More Mammography Muddle: Emotions, Politics, Science, Costs, and Polarization[1]

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The lady doth protest too much, methinks.
Shakespeare, *Hamlet*

The latest battle over screening mammography pits the U.S. Preventive Services Task Force (USPSTF) seemingly against the entire radiologic community. The repetitive skirmishes regarding mammographic screening are regrettable because they detract from the goal of all dedicated participants in the war against breast cancer. In this editorial, we will advocate for more understanding and less posturing and polarization, particularly on the part of the imaging community. We believe that the overreaction of radiologists to this issue may be perceived as self-interested and self-serving by the public as well as by our clinical colleagues. We also believe that recommendations regarding screening mammography, as with many other controversial and costly medical recommendations, must increasingly be viewed as societal issues rather than purely medical or scientific concerns. Therefore, more open-minded public discussion and public education are to be encouraged.

USPSTF

The USPSTF screening mammography recommendations were published in the *Annals of Internal Medicine* on November 17, 2009. It behooves the objective reader to review the exact wording (1):

> … The USPSTF reasoned that the additional benefit gained by starting screening at age 40 years rather than at age 50 years is small, and that moderate harms from screening remain at any age. This leads to the … recommendation against *routine* screening of women aged 40 to 49 years.… The decision to start regular, biennial screening mammography before the age of 50 years should be an individual one and take patient context into account, including the patient's values regarding specific benefits and harms.…
>
> The USPSTF concludes that the current evidence is insufficient to assess the additional benefits and harms of screening mammography in women 75 years or older.…
>
> The USPSTF recommends against *teaching* [italics added] breast self-examination.…
>
> The USPSTF concludes that the current evidence is *insufficient* [italics added] to assess the additional benefits and harms of clinical breast examination.…

A brief history about the USPSTF is helpful. When it was created in 1984, a primary consideration was that the group be insulated from politics. The idea was to identify medical experts who could objectively evaluate evidence and to protect the group from any political pressures so that they could write honest assessments. The USPSTF is financed by the Department of Health and Human Services but works at arms length from and makes its decisions without consulting with that department (2). In 2002, the USPSTF actually advised but did not formally recommend that mammographic screening begin at age 40 years. In 2007, as part of its five-year updates of previous recommendations, a new panel was created to evaluate both new and old data, and this group eventually commissioned extensive new statistical modeling (3).

USPSTF members have repeatedly emphasized that politics and questions of cost are never part of their discussions, and indeed, they are prohibited from considering cost when they make guidelines.

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Russell Harris, MD, who served on the USPSTF from 2002 to 2007, has emphasized that "it's important to keep the science separate from policy judgments. The science is what the Task Force is dealing with—not policy making. I think the process could be disturbed if people were to bring their emotional views to the Task Force" (4). Ned Calonge, MPH, the current USPSTF chairman, has echoed similar sentiments: "The introduction of politics into the process is a real danger. We need to make sure the Task Force's evaluations remain free from advocacy, politics, and economics" (4).

Emotions

The 2009 USPSTF screening mammography recommendations drew immediate and rancorous responses from the radiologic community. An American College of Radiology (ACR) press release (5) proclaimed that "two decades of decline in breast cancer mortality could be reversed and countless American women may die needlessly from breast cancer each year" if the USPSTF recommendations are adopted. It further stated that the recommendations are "incredibly flawed," "could have deadly effects for American women," "reflect a conscious decision to ration care," and are "shocking." A subsequent ACR statement (6) characterized the recommendations as "unconscionable". Other ACR officials asserted, "We're not comfortable putting a price tag on a woman's life" (7), and "We are entering an era of deliberate decisions where we choose to trade people's lives for money" (8).

Well-known radiologists voiced similar widely quoted sentiments. Daniel Kopans, MD, from Harvard Medical School stated (9),

> The Task Force told women in their 40s that they should not examine their own breasts and should not allow a trained healthcare professional to examine their breasts.… The USPSTF is telling women to wait until their cancers are so large that they can no longer ignore them, and then bring them to their doctor's attention when there is no longer a chance for cure.…

> The USPSTF has misled American women and their physicians … and does not think it is worth saving women in their 40s … from dying from breast cancer.

