

New Breast Cancer Screening Guidelines Opposed by Societies

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November 19, 2009 — Several professional organizations and expert groups have voiced their objections to new recommendations for breast cancer screening issued by the US Preventive Services Task Force (USPSTF) and published in the November 17 issue of the *Annals of Internal Medicine*.

"[The American Cancer Society] continues to recommend [mammography] screening annually for women 40 to 49 years of age," Victor G. Vogel, MD, MHS, FACP, national vice president for research at the American Cancer Society (ACS) in Atlanta, Georgia, told *Medscape Medical News*. "Clinicians should recognize that very few agencies, including the ACS, are altering their screening guidelines based on the USPSTF modeling results, which simply reanalyze previously published data."

Based on an evidence review, the updated USPSTF guidelines recommend against routine mammography screening for women before age 50 years, suggest that screening end at age 74 years, and recommend changing the screening interval from 1 year to 2 years.

In addition to the ACS, the American College of Radiology (ACR), the American College of Obstetricians and Gynecologists (ACOG), and several other expert groups recommend that clinicians and patients continue to follow earlier guidelines (see [Table](#) below for a detailed comparison with ACS guidelines). The ACS recommendations call for annual mammograms starting at age 40 years and continuing for as long as a woman is in good health; ACS has no specific upper age at which mammography screening should be discontinued. The society suggests that the decision to stop regular mammography screening should be individualized based on patient-specific, potential benefits and risks of screening within the context of overall health and estimated lifespan.

ACOG's recommendations are similar, except that mammography is recommended every 1 to 2 years from ages 40 to 49 years.

"We would urge primary care clinicians to continue to observe the ACR and ACS mammography guidelines and to talk with their patients regarding the benefits of mammography and any concerns their patients may have," M. Shawn Farley, ACR's director of public affairs, told *Medscape Medical News*.

Supporting Evidence

Dr. Vogel cited several lines of evidence supporting the ACS position, including evidence that early detection of breast cancer saves lives or improves survival (*JAMA*. 1995;273[2]:149–154).

"If the USTSF recommendations are adopted as policy — particularly if Medicare and private insurers try to use them as an excuse to cut cost — many women will die unnecessarily from breast cancer," Mr. Farley said. "The treatment costs associated with the disease may rise because cancers would be found at a more advanced stage. For those women diagnosed at a later stage, they may experience more invasive techniques to remove the cancers because the disease is more advanced."

Mr. Farley also cited 2 studies showing that the ACR/ACS approach to screening has significantly reduced breast cancer mortality since 1990: (1) Duffy SW. Interpretation of the Breast Screening Trials: A Commentary

on the Recent Paper by Gotzsche and Olsen. *The Breast*. 2001;10:209–212, and (2) The Swedish Organized Service Screening Evaluation Group. Reduction in Breast Cancer Mortality from Organized Service Screening with Mammography: 1. Further Confirmation with Extended Data. *Cancer Epidemiol Biomarkers Prev*. 2006;15:45–51.

These studies have shown that breast cancer mortality decreased by nearly 2% per year during the 1990s, which was largely attributed to the benefits of screening. For women younger than 50 years, the decline was more than 3% per year. Since mortality rates peaked in 1989, a woman's risk of dying of breast cancer has decreased by 29%.

Mammography screening is also associated with detection of smaller tumors. In the early 1980s, when only 13% of US women had regular mammography, average tumor size at detection was about 3 cm. This decreased to 2 cm by the late 1990s, when 60% of women had regular mammography.

In addition, 17% of breast cancer deaths in 2006 were among women who were diagnosed between the ages 40 and 49 years, according to data from the ACS. A meta-analysis of randomized controlled trials published in a monogram of the National Cancer Institute (NCI) also showed benefits of screening mammography specifically in women aged 40 to 49 years (Hendrick RE. *Monogr Natl Cancer Inst*. 1997;22:87–92).

Widespread implementation of the updated USPSTF guidelines vs the professional society recommendations could therefore have significant public health implications over time.

"Data from the NCI SEER program show that since 1990, when widespread population-based screening of women 40 to 49 years of age began, death rates from breast cancer have declined [by] 3% per year," Dr. Vogel said. "This is attributable to both mammographic screening and the use of effective adjuvant therapies for early breast cancer detected by mammography. If we stop screening women 40 to 49 years of age, the death rates from breast cancer will rise progressively, and we will eliminate nearly 2 decades of progress in this disease."

