	Contracture of palmar fascia	32723	Obstructive sleep apnea

COMORB_COMP_1 -- COMORB_COMP_10 (Comorbidities) continued

33394	Restless leg syndrome	73300	Osteoporosis, NOS
34122	Idiopathic transverse myelitis	73340	Aseptic necrosis of bone, site unspecified
34989	Other specified disorders of nervous system	73390	Disorder of bone and cartilage, NOS
36011	Sympathetic uveitis	73743	Scoliosis
36220	Retinopathy of prematurity, NOS	74330	Congenital cataract
36289	Other retinal disorders	74687	Malposition of heart and cardiac apex
36274	Pigmentary retinal dystrophy	78039	Other convulsions
38830	Tinnitus, unspecified	78050	Sleep disturbance, unspecified
38920	Mixed hearing loss, unspecified	78052	Insomnia unspecified
42731	Atrial fibrillation	78057	Unspecified Sleep Apnea
42781	Sinoatrial node dysfunction	78602	Orthopnea
43885	Vertigo	95215	Spinal cord injury
45183	Phlebitis and thrombophlebitis of deep veins of upper extremities	V101	Personal history of malignant neoplasm trachea, bronchus and lung
45189	Phelbitis and thrombophlebitis other	V108	Personal history of malignant neoplasm other sites
51889	Lung Disease NOS	V113	Personal history alcoholism
53081	Esophageal reflux	V134	Personal history of arthritis
53085	Barrett's esophagus	V222	Pregnant state incidental
56210	Diverticulosis of colon without mention of hemorrhage	V409	Unspecified mental of behavioral problem
56211	Diverticulitis of colon without mention of hemorrhage	V1000	Personal history of malignant neoplasm Gastrointestinal tract unspecified
57142	Autoimmune hepatitis	V1001	Personal history malignant neoplasm of tongue
58189	Other nephrotic syndrome	V1005	Personal history malignant neoplasm of large instestine
59000	Chronic pyelonephritis	V1006	Personal history malignant neoplasm of rectosigmoid, rectum, anus
70583	Hidradenitis	V1011	Personal history malignant neoplasm bronchus and lung
72400	Spinal stenosis, unspecified region	V1041	Personal history of malignant neoplasm of Cervix uteri

COMORB_COMP_1 -- COMORB_COMP_10 (Comorbidities) continued

V1042	Personal history of malignant neoplasm other parts of uterus
V1043	Personal history of malignant neoplasm ovary
V1044	Personal history of malignant neoplasm other female genital organs
V1052	Personal history of malignant neoplasm kidney
V1053	Personal history of malignant neoplasm renal pelvis
V1072	Personal history of malignant neoplasm hodgkin's disease
V1082	Personal history of malignant neoplasm melanoma of skin
V1083	Personal history of malignant neoplasm other malignant neoplasm of skin
V1087	Personal history of malignant neoplasm thyroid
V1201	Personal history of tuberculosis
V1241	Personal history of benign neoplasm of the brain
V1251	Personal history venous thrombosis and embolism
V1252	Personal history thrombophlebitis
V1254	Personal history of transient ishemic attack
V1272	Personal history colonic polyps
V1279	Personal history diseases of digestive system
V1303	Personal history of nephrotic syndrome
V4581	Aortocoronary bypass status

TOPO (Site)

C069	Mouth, NOS	C500	Nipple
C099	Tonsil, NOS	C501	Central portion of breast
C109	Oropharynx, NOS	C502	Upper-inner quadrant of breast
C119	Nasopharynx, NOS	C503	Lower-inner quadrant of breast
C159	Esophagus, NOS	C504	Upper-outer quadrant of breast
C163	Gastric antrum stomach	C505	Lower-outer quadrant of breast
C169	Stomach, NOS	C506	Axillary tail of breast
C180	Cecum	C508	Overlapping lesion of breast
C181	Appendix	C509	Breast, NOS
C184	Transverse colon	C519	Vulva, NOS
C189	Colon, NOS	C539	Cervix Uteri
C199	Rectosigmoid junction	C541	Endometrium
C209	Rectum, NOS	C549	Corpus Uteri
C239	Gallbladder	C559	Uterus, NOS
C259	Pancreas, NOS	C569	Ovary
C343	lower lobe, lung	C579	Female genital tract NOS
C349	Lung	C649	Kidney, NOS
C421	Bone marrow	C728	Overlapping lesion of brain & central nervous system
C499	Connective subcutaneous & other soft tissues, NOS	C739	Thyroid gland
C449	Skin, NOS	C749	Adrenal gland, NOS
C490	Connective subcutaneous & other soft tissues of head, face, and neck	C760	Head, Face, or Neck, NOS
C492	Connective subcutaneous & other soft tissues of lower limb and hip	C761	Thorax, NOS
		C764	Upper limb NOS
		C778	Lymph nodes of multiple regions
		C779	Lymph nodes, NOS

