

Survival of Older Cancer Patients in the Veterans Health Administration versus Fee for Service Medicare

Landrum, et al

Data Supplement Tables 1-7

Appendix Table 1. Cohort inclusion and exclusion criteria

	Colorectal Cancer†		Lung Cancer‡		Non-Hodgkin's Lymphoma		Multiple Myeloma	
	VHA	SEER-Medicare	VHA	SEER-Medicare	VHA	SEER-Medicare	VHA	SEER-Medicare
Patients diagnosed with first cancer of interest	16,289	110619	28426	135000	3796	36507	1444	12332
Age ≤65	5969	12098	11107	12846	1661	5075	495	1767
Females	302	55581	489	62183	106	17805	27	5708
Histology unlikely to be primary cancer of interest	1048	3757	985	4636	1408	8747	4	46
Diagnosed at autopsy or death certificate	16	385	59	1396	3	147	0	119
Unknown reporting source*		n/a	0	n/a	0	n/a	0	n/a
Enrolled in HMO	n/a	9370	n/a	13033	n/a	1193	n/a	1117
Not enrolled in both Medicare parts A/B	n/a	2471	n/a	3429	n/a	300	n/a	349
Incomplete data or data linkage problem	19	526	45	940	1	48	3	56
Total N	8760	25296	15560	36537	613	3192	900	3170

*Unknown if reporting source was a hospital, office, death certificate, or autopsy.

† Colon and rectal cancer are combined in this cohort

‡ Small cell and NSC lung cancers are combined in this cohort

Appendix Table 2. Demographic and clinical characteristics of the VHA and SEER-Medicare colon cancer cohorts

	Before Adjustment			After Adjustment		
	VHA	SEER-Medicare	p-value	VHA	SEER-Medicare	p-value
N	7003	20734		7003	20734	
Age (%)			<0.001			0.95
66-69	17.8	15.0		17.8	18.2	
70-74	28.0	23.3		28.0	27.5	
75-79	28.5	25.2		28.5	28.3	
80-84	19.2	20.9		19.2	19.3	
85 and older	6.5	15.7		6.5	6.6	
Race (%)			<0.001			0.67
White	78.3	90.3		78.3	78.8	
African American	16.3	8.1		16.3	17.6	
Hispanic	5.4	1.5		5.4	3.6	
Missing Race (%)	2.1	4.9	<0.001	2.1	1.9	0.78
Marital Status (%)			<0.001			0.49
Single	44.0	29.4		44.0	45.1	
Married	56.0	70.6		56.0	54.9	
Missing Marital Status (%)	2.6	3.1	0.043	2.6	2.7	0.86
Census Region (%)			<0.001			0.99
Northeast	17.1	25.1		17.1	17.5	
Midwest	20.0	15.8		20.0	20.4	
South	46.2	19.2		46.2	44.4	
West	16.7	39.9		16.7	17.7	
Socioeconomic Variables*						
% with college degree in zip code of residence	25.6	31.7	<0.001	25.6	25.5	0.89
% professionals in zip code of residence	29.5	34.3	<0.001	29.5	29.6	0.77
Median household income in zip code of residence	44800	56500	<0.001	44800	46400	0.28
% age 65+ income < poverty in zip code of residence	12.5	9.2	<0.001	12.5	12.0	0.61
% Hispanic in zip code of residence	12.2	11.7	0.110	12.2	9.5	0.39
% African American in zip code of residence	16.1	10.1	<0.001	16.1	16.9	0.81
Missing census data (%)	5.7	2.9	<0.001	5.7	7.4	0.12
Charlson Comorbidity Score (%)			<0.001			0.94
0	44.4	49.0		44.4	44.4	
1	30.8	26.6		30.8	30.5	
2	14.1	13.4		14.1	14.2	
3 or more	10.7	11.0		10.7	11.0	
Prior cancer (%)	16.7	23.5	<0.001	16.7	16.6	0.90

Appendix Table 3. Demographic and clinical characteristics of the VHA and SEER-Medicare rectal cancer cohorts