USPSTF Responds

"The recommendations of the USPSTF for screening mammography were based on several lines of evidence: new studies and analyses of old studies since 2002, new evidence about the harms of screening, and the pulling together of evidence to attempt to define what the lifetime balance of benefit and harms might be for various starting and stopping ages for screening and also for different screening intervals," USPSTF Vice Chairman Diana B. Petitti, MD, MPH, professor of biomedical informatics at Arizona State University in Phoenix, told *Medscape Medical News*.

"The balance of benefits and harms of screening women starting at age 40 was small, [suggesting] that screening should not be routine, Dr. Petitti said. "This recommendation *is not* a recommendation against ever screening women age 40 to 49; it is a recommendation against *routine* screening of women starting at this age," she stressed.

"Rather, the decision about an age to begin screening (40 or 45 or 50) should be made based on a discussion that makes clear that the benefit of screening starting in the 40s is small, that the harms are small, and that the benefits are larger with an age to start screening of 50 compared with earlier, and the harms are smaller."

Dr. Petitti explained that the USPSTF last considered the topic of breast cancer prevention in 2002 and that topics considered by the USPSTF are rereviewed every 5 years. In 2007, the USPSTF commissioned the Oregon Health Sciences University Evidence Practice Center to conduct a review of evidence from 2002

forward. To obtain evidence regarding the questions of starting age, interval for screening, and ending age for screening (if any), the USPSTF also commissioned the Cancer Intervention and Surveillance Modeling Network to provide information about what the benefits and harms might be from mammography screening for various starting ages and intervals of screening and stopping ages.

"The evidence from 8 randomized trials of film mammography to screen for breast cancer starting at ages in the 40s shows that screening starting at age 40 to 50 reduces breast cancer mortality," Dr. Petitti said. "The evidence from the 8 trials combined shows that screening starting in the 40s reduces the chance of dying from breast cancer by 15%. The addition of information from this trial makes more precise the estimate of benefit of screening."

Potential harms of screening noted by Dr. Petitti include those related to false-positive results, such as undergoing additional tests (eg, repeat mammogram, ultrasound, biopsy) and waiting time involved in scheduling the tests and processing the results.

"It is not easy to weigh the benefits and the harms of screening," Dr. Petitti said. "A woman who is screened in her 40s and is found to have a cancer that is treatable/curable and would not have been treatable/curable if found later has a benefit.... The harms of mammography become lower with increasing age because of biological changes in breast density that make it 'easier' for a mammogram to distinguish cancer from other normal breast structures."

Dr. Petitti noted several lines of evidence supporting the USPSTF recommendation to screen every other year instead of screening every "1 to 2" years.

"First, randomized trials of mammography screening have included annual and biannual intervals, and these studies, as a whole, show that there is about a 15% benefit of screening for every-other-year screening," Dr. Petitti said. "Second, evidence from an NCI-sponsored study showed that most (at least 70% and as much as 99%) of the benefit of mammography is attained with every-other-year screening. Equally important, every-other-year screening substantially decreases the number of women who have a false-positive mammography test."

Cost Issues?

One of the concerns some experts have voiced is whether the updated USPSTF guidelines were in any way motivated by cost-cutting or healthcare-rationing objectives.

"It is not possible to know those issues because the task force did not discuss them," Dr. Vogel said. "They did acknowledge, however, that screening women 40 to 49 saves lives, but it requires screening more women to save 1 life than screening women 50 years and older."

"We believe that the USPSTF recommendations ring of cost cutting," Mr. Farley said. "We are not aware of any new information that would warrant such drastic changes in policy. The fact that it is a federally supported body, and that these recommendations come at a time when the government is trying to cut costs any way it can, certainly seem more than coincidental."

However, Dr. Petitti stated that cost considerations in no way affected the updated USPSTF recommendations.

"The USPSTF does not address issues of insurance and coverage and the USPSTF recommendations about breast cancer screening did not consider cost and were not based on cost-effectiveness studies or models of cost-effectiveness," Dr. Petitti said.

"Cost was not a word that was uttered during the deliberations of the USPSTF in formulating its recommendations," she added.

Clinical Implications

Other expert groups continuing to support annual screening mammograms for women beginning at age 40 years include the Seattle Cancer Care Alliance in Washington.

