Surviving the Test of Time

By Alyssa Martino  Two years post-USPSTF guidelines, mammography is still saving lives.
Screening Mammography’s Never-ending Story

By Daniel B. Kopans, M.D., FACS

Mammography screening is one of the most important medical advances in the last 50 years, but it is also one of the most controversial. Since its inception, a continuous debate has raged over the benefits of mammography. The following timeline chronicles 40 years of opposition to mammography — which has frequently been scientifically unsupported — and the subsequent responses grounded in science. The repeated misinformation by the opposition has unfortunately led to confusion and uncertainty among women and their physicians about an exam that has saved tens of thousands of lives.

In November 2009, the United States Preventive Services Task Force (USPSTF) released new guidelines on screening mammography that caused an uproar in the breast imaging community. The recommendations [http://bit.ly/aJJ6O7] stated that women ages 50–74 should undergo biennial mammograms, which went against guidelines set by such organizations as the American Cancer Society (ACS), the ACR, and the Society of Breast Imaging (SBI), all of which support annual screening for women beginning at age 40. Furthermore, the guidelines emphasized that the decision to screen women prior to age 50 should be an individual one based on risk.

As W. Phil Evans, M.D., FACS, professor of radiology and director of the Center for Breast Care at University of Texas Southwestern Medical Center in Dallas, president-elect of the ACS, explains, “Typically, an issue like this will receive a lot of media attention for a day … Usually, the interest dies down. But [the USPSTF-related controversy] went on for months.”

Although scrutiny specifically related to the changing guidelines appears to have mostly come and gone, debate about mammography has been ongoing since the imaging method became a staple in women’s health more than 40 years ago. “Mammography is one subject that’s continually in the media,” says Evans. “There are a lot of misconceptions about it.”

How did breast imagers, referring physicians, patients, and the general public react to the USPSTF guidelines? Looking back, what is their overall effect and how can stakeholders continue to promote the importance of screening in women’s health care?

Radiologists Respond

With radiologists as guest stars on television talk shows, advertisements promoting screening, and articles penned detailing benefits of mammography, the breast imaging community’s reaction to the USPSTF guidelines was immediate. Barbara S. Monsees, M.D., FACS, Ronald and Hanna Evans Professor of Women’s Health and chief of the breast imaging section at Mallinckrodt Institute of Radiology at Washington University in St. Louis, says the guidelines induced “grave disappointment” among her colleagues.

This disappointment only further compelled Monsees, who also chairs the ACR Commission on Breast Imaging, and many other breast imagers to take a proactive approach to clarify the USPSTF recommendations. “We were concerned that primary care physicians would not have enough time to discuss pros and cons of screening as advised by the task force,” she explains.

“We did a lot of interviews with the local media, mailed letters to our referring physicians, and sent our patients reminder notices, which spelled out the ACS recommendations for screening and why we support them,” Monsees explains. Evans says that professional organizations like the ACR and the SBI also took action to clarify the controversy’s details through public statements, scholarly journal articles, and instituting the Mammography Saves Lives™ campaign. Visit www.mammographysaveslives.org for more information.
valuable facts, research, survivor stories, and handouts that can help you talk to your patients about breast screening. Check out the campaign’s public service announcements at http://bit.ly/ogFxPJ.

**Seeing the Big Picture**

In addition to the imaging community’s proactive response, it was important to rebut the USPSTF recommendations with evidence-based data, some of which the USPSTF did not emphasize when forming its guidelines, according to Mark A. Helvie, M.D., FACR, professor of radiology and director of the breast imaging division at the University of Michigan Medical Center in Ann Arbor, Mich.¹

To clarify the finer points of mammography, such as age and screening frequency, the so-called harms of false positives and unnecessary biopsies, and cost-effectiveness, Helvie and other breast imagers continue to seek scientific evidence, including the most recent data from the Swedish Two-County Trial, which followed 130,000 women’s mammogram outcomes for 29 years, and made worldwide news. “The study conclusively shows a 30-percent risk reduction in breast-cancer mortality over a 25-year follow-up period,” says Evans.

Despite the study’s overall results and given mammography’s tenuous history, it would be foolish to expect controversy over the imaging method to end anytime soon. Indeed, then, a concerted effort among physicians is necessary to keep screening a priority for women. “We tend not to see the big picture,” explains Helvie, “which is the widespread agreement that screening is an effective measure to save lives.”

Follow the timeline to read more about the many misunderstandings mammography has endured over the past 40 years. And yet through it all, says Monssees, “Mammography has survived the test of time and numerous controversies.” //

ENDNOTE

QUALITY OVER QUANTITY

The questions surrounding mammography are often focused on the numbers: What age should women begin screening? How often should they receive mammograms? How many patients has mammography saved? However, what’s more important to remember is that mammography is focused on quality, and as such, the ACR’s breast accreditation program can demonstrate your practice’s commitment to provide top-notch care.

"The mammography accreditation program started as a voluntary program in the late 1980s," says W. Phil Evans, M.D., FACR. Then, the Mammography Quality Standards Act was passed in 1992, requiring all mammography facilities to become accredited. "It was the first time anything like that ever happened in medicine in the United States,” explains Evans. "It caused the quality of mammography to be standardized across the country, and it’s been extremely successful.” Learn more about accreditation requirements and renewal at www.acr.org/accreditation/mammography.

