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NEWS

Embargoed until Wednesday, Dec. 4, 2013, at 12:01 a.m. ET

Scientific Formal (Paper) Presentations

CODE: SST01-01
SESSION: SST01
Mammography Outcomes by Screening Interval: Does Biennial Screening Affect Prognosis?

Date/Times

- **DATE: Friday**
- **TIME: 10:30-10:40 AM**
- **LOCATION: E450B**

PARTICIPANTS

- Lilian Wang MD - Nothing to disclose.
- Laura Billadello MD - Nothing to disclose.
- Riti Mahadevia undefined - Nothing to disclose.
- Paula M Grabler MD - Nothing to disclose.
- Ellen B Mendelson MD - Scientific Advisory Board, Hologic, Inc Research support, Siemens AG Speakers Bureau, Siemens AG Medical Advisory Board, Quantason, LLC Consultant, Quantason, LLC Speakers Bureau, SuperSonic Imagine Research support, SuperSonic Imagine Medical Advisory Board, Toshiba Corporation.

SUBSPECIALTY CONTENT

- Breast (Imaging and Interventional)

PURPOSE
In 2009, the U.S. Preventative Services Task Force announced the recommendation for biennial screening mammography for women aged 50-74 years, despite evidence of mortality reduction with annual screening mammography beginning at age 40, as supported by the American College of Radiology (ACR), Society of Breast Imaging (SBI), and American Cancer Society (ACS). The purpose of this study is to use secondary endpoints of tumor size and lymph node positivity to compare the efficacy of screening mammography performed at various time intervals.

METHOD AND MATERIALS
Under IRB approval, a retrospective review of all screen-detected breast cancers between 2007-2010 was performed. Patients were divided into groups 1-3 based on time interval between screening mammograms, defined as <1.5 years, 1.5-3 years, and >3 years. The three groups were controlled in terms of age, breast density, high risk status, and family history of breast cancer. Audit data as outlined by ACR BI-RADS, including % stage 0 or 1 cancers, % minimal cancer, and % positive axillary lymph nodes, were compared for the three groups. The size of invasive cancers was also compared.

RESULTS
There were 419 screen-detected cancers during the study period. 34 patients were excluded due to unknown screening interval or lack of surgical pathology and 24 patients were excluded for cancer detection on baseline mammography. To adjust for differences in age between groups, patients >75 years were excluded. This resulted in 332 patients, 207 in group 1, 73 in group 2, and 52 in group 3. There was no significant difference in age, breast density, high risk status, family history, or index histology between groups. The % stage 0 or 1 cancer and % minimal cancer did not differ between the groups ($p=0.057$ and $p = 0.498$, respectively). The size of invasive cancers was also not statistically different between the three groups (ANOVA, $p=0.165$). However, lymph node positivity was lowest in group 1, which was a statistically significant difference (8.7% vs. 20.5% and 15.4%, $p = 0.002$).

CONCLUSION
Screening mammography performed at an interval <1.5 years significantly reduces the rate of lymph node positivity, thereby improving patient prognosis. This supports recommendations set forth by the ACS, ACR, and SBI.

CLINICAL RELEVANCE/APPLICATION
Screening mammography performed at an interval less than that recommended by the USPSTF significantly reduces the rate of lymph node positivity, thereby improving patient prognosis.