Kopans called the USPSTF recommendations "disastrous for women's health," and Robert Schmidt, MD, from the University of Chicago called them "arrogant and irresponsible" (10). Carol Lee, MD, chair of the ACR Breast Imaging Commission from Memorial Sloan-Kettering, stated, "If Medicare and private insurers adopt these incredibly flawed USPSTF recommendations…, it could have deadly effects for American women" (5).

The lay community, partly in response to the above statements, initially had equally disparaging remarks. A *Chicago Sun-Times* columnist opined that the USPSTF recommendations were "damaging at best, borderline murderous at worst" and concluded that "we may never know how many mothers, sisters, and wives will be lost in this baffling skirmish" (11). A *Washington Post* columnist called for Congress to "take pity" on the USPSTF and send it to "the death panel for humane end" (12). However, the comments of much of the lay community (13–19), as well as the overwhelming majority of opinions of the nonradiology medical community (20–26,61), were more open-minded and supportive of the USPSTF recommendations than were those of radiologists. As pointed out in the *New England Journal of Medicine* (19), "The task force did not suddenly turn the long-debated topic of breast cancer screening upside down, [and] is neither prohibiting mammography for women in their forties nor deeming it to be of no value.… It has acknowledged what we have known for many years: There is no doubt that early detection of breast cancer can save lives."

Politics

In previous screening mammography confrontations, the debaters were generally limited to the medical and lay communities, with politics remaining on the sidelines. This time, politicians quickly jumped into the fray. A *Wall Street Journal* editorial (27) proclaimed, "The flap over breast cancer screening has provided a fascinating insight into the political future of ObamaCare [that] supports medical rationing even as it disavows that any such thing is happening." Rep Marsha Blackburn from Tennessee asserted, "This is how rationing begins. This is the little toe in the edge of the water; this is when you start getting a bureaucrat between you and your physician" (28). Lawmakers were called upon by the ACR and the Society of Breast Imaging to formally reject the USPSTF role in Senate health care reform legislation, and a bipartisan group of 22 senators urged the Heath, Education, Labor, and Pension Committee to look into the breast cancer controversy (29). ACR Board of Chancellors Chairman James Thrall, MD, called on lawmakers "to require that the USPSTF include experts from the field on which they are making recommendations" and on Secretary of Health and Human Services Kathleen Sebelius to order the USPSTF to rescind its recommendations (30).

The muddle involving mammography soon became intertwined with the Senate's health care reform debate. In a *Wall Street Journal* commentary (31), Sen Tom Coburn, MD, a Republican from Oklahoma who is also a physician, spoke of a 33-year-old female former patient who had breast cancer. He said, "If I had been practicing under the legislation introduced by Senate Majority Leader Harry Reid, the government would have likely told me I couldn't have done the test that discovered the woman's cancer." Rep John Shadegg of Arizona warned that inclusion of the USPSTF recommendations on mammography in the health care reform legislation would be "devastating to women's access to mammograms and nothing short of catastrophe for women's health in this country" (32). Rep Frank Pallone, Jr, announced that his House Health Subcommittee would hold hearings on the USPSTF mammogram issue (33).

Not surprisingly, on December 3, 2009, in a 61 to 39 vote, the Senate approved an amendment to its massive health care reform bill that would guarantee coverage of mammograms (34).

Secretary Sebelius expressed her opinion without criticizing or disparaging the USPSTF: "My message to women is simple. Mammograms have always been an important life-saving tool in the fight against breast cancer and they still are today. Keep doing what you have been doing for years—talk to your doctor about your individual history, ask questions, and make the decision that is right for you" (35).

An article (36) in *Time* magazine pointed out that the USPSTF recommendations "went straight to the heart of the emotionally charged debate over the Democratic-sponsored healthcare reform legislation" and that "the merits of what the Task Force is now recommending have been obscured by all the political smoke."