However, high quality isn’t only dictated by equipment; it’s a standard set through lifelong learning and experienced interpretation skills. The College offers access to a variety of informative and instructional resources designed to assist breast imagers in providing effective, safe, and quality care to patients. Please visit www.acr.org/breast-imaging to view the various educational and CME activities ACR offers for breast imaging.
With the FDA’s approval of 3-D tomosynthesis and advances in MR, molecular imaging, and spectroscopy in 2011, as well as the forthcoming edition of the BI-RADS® Atlas in 2012, numerous topics are up for discussion during the presentations, lectures, and workshops at the 35th National Conference on Breast Cancer™ (NCBC™), April 13–15, 2012, at the Westin Diplomat Resort in Hollywood, Fla. The conference, which is sponsored by the ACR, will seek to answer questions from the breast imaging and other communities, including:

- Should I abandon my current digital imaging systems in favor of the latest 3-D equipment?
- Why do surgeons consider MR not useful in some settings?
- What is the best strategy for imaging when a lesion is probably benign?
- How can I work and interact more effectively with my peers?

“Our lectures are designed to provide a good look at digital mammography and breast imaging from the standpoint of mammography, ultrasound, and MR,” explains Debra L. Monticciolo, M.D., FACR, professor of radiology, vice-chair for research, and section chief of breast imaging at Texas A&M University’s College of Medicine and Scott & White Healthcare System, both in Temple, Texas. Monticciolo cochairs the NCBC Program Committee with Carol H. Lee, M.D., FACR, attending radiologist at Memorial Sloan-Kettering Cancer Center in New York, professor of radiology at Weill Medical College at Cornell University, and the former chair of the ACR Commission on Breast Imaging.

Finding a Place for MR
Among the most prominent portions of the program is the Wendell Scott Lecture, which will feature Monica Morrow, M.D., chief of breast service at the Department of Surgery at the Memorial Sloan-Kettering Cancer Center, in New York. During the lecture, “Current Surgical Approach to the Breast Cancer Patient,” Morrow will cite reasons for opposing regular MR use to image patients already diagnosed with breast cancer. “There...
is a feeling among the surgical community that MR is not useful in many settings,” explains Monticciolo.

Immediately following the lecture, Monticciolo will moderate a multidisciplinary case review that will include Morrow, Bruce G. Haffty, M.D., radiation oncologist from The Cancer Institute of New Jersey, in New Brunswick, N.J., Lawrence W. Bassett, M.D., FACR, section chief of the Iris Cantor Center for Breast Imaging at the David Geffen School of Medicine at the University of California, Los Angeles, and Christopher E. Comstock, M.D., FACR, radiologist at the breast imaging service and professor of radiology at Memorial Sloan-Kettering Cancer Center. The panel will discuss the appropriate use of MR and will answer questions about the roles of surgeons, radiologists, and radiation oncologists and how they can interact to provide more effective patient care.

In addition to the controversy between surgeons and radiologists with respect to MR, the MR section of the current BI-RADS Atlas will be discussed during several sessions. Specific time will be devoted to using current BI-RADS terminology to describe when a lesion is “probably benign.” Elizabeth A. Morris, M.D., FACR, chief of breast imaging service and professor of radiology at Memorial Sloan-Kettering Cancer Center, and NCBC committee member, is serving as chair of the MR section of the upcoming fifth edition of the BI-RADS Atlas, which will feature significant revisions over the fourth edition. She says that the new edition will provide information on updated technology, recommended follow-up visits and other guidelines. Changes to the next edition of the publication, scheduled for release March 2012, will also be discussed.

Other MR-related questions will be fielded by Lee in a session addressing MR-guided biopsy. “While there are many similarities among the various image-guided biopsy procedures, there are some factors that are unique to MR-guided biopsies. I’ll discuss some of the appropriate follow-up issues as well as some tips, techniques, and technical challenges,” she notes.

**Entering Another Dimension**

In addition to the evolution of MR, the conference will also address 3-D tomosynthesis as well as other digital imaging equipment, according to Monticciolo. (In February 2011, Hologic’s Selenia Dimensions 3-D digital mammography tomosynthesis system received FDA approval.)

Mammographers are wondering if and when they should begin using 3-D tomosynthesis and if it is worth the cost of replacing their current digital systems. To address these quandaries, Mark A. Helvie, M.D., FACR, director of the breast imaging division at the University of Michigan in Ann Arbor, Mich., will compare tomosynthesis to other digital applications, and Margarita L. Zuley, M.D., medical director of Magee-Womens Hospital of the University of Pittsburgh Medical Center, in Pittsburgh, and an expert on mammography for X-Ray Associates of New Mexico P.C., in Albuquerque, N.M., will discuss the pros and cons, as well as new screening technologies, and how to choose the appropriate system.

Another emerging modality to be discussed is molecular breast imaging (MBI). MBI is three times more effective at finding tumors in dense breast tissue than mammography, according to “Molecular Breast Imaging: Seeing Cancer Tumors,” in the Mayo Clinic’s online magazine *Discovery’s Edge* from March 2010 (http://bit.ly/d2Nk1w). Michael N. Linver, M.D., FACR, NCBC committee member and director of mammography for X-Ray Associates of New Mexico P.C., in Albuquerque, N.M., will discuss the pros and cons, as well as the latest news, on MBI.

Linver’s discussion, as well as the many other lectures and workshops, will earn attendees up to 20 AMA PRA Category 1 Credits™. For more information or to register, visit the conference website at [http://bit.ly/cZ19z8](http://bit.ly/cZ19z8). (Note: all lectures and workshops provide CME.) //

**Click here for references**