

Supplementary Online Content

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eTable 1. Eligible claims codes by cancer site and treatment category

eTable 2. Treatment characteristics, by HIV status and cancer site

This supplementary material has been provided by the authors to give readers additional information about their work.

eTable1. Eligible claims codes by cancer site and treatment category

Code	Type of code
COLORECTAL CANCER	
SURGERY	
4835	ICD-9 Procedure code
4836	ICD-9 Procedure code
44140	HCPCS code
44143	HCPCS code
44145	HCPCS code
44160	HCPCS code
45384	HCPCS code
45385	HCPCS code
4571	ICD-9 Procedure code
4572	ICD-9 Procedure code
4573	ICD-9 Procedure code
4574	ICD-9 Procedure code
4575	ICD-9 Procedure code
4576	ICD-9 Procedure code
4579	ICD-9 Procedure code
4580	ICD-9 Procedure code
4581	ICD-9 Procedure code
4582	ICD-9 Procedure code
4583	ICD-9 Procedure code
4850	ICD-9 Procedure code
4851	ICD-9 Procedure code
4852	ICD-9 Procedure code
4859	ICD-9 Procedure code
4860	ICD-9 Procedure code
4861	ICD-9 Procedure code
4862	ICD-9 Procedure code
4863	ICD-9 Procedure code
4864	ICD-9 Procedure code
4865	ICD-9 Procedure code
4869	ICD-9 Procedure code
45110	HCPCS code
45111	HCPCS code
45112	HCPCS code
45113	HCPCS code
45114	HCPCS code
45116	HCPCS code
45119	HCPCS code
45120	HCPCS code
45121	HCPCS code
45123	HCPCS code
45126	HCPCS code
45160	HCPCS code
45171	HCPCS code
45172	HCPCS code

Code	Type of code
45190	HCPCS code
RADIOTHERAPY	
V580	ICD-9 Diagnosis code
9221	ICD-9 Procedure code
9222	ICD-9 Procedure code
9223	ICD-9 Procedure code
9224	ICD-9 Procedure code
9225	ICD-9 Procedure code
9226	ICD-9 Procedure code
9227	ICD-9 Procedure code
9228	ICD-9 Procedure code
9229	ICD-9 Procedure code
9230	ICD-9 Procedure code
9231	ICD-9 Procedure code
9232	ICD-9 Procedure code
9233	ICD-9 Procedure code
9239	ICD-9 Procedure code
9241	ICD-9 Procedure code
61793	HCPCS code
61797	HCPCS code
61798	HCPCS code
61799	HCPCS code
77371	HCPCS code
77372	HCPCS code
77373	HCPCS code
77399	HCPCS code
77401	HCPCS code
77402	HCPCS code
77403	HCPCS code
77404	HCPCS code
77406	HCPCS code
77407	HCPCS code
77408	HCPCS code
77409	HCPCS code
77411	HCPCS code
77412	HCPCS code
77413	HCPCS code
77414	HCPCS code
77416	HCPCS code
77418	HCPCS code
77422	HCPCS code
77423	HCPCS code
77424	HCPCS code
77425	HCPCS code
77427	HCPCS code
77431	HCPCS code
77435	HCPCS code
77469	HCPCS code
77470	HCPCS code
77499	HCPCS code
77520	HCPCS code