MORPHO (Histology)

80003	malignant tumor NOS, malignancy NOS, cancer NOS	85223	Infiltrating duct and lobular carcinoma
80103	Carcinoma NOS	85233	Infiltrating duct carcinoma mixed with other types of carcinoma
80106	Carcinoma, Metastatic	85243	Infiltrating lobular mixed with other types of carcinoma
80413	Small Cell carcinoma, NOS	85303	Inflammatory carcinoma; can also be coded as infiltrating duct
80503	Papillary carcinoma	85413	Paget disease and infiltrating duct carcinoma
80703	Squamous cell carcinoma	85603	Adenosquamous carcinoma
80723	Squamous cell carcinoma, nonkeratinizing, NOS	85703	Adenocarcinoma with squamous metaplasia
80903	Basal Cell Carcinoma	85753	Metaplastic carcinoma, NOS
81403	Adenocarcinoma, NOS	87203	Malignant Melanoma, NOS
82003	Adenoid cystic carcinoma	88003	Sarcoma, NOS
82113	Tubular carcinoma	88903	Leiomyosarcoma, NOS
82403	Carcinoid tumor, NOS	89003	rhabdomyosarcoma, NOS
82463	Neuroendocrine carcinoma, NOS	89363	Malignant Gastrointestinal stromal tumor
82603	Papillary adenocarcinoma	91203	hemangiosarcoma/ angiosarcoma
83123	Renal cell carcinoma	95300	Meningioma nos
83403	Papillary carcinoma follicular variant	95903	Malignant lymphoma nos;lymphoma nos
84013	Apocrine adenocarcinoma	95913	Non Hodgkins Lymphoma
84413	Serous carcinoma	96503	Hodgkins Disease, NOS
84803	Mucinous adenocarcinom	96903	follicular lymphoma
85002	Ductal carcinoma in situ	97323	Multiple myeloma
85003	Infiltrating duct carcinoma	98013	Acute Leukemia NOS
85103	Medullary carcinoma	98033	Chronic Leukemia NOS
85202	Lobular carcinoma in situ	98213	Acute lymphoid leukemia
85203	Lobular carcinoma, NOS	98233	Chronic lymphocytic leukemia
85222	intraductal carcinoma and lobular carcinoma in situ	98613	Acute myeloid leukemia, NOS

EXTN (Tumor extension/involvement)

000	In situ, non infil, intraepithelial, intraductal w/o infiltration, Lobular neoplasia
050	Paget disease of nipple w/o underlying tumor
070	Paget disease of nipple w/o underlying invasive ca pathologically
100	Confined to breast tissue and fat including nipple and/or areola
200	Invasion of subcutaneous tissue, local infiltration of dermal lymphatics adj to prim tumor inv skin by direct extension, skin infiltration of primary breast including skin of nipple and/or areola
300	Attached or fixation to pectoral muscle(s) or underlying tissue, deep fixation, Invasion of or fixation to pectoral fascia or muscle
400	Invasion of or fixation to chest wall, intercostal or serratus ant muscles, ribs
510	Extensive skin inv including satellite nodule(s) in skin of primary breast, ulceration of skin if breast, any of the following conditions described as inv not more than 50% of the breast or amount of % not stated: edema of skin, en cuirasse, erythema, inflammation of skin, peau d'orange
520	Any of the following conditions described as inv more than 50% of the breast without a stated dx of inflammatory carcinoma: edema of skin, en cuirasse, erythema, inflammation of skin, peau d'orange
610	400 + 510
620	400 + 520
710	Dx of inflammatory carcinoma with a clinical description of inflammation, erythema, edema, peau d'orange, etc, inv not more than 50% of the skin of the breast or percent inv not stated, with or without dermal lymphatic infiltration, inflammatory carcinoma, NOS
720	Obsolete
730	Dx of inflammatory carcinoma with a clinical description of inflammation, erythema, edema, peau d'orange, etc, inv more than 50% of the skin of the breast or percent inv not stated, with or without dermal lymphatic infiltration, inflammatory carcinoma
950	No evidence of primary tumor
999	Unknown extension, tumor cannot be assessed, not documented in patient record