"Women need a clear message: Early detection offers a woman the best chance for a cure, and mammography is essential for early detection of breast cancer," Constance Lehman, MD, PhD, medical director of radiology and director of breast imaging at Seattle Cancer Care Alliance and professor and vice chair of radiology at the University of Washington School of Medicine, Seattle, said in a statement this week. "Failing to identify those women in their 40s with cancer and having them wait until they are screened at age 50 is a disservice. By then, breast cancer can be advanced and more difficult to treat."

Dr. Lehman noted that digital mammography significantly improves the detection of cancer in young women and in women with dense breast tissue, which was not considered in the analyses underlying the changed USPSTF recommendations. She recommended that women undergo mammography at centers capable of providing high-quality imaging.

The controversial USPSTF updated recommendations have also attracted considerable media attention and questions from the lay public.

"There is no question that the [USPSTF] recommendations have caused a great deal of confusion and worry among women and their families across this country," said US Department of Health and Human Services Secretary Kathleen Sebelius in a statement issued yesterday. "I want to address that confusion head on. The [USPTF] is an outside independent panel of doctors and scientists who make recommendations. They do not set federal policy and they don't determine what services are covered by the federal government."

Despite new evidence presented by the USPSTF, Dr. Sebelius noted that "our policies remain unchanged. Indeed, I would be very surprised if any private insurance company changed its mammography coverage decisions as a result of this action."

Although she recommended additional research to help women prevent, detect, and fight breast cancer, Dr. Sebelius pointed out that mammograms continue to be an important lifesaving tool in that fight. She recommended that physicians and patients keep the lines of communication open — "talk to your doctor about your individual history, ask questions, and make the decision that is right for you."

"Organizations working to help women make choices about what to do to address breast cancer are more consistent than disparate," Dr. Petitti said. "There is no disagreement on the question of whether mammography has a benefit when done at ages 40 to 74. The question is about the absolute benefit as against the harms (negatives) of starting to screen at a younger versus older age."

A statement issued by the ACR very strongly opposed the new USPSTF recommendations and denounced the potential implications of adopting these guidelines on the health of US women.

"These unfounded USPSTF recommendations ignore the valid scientific data and place a great many women at risk of dying unnecessarily from a disease that we have made significant headway against over the past 20 years," said Carol H. Lee, MD, chair of the ACR Breast Imaging Commission.

"Mammography is not a perfect test, but it has unquestionably been shown to save lives — including in women aged 40 to 49. These new recommendations seem to reflect a conscious decision to ration care. If Medicare and private insurers adopt these incredibly flawed USPSTF recommendations as a rationale for refusing women coverage of these lifesaving exams, it could have deadly effects for American women."

Other ACS Breast Cancer Screening Guidelines

In addition to its mammography guidelines discussed above, ACS continues to advocate the following breast cancer screening guidelines:

- Clinical breast examination should be done about every 3 years for women in their 20s and 30s and annually for women aged 40 years and older.
- Women should promptly report to their healthcare providers any change they notice in their breasts. Breast self-examination is also an option beginning at age 20 years.
- For women at more than 20% lifetime risk for breast cancer, magnetic resonance imaging (MRI) and mammography should be performed every year. Women at 15% to 20% lifetime risk should consult with their physicians about the benefits and limitations of adding MRI screening to their annual mammogram.
- For women whose lifetime risk for breast cancer is less than 15%, annual MRI screening is not recommended.

The ACS also provides a comparison of its recommendations with the new USPSTF recommendations:

Comparison of Breast Cancer Screening Recommendations

Cancer Screening Age	ACS Recommendations	New USPSTF Recommendations
40 – 49 years	Annual mammograms are recommended starting at age 40 years and continuing for as long as a woman is in good health. There is no specific upper age at which mammography screening should be discontinued. Rather, the decision to stop regular mammography screening should be made on an individual basis based on the potential benefits and risks of screening within the context of a patient's overall health status and estimated longevity.	"C Grade" : Recommends against routine screening mammography in women aged 40 to 49 years.
50 – 74 years		"B Grade" : Recommends biennial screening mammography for women between ages 50 to 74 years.
≥75 years		"I Grade" : Insufficient to assess the additional benefits and harms of screening mammography in women aged 75 years and older.

All experts interviewed for this article have disclosed no relevant financial relationships. The USPSTF is an independent, voluntary body supported by the Agency for Healthcare Research and Quality. Recommendations made by the USPSTF are independent of the US government and should not be construed as an official position of the Agency for Healthcare Research and Quality or the US Department of Health and Human Services.