77522	HCPCS code
Code	Type of code
77523	HCPCS code
77525	HCPCS code
CHEMOTHERAPY	
J0640	HCPCS code
J9999	HCPCS code
V581	ICD-9 Diagnosis code
9925	ICD-9 Procedure code
9928	ICD-9 Procedure code
96400, 96401	HCPCS code
96405	HCPCS code
96406	HCPCS code
96408, 96409	HCPCS code
96411	HCPCS code
96410, 96413	HCPCS code
96412, 96415	HCPCS code
96414, 96416	HCPCS code
96417	HCPCS code
96420	HCPCS code
96422	HCPCS code
96423	HCPCS code
96425	HCPCS code
96440	HCPCS code
96445	HCPCS code
96446	HCPCS code
96450	HCPCS code
96542	HCPCS code
96545	HCPCS code
96549	HCPCS code
Q0083	HCPCS code
Q0084	HCPCS code
Q0085	HCPCS code
C8953 (96408)	HCPCS code
C8954 (96410)	HCPCS code
C8955 (96412)	HCPCS code
C8957	HCPCS code
G0355	HCPCS code
G0357	HCPCS code
G0358	HCPCS code
G0359	HCPCS code
G0360	HCPCS code
G0361	HCPCS code
G0362	HCPCS code
J9035	HCPCS code
J9050	HCPCS code
J9055	HCPCS code
J9178	HCPCS code
J9190	HCPCS code
J9201	HCPCS code
J9206	HCPCS code
J9263	HCPCS code

J9303	HCPCS code
J8520	HCPCS code
Code	Type of code
J8521	HCPCS code
J8999	HCPCS code
00004110150	NDC_CD code
00004110020	NDC_CD code
PROSTATE CANCER	
SURGERY	
6241	ICD-9 Procedure code
603	ICD-9 Procedure code
604	ICD-9 Procedure code
605	ICD-9 Procedure code
606	ICD-9 Procedure code
609	ICD-9 Procedure code
55801	HCPCS code
55810	HCPCS code
55812	HCPCS code
55815	HCPCS code
55821	HCPCS code
55831	HCPCS code
55840	HCPCS code
55842	HCPCS code
55845	HCPCS code
55866	HCPCS code
RADIOTHERAPY	
4165F	HCPCS code
V580	ICD-9 Diagnosis code
9221	ICD-9 Procedure code
9222	ICD-9 Procedure code
9223	ICD-9 Procedure code
9224	ICD-9 Procedure code
9225	ICD-9 Procedure code
9226	ICD-9 Procedure code
9227	ICD-9 Procedure code
9228	ICD-9 Procedure code
9229	ICD-9 Procedure code
9230	ICD-9 Procedure code
9231	ICD-9 Procedure code
9232	ICD-9 Procedure code
9233	ICD-9 Procedure code
9239	ICD-9 Procedure code
9241	ICD-9 Procedure code
77371	HCPCS code
77372	HCPCS code
77373	HCPCS code
77399	HCPCS code
77401	HCPCS code

77402	HCPCS code
77403	HCPCS code
77404	HCPCS code
Code	Type of code
77406	HCPCS code
77407	HCPCS code
77408	HCPCS code
77409	HCPCS code
77411	HCPCS code
77412	HCPCS code
77413	HCPCS code
77414	HCPCS code
77416	HCPCS code
77418	HCPCS code
77422	HCPCS code
77423	HCPCS code
77424	HCPCS code
77425	HCPCS code
77427	HCPCS code
77431	HCPCS code
77432	HCPCS code
77435	HCPCS code
77469	HCPCS code
77470	HCPCS code
77499	HCPCS code
77520	HCPCS code
77522	HCPCS code
77523	HCPCS code
77525	HCPCS code
77761	HCPCS code
77762	HCPCS code
77763	HCPCS code
77776	HCPCS code
77777	HCPCS code
77778	HCPCS code
77785	HCPCS code
77786	HCPCS code
77787	HCPCS code
77789	HCPCS code
77799	HCPCS code
CHEMOTHERAPY	
V581	ICD-9 Diagnosis code
9925	ICD-9 Procedure code
9928	ICD-9 Procedure code
96400, 96401	HCPCS code
96405	HCPCS code
96406	HCPCS code
96408, 96409	HCPCS code
96411	HCPCS code
96410, 96413	HCPCS code
96412, 96415	HCPCS code
96414, 96416	HCPCS code

