

Supplemental Digital Content 2: Specificity and negative predictive value (NPV) of SEER to identify chemotherapy receipt and percent of individuals with unknown treatment status from SEER with chemotherapy claims identified in Medicare by patient and tumor characteristics^a.

	Specificity (95% CI) ^b		NPV (95% CI) ^b		Unknown in SEER		% with Medicare claims found
					N	%	
Overall							
12 month window	97.7	(97.6, 97.7)	90.5	(90.4, 90.6)	18074	4.4	27.7
8 month window	97.6	(97.5, 97.6)	91.3	(91.2, 91.4)	18074	4.4	26.7
4 month window	96.9	(96.9, 97.0)	92.5	(92.4, 92.6)	18074	4.4	24.7
Cancer Site							
Bladder	98.3	(98.1, 98.5)	65.4	(64.9, 66.0)	890	3.1	35.5
Female Breast	98.3	(98.2, 98.4)	92.6	(92.4, 92.8)	3585	4.8	24.4
Colorectal	97.3	(97.1, 97.4)	89.5	(89.2, 89.7)	4307	5.9	36.0
Lung	94.1	(93.9, 94.3)	88.5	(88.2, 88.7)	5534	5.6	29.1
Ovary	92.9	(92.0, 93.7)	79.7	(78.5, 81.0)	497	5.9	54.1
Pancreas	95.6	(95.3, 96.0)	87.6	(87.1, 88.2)	1047	5.5	28.7
Prostate	99.7	(99.7, 99.7)	97.5	(97.4, 97.6)	2214	2.0	3.7
Stage at Diagnosis ^c							
In situ	99.7	(99.6, 99.8)	98.6	(98.4, 98.8)	503	3.3	2.4
Localized	98.7	(98.6, 98.7)	87.6	(87.3, 87.8)	4372	4.0	21.0
Localized/ Regional ^d	99.8	(99.7, 99.8)	98.0	(97.9, 98.1)	1580	1.5	2.7
Regional	94.6	(94.4, 94.9)	81.5	(81.2, 81.9)	4371	5.9	44.4
Distant	93.3	(93.1, 93.5)	86.5	(86.3, 86.8)	4363	4.8	39.4
Unstaged	98.7	(98.5, 98.8)	92.6	(92.3, 93.0)	2885	13.2	12.7
Sex							
Female	97.5	(97.4, 97.6)	89.7	(89.5, 89.8)	9973	5.3	29.4
Male	97.8	(97.7, 97.9)	91.2	(91.1, 91.3)	8101	3.6	25.5
Age at Diagnosis							
65-69 years	96.8	(96.7, 96.9)	89.2	(89.0, 89.5)	3923	4.0	37.0
70-74 years	97.4	(97.3, 97.5)	89.3	(89.0, 89.5)	4290	4.2	33.4
75-79 years	97.7	(97.6, 97.8)	89.9	(89.7, 90.1)	4361	4.6	28.1
80-84 years	98.1	(98.0, 98.2)	91.4	(91.2, 91.6)	3168	4.6	20.6
85+ years	98.8	(98.7, 98.9)	94.6	(94.4, 94.8)	2332	4.5	10.0
Race/Ethnicity							
NH White	97.8	(97.7, 97.8)	90.4	(90.2, 90.5)	15342	4.5	27.2
NH Black	96.9	(96.7, 97.1)	92.1	(91.8, 92.4)	1551	4.6	30.1
Hispanic	97.4	(97.2, 97.7)	90.4	(90.0, 90.9)	654	3.2	30.6
NH AI/AN	97.5	(96.4, 98.6)	92.8	(91.0, 94.6)	15	1.5	20.0
NH API	96.8	(96.5, 97.1)	89.8	(89.3, 90.3)	377	2.4	37.1
NH Other/ Unknown	99.6	(99.4, 99.8)	94.2	(93.5, 94.9)	135	3.0	14.1

	Specificity (95% CI) ^b		NPV (95% CI) ^b		Unknown in SEER		% with Medicare claims found
					N	%	
Registry ^d							
A	96.9	(96.7, 97.1)	91.8	(91.5, 92.2)			15.8
B	97.8	(97.6, 98.0)	90.2	(89.8, 90.5)			49.5
C	98.1	(97.9, 98.2)	93.8	(93.5, 94.1)			46.6
D	97.9	(97.5, 98.2)	90.7	(90.0, 91.3)			45.2
E	98.1	(97.9, 98.3)	89.8	(89.4, 90.1)			53.0
F	97.3	(97.1, 97.5)	91.8	(91.5, 92.1)			61.6
G	97.4	(97.3, 97.5)	90.2	(90.0, 90.3)			35.3
H	98.1	(98.0, 98.2)	88.0	(87.8, 88.3)			24.7
I	97.9	(97.6, 98.2)	89.2	(88.6, 89.8)			28.5
J	98.8	(98.6, 99.0)	91.9	(91.3, 92.4)			49.5
K	97.4	(97.2, 97.7)	93.9	(93.5, 94.2)			40.4
L	97.2	(96.7, 97.7)	91.8	(91.0, 92.6)			44.3
Year of Diagnosis							
2000	97.6	(97.5, 97.8)	90.9	(90.6, 91.1)	3464	6.2	20.0
2001	97.9	(97.8, 98.0)	91.1	(90.9, 91.4)	1894	3.2	26.9
2002	98.1	(98.0, 98.2)	90.7	(90.5, 91.0)	2127	3.4	29.5
2003	97.8	(97.7, 97.9)	90.8	(90.5, 91.0)	3128	5.2	28.9
2004	97.5	(97.4, 97.7)	90.1	(89.9, 90.4)	2615	4.3	29.5
2005	97.4	(97.3, 97.6)	89.8	(89.5, 90.0)	2421	4.2	31.0
2006	97.3	(97.1, 97.4)	90.4	(90.1, 90.7)	2425	4.1	30.6

NH=Non-Hispanic, API=Asian/Pacific Islander, AI/AN=American Indian/Alaskan Native

^aA 12-month post-diagnosis window was used to identify treatment using Medicare claims (gold standard) unless otherwise specified

^b95% confidence intervals computed using normal approximation

^cSEER Historic Stage A

^dProstate cancer is categorized as in situ, localized/regional or distant. All other cancer sites have localized and regional as separate categories

^eSample sizes omitted to preserve anonymity of the registries. Data from registries in California were combined (Greater California, Los Angeles, San Jose-Monterey) and data from registries in Georgia were combined (Atlanta and Rural Georgia)