Comparative Adherence to Adjuvant Hormonal Therapy and Associated Mortality in Male and Female Veterans with Breast Cancer: A Nationwide Cohort Analysis

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Background

- Male breast cancer is rare (<1%) and prior studies suggest men have lower treatment adherence.
- The VHA's uniform access system enables evaluation of adherence and mortality to identify modifiable survivorship gaps.

Objective

- Compare adherence to adjuvant hormonal therapy and associated mortality risk between male and female veterans.
- Identify demographic and clinical predictors of nonadherence within the veteran population.

Methodology

- Retrospective cohort study using national VHA VINCI data from 2005–2019.
- Included veterans diagnosed with breast cancer and prescribed adjuvant hormonal therapy (tamoxifen, anastrozole, letrozole, or exemestane).
- Collected demographic and clinical characteristics; adherence assessed using the Medication Possession Ratio (MPR), with MPR ≥ 80% classified as adherent.
- Used multivariable logistic regression to compare adherence between males and females and identify predictors of nonadherence.

	Total (n=7,155)	Male (n=1,139)	Female (n=6,016)	P-value
Age at first prescription, mean(SD)	60.1 (11.4)	69.8 (10.0)	58.2 (10.7)	< 0.001
Race, n(%)				
White	4,579 (64%)	764 (64%)	3,815 (63%)	
Black	1,888 (26%)	274 (24%)	756 (27%)	
Other/Unknown	688 (10%)	10 (9%)	268 (10%)	0.061
Ethnicity, n(%)				
Hispanic or Latino	341 (5%)	41 (4%)	300 (5%)	
Not Hispanic or Latino	6,639 (93%)	1,067 (94%)	5,572 (93%)	
Unknown	175 (2%)	31 (3%)	144 (2%)	0.111
Marital status at diagnosis, n(%)				
Single	1,187 (17%)	138 (12%)	1,049 (17%)	
Married	2,578 (36%)	563 (49%)	2,015 (33%)	
Divorced/Separated	2,789 (39%)	343 (30%)	2,446 (41%)	
Widowed	535 (7%)	89 (8%)	446 (7%)	
Other/Unknown	66 (1%)	6 (1%)	60 (1%)	< 0.001

Table 1:Cohort Demographics

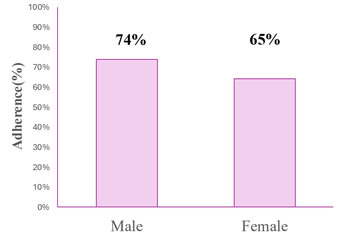


Figure 1: Hormone therapy adherence by sex

Results

- A total of 7,155 veterans (1,139 male; 6,016 female) were analyzed; males were significantly older at first prescription (69.8 vs. 58.2 years, p<0.001).
- Male veterans demonstrated higher unadjusted adherence to hormone therapy compared with females (74% vs. 65%, p<0.001).
- Adherence increased with older age and among non-Hispanic/Latino veterans, but was lower among Black veterans, divorced/separated or widowed individuals.
- Gender was not a significant predictor of adherence after adjustment, and adherence was independently associated with lower mortality (Adj OR 0.76, 95% CI 0.67–0.86).

Conclusions

- Largest national assessment of hormonal therapy adherence among veterans with breast cancer.
- Male veterans showed higher adherence than female veterans (74% vs. 65%, p<0.001); female adherence rates were similar to those reported in prior studies.
- Lower adherence was associated with racial and marital disparities, as well as younger age.
- Higher adherence correlated with improved survival.

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