Screening Mammography Rates Are Falling Short

BY BRUCE JANCIN

FROM THE ANNUAL MEETING OF THE AMERICAN PUBLIC HEALTH ASSOCIATION

DENVER – Even before the U.S. Preventive Services Task Force issued its controversial 2009 recommendation, only a slim majority of women with health insurance were getting even one mammogram every 2 years.

Thus, the utilization rate for mammography – be it standard, digital, or MRI – remains well below recommendations, Judie Mopsik said at the meeting.

She presented an analysis of longitudinal medical claims data for 4.5 million women aged 18 years or older covered by a national health insurance company with 20 million enrollees.

These were women with full access to preventive care. During the study period, 2006-2008, 1.9 million of the 4.5 million women had a mammogram.

The mammographic screening rate during this 2-year window was 9% among 18- to 39-year-olds.

The rate was 53% among women aged 40-49 years, a group for whom routine screening isn't recommended in the latest USPSTF guidelines (available at www.uspreventiveservicestaskforce.org/uspstf/uspsbrca.htm).

At the time of the study, however, the USPSTF's previous guidelines were in effect, and those guidelines recommended mammography every 1-2 years starting at age 40, noted Ms. Mopsik, who is president of the Council of Professional Associations on Federal Statistics and vice president for business development at the Lewin Group in Falls Church, Va.

VITALS

Major Finding: The screening mammography rate within a 2-year study window was 59% for women in their 50s and 49% for women aged 60 years or older.

Data Source: Longitudinal medical claims data for 2006-2008 for 4.5 million women covered by a national health insurance company with 20 million enrollees and full access to preventive care.

Disclosures: The study was supported by the National Center for Health Statistics. Ms. Mopsik declared having no relevant financial interests.

The screening rate within the 2-year study window was 59% among women in their 50s, for whom mammography is routinely recommended at least once every 2 years.

And the screening rate was 49% in women aged 60 years or older.

Among women who had two or more mammograms during the 2-year study period, the majority – 56%-84% depending upon the age group – had their most recent mammogram within 11-18 months of their prior mammogram.

This is the population of assiduous adherents to preventive medicine likely to find particularly troubling the USPSTF's reversal of its longtime guidelines calling for screening every 1-2 years, particularly since the American Cancer Society still recommends annual mammography starting at age 40 years. ■

MRI Superior to Mammography Screening for At-Risk Women

BY MARY ANN MOON

FROM THE JOURNAL OF CLINICAL ONCOLOGY

MRI remains strongly superior to mammography over the long term in screening women who are at increased risk of developing breast cancer, according to a study published online in the journal.

The advantage in sensitivity was highly significant for BRCA1 mutation carriers, but not for those who carried BRCA2 mutations and were more likely to present with ductal carcinoma in situ (DCIS).

Previous research showed that in the short term, MRI was approximately twice as sensitive as mammography in detecting breast cancer among women susceptible to the disease, and most guidelines now recommend MRI screening in those who carry BRCA1 or BRCA2 mutations.

However, there is no consensus on the screening protocol for other risk groups, few studies have assessed BRCA1 carriers separately from BRCA2 carriers, and until now no studies have evaluated longer-term screening results, said Dr. Adriana J. Rijnsburger of Erasmus University Medical Center, Rotterdam, the Netherlands, and her associates.

To address these issues, the investigators enlarged and extended the Dutch MRI Screening Study (MRISC) and report their findings after following 2,157 women at six cancer or academic centers for 5 years.

The study subjects, aged 25-75 years at enrollment, had never had breast cancer but were at increased risk because they carried either the BRCA1 or BRCA2 mutation (raising their cumulative lifetime risk of developing breast cancer to 50%-85%), had a high-risk family history (raising their cumulative lifetime risk of developing breast cancer to 30%-50%), or had a moderate-risk family history (raising their cumulative lifetime risk of developing breast cancer to 15%-30%).