Science

Unfortunately, rapidly advancing technology ensures that much of medical practice will always be based on inadequate or controversial data. Mammographers have known for many years that screening has substantial limitations and was probably oversold to the public, with unrealistic patient expectations not infrequently leading to malpractice litigation (37–39).

A survey (40) of 19 members of the International Breast Cancer Screening Network (ie, Australia, Canada, Denmark, France, Iceland, Israel, Italy, Japan, Luxembourg, the Netherlands, New Zealand, Norway, Portugal, Spain, Sweden, Switzerland, the United Kingdom, Uruguay, and the United States) showed only Iceland, Uruguay, Sweden, and the United States begin screening at age 40 years. All countries screened biennially except the United States (annually), Uruguay (annually), and the United Kingdom (triennially). Most other countries also have screening recall and biopsy rates that are less than one-half of those in the United States (41,42). Does disparaging the new USPSTF recommendations also mean disparaging those physicians, statisticians, and public health officials in other countries who base their guidelines on the same data? Do most other countries have it wrong? Is there a right and a wrong?

Recent appreciation of the frequency of premalignant, in situ, and even indolent low-grade cancers that will never progress to symptomatic or life-threatening disease has influenced everyone's approach to cancer screening (43,44,62,63). Recent estimates are that up to "one in three breast cancers detected in a population offered screening is overdiagnosed" (62). The analogy between the overdiagnosis of breast cancer with mammographic screening and that of prostate cancer with prostate-specific antigen screening is well known. As one researcher observed, "There are many studies showing that mammograms find low-risk, well-behaved cancers preferentially and miss the bad actors preferentially, [with] paper after paper saying mammograms pick up cancers that don't need to be found" (45).

The raison d'etre for consensus conferences, meta-analyses, and statistical modeling is to provide guidelines when there is inadequate or controversial data. This is a common problem in medicine, where there are relatively few absolutes, technology changes rapidly, and it is estimated that half of our knowledge will be passé, or simply wrong, 5 years into the future (46). When one factors costs, politics, and lobbying into the equation, as we must inevitably do, the recommendations become even more complex, as exemplified by recent health care discussions in Washington. An emotionally charged issue, such as breast cancer, further complicates matters.

As regards the science of screening mammography, a recent commentary (61) by the editors of the *Annals of Internal Medicine* concluded: "One survey respondent wrote, 'This Task Force has performed a vital service for years. It brings a welcome dose of science to the politics of screening.' The editors heartily agree."

Costs

The USPSTF did not consider costs. However, costs are the elephant in the room that simply cannot be ignored in heath care discussions. A recent commentary (21) in the *New England Journal of Medicine* pointed out that "Americans are deeply conditioned to think about health care decisions in terms of the benefits and costs to individuals, not to society as a whole.... We have traditionally rationed health care in the same way we ration expensive cars: those who can afford to pay for them are those who can have them."

A shift from individual to societal goals could mean questioning whether it is worthwhile to annually screen 1900 women between the ages of 40 and 49 years to result in an estimated 15% reduction in death from breast cancer and save a single life. And how do we meaningfully compare this to annual screening for 10 years of 1300 women aged 50 to 59 years to save a single life (47,48)? These examples are crude statistical extrapolations from limited data, but they emphasize the necessity to publicly discuss concepts such as cost per quality-adjusted life-year saved, as well as the word that the American public does not want to hear: rationing (21).

As pointed out in a recent *Journal of the American Medical Association* commentary (23), "Today's health care crisis demands efforts to curtail overutilization and maximize the health benefits of spending. Independent commissions are proposed to find solutions, but lawmakers who fear rationing have barred them from examining costs, even as costs threaten health care and the economy.... The nation cannot afford this approach to decision making."

Polarization

We are particularly concerned about the marked discordance and apparent disconnect between the opinions of radiologists and those of the rest of the medical community regarding the USPSTF recommendations. Of the seven commentaries published in the *New England Journal of Medicine* and the *Journal of the American Medical Association* on this subject, six (20,21,23–26,61) were balanced and generally supportive of the USPSTF position. The single exception (49) was written by a breast imaging radiologist.