N_STAGE (Node stage)

For AJCC_BASIS = P (pathologic)

- X = Regional nodes cannot be assessed
- 0 = No regional lymph node mets
- 1 = Mets in 1 to 3 axillary LNs, and/or in internal mammary nodes with microscopic disease detected by SLN dissection, but not clinically apparent
- 1A = Mets in 1 to 3 axillary LNs
- 1B = Mets in internal mammary nodes with microscopic disease detected by SLN dissection, but not clinically apparent
- 1C = Mets in 1 to 3 axillary LNs and in internal mammary nodes, with microscopic disease detected by SLN dissection, but not clinically apparent
- 1MI = Micrometastasis(>0.2 mm – 2.0 mm)
- 2 = Mets in 4 - 9 axillary LNs or in clinically apparent internal mammary LNs in the absence of ALN mets
- 2A = Mets in 4 - 9 axillary LNs (at least one tumor deposit >2.0 mm)
- 2B = Mets in clinically apparent internal mammary LNs in the absence of ALN mets
- 3 = Mets in 10 or more ALNs or in infraclav LNs or in clinically apparent ipsilateral internal mammary LNs w/ 1 or more positive ALNs or in more than 3 ALNs with clinically neg microscopic mets in int mammary LNs or in supraclav LNs
- 3A = Mets in 10 or more ALNs or mets to the infraclavicular lymph nodes
- 3B = Mets in clinically apparent ipsilateral internal mammary LNs w/ 1 or more positive ALNs or in more than 3 ALNs and in internal mammary LNs with clinically neg microscopic mets in int mamm LNs det by SLN dissection
- 3C = Mets in ipsilateral supraclav LNs
- 88 = Not applicable

For AJCC_BASIS = C (clinical)

- X = Regional nodes cannot be assessed
- 0 = No regional lymph node mets
- 1 = Mets in moveable ipsilateral axillary LNs
- 2 = Mets in ipsilateral ALNs fixed or matted or in clinically apparent ipsilateral internal mammary nodes in the absence of clinically evident ALN Mets
- 2A = Mets in ipsilateral ALNs fixed to one another or to other structures
- 2B = Mets only in clinically apparent ipsilateral internal mammary nodes in the absence of clin evident ALNs mets
- 3 = Mets in ipsilateral infraclavicular LNs w/ or w/o ALN involvement or clin ips infraclav w/ clin evid ALN mets or mets in ipsi Supraclav LNs w/ or w/o ALN or int mamm LN inv.
- 3A = Mets in ipsilat infraclav LNs
- 3B = Mets in ipsilat int mamm LNs and ALNs
- 3C = Mets in ipsilateral supraclav LNs
- 88 = Not applicable

SURG_SIDE1 – SURG_SIDE5 (Surgery side effects)

00	None
99	Side effects unknown
01	Lymphedema with treatment
02	Lymphedema no treatment
03	Fibrosis with treatment
04	Fibrosis no treatment
05	Breast Asymmetry with treatment
06	Breast Asymmetry no treatment
07	Deformity with treatment
08	Deformity no treatment
09	Infection with treatment
10	Infection no treatment
11	Hematoma with treatment
12	Hematoma no treatment
13	Edema due to DVT with treatment
14	Edema due to DVT no treatment
15	Skin necrosis with treatment
16	Skin necrosis no treatment
17	Seroma with treatment
18	Seroma no treatment
19	Thrombosis with treatment
20	Thrombosis no treatment
21	Dehiscence with treatment
22	Dehiscence no treatment
23	Frozen shoulder with treatment
24	Frozen shoulder no treatment
25	Post-op pain with treatment
26	Post-op pain no treatment

RAD_SIDE1 – RAD_SIDE5 (Radiation side effects)

00	None
99	Side effects unknown
01	Lymphedema with treatment
02	Lymphedema no treatment
03	Erythema with treatment
04	Erythema no treatment
05	Infection with treatment
06	Infection no treatment
07	Lung problems with treatment
08	Lung problems no treatment
09	Skin ulceration with treatment
10	Skin ulceration no treatment
11	Tissue fibrosis with treatment
12	Tissue fibrosis no treatment
13	Desquamation with treatment
14	Desquamation no treatment
15	Skin changes, NOS with treatment
16	Skin changes, NOS no treatment

