

Breast Cancer Screening USPSTF Update:

An Interview with Miriam Alexander, MD, MPH, President-Elect, American College of Preventive Medicine. Assistant Professor, Population and Reproductive Health; Director, General Preventive Medicine Residency Program, Johns Hopkins Bloomberg School of Public Health, Baltimore, Maryland

By Linda Brookes Good, MSc, Medscape, January 8, 2010

Introduction

When the US Preventive Services Task Force (USPSTF) issued its updated guideline on screening for breast cancer in November 2009, the members were unprepared for the overwhelmingly hostile reaction from the media, public advocacy groups, and specialist medical groups. The new recommendations were based on reviews of data from randomized controlled trials of mammography, magnetic resonance imaging (MRI), and breast self-examination and clinical breast examination as well as studies and analyses of adverse effects of breast cancer screening. However, their conclusions appeared to contradict other breast cancer screening guidelines, including those of the American Cancer Society and the American College of Obstetricians and Gynecologists, as well as those previously issued by the USPSTF itself in 2002. The part of the new USPSTF guideline that drew most ire was the recommendation against routine screening mammography in women aged 40-49 years.

The USPSTF said that "the decision to start regular, biennial screening mammography before the age of 50 years should be an individual one and take into account patient context, including the patient's values regarding specific benefits and harms." However, this was **widely misinterpreted as saying that no women under 40 years of age should have screening, and it was widely implied that this would be a binding on government healthcare policy.** Many patient advocacy groups and medical organizations publicly expressed their opposition to the USPSTF statement. **The American College of Radiology called its recommendations "incredibly flawed" and claimed that they would result in "countless deaths" if adopted. A commentary published in Cancer Investigation called them "misguided recommendations** based on an interpretation of the evidence that is not justified and is clearly at odds with those from several professional groups as well as the majority of experts who diagnose and treat women with breast cancer. The American Urological Association, which previously clashed with the USPSTF over prostate-specific antigen testing guidelines, said that they were "pleased to see the medical and advocacy community rejecting the USPSTF breast cancer screening recommendations."

As more organizations joined in suggesting that the recommendations would directly affect costs and insurance coverage for breast cancer screening, calls were made for Congress to intervene. In response, the Senate passed 2 amendments to the healthcare legislation, one requiring the federal government to ignore the new recommendations and guaranteeing no-cost breast screening for women in their 40s. On December 2, a specially convened House of Representatives Committee on Energy and Commerce Health subcommittee held a meeting at which USPSTF members defended their recommendations. Ned Calonge, MD, MPH, USPSTF Chairman, acknowledged that parts of the recommendations were poorly expressed, and he pledged that communication by the USPSTF would be improved in the future.

A few professional healthcare organizations have publicly voiced support for the USPSTF recommendations. The American College of Preventive Medicine was notable in issuing a press release supporting the USPSTF recommendations and posting a list of Talking Points that addressed some of the accusations made in the media. **The American College of Preventive Medicine was 1 of 11 healthcare organizations – the others included the American Academy of Family Physicians and the American College of Physicians – that signed a letter to the House committee defending the USPSTF, seeking to**

"set the record straight about the recommendations and about the Task Force itself"
(<http://www.prevent.org/images/mammographyletter.pdf>).

In this interview, Dr. Alexander spoke with Linda Brookes, MSc, for Medscape, to discuss the USPSTF breast screening recommendations and reactions to them. Dr. Alexander, Assistant Professor in the Department of Population, Family, and Reproductive Health at the **Johns Hopkins Bloomberg School of Public Health**, is **President-elect of the American College of Preventive Medicine**.

The Interview With Dr. Alexander

Medscape: Could I first ask whether you were surprised at the strength of hostile reaction to the USPSTF updated recommendations?

Dr. Alexander: I was not surprised -- slightly disappointed, but not surprised. This has happened multiple times before. **When science or the evidence flies in the face of people's desires or their personal health beliefs, they get angry.**

Medscape: It wasn't just the general public and patient advocacy groups who appeared to misinterpret what the Task Force was saying. There was also a lot of criticism from professional medical organizations, especially among the radiology/oncology community, who complained that their areas of specialty were not represented on the Task Force.