	Before Adjustment			After Adjustment		
	VHA	SEER-Medicare	p-value	VHA	SEER-Medicare	p-value
N	1757	4562		1757	20734	
Age (%)			<0.001			0.67
66-69	18.1	17.8		18.1	19.5	
70-74	30.4	25.6		30.4	30.8	
75-79	28.1	25.3		28.1	28.0	
80-84	18.5	18.5		18.5	16.8	
85 and older	5.0	12.8		5.0	4.9	
Race (%)			<0.001			0.52
White	80.8	92.0		80.8	81.1	
African American	13.7	6.0		13.7	15.6	
Hispanic	5.5	2.0		5.5	3.4	
Missing Race (%)	2.3	5.6	<0.001	2.3	2.0	0.71
Marital Status (%)			<0.001			0.36
Single	44.8	29.4		44.8	46.7	
Married	55.2	70.6		55.2	53.3	
Missing Marital Status (%)	2.5	3.4	0.063	2.5	2.6	0.93
Census Region (%)			<0.001			0.99
Northeast	15.9	24.6		15.9	16.4	
Midwest	21.1	15.4		21.1	21.7	
South	45.7	18.8		45.7	43.0	
West	17.3	41.3		17.3	18.9	
Socioeconomic Variables*						
% with college degree in zip code of residence	24.6	30.8	<0.001	24.5	24.6	0.96
% professionals in zip code of residence	28.8	33.6	<0.001	28.8	28.8	0.96
Median household income in zip code of residence	44400	55500	<0.001	44400	45500	0.47
% age 65+ income < poverty in zip code of residence	12.3	9.2	<0.001	12.3	11.9	0.66
% Hispanic in zip code of residence	12.9	12.5	0.55	12.9	10.6	0.47
% African American in zip code of residence	14.0	9.1	<0.001	14.0	14.7	0.81
Missing census data (%)	4.7	2.9	<0.001	4.7	6.9	0.09
Charlson Comorbidity Score (%)			<0.001			0.98
0	51.0	57.1		51.0	51.3	
1	29.7	25.0		29.7	29.2	
2	11.0	10.0		11.0	11.4	
3 or more	8.3	8.0		8.3	8.1	
Prior cancer (%)	16.1	23.3	<0.001	16.1	15.5	0.72

Appendix Table 4. Demographic and clinical characteristics of the VHA and SEER-Medicare NSC lung cancer cohorts

	Before Adjustment			After Adjustment		
	VHA	SEER-Medicare	p-value	VHA	SEER-Medicare	p-value
N	13434	31868		13434	31868	
Age (%)			<0.001			0.86
66-69	21.9	18.3		21.9	22.5	
70-74	30.5	27.3		30.5	30.2	
75-79	29.2	26.9		29.2	28.9	
80-84	15.0	18.0		15.0	15.0	
85 and older	3.4	9.6		3.4	3.4	
Race (%)			<0.001			0.79
White	80.7	89.4		80.7	80.2	
African American	17.2	9.1		17.2	18.2	
Hispanic	2.2	1.5		2.2	1.6	
Missing Race (%)	1.5	4.7	<0.001	1.5	1.4	0.85
Marital Status (%)			<0.001			0.59
Single	47.7	31.9		47.7	48.4	
Married	52.3	68.1		52.3	51.6	
Missing Marital Status (%)	2.3	2.6	0.098	2.3	2.3	0.95
Census Region (%)			<0.001			0.99
Northeast	14.6	22.1		14.6	14.6	
Midwest	21.3	15.8		21.3	21.2	
South	46.9	23.5		46.9	46.4	
West	17.2	38.6		17.2	17.8	
Socioeconomic Variables*						
% with college degree in zip code of residence	24.6	29.7	<0.001	24.6	24.5	0.90
% professionals in zip code of residence	28.9	32.9	<0.001	28.9	28.9	0.94
Median household income in zip code of residence	44500	54000	<0.001	44500	45300	0.49
% age 65+ income < poverty in zip code of residence	12.2	9.7	<0.001	12.2	12.2	0.98
% Hispanic in zip code of residence	10.3	11.6	<0.001	10.3	9.1	0.58
% African American in zip code of residence	16.8	10.7	<0.001	16.8	17.3	0.88
Missing census data (%)	4.6	2.9	<0.001	4.6	5.6	0.24
Charlson Comorbidity Score (%)			<0.001			0.60
0	54.1	56.9		54.1	54.1	
1	25.8	24.4		25.8	25.9	
2	12.2	10.8		12.2	12.2	
3 or more	7.9	8.0		7.9	7.8	
COPD (%)	45.0	41.8	<0.001	45.0	44.9	0.94
Prior cancer (%)	21.3	25.9	<0.001	21.3	20.6	0.45

