Palliative Care Utilization and Associated Outcomes in Hospitalized Breast Cancer Patients

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Background

- Palliative care (PC) plays a vital role in improving quality of life for patients with cancer.
- Despite its proven benefits, national data on PC utilization in breast cancer hospitalizations remain limited.
- Understanding predictors and outcomes of PC use can help identify gaps in care and guide resource allocation.

Methods

- This was a retrospective cross-sectional study using data from the 2021 National Inpatient Sample (NIS).
- We included adult hospitalizations with a diagnosis of breast cancer and a documented palliative care encounter based on ICD-10 codes.
- Survey-weighted logistic and linear regression models were performed to identify predictors of palliative care use and its impact on mortality, length of stay (LOS), and total hospitalization charges.
- The models were adjusted for demographics, comorbidities (Charlson Comorbidity Index), income quartile, insurance type, and hospital characteristics including teaching status, region, and bed size.

Results

- Among 32,719 breast cancer hospitalizations, palliative care (PC) was utilized in 12.1% of cases (95% CI: 11.6–12.6%).
- Patients receiving PC were older (mean age 66.8 vs. 65.1 years, $p < 0.001$), had a higher comorbidity burden, and were more frequently treated at teaching hospitals ($p < 0.001$).
- By race, White patients comprised 65.3%, followed by Black (19.2%), Hispanic (8.8%), Asian/Pacific Islander (3.5%), Native American (0.4%), and Other (2.8%).
- Insurance status strongly influenced PC use ($p < 0.001$), with Medicare and Medicaid recipients more likely to receive PC than those with private insurance.
- Most palliative care encounters occurred in teaching hospitals (80.0%) versus non-teaching hospitals (20.0%).
- Utilization was greatest in large hospitals (54.5%), followed by medium (26.1%) and small hospitals (19.4%).
- Regionally, palliative care use was highest in the South (38.2%), followed by the Midwest (23.6%), Northeast (19.7%), and West (18.6%).
- In adjusted analyses, PC was independently associated with:
  i. Higher in-hospital mortality (aOR: 13.36; 95% CI: 11.91–14.99; $p < 0.001$)
  ii. Longer length of stay (LOS) (+1.83 days; 95% CI: 1.55–2.12; $p < 0.001$)
  iii. Increased total hospitalization charges (+$9,614; 95% CI: $5,163–$14,066; $p < 0.001$)

Table: Predictors and Outcomes of Palliative Care (PC) Utilization in Breast Cancer

Category	Findings	p-value / Significance
Overall PC Utilization	12.1% (95% CI: 11.6–12.6%)	—
Age (years)	66.8 vs. 65.1	<0.001
Comorbidity Burden	Cat 2 → 3.4%; Cat 3 → 96.6%	<0.001
Race/Ethnicity	White 65.3%, Black 19.2%, Hispanic 8.8%, Asian/PI 3.5%, Native American 0.4%, Other 2.8%	—
Insurance Type	Medicare/Medicaid > Private	<0.001
Hospital Type	Non-teaching 20.0%, Teaching 80.0%	<0.001
Hospital Bed Size	Small 19.4%, Medium 26.1%, Large 54.5%	0.016
Region	NE 19.7%, MW 23.6%, South 38.2%, West 18.6%	<0.001
In-Hospital Mortality (adjusted)	aOR: 13.36 (95% CI: 11.91–14.99)	<0.001
Length of Stay (LOS)	+1.83 days (95% CI: 1.55–2.12)	<0.001
Total Hospital Charges	+$9,614 (95% CI: $5,163–$14,066)	<0.001

Discussion

- Palliative care (PC) use in breast cancer hospitalizations remains low, indicating underutilization nationwide.
- Racial, insurance, and hospital-related disparities highlight unequal access to PC services.
- Associations with higher mortality and longer stays likely reflect greater illness severity and late PC referral.
- Early and equitable PC integration could improve patient outcomes and reduce care disparities.

Conclusion

- Palliative care use in breast cancer hospitalizations remains low and unevenly distributed.
- Equitable access should be strengthened through education, policy, and institutional support.
- Expanding PC services beyond tertiary centers and standardizing referrals can ensure timely, patient-centered care for all patients.

Reference

- Jackson I, Lu Q, Tripathy D, et al. *Racial/Ethnic Disparities in Hospitalization Outcomes by Palliative Care Utilization and Trends Among Women With Metastatic Breast Cancer in the United States.* JCO Oncol Pract. 2025;21(3):418–426. DOI:10.1200/OP.24.00434

Disclosure

Christie Hilton serves in a consultant/advisory role for Astra Zeneca, Bio-theranostics and Gilead. In the past she was on the speakers bureau for Astra Zeneca and Diiachi Sanyo. She works as a protocol officer at the NSABP and is on the board for the Glimmer of Hope Foundation Pittsburgh.