96417	HCPCS code
96420	HCPCS code
96422	HCPCS code
96423	HCPCS code
96425	HCPCS code
Code	Type of code
96440	HCPCS code
96445	HCPCS code
96446	HCPCS code
96450	HCPCS code
96542	HCPCS code
96545	HCPCS code
96549	HCPCS code
Q0083	HCPCS code
Q0084	HCPCS code
Q0085	HCPCS code
Q2043	HCPCS code
C8953 (96408)	HCPCS code
C8954 (96408)	HCPCS code
C8955 (96412)	HCPCS code
C8957	HCPCS code
G0355	HCPCS code
G0357	HCPCS code
G0358	HCPCS code
G0359	HCPCS code
G0360	HCPCS code
G0361	HCPCS code
G0362	HCPCS code
J9043	HCPCS code
J9045	HCPCS code
J9060	HCPCS code
J9171	HCPCS code
J9181	HCPCS code
J9293	HCPCS code
J9999	HCPCS code
J8560	HCPCS code
J8999	HCPCS code
HORMONE THERAPY	
623	ICD-9 Procedure code
624	ICD-9 Procedure code
6241	ICD-9 Procedure code
6242	ICD-9 Procedure code
54520	HCPCS code
54521	HCPCS code
54522	HCPCS code
54530	HCPCS code
54535	HCPCS code
54690	HCPCS code
J0128	HCPCS code
J1050	HCPCS code
J1051	HCPCS code
J1950	HCPCS code
J3315	HCPCS code

J9202	HCPCS code
J9217	HCPCS code
J9218	HCPCS code
J9219	HCPCS code
J9155	HCPCS code
J9165	HCPCS code
Code	Type of code
S0165	HCPCS code
S0175	HCPCS code
S9560	HCPCS code
C9216	HCPCS code
C9430	HCPCS code
G0356	HCPCS code
96400, 96402	HCPCS code
LUNG CANCER	
SURGERY	
32440	HCPCS code
32442	HCPCS code
32445	HCPCS code
32482	HCPCS code
32484	HCPCS code
32486	HCPCS code
32488	HCPCS code
32500	HCPCS code
32505	HCPCS code
32506	HCPCS code
32507	HCPCS code
32520	HCPCS code
32522	HCPCS code
32525	HCPCS code
32657	HCPCS code
32	ICD-9 Procedure code
3201	ICD-9 Procedure code
3209	ICD-9 Procedure code
321	ICD-9 Procedure code
322	ICD-9 Procedure code
3220	ICD-9 Procedure code
3229	ICD-9 Procedure code
323	ICD-9 Procedure code
3230	ICD-9 Procedure code
3239	ICD-9 Procedure code
324	ICD-9 Procedure code
3241	ICD-9 Procedure code
3249	ICD-9 Procedure code
325	ICD-9 Procedure code
3250	ICD-9 Procedure code
3259	ICD-9 Procedure code
326	ICD-9 Procedure code
329	ICD-9 Procedure code
32480	ICD-9 Procedure code
RADIOTHERAPY	
V580	ICD-9 Diagnosis code
9221	ICD-9 Procedure code

9222	ICD-9 Procedure code
9223	ICD-9 Procedure code
9224	ICD-9 Procedure code
9225	ICD-9 Procedure code
9226	ICD-9 Procedure code
9227	ICD-9 Procedure code
9228	ICD-9 Procedure code
Code	Type of code
9229	ICD-9 Procedure code
9230	ICD-9 Procedure code
9231	ICD-9 Procedure code
9232	ICD-9 Procedure code
9233	ICD-9 Procedure code
9239	ICD-9 Procedure code
9241	ICD-9 Procedure code
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77373	HCPCS code
77399	HCPCS code
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77404	HCPCS code
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77412	HCPCS code
77413	HCPCS code
77414	HCPCS code
77416	HCPCS code
77418	HCPCS code
77422	HCPCS code
77423	HCPCS code
77424	HCPCS code
77425	HCPCS code
77427	HCPCS code
77431	HCPCS code
77432	HCPCS code
77435	HCPCS code
77469	HCPCS code
77470	HCPCS code
77499	HCPCS code
77520	HCPCS code
77522	HCPCS code
77523	HCPCS code
77525	HCPCS code
CHEMOTHERAPY	
V581	ICD-9 Diagnosis code
9925	ICD-9 Procedure code
9928	ICD-9 Procedure code
96400, 96401	HCPCS code