Appendix Table 5. Demographic and clinical characteristics of the VHA and SEER-Medicare small cell lung cancer cohorts

	Before Adjustment			After Adjustment		
	VHA	SEER-Medicare	p-value	VHA	SEER-Medicare	p-value
N	2111	4669		2111	4669	
Age (%)			<0.001			0.99
66-69	24.4	21.2		24.4	24.4	
70-74	32.6	28.7		32.6	31.9	
75-79	27.6	28.0		27.6	28.1	
80-84	12.4	15.1		12.4	12.6	
85 and older	3.0	7.1		3.0	3.0	
Race (%)			<0.001			0.96
White	85.1	91.7		85.1	85.5	
African American	12.6	6.9		12.6	12.5	
Hispanic	2.3	1.4		2.3	2.0	
Missing Race (%)	1.5	4.0	<0.001	1.5	1.3	0.80
Marital Status (%)			<0.001			0.99
Single	46.9	30.8		46.9	46.9	
Married	53.1	69.3		53.1	53.1	
Missing Marital Status (%)	1.8	2.3	0.30	1.8	2.0	0.92
Census Region (%)			<0.001			0.99
Northeast	13.8	20.5		13.8	14.6	
Midwest	24.8	17.3		24.8	21.2	
South	43.9	25.7		43.9	46.4	
West	17.5	36.5		17.5	17.8	
Socioeconomic Variables*						
% with college degree in zip code of residence	24.6	28.8	<0.001	24.6	24.6	0.96
% professionals in zip code of residence	28.8	32.1	<0.001	28.8	28.9	0.77
Median household income in zip code of residence	45200	53000	<0.001	45200	46200	0.44
% age 65+ income < poverty in zip code of residence	11.5	9.8	<0.001	11.5	11.6	0.89
% Hispanic in zip code of residence	10.0	11.5	<0.001	10.0	9.1	0.67
% African American in zip code of residence	14.0	9.8	<0.001	14.0	14.3	0.91
Missing census data (%)	4.7	2.6	<0.001	4.7	6.0	0.24
Charlson Comorbidity Score (%)			0.192			0.94
0	53.0	55.2		53.0	52.7	
1	25.3	24.9		25.3	25.1	
2	12.4	10.8		12.4	12.9	
3 or more	9.3	9.1		9.3	9.3	
COPD (%)	44.5	42.9	0.204	44.5	44.6	0.98
Prior cancer (%)	19.2	21.7	0.022	19.2	19.8	0.68

Appendix Table 6. Demographic and clinical characteristics of the VHA and SEER-Medicare diffuse large B-cell lymphoma cohorts

