dergo prophylactic bilateral mastectomy because of either a strong family history of breast cancer or because they were carriers of BRCA1 or BRCA2 genes, estimated that their lifetime risk of developing breast cancer without mastectomies was 76%, with 28% of the women estimating that their lifetime risk for developing breast cancer was 100%.

Independent mathematic models for calculating individual breast cancer risk by applying the Gail model or the Claus model estimated the average risk in these same women to be 26% [9]. Second, a survey conducted among women in whom ductal carcinoma in situ (DCIS) was diagnosed disclosed that 40% of the women perceived that there was at least a moderate risk of developing invasive cancer within the next 5 years and a 53% risk within their lifetime. Researchers stated that the risk of developing invasive breast cancer after a diagnosis of DCIS that has been treated is actually less than 1% [10].

**Radiologists’ Perceptions: Malpractice and Breast Cancer**

As indicated, the medical literature is replete with reports of surveys documenting unrealistic perceptions held by the public with regard to mammography and breast cancer. Surprisingly little, however, has been published about the perceptions of physicians regarding this topic. An article published in 1992 [11] focused on physicians’ perceptions of the risk of being sued for medical malpractice in cases involving myriad allegations of wrongdoing unrelated to
breast cancer. In 2005, Elmore and her group of researchers [12] at the University of Washington reported the results of a survey that assessed radiologists’ perceptions regarding the likelihood they would be sued for medical malpractice arising from their interpretations of mammography. The researchers found that a cohort of radiologists who had at least 10 years of mammography experience and spent more than 20% of their work time on breast imaging had an average perceived risk of 41% of being sued for malpractice during the following 5 years; a quarter of the radiologists perceived their risk of being sued in the following 5 years to be 70% or higher.

Elsewhere in this issue of the American Journal of Roentgenology, the same group of researchers [13] not only present the results of a similar 2006 survey of radiologists but also a comparison between radiologists’ 2002 risk estimates and the actual incidence of malpractice lawsuits filed against them. The results are rather startling: Radiologists overestimated the likelihood of their getting sued for malpractice because of alleged misinterpretation of mammography to an extent not dissimilar to the public’s overestimation of the accuracy and benefit of mammography. The gap between the public’s perception and the reality of the attributes of mammography appears to be neither wider nor narrower than the radiologists’ gap between perception and reality regarding the threat of malpractice litigation.

Let us return to the earlier 2002 survey. Elmore and her researchers [12] asked radiologists who interpret mammography what they believe the probability to be that a medical malpractice lawsuit involving mammography would be filed against them within the subsequent 5 years. Radiologists’ perception of their risk of being sued ranged from 2.5% to 100%, with a mean of 41% and a median of 30%. Interestingly, data from the updated 2006 survey [13] showed the perceived risk of being sued over the next 5 years to be rather similar: a mean of 35%, and a median of 25%. However, the data disclosed that, in fact, only 10% of the radiologists surveyed in 2002 were sued. In other words, the average perceived risk of being subjected to a malpractice lawsuit arising from mammographic interpretation within the following 5 years was nearly four times higher than the actual prevalence.

Apparently, when it comes to the triad of breast cancer, mammography, and malpractice, reality is overshadowed by perception in the minds of both the public and the radiology community. Let us briefly explore the cause of this disparity between perception and reality.

**The Gap Between Perception and Reality Regarding Malpractice, Breast Cancer, and Mammography**

It is not difficult to determine why the public’s perception of the attributes of mammography so dramatically exceeds reality. Nearly a decade ago, New York Times medical reporter Jane Brody wrote [14]:

> The public has come to view the cancer risks most talked about as those that are most serious. That is why one quarter of the population believes that breast cancer is the leading cause of death in American women. This is due to the constant barrage of media reports on the disease American women have come to fear most….