96405	HCPCS code
96406	HCPCS code
96408, 96409	HCPCS code
96411	HCPCS code
96410, 96413	HCPCS code
96412, 96415	HCPCS code
96414, 96416	HCPCS code
96417	HCPCS code
Code	Type of code
96420	HCPCS code
96422	HCPCS code
96423	HCPCS code
96425	HCPCS code
96440	HCPCS code
96445	HCPCS code
96446	HCPCS code
96450	HCPCS code
96542	HCPCS code
96545	HCPCS code
96549	HCPCS code
Q0083	HCPCS code
Q0084	HCPCS code
Q0085	HCPCS code
C8953 (96408)	HCPCS code
C8954 (96410)	HCPCS code
C8955 (96412)	HCPCS code
C8957	HCPCS code
C9213	HCPCS code
C9414	HCPCS code
C9418	HCPCS code
C9425	HCPCS code
C9427	HCPCS code
C9431	HCPCS code
C9432	HCPCS code
G0355	HCPCS code
G0357	HCPCS code
G0358	HCPCS code
G0359	HCPCS code
G0360	HCPCS code
G0361	HCPCS code
G0362	HCPCS code
J9035	HCPCS code
J9062	HCPCS code
J9171	HCPCS code
J9190	HCPCS code
J9208	HCPCS code
J9264	HCPCS code
J9280	HCPCS code
J9290	HCPCS code
J9291	HCPCS code
J9300	HCPCS code
J9305	HCPCS code
J9360	HCPCS code

J7150	HCPCS code
J8560	HCPCS code
J8565	HCPCS code
J8999	HCPCS code
J9045	HCPCS code
J9060	HCPCS code
J9170	HCPCS code
J9181	HCPCS code
J9182	HCPCS code
Code	Type of code
J9201	HCPCS code
J9206	HCPCS code
J9265	HCPCS code
J9350	HCPCS code
J9390	HCPCS code
J9999	HCPCS code
00378326694	NDC_CD code
BREAST CANCER	
SURGERY	
403	ICD-9 Procedure code
4023	ICD-9 Procedure code
4051	ICD-9 Procedure code
38525	HCPCS code
38745	HCPCS code
852	ICD-9 Procedure code
8520	ICD-9 Procedure code
8521	ICD-9 Procedure code
8522	ICD-9 Procedure code
8523	ICD-9 Procedure code
8533	ICD-9 Procedure code
8534	ICD-9 Procedure code
8535	ICD-9 Procedure code
8536	ICD-9 Procedure code
854	ICD-9 Procedure code
8541	ICD-9 Procedure code
8542	ICD-9 Procedure code
8543	ICD-9 Procedure code
8544	ICD-9 Procedure code
8545	ICD-9 Procedure code
8546	ICD-9 Procedure code
8547	ICD-9 Procedure code
8548	ICD-9 Procedure code
19120	HCPCS code
19125	HCPCS code
19126	HCPCS code
19160	HCPCS code
19162	HCPCS code
19180	HCPCS code