Dr. Alexander: The USPSTF is composed mainly of people who represent the breadth of primary care -- mostly family physicians, general internists, obstetricians and gynecologists, pediatricians, and nurse practitioners. One time they may be looking at the science of mammography, but the next time they may be looking at the science of pediatric immunizations, and then they may be looking at counseling for obesity. They are constantly evaluating preventive measures across the human spectrum, and the goal is not to get people's reactions; the goal is to review all of the good science. Therefore, the radiologists might be upset this time, but when the USPSTF releases recommendations on prostate-specific antigen screening, the urologists might be upset, and then when they release recommendations on counseling for obesity, the health educator community might be upset. **These recommendations have nothing to do with special interests. They are concerned with the science of preventing morbidity or mortality by the healthcare services and the related physician behaviors.**

Medscape: What do you think about accusations that some important **observational studies** were not included in the USPSTF review of evidence?

Dr. Alexander: These kinds of studies **are never included in these analyses**. The USPSTF is crystal clear about exactly what kind of studies they look at. They have epidemiologists and biostatisticians who don't care about the disease state or the service. They are **only looking at the science of the study**.

Medscape: Do you have any reservations about the way in which the Task Force arrived at its recommendations?

Dr. Alexander: No, I don't. My favorite analogy for this is that it is intuitive that if you find an abnormality, you want to cut it out. From a surgical perspective, if you find an abnormality, it is just intuitive that if you take it out, the patient is going to get better. However, for almost all tumors -- liver, pancreatic, brain aside -- people don't die of their primary tumors; they die because the disease has metastasized. Often it has metastasized before the primary tumor has been excised. Even though it may be intuitive that if you surgically remove something you are going to make the patient better, as the radiologists would say, "the science doesn't bear that out."

A good example of this was shown in a study, done a couple of years ago, that looked at arthroscopy in patients with osteoarthritis of the knee.[14] For a patient with knee pain, the only true reasons to have

surgery are to relieve the pain and to improve function; it won't be possible to eliminate the arthritis. In this well-designed study, orthopaedists did arthroscopies of knees in one group and sham surgery in a control group, and they found that at 6 months the patients who had had surgery did not have less pain or improved function compared with the controls.

Therefore, going back to the breast cancer issue, just because intuitively it makes sense to surgically to remove abnormalities, unfortunately we don't understand enough about cancer to know whether this is true or not. I think you need to look at the very well-designed studies and listen to them. That doesn't mean that in the future mammography will not do a better job of identifying those tumors that clearly need to come out or that we will not have fewer false-positives. We should not give up. We have to keep improving the science of mammography and surgery and cancer treatments, but at the moment, the science just doesn't support it in those populations.

Medscape: The main misunderstanding about the guidelines seemed to be that women aged 40-49 years shouldn't have mammographies, which is not what they actually indicated. The recommendation was against routine screening in this age group. What is your view of that recommendation?

Dr. Alexander: The definition of screening is a test that gets applied to members of a population who are asymptomatic or who are not at particularly high risk. People with risk factors, a family history, or other problems are no longer members of the general population. Recommendations for screening do not apply to them because they are already in a totally different risk category. Thus, screening recommendations issued by the USPSTF are meant for the general, asymptomatic population and deal with screening to detect early disease in which treatment or intervention will make a difference in ultimate health outcomes. They are meant for people who are at low or moderate risk.

There are many women who are at high or moderate risk or have a reason that makes them believe that they should get the test. These women are no longer being screened. They represent a population that will have a much more prevalent situation. These are the people who should discuss whether to have mammography screening with their healthcare providers on an individual basis and tell them, "I have a BRCA mutation" or "my aunt and my mother all had breast cancer."

There are also some **women who say that they don't care whether they have a false-positive result or whether they need to have biopsies**; they just want to be sure that they don't have cancer. These women **are also in a different situation**.

Medscape: Shouldn't these women be concerned about the risk for false-positive results or other adverse effects of mammography, such as unnecessary radiation exposure or treatment?

