CHICAGO — Carol Lee, MD, a Memorial Sloan-Kettering Cancer Center radiologist, presented a balanced menu of evidence on breast-cancer screening at RSNA 2011 on Monday. She offered up a slew of studies that, collectively, have found mammography to cut breast cancer mortality around 25 percent. She highlighted other studies, one dating back to 1976, that questioned whether mammography made any difference at all for women.

Lee mentioned the screening recommendations of the American College of Obstetricians and Gynecologists, the National Comprehensive Cancer network, the American College of Radiology, and the American Cancer Society (all who suggest annual screening for women ages 40 and older) as well as those for the National Cancer Institute (biannually starting at age 40) and the U.S. Preventive Services Task Force, which recommends biannual screens starting at age 50.

Indeed, to capture her true thoughts on the issue, one had to wait for the Q&A.

“I wonder what the motivation of those who continually attack screening mammography is,” she wondered aloud. “We have some pretty good science behind our position.” She added that the Scandinavian studies (Kalager et all in the New England Journal of Medicine and Jorgensen et al in the British Medical Journal, both in 2010) that have questioned the value of screening mammography, are weaker than some of the studies supporting screening because they weren’t randomized, prospective, controlled trials.

And so most the discussion during the panel “Screening for Breast Cancer: Where do we stand?” was not about whether to screen, but how to screen, with a focus on emerging alternatives to mainstay mammography. Lee briefly covered two of the latest options herself: positron emission mammography (PEM) and breast-specific gamma imaging (BSGI). Both, she said, have been shown to detect otherwise occult breast cancers – indeed, two studies presented Tuesday at RSNA 2011 found BGI to have greater sensitivity and sensitivity – as well as effectiveness in diagnosis among women with dense-breasts -- than with mammography or ultrasound. But both BGI and PEM expose patients to radiation doses far higher than the roughly 0.44 millisieverts of a digital mammogram – 6.2 mSv for BGI and 9.3 mSv per PEM scan, she said.

Janice Sung, MD, also of Memorial Sloan-Kettering, picked up the thread for MRI screening. MRI shines with women with risk factors such as a personal history of cancer, a history of chest irradiation when young, and BRCA 1 or 2 mutations, Sung explained. Various studies have found MRI to help in detecting between 4 percent and 7 percent more cancers in high-risk women than would be the case with mammography, most of the tumors less than one centimeter in size.

Margarita Zuley, MD, the University of Pittsburgh’s medical director for breast imaging, discussed research in tomosynthesis screening for breast cancer. The procedure, which creates a three-dimensional image of the breast using X-rays, won U.S. Food and Drug Administration approval in February. University of Pittsburgh researcher David Gur, ScD, and others have found it to be particularly good at highlighting small lesions and speculated masses. A current study by Gur and colleagues is yielding numbers similar to or better than a 2009 study showing a 30 percent reduction in recall rate with tomosynthesis-plus-mammography and a 10 percent reduction in recall rate with tomosynthesis alone, Zuley said.

Jean Weigert, MD, director of women’s imaging at Mandell and Blau MDs, PC, and the Hospitals of Central Connecticut, picked up the thread with ultrasound. It’s a good choice with dense breasts, where mammography is weak, she said. Data collected in the first year of a new study across six practices with 10 sites in Connecticut – covering 78,778 screening mammograms and 8,651 screening ultrasounds retrospectively – estimated that ultrasound screening caught an additional 3.2
cancers per 1,000 patients in the screening population, Weigert said. Two of the main challenges for ultrasound breast cancer screening are the spottiness of insurance coverage for patients and lower insurance reimbursement rates for the procedure, Weigert said. But she added that several states, including New York, Texas and California, are making headway in requiring ultrasound as secondary screening.

Disclosures:

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