**NEOADJ_SIDE1 – NEOADJ_SIDE7 (Neoadjuvant chemotherapy side effects),
 ADJ_SIDE1 – ADJ_SIDE7 (Adjuvant chemotherapy side effects),
 BIO_SIDE1—BIO_SIDE6 (Biologics side effects)**

00	None	21	Decreased ejection fraction with treatment
99	Side effects unknown	22	Decreased ejection fraction no treatment
01	Hair loss (alopecia) with treatment	23	Heart disease, NOS with treatment
02	Hair loss (alopecia) no treatment	24	Heart disease, NOS no treatment
03	Nausea/Vomiting with treatment	25	Anemia with treatment
04	Nausea/Vomiting no treatment	26	Anemia no treatment
05	Sensory neuropathy with treatment	27	Bone pain with treatment
06	Sensory neuropathy no treatment	28	Bone pain no treatment
07	Severe constipation/cramps with treatment	29	Infection, NOS with treatment
08	Severe constipation/cramps no treatment	30	Infection, NOS no treatment
09	Stomatitis with treatment	31	Hot flashes with treatment
10	Stomatitis no treatment	32	Hot flashes no treatment
11	Diarrhea with treatment	33	Infusion reaction with treatment
12	Diarrhea no treatment	34	Infusion reaction no treatment
13	Neutropenia with treatment	35	Blood clots/DVT with treatment
14	Neutropenia no treatment	36	Blood clots/DVT no treatment
15	Muscle aches with treatment		
16	Muscle aches no treatment		
17	Rash/Nail changes with treatment		
18	Rash/Nail changes no treatment		
19	Cardiomyopathy with treatment		
20	Cardiomyopathy no treatment		

**NEOAJ_SIDE_OTHER (Other neoadjuvant chemotherapy side effect),
ADJ_SIDE_OTHER (Other adjuvant chemotherapy side effect),
BIO_SIDE_OTHER (Other biologics side effect)**

- 00 None
- 01 Arthralgia/joint pain with treatment
- 02 Arthralgia/joint pain no treatment
- 03 Myelosuppression with treatment
- 04 Myelosuppression no treatment
- 05 Leukopenia with treatment
- 06 Leukopenia no treatment
- 07 Thrombocytopenia with treatment
- 08 Thrombocytopenia no treatment
- 09 Dehydration with treatment
- 10 Dehydration no treatment
- 11 Hand foot syndrome with treatment
- 12 Hand foot syndrome no treatment
- 13 Acute renal failure with treatment
- 14 Acute renal failure no treatment

HORM_SIDE1—HORM_SIDE5 (Hormone side effects)

00	None	09	Vaginal dryness with treatment
99	Side effects unknown	10	Vaginal dryness no treatment
01	Deep vein thrombosis with treatment	11	Cataracts with treatment
02	Deep vein thrombosis no treatment	12	Cataracts no treatment
03	Pulmonary embolus with treatment	13	Leg Cramps with treatment
04	Pulmonary embolus no treatment	14	Leg Cramps no treatment
05	Hot flashes with treatment	15	Joint ache/stiffness with treatment
06	Hot flashes no treatment	16	Joint ache/stiffness no treatment
07	Night sweats with treatment		
08	Night sweats no treatment		

HORM_SIDE_OTHER (Other hormone side effect)

- 00 None
- 01 Depression with treatment
- 02 Depression no treatment
- 03 Edema with treatment
- 04 Edema no treatment

RECUR_TYPE (Subsequence recurrence type)