The reporter’s use of the word “barrage” is not an understatement. A survey of six high-circulation U.S. newspapers revealed that their articles were twice as likely to emphasize the benefits of mammography as to express any reservations about it [15]. As a public service for encouraging women to undergo mammography, American newspapers and magazines regularly publish advertisements prepared by the American Cancer Society and related health entities that extol the virtues of mammography [16]. Hospitals and radiologists from time to time exaggerate the capability of mammography by claiming that mammograms “can often detect tumors as small as the head of a pin” [17] or that “mammograms can detect breast cancers as small as one fifth of an inch [5 mm]” [18]. Another survey of news articles in 10 of the most heavily circulated U.S. newspapers as well as transcripts of three major television networks disclosed that 60% of articles and transcripts highlighted only the benefits of mammography in reducing breast cancer mortality without any mention of potential downsides and recommended that women should “probably” or “definitely” undergo screening mammography [19].

Although the influence of the news media is substantial in elevating the public’s perception of the value of mammography to unrealistically high expectations, the influence of the federal government and the courts cannot be ignored. In 2002, then U.S. Secretary of Agriculture Ann Veneman announced that she had developed DCIS [20]. Emphasizing in a press conference that Veneman’s cancer “could not have been detected without a mammogram,” President George W. Bush said [21]:

> I knew I picked an extraordinary person when I named her to run the Department of Agriculture. I didn’t realize I was going to pick a heroic figure as well, an example for many people to understand the need to get a mammogram, the need to take care of yourself, the need to screen early, the need to understand that we can stop cancer in its tracks if we all take wise moves.

An example of the judiciary’s contribution toward unrealistically raising the public’s perception of the relationship between mammography and early diagnosis of breast cancer can be seen in an excerpt of a New Jersey State Supreme Court decision that involved misinterpretation of a mammogram [22]:

> Delaying cancer diagnosis usually increases the risk of metastases…. This concept of “the earlier the better” is the basis for improved survival in patients with carcinoma of the breast. Cancer’s specific survival time is better when symptoms have been present for 1 week or less as compared with those who have symptom duration of 6 months or more…. Failure to have made a timely diagnosis [causes] great pain and mental anguish…. Courts have come to recognize that mental and emotional distress is just as “real” as physical pain.

“Hyperbole” emanating from the news media has caused some American women to become “terrified” [23] and made to feel guilty if they have not undergone screening mammography. Indeed, one large survey revealed that 67% of adults believe that a 55-year-old person not undergoing routine cancer screening is being irresponsible to his or her family [7]. An example of such guilt and feeling of irresponsibility can be found in the words of Elizabeth Edwards, wife of former North Carolina Senator and then Presidential contender John Edwards,
who had just made public the fact that her breast cancer had metastasized to her bones and lungs [24]:

My cancer had a chance to migrate because I sat at home doing whatever I thought was important, and I didn’t get mammograms. I do not have to be in this situation. I am responsible for putting myself, my husband, and my family at risk. I did that by my own negligence about my health.

Why do radiologists’ perceptions of the risk of becoming a defendant in a medical malpractice lawsuit alleging a delay in the diagnosis of breast cancer far exceed the reality of actual incidence? Dick et al. [13] attribute this to the mass media’s “actively” reporting errors in medicine and frequent emphasis on breast cancer malpractice litigation, which in turn “heightens radiologists’ awareness and anxiety regarding malpractice issues.” These researchers further suggest that this anxiety is increased by the “many medical societies and other physician interest groups” that “have vigorously publicized the challenges in the current malpractice environment in hopes of encouraging tort reform” [13].

In his book on medical malpractice, journalist Barry Werth [25] observes that almost all malpractice cases are decided “not on the basis of fact but on the perception of what a jury is likely to think is fact.” In the legal arena, perception becomes reality.

Dick et al. [13] conclude their article by emphasizing the need to lessen the anxiety of radiologists and to develop among them an accurate perception of malpractice lawsuits. The same can be said about members of the public: Their perceptions about the risk. The same can be said about members of the public: Their perceptions about the risk. The same can be said about members of the public: Their perceptions about the risk.

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FOR YOUR INFORMATION

The reader’s attention is directed to the article pertaining to this commentary, which appears on the preceding pages.

The comprehensive and newly updated book, Malpractice Issues in Radiology, 3rd edition, by Leonard Berlin, is now available! For more information or to purchase a copy, see see www.arrs.org.
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