

Regional Variations in the Use of Endocrine Therapy – 788117

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Background:

- The majority of breast cancers are hormone receptor positive
- There is increasing incidence of HR+ cancers since 2004
- Increased disease free survival from endocrine therapy in hormone receptor positive cancer
- There is greater mortality in black females than white females from breast cancer, including in HR+ cancer
- Regional differences exist in breast cancer survival across the US

Objectives:

- Identify factors associated with endocrine therapy use across the US
- Determine the effect of race on endocrine therapy utilization

Methods:

- NCDB Query for HR+ breast cancers in women
- Age >18
- Stage I, II, III
- Diagnosis date 2004-2016

Multivariable Analysis of Endocrine Therapy Use

Covariate	N (%)	Odds Ratio (95% CI)	p-value
Age			
>65	372491 (37)	0.86 (0.84-0.87)	<0.001
≤65	636404 (63)	reference	
Race			
Black	90583 (9)	0.89 (0.87-0.91)	<0.001
White	866057 (91)	reference	
Insurance Status			
Uninsured	32305	0.71 (0.69-0.74)	<0.001
Medicaid	53551	0.94 (0.91-0.97)	
Medicare	377866	0.98 (0.96-1.00)	
Private	545173	reference	
Year of Diagnosis			
2010-2016	617101 (61)	3.23 (3.18-3.28)	<0.001
2004-2009	391794 (39)	reference	
Facility Location			
South	363125 (36)	0.66 (0.64-0.67)	<0.001
Midwest	257832 (26)	1.18 (1.15-1.21)	
West	172390 (17)	0.64 (0.62-0.65)	
Northeast	215548 (21)	reference	
Location Type			
Metro	844684	0.63 (0.59-0.67)	<0.001
Rural	15810	reference	

Patient Characteristics

Variable	N (%)
Age at Diagnosis	
≤ 65	372491 (36.9)
> 65	636404 (63.1)
Year of Diagnosis	
2004-2009	391794 (38.8)
2010-2016	617101 (61.2)
Location	
South	363125 (36.0)
West	172390 (17.1)
Midwest	257832 (25.6)
Northeast	215548 (21.4)
Primary Payer	
Uninsured	32305 (3.2)
Private Insurance	545173 (54.0)
Medicaid	53551 (5.3)
Medicare/Other Gov't	377866 (37.5)
Race	
White	866057 (85.8)
Black	90583 (9.0)
Other	52255 (5.2)
Location Type	
Metro	844684 (83.7)
Rural	15810 (1.6)
Hormone Therapy	
Yes	896246 (88.8)
No	112649 (11.2)

Multivariable Analysis by Race

Covariate	N (%)	White Odds Ratio (95% CI)	p-value	Covariate	N (%)	Black Odds Ratio (95% CI)	p-value
Age				Age			
≤65	329921 (38)	0.84 (0.82-0.86)	<.001	≤65	28583 (32)	1.01 (0.95-1.07)	0.79
>65	536136 (62)	reference		>65	62000 (68)	reference	
Insurance status				Insurance status			
Uninsured	25288 (3)	0.68 (0.66-0.71)	<.001	Uninsured	4336 (5)	0.90 (0.81-0.98)	0.055
Medicaid	37720 (4)	0.92 (0.88-0.95)		Medicaid	10524 (12)	1.04 (0.97-1.12)	
Medicare	332758 (38)	0.97 (0.95-1.00)		Medicare	31933 (35)	1.00 (0.95-1.07)	
Private	470291 (54)	reference		Private	43790 (48)	reference	
Year of Diagnosis				Year of Diagnosis			
2010-2016	523464 (60)	3.27 (3.21-3.32)	<.001	2010-2016	58790 (65)	3.02 (2.88-3.17)	<.001
2004-2009	342593 (40)	reference		2004-2009	31793 (35)	reference	
Facility Location				Facility Location			
South	299541 (35)	0.63 (0.61-0.65)	<.001	South	51353 (57)	0.77 (0.73-0.82)	<.001
Midwest	232020 (27)	1.16 (1.14-1.19)		Midwest	18096 (20)	1.14 (1.05-1.22)	
West	147295 (17)	0.61 (0.60-0.62)		West	5120 (6)	0.63 (0.58-0.70)	
Northeast	187201 (21)	reference		Northeast	16014 (17)	reference	
Location Type				Location Type			
Metro	715193 (83)	0.64 (0.60-0.68)	<.001	Metro	81683 (90)	0.60 (0.47-0.76)	<.001
Rural	14585 (2)	reference		Rural	853 (1)	reference	

Discussion:

- Endocrine therapy use is increasing in more recent years, regardless of race
- Younger white women are more likely to take endocrine therapy vs older white women
 - There are similar rates of use in younger and older black women
- Black women are less likely to take endocrine therapy than white women
- Midwest and Northeast regions have better utilization rates vs South and West regions
 - Same patterns for black and white women

Conclusions:

- There are regional differences in the use of endocrine therapy with highest utilization is in the Midwest
- Black patients are less likely to use endocrine therapy
- More information is needed to determine reasons for differences in endocrine therapy utilization

Selected References:

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