- 00 = None
- 04 = In situ recurrence of invasive tumor
- 06 = In situ recurrence of in situ tumor
- 10 = Local recurrence, NOS
- 13 = Local recurrence of invasive tumor
- 14 = Trocar recurrence of invasive tumor
- 15 = Both local and trocar recurrence of invasive tumor
- 16 = Local recurrence of in situ tumor, NOS
- 17 = Both local and trocar recurrence of in situ tumor
- 20 = Regional recurrence, insufficient information
- 21 = Recurrence of invasive tumor in adjacent tissue or organ(s) only
- 22 = Recurrence of invasive tumor in regional lymph nodes only
- 25 = Recurrence of invasive tumor in adjacent tissue or organ(s) and in regional lymph nodes
- 26 = Regional recurrence of an in situ tumor, NOS
- 27 = Recurrence of an in situ tumor in adjacent tissue or organ(s) and in regional lymph nodes at the same time
- 30 = Both regional recurrence of an invasive tumor in adjacent tissue or organ(s) and/or regional lymph nodes and local and/or trocar recurrence
- 36 = Both regional recurrence of an in situ tumor in adjacent tissue or organ(s) and/or regional lymph nodes and local and/or trocar recurrence
- 40 = Distant recurrence, insufficient information
- 46 = Distant recurrence of in situ tumor
- 51 = Distant recurrence of an invasive tumor in peritoneum only
- 52 = Distant recurrence of an invasive tumor in the lung only
- 53 = Distant recurrence of an invasive tumor in pleura only
- 54 = Distant recurrence of an invasive tumor in liver only
- 55 = Distant recurrence of an invasive tumor in bone only
- 56 = Distant recurrence of an invasive tumor in CNS only
- 57 = Distant recurrence of an invasive tumor in the skin only
- 58 = Distant recurrence of an invasive tumor in lymph node only
- 59 = Distant systemic recurrence of invasive tumor only
- 60 = Distant recurrence of an invasive tumor in single distant site and local, trocar and/or regional recurrence
- 62 = Distant recurrence of an invasive tumor in multiple sites
- 70 = Since diagnosis, patient has never been disease free
- 88 = Disease has recurred, but type of recurrence is unknown
- 99 = Unknown whether the disease recurred or if the patient was ever disease free

TRIAL_NAME1 – TRIAL_NAME3 (Clinical trial name)

00	Not on, not applicable	25	CALGB 40603
01	CALGB 150007	26	DUMC DOD Gen Exp Prof
02	SWOG 0307	27	LCL 161 Trial
03	E 5103	28	BKM120 Trial
04	CALGB 40101	29	CALGB 40502
05	TAYLOR RX TRIAL	30	VACCINE Trial J0885
06	NSABP B-40	31	NSABP B-47
07	SWOG S0221	32	SWOG S1007
08	DFCI 07-199	33	ABT-888 Trial
09	Clodronate Trial, NOS	34	MEK/P13 Trial
10	NSABP B39	35	LJCC 07-03 Trial
11	CALGB 40503	36	NSABP-49 Trial
12	BSI-201 TRIAL	37	BP22572 Trial
13	LCCC 0801	38	NSABP FB-9 Trial
14	NSABP B-46-I	39	A86441016 Trial
15	ALTTO TRIAL	40	2B3 101 Trial
16	USON 09185	41	NCT02168777
17	USON 07132		
18	DUMC Triple Negative Trial		
19	ACOSOG 21031 Trial		
20	BETH Study		
21	CALGB 40601		
22	NSABP B-41		
23	ACOSOG Z1031		
24	NERATINIB (HKI-272) Trial		

SURG (Surgery code) from the SURGERY datasets

- 01 Biopsy(inc, need, asp) to site other than primary
- 02 Biopsy(inc, need, asp) to primary site
- 19 Local tumor destruction, NOS
- 20 Partial mastectomy, NOS; less than total mastectomy, NOS
- 21 Partial mastectomy with nipple resection
- 22 Lumpectomy or excisional biopsy
- 23 Reexcision of the biopsy site for gross or microscopic residual disease
- 24 Segmental mastectomy (including wedge resection, quadrantectomy, tylectomy)
- 30 Subcutaneous mastectomy
- 40 Total (simple) mastectomy
- 41 Total mastectomy without removal of uninvolved contralateral breast
- 42 Total Mastectomy with removal of uninvolved contralateral breast
- 43 Total Mastectomy with Reconstruction NOS without removal of uninvolved contralateral breast
- 44 Total Mastectomy with Reconstruction with tissue without removal of uninvolved contralateral breast
- 45 Total Mastectomy with Reconstruction with implant without removal of uninvolved contralateral breast
- 46 Total Mastectomy with Reconstruction combined (with tissue and implant) without removal of uninvolved contralateral breast
- 47 Total Mastectomy Reconstruction NOS with removal of uninvolved contralateral breast
- 48 Total Mastectomy Reconstruction with tissue with removal of uninvolved contralateral breast
- 49 Total Mastectomy Reconstruction with implant with removal of uninvolved contralateral breast
- 50 Modified radical mastectomy
- 51 Modified radical mastectomy without removal of uninvolved contralateral breast
- 52 Modified radical mastectomy with removal of uninvolved contralateral breast
- 53 Modified radical mastectomy Reconstruction NOS without removal of uninvolved contralateral breast
- 54 Modified radical mastectomy Reconstruction w/ tissue without removal of uninvolved contralateral breast
- 55 Modified radical mastectomy Reconstruction w/ implant without removal of uninvolved contralateral breast
- 56 Modified radical mastectomy Reconstruction combined (tissue and implant) without removal of uninvolved contralateral breast
- 57 Modified radical mastectomy Reconstruction, NOS with removal of uninvolved contralateral breast
- 58 Modified radical mastectomy Reconstruction, with tissue with removal of uninvolved contralateral breast
- 59 Modified radical mastectomy Reconstruction, with implant with removal of uninvolved contralateral breast