VITALS

Major Finding: MRI screening had 71% sensitivity overall (vs. 41% for mammography), 78% sensitivity for invasive cancers (vs. 36% for mammography), 67% sensitivity in BRCA1 carriers (vs. 25% for mammography), and 69% sensitivity in BRCA2 carriers (vs. 62% for mammography).

Data Source: The MRISC was a prospective, nonrandomized cohort study involving 2,157 Dutch women at increased risk for developing breast cancer, who were screened annually by both mammography and MRI for a median of 5 years.

Disclosures: This study was supported by the Dutch government and the Cancer Genomics Center in the Netherlands. The investigators reported having no financial conflicts of interest.

They underwent biannual clinical breast examination and annual mammography and MRI.

During 5 years of follow-up, 97 breast cancers developed in 94 women, including 78 (80%) invasive tumors and 19 (20%) cases of DCIS.

Sensitivity at detecting breast cancer was 71% with MRI, significantly greater than the 41% sensitivity of mammography. When only invasive breast cancers were considered, MRI sensitivity increased to 78%, while mammography's sensitivity decreased to 36%.

When the analysis was restricted only to women who carried genetic mutations, the sensitivity of MRI (67%) was "strikingly" higher than that of mammography (25%) for BRCA1 carriers. In contrast, MRI sensitivity (69%) was only slightly higher than mammography's sensitivity (62%) in BRCA2 carriers.

This difference can be explained, at least in part, by the higher proportion of DCIS in BRCA2 than in BRCA1 carriers; mammography was much more sensitive in detecting DCIS (69%) than in detecting invasive tumors (36%).

The specificity of the two screening methods was not significantly different.

Overall, 43% of breast cancers were detected by MRI only. This included 46% of the cancers in BRCA1 carriers, 31% in BRCA2 carriers, 41% in women with a high-risk family history, and 47% in the women with a moderate-risk family history, Dr. Rijnsburger and her colleagues said (J. Clin. Oncol. 2010 Nov. 16; doi:10.1200/JCO.2009.27.2294).

These findings "support the recommendation of the American Cancer Society to use annual MRI screening not only for BRCA1/2 mutation carriers, but for all women with an approximately 20%-25% or greater cumulative lifetime risk of breast cancer due to a familial predisposition," they noted, with the caveat that cost-effectiveness should be evaluated separately in all risk groups.

This also was the first prospective study of screening in this at-risk patient population to report mortality data, the researchers added.

Five women, all BRCA1/2 mutation carriers, developed distant metastases, and four of them died during follow-up. Two of the women who died had had a favorable tumor stage at diagnosis.

This finding underscores the need for clinicians to avoid guaranteeing that all breast cancer deaths can be prevented by early detection via screening, Dr. Rijnsburger and her associates said.

Survival was 84% in the women with BRCA1 mutations and invasive cancer, and 93% in those with BRCA2 mutations and invasive cancer. Survival was 100% in the other at-risk groups.

BRCA1-associated tumors "behaved completely differently" from BRCA2-associated tumors. They developed at a younger patient age, were not detected as well on mammography, were more likely to develop during the interval between screenings, were more likely to be invasive, and were larger at diagnosis, the investigators said.

This indicates that the current screening schedule for BRCA1 carriers may need to be modified, perhaps by increasing MRI screening to twice rather than once yearly, Dr. Rijnsburger and her colleagues said. ■

VIEW ON THE NEWS

Findings May Alter Routine Practice for Screenings

"The investigators have conducted the largest such trial of MRI screening in high-risk individuals, and their new report that MRI screening appears to be preferentially useful in BRCA1 mutation carriers as compared to BRCA2 has potentially practice-changing implications," said Dr. Andrew D. Seidman.

"The favorable overall survival in all high-risk groups reported suggests that careful MRI screening is not only superior to mammography alone, but may be an attractive alternative to risk-reducing prophylactic mastectomy for some women."

DR. SEIDMAN *is on the American Society of Clinical Oncology communications committee and is an oncologist at Memorial Sloan-Kettering Cancer Center, New York. These comments were taken from an ASCO press statement accompanying the online report of Dr. Rijnsburger's study.*