ID: 403820 Impact of Screening Mammography on Treatment in Women Diagnosed with Breast Cancer

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Background

- Screening mammography has shown to significantly reduce breast cancer mortality.
- Yet, compliance remains suboptimal, and there are controversies regarding the value of screening, especially in certain age groups.
- Aim of this study was to evaluate the impact of screening mammography on treatment of breast cancer.

Methods

- Retrospective review of breast cancer patients 40+ years of age who received treatment for breast cancer between Sept 2008 to May 2016 at a single institution was performed.
- Patients were divided into two groups according to the time interval between breast cancer diagnosis and prior screening, if any:
  1) Patients with screening 25+ months of diagnosis
  2) Patients with screening 25+ months prior to diagnosis or never
- Logistic regression models used to assess the association between different screening intervals and clinical factors: need for chemotherapy, axillary lymph node status at diagnosis, tumor size, and need for mastectomy and axillary dissection (AD).

Results

- A total of 1125 breast cancer patients with information on screening interval were included.
  - 819 (73%) with documented screening within 24 months of diagnosis
  - 306 (27%) with screening 25+ months from diagnosis including 65 (6%) who never had mammogram
- Overall, those screened 25+ months were significantly more likely to receive chemotherapy (OR (95% Confidence Interval - Cl): 1.51, (1.14, 1.99), p=0.0040), undergo mastectomy (OR (95% Cl): 1.32 (1.00, 1.72), p=0.0465), and require AD (OR (95% Cl): 1.66 (1.17, 2.35), p=0.0045) than patients who underwent screening 1-24 months prior to diagnosis.
- Among those who underwent upfront surgery (1045/1125, 93%), patients with screening 1-24 months prior to diagnosis had significantly smaller mean tumor size than those with mammogram 25+ months of diagnosis or never (12.5mm vs 14.5mm, p=0.0225).
- Subgroup analysis by age groups showed that patients aged 40-49 years who never had a mammogram (n=29) were significantly more likely to require chemotherapy (OR(95%Cl): 2.52(1.10,5.77), p=0.0287), have positive lymph nodes (OR(95%CI): 4.52(1.64,12.42), p=0.0035), have larger tumors (mean 23 mm vs 13 mm, p=0.0417), undergo mastectomy (OR(95%CI): 3.44 (1.41,8.43), p=0.0068), and undergo AD (OR(95%CI): 4.64(2.05,10.52), p=0.0002) compared to those screened within 24 months (n=197).

Conclusions

- Breast cancer screening is associated with decreased stage at diagnosis and receipt of less extensive medical and surgical treatment.
- This was also evident in the 40-49 year age group, where controversy still exists on whether screening is even necessary.
- Decision making regarding the use of screening mammography should not only take into account survival advantage, but other endpoints including potential for less aggressive treatment.

No relevant financial relationships to disclose.