19182	HCPCS code
19200	HCPCS code
19220	HCPCS code
19240	HCPCS code
19260	HCPCS code
19271	HCPCS code
19272	HCPCS code
19301	HCPCS code
19302	HCPCS code
Code	Type of code
19303	HCPCS code
19304	HCPCS code
19305	HCPCS code
19306	HCPCS code
19307	HCPCS code
RADIOTHERAPY	
77781	HCPCS code
V580	ICD-9 Diagnosis code
9221	ICD-9 Procedure code
9222	ICD-9 Procedure code
9223	ICD-9 Procedure code
9224	ICD-9 Procedure code
9225	ICD-9 Procedure code
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9230	ICD-9 Procedure code
9231	ICD-9 Procedure code
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9233	ICD-9 Procedure code
9239	ICD-9 Procedure code
9241	ICD-9 Procedure code
77371	HCPCS code
77372	HCPCS code
77373	HCPCS code
77399	HCPCS code
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77404	HCPCS code
77406	HCPCS code
77407	HCPCS code
77408	HCPCS code
77409	HCPCS code
77411	HCPCS code
77412	HCPCS code
77413	HCPCS code
77414	HCPCS code

77416	HCPCS code
77418	HCPCS code
77422	HCPCS code
77423	HCPCS code
77424	HCPCS code
77425	HCPCS code
77427	HCPCS code
77431	HCPCS code
77432	HCPCS code
77435	HCPCS code
Code	Type of code
77469	HCPCS code
77470	HCPCS code
77499	HCPCS code
77520	HCPCS code
77522	HCPCS code
77523	HCPCS code
77525	HCPCS code
77761	HCPCS code
77762	HCPCS code
77763	HCPCS code
77776	HCPCS code
77777	HCPCS code
77778	HCPCS code
77789	HCPCS code
CHEMOTHERAPY	
V581	
9925	ICD-9 Procedure code
9928	ICD-9 Procedure code
96400, 96401	HCPCS code
96405	HCPCS code
96406	HCPCS code
96408, 96409	HCPCS code
96411	HCPCS code
96410, 96413	HCPCS code
96412, 96415	HCPCS code
96414, 96416	HCPCS code
96417	HCPCS code
96420	HCPCS code
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96425	HCPCS code
96440	HCPCS code
96445	HCPCS code
96446	HCPCS code
96450	HCPCS code
96542	HCPCS code
96545	HCPCS code
96549	HCPCS code
Q0083	HCPCS code

Q0084	HCPCS code
Q0085	HCPCS code
C8953 (96408)	HCPCS code
C8954 (96410)	HCPCS code
C8955 (96412)	HCPCS code
C8957	HCPCS code
C1167	HCPCS code
C9214	HCPCS code
C9127	HCPCS code
C9415	HCPCS code
Code	Type of code
C9420	HCPCS code
C9421	HCPCS code
C9431	HCPCS code
C9432	HCPCS code
C9440	HCPCS code
G0355	HCPCS code
G0357	HCPCS code
G0358	HCPCS code
G0359	HCPCS code
G0360	HCPCS code
G0361	HCPCS code
G0362	HCPCS code
G0357	HCPCS code
G0358	HCPCS code
G0359	HCPCS code
G0360	HCPCS code
G0361	HCPCS code
G0362	HCPCS code
J9000	HCPCS code
J9001	HCPCS code
J9035	HCPCS code
J9045	HCPCS code
J9070	HCPCS code
J9080	HCPCS code
J9090 – J9097	HCPCS code
J9170	HCPCS code
J9175	HCPCS code
J9178	HCPCS code
J9180	HCPCS code
J9190	HCPCS code
J9200	HCPCS code
J9201	HCPCS code
J9250	HCPCS code
J9260	HCPCS code
J9264	HCPCS code
J9265	HCPCS code
J9280	HCPCS code