We have reviewed many articles published between November 2009 and January 2010 that contained radiologists'

opinions about the USPSTF recommendations (49–56). The tenor of all but one ranged from criticism to condemnation, going so far as to accuse supporters of the USPSTF recommendations of "distorting facts" and of being "either ignorant of scientific analysis or maliciously misleading women and their physicians" (50). The one exception was a letter the *Wall Street Journal* editors chose to publish in which a radiologist wrote, "What is now clear is the American College of Radiology knows that $3.3 billion is spent annually on mammography. There is an obvious conflict of interest with screening mammography for radiologists" (51).

In another article, the *Wall Street Journal* also raised the specter of conflict of interest surrounding the positions taken by radiologists (57):

> The American College of Radiology, a trade group, called the new government guidelines scientifically unfounded.... It received donations of at least $1 million each from GE Healthcare and Siemens AG, according to the trade group's 2007–2008 annual report. Both companies make mammography equipment and MRI scanners. Several other medical device makers donated at least $100,000.... The College of Radiology said sponsors haven't influenced its research. It has spent $480,000 on lobbying in the past two years, while the imaging industry spent more than $2.5 million.... A lobbying group leading the charge in Washington against the new [USPSTF] guidelines ... includes GE and Siemens ... and the college of radiology.

As noted above, many nations already have guidelines similar to those recommended by the USPSTF (40). It would be most unfortunate if the public mistakenly comes to believe that radiologists are self-interested and self-serving.

Discussion

Much of the opinion in this editorial is summarized in a commentary that, although it deals with cervical cancer screening, is nevertheless equally applicable to mammographic screening (58):

> The benefits of cancer screening ... are well known and widely promoted; the harms of cancer screening receive less attention.... Attention between these two screening goals often leads to controversies regarding the age at which to begin cancer screening, the age at which to end screening, and the appropriate screening interval. Guidelines promoting a recommendation to do less are often viewed with suspicion; individual women may feel as if they are being asked to accept greater personal risk as part of an over-all effort to contain costs. Clinicians should inform women that the changes in the guidelines have not been prompted by financial considerations but by careful consideration of the estimated balance between benefits and harms, [and] that health recommendations are updated periodically as newer, more robust evidence becomes available.

Similarly applicable to screening mammography are the recent comments of Otis Brawley, MD, chief medical officer of the American Cancer Society, regarding prostate cancer screening (59):

> I am concerned that the benefits of prostate cancer screening are frequently exaggerated when men are encouraged to get screened but the limitations of screening are not mentioned. I would like to see every man make an informed decision about what is right for him personally after hearing a balanced presentation of the potential benefits and risks of screening. All of us in the medical and advocacy communities should respect that choice.... Some men may choose not to be screened [and] this decision should not be criticized.... Advocates often encourage screening with messages that are so simple they are misleading—for example, "Screening definitely saves lives," or "Only a fool would not get screened." One can reasonably be a proponent of prostate cancer screening without such exaggerations.

We believe that if we substitute *breast* for *prostate*, Brawley's words are as relevant and meaningful for women as they are for men. We also believe that if the USPSTF recommendations were implemented, the great majority of women in the United States would, and should, still begin screening mammography at age 40 years, similar to what they do today (16).

Greater sharing of information and decision making between patients and their physicians is one of the major advances in the doctor-patient relationship that has occurred in our lifetimes (60), and we believe most patients will welcome this public discussion and understand that there are often no absolute right or wrong recommendations. Medicine remains an art as well as a science.

In summary, we believe the response of the radiologic medical community to the new USPSTF guidelines for screening mammography was needlessly confrontational and not in the best interest of everyone's fight against breast cancer. Because these critical views are not shared by the bulk of the medical community, we fear an unwarranted backlash against our specialty. Controversies regarding medical screening and many other cost-benefit health care decisions are increasingly societal issues rather than purely scientific ones, and therefore, open-minded public discussion and education should be welcome. It is time to heed Shakespeare's words by engaging in more discussion and less protestation.

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