(continued)

SURG (continued)

- 60 Radical mastectomy
- 61 Radical mastectomy without removal of uninvolved contralateral breast
- 62 Radical mastectomy with removal of uninvolved contralateral breast
- 63 Modified radical mastectomy Reconstruction, combined (tissue and implant) with removal of uninvolved contralateral breast
- 64 Radical mastectomy Reconstruction NOS without removal of uninvolved contralateral breast
- 65 Radical mastectomy Reconstruction w/ tissue without removal of uninvolved contralateral breast
- 66 Radical mastectomy Reconstruction w/ implant without removal of uninvolved contralateral breast
- 67 Radical mastectomy Reconstruction combined (tissue and implant) without removal of uninvolved contralateral breast
- 68 Radical mastectomy Reconstruction, NOS with removal of uninvolved contralateral breast
- 69 Radical mastectomy Reconstruction, with tissue with removal of uninvolved contralateral breast
- 70 Extended radical mastectomy
- 71 Extended radical mastectomy without removal of uninvolved contralateral breast
- 72 Extended radical mastectomy with removal of uninvolved contralateral breast
- 73 Radical mastectomy Reconstruction, with implant with removal of uninvolved contralateral breast
- 74 Radical mastectomy Reconstruction, combined (tissue and implant) with removal of uninvolved contralateral breast
- 75 Total Mastectomy Reconstruction combined (tissue and implant) with removal of uninvolved contralateral breast
- 80 Mastectomy, NOS
- 90 Surgery, NOS
- 99 Unknown if surgery was performed, death certificate only

REG_MODALITY (Regional treatment modality), BOOST_MODALITY (Boost radiation treatment modality) from the RADIATION dataset

00 = No radiation
20 = External Beam, NOS
21 = Orthovoltage
22 = Cobalt 60, Cesium 137
23 = Photons (2-5MV)
24 = Photons (6-10MV)
25 = Photons (11-19MV)
26 = Photons (>19 MV)
27 = Photons (mixed energies)
28 = Electrons
29 = Photons and Electrons mixed
30 = Neutrons
31 = IMRT
32 = Conformal or 3-D therapy
40 = Photons
41 = Stereotactic radiosurg
42 = Linac Radiosurgery
43 = Gamma Knife
50 = Brachytherapy, NOS
51 = Brachytherapy, intracavitary, LDR
52 = Brachytherapy, intracavitary, HDL
53 = Brachytherapy Interstitial, LDR
54 = Brachytherapy, interstitial HDL
55 = Radium
60 = Radioisotopes, NOS
61 = Strontium- 89
62 = Strontium- 90
80 = Combination Modality, specified
85 = Combination Modality, NOS
98 = Other, NOS
99 = Unknown

RAD_SITES (radiation sites) from the RADIATION dataset

00 = No radiation treatment	26 = Ribs
01 = Eye/orbit	27 = Hip
02 = Pituitary	28 = Pelvic bones
03 = Brain (NOS)	29 = Pelvis (NOS)
04 = Brain (limited)	30 = Skin
05 = Head and Neck (NOS)	31 = Soft tissue
06 = Head and Neck (limited)	32 = Hemibody
07 = Glottis	33 = Whole body
08 = Sinuses	34 = Bladder and pelvis
09 = Parotid	35 = Prostate and pelvis
10 = Chest/lung NOS	36 = Uterus and cervix
11 = Lung (limited)	37 = Shoulder
12 = Esophagus	38 = Extremity bone, NOS
13 = Stomach	39 = Inverted Y
14 = Liver	40 = Spinal cord
15 = Pancreas	41 = Prostate
16 = Kidney	50 = Thyroid
17 = Abdomen (NOS)	60 = Lymph node region, NOS
18 = Breast	98 = Other
19 = Breast/lymph nodes	99 = Unknown
20 = Chest wall	
21 = Chest wall/lymph nodes	
22 = Mantle, Mini-mantle	
23 = Lower extended field	
24 = Spine	
25 = Skull	