J9290	HCPCS code
J9291	HCPCS code
J9293	HCPCS code
J9355	HCPCS code
J9357	HCPCS code
J9390	HCPCS code
J9999	HCPCS code
J7150	HCPCS code
J8520	HCPCS code
J8521	HCPCS code
J8530	HCPCS code
Code	Type of code
J8610	HCPCS code
J8700	HCPCS code
J8999	HCPCS code
00004110150	NDC_CD code
00004110020	NDC_CD code

eTable2. Treatment characteristics, by HIV status and cancer site

COLORECTAL CANCER	HIV-infected; N (%)	HIV-uninfected; N (%)
Surgery (required for eligibility) ^a		
Yes	34 (100)	49,623 (100)
Median (IQR) days to surgery	36 (18-67)	27 (15-45)
Radiotherapy + surgery		
Yes	-- ^b	6,733 (13.6)
Median (IQR) days to radiation	56 (46-66)	63 (39-106)
Median (IQR) number of radiotherapy billing codes	9 (8-9)	9 (7-25)
Chemotherapy + surgery		
Yes	17 (50.0)	21,288 (42.9)
Median (IQR) days to chemotherapy	67 (58-79)	69 (52-94)
Receipt of 5-FU ^c	15 (88.2)	17,710 (83.2)
Median (IQR) number of 5-FU cycles	15 (6-24)	14 (6-23)
NON-SMALL-CELL LUNG CANCER		
Surgery		
Yes	25 (73.5)	17,213 (58.9)
Median (IQR) days to surgery	46 (34-73)	42 (22-69)
Radiotherapy		
Yes	14 (41.2)	13,744 (47.0)
Median (IQR) days to radiation	116 (79-131)	68 (42-124)
Median (IQR) number radiotherapy of billing codes	10 (7-15)	10 (7-25)
Chemotherapy		
Yes	15 (44.1)	15,673 (50.2)
Median (IQR) days to chemotherapy	77 (62-156)	68 (44-109)
Receipt of platinum	11 (73.3)	12,882 (87.8)
Median (IQR) number of platinum cycles	4 (1-6)	5 (3-7)
Receipt of etoposide and/or docetaxel	--	10,950 (74.6)
PROSTATE CANCER		
Surgery		
Yes	32 (18.8)	33,060 (24.9)
Median (IQR) days to surgery	79 (60-107)	76 (55-107)
Radiotherapy		
Yes	113 (66.5)	78,176 (58.8)
Median (IQR) days to radiation	109 (77-158)	103 (68-154)
Median (IQR) number radiotherapy of billing codes	11 (7-29)	11 (4-27)
Hormone therapy		
Yes	91 (53.5)	67,773 (51.0)
Median (IQR) days to hormone therapy	62 (36-94)	47 (32-73)
BREAST CANCER		
Surgery (required for eligibility)		
Yes	50 (100)	96,124 (100)
Median (IQR) days to surgery	27 (10-46)	32 (19-48)
Mastectomy	29 (58.0)	51,542 (53.8)
Excision or lumpectomy ^d	21 (42.0)	44,306 (46.2)
Radiotherapy + surgery		
Yes	27 (54.0)	56,903 (59.2)
Median (IQR) days to radiation	91 (65-197)	92 (66-153)
Median (IQR) number of radiotherapy billing codes	11 (8-30)	9 (8-28)
Chemotherapy + surgery		
Yes	15 (30.0)	22,971 (23.9)
Median (IQR) days to chemotherapy	66 (30-85)	77 (58-102)
Median (IQR) number of cyclophosphamide cycles	4 (2-4)	4 (4-5)
Receipt of additional chemotherapy ^e	12 (80.0)	17,215 (74.9)

<p>Abbreviations: IQR (interquartile range) ^aWe included only surgery codes for curative, not diagnostic, procedures. ^bNumbers <11 are not reported in accordance with the SEER-Medicare data use agreement, but HIV-infected and HIV-uninfected patients did not differ substantially regarding the proportion who received radiotherapy and surgery. ^cPercentages for receipt of specific drugs are calculated among those receiving chemotherapy. ^dThe surgery variable was classified in the following hierarchical order: mastectomy, lumpectomy, and excision-only. For example, a woman with an excision code and mastectomy code is categorized as receiving a mastectomy. ^eAdditional chemotherapy is defined as receipt of adriamycin, docetaxel/paclitaxel, methotrexate, or 5-FU.</p>		