	Before Adjustment			After Adjustment		
	VHA	SEER-Medicare	p-value	VHA	SEER-Medicare	p-value
N	613	3192		613	3192	
Age (%)			<0.001			0.99
66-69	16.0	14.4		16.0	16.2	
70-74	24.6	22.6		24.6	24.7	
75-79	29.2	25.9		29.2	28.7	
80-84	23.0	22.7		23.0	23.0	
85 and older	7.2	14.4		7.2	7.5	
Race (%)			<0.001			0.51
White	88.8	94.4		88.8	89.7	
African American	6.2	3.3		6.2	7.3	
Hispanic	5.0	2.3		5.0	3.0	
Missing Race (%)	2.4	5.0	0.005	2.4	2.2	0.81
Marital Status (%)			<0.001			0.82
Single	43.4	24.9		43.4	43.9	
Married	56.6	75.2		56.6	56.1	
Missing Marital Status (%)	1.1	3.1	0.008	1.1	1.2	0.93
Census Region (%)			<0.001			0.99
Northeast	13.5	23.5		13.5	13.5	
Midwest	21.5	15.7		21.5	21.5	
South	42.6	16.5		42.6	42.6	
West	22.4	44.2		22.4	22.4	
Socioeconomic Variables*						
% with college degree in zip code of residence	27.6	34.2	<0.001	27.6	27.5	0.96
% professionals in zip code of residence	31.0	36.1	<0.001	31.0	31.1	0.86
Median household income in zip code of residence	47300	59600	<0.001	47300	49100	0.40
% age 65+ income < poverty in zip code of residence	11.2	8.4	<0.001	11.2	10.9	0.38
% Hispanic in zip code of residence	11.7	11.5	0.85	11.7	9.5	0.44
% African American in zip code of residence	10.6	7.3	<0.001	10.6	10.4	0.93
Missing census data (%)	4.6	2.7	0.011	4.6	5.4	0.55
Charlson Comorbidity Score (%)			0.001			0.98
0	41.3	50.0		41.3	41.2	
1	31.5	25.8		31.5	32.3	
2	14.7	13.0		14.7	14.3	
3 or more	12.6	11.2		12.6	12.1	
Prior cancer (%)	19.3	25.9	<0.001	19.3	19.1	0.94

Appendix Table 7. Demographic and clinical characteristics of the VHA and SEER-Medicare multiple myeloma cohorts

	Before Adjustment			After Adjustment		
	VHA	SEER-Medicare	p-value	VHA	SEER-Medicare	p-value
N	900	3170		900	3170	
Age (%)			<0.001			0.99
66-69	18.6	16.9		18.6	18.7	
70-74	25.0	24.8		25.0	24.8	
75-79	28.4	25.5		28.4	28.7	
80-84	23.1	19.6		23.1	23.2	
85 and older	4.9	13.2		4.9	4.7	
Race (%)			<0.001			0.62
White	64.7	82.9		64.7	65.7	
African American	27.8	14.6		27.8	27.8	
Hispanic	6.5	2.4		6.5	6.5	
Missing Race (%)	2.1	3.2	0.092	2.1	2.0	0.91
Marital Status (%)			<0.001			0.67
Single	39.0	26.5		39.0	40.1	
Married	61.0	73.5		61.0	59.9	
Missing Marital Status (%)	1.9	4.9	<0.001	1.9	2.0	0.88
Census Region (%)			<0.001			0.99
Northeast	14.6	22.6		14.6	14.4	
Midwest	21.8	17.6		21.8	22.2	
South	43.7	19.2		43.7	42.8	
West	20.0	40.7		20.0	20.7	
Socioeconomic Variables*						
% with college degree in zip code of residence	26.8	32.4	<0.001	26.8	26.5	0.77
% professionals in zip code of residence	30.4	34.9	<0.001	30.4	30.4	0.96
Median household income in zip code of residence	45300	57300	<0.001	45300	47400	0.23
% age 65+ income < poverty in zip code of residence	13.0	9.4	<0.001	13.0	12.4	0.60
% Hispanic in zip code of residence	13.0	11.7	0.099	13.0	10.2	0.45
% African American in zip code of residence	20.2	12.3	<0.001	20.2	20.1	0.99
Missing census data (%)	6.7	2.8	<0.001	6.7	8.9	0.29
Charlson Comorbidity Score (%)			0.001			0.96
0	40.1	47.5		40.1	39.7	
1	25.4	23.2		25.4	25.3	
2	17.2	14.2		17.2	18.1	
3 or more	17.2	15.1		17.2	16.9	
Prior cancer (%)	20.0	24.3	0.008	20.0	20.0	0.99