Dr. Alexander: Absolutely, they should! You go to your doctor and you are totally healthy, and your doctor orders a panel of blood tests -- as is done very often -- and there ends up being 20-25 different tests and you are totally fine. Statistically there is a good chance that 1 test is going to come back abnormal, and then your doctor will call you back and do more testing, and this causes a lot of psychological harm. It is very anxiety provoking and you are following a false test.

Taking colonoscopies as an example, if a large enough number are performed, on a population basis there will eventually be a perforation of the colon. Because colonoscopy is a gold standard for examination of the colon, it may seem as if the benefit outweighs the risks, but the small risk for perforation makes it unacceptable for population screening. In the case of a young woman, there may appear to be an abnormality on her mammogram and then she may have a biopsy, which is physically uncomfortable and very scary; there may be scar tissue afterward that will make the mammogram a little harder to read; and then it comes back negative. False-positives like that are never to be made light of; they must be considered when screening a population.

Then the next issue concerns the tests with positive results. Obviously, when a cancer is detected, especially in a younger woman, you are going to treat it. However, we don't necessarily know enough

about cancer to know which of these cancers might regress or which might be indolent. The perfect example of this is prostate cancer. With many prostate cancers, men don't die of their prostate cancer; they die with it, in the same way that many of us have hypertension and diabetes. We don't yet understand enough about these diseases to know which will be problematic and which will not. Therefore, we are very aggressive with all of them, and many people end up with a diagnosis of "I'm a breast cancer survivor." For the rest of their lives, they feel like an ill person, and maybe in that individual the testing wasn't needed or they never really had cancer. It may not have become a problem, but because we don't know, we have to treat these patients.

A recent study showed that **one third of screening-detected breast cancers lead to unnecessary surgery, chemotherapy, and/or radiation.** However, if you ask me as a doctor who sees patients -- which I do -- if someone came to me and she had a mammogram that showed something suspicious, I would want her to see a surgeon; if the surgeon found something, I would want it taken out; and I would want her to see an oncologist and perhaps a radiation oncologist. There is no question that I would do that because I'm acting as a doctor of individual patients. However, I am also trying to look at the overall data and say, "Should these populations have been screened in the first place?"

Medscape: What was your reaction about the other recommendations in the other age groups, the 50- to 74-year-olds (biennial screening mammography recommended) and the ≥ 75 -year-olds (insufficient evidence to assess harm and benefits in this group)?

Dr. Alexander: My feeling about those is: The data are the data. Therefore, my having a personal feeling about them is almost irrelevant. This is what the data showed, and if this is what they showed, then I totally trust that. I never trust just 1 study, but when the preponderance of good studies leads you in one direction, then I think that is the direction that population-based recommendations should follow. Again, it does not mean that any one individual might not fall outside that category of which the recommendations apply.

Medscape: Therefore, no doctor is going to follow the data without considering the individual patient?

Dr. Alexander: No. No doctor treats that way. It is such a disingenuous argument. Whether I am a health planner or whether I set policies is one issue because, again, policy is different from individuals. I think that on a population basis, when you follow recommendations, in general, people do better. For instance, a method of birth control can be 99% safe. When I am sitting here talking about that, I say that that is pretty good, but as a woman I am not one-one hundredth pregnant; either I am or I am not. Thus, when you apply population-based data to individuals, one always has to be careful.

Using that birth control example, let us say that most contraceptives are 99% safe. Now I am an individual woman, and if I happen to be the kind of person who is always forgetful and there's no way that I am going to remember to take pills, then I should say to myself that I may be in that one-one hundredth case vs the kind of person who remembers to take a pill every day, and I can say that population data may work better for me.

Medscape: That is the attitude of primary care.

Dr. Alexander: I would hope that that would be the general attitude of any physician.

Medscape: The healthcare organizations that signed the letter to the House subcommittee supporting the USPSTF recommendations were mostly family physicians, nurse practitioners, and preventive public health groups, whereas the **professional groups that objected were the specialists.** Does that represent a disconnect between how treating breast cancer is perceived?

Dr. Alexander: No. I think that it **represents self-interest.** For example, gastroenterologists didn't object because it's not in their special interest. Again, if we were talking about prostate-specific antigen

screening, you wouldn't see the breast surgeons or the radiologists objecting; you would see the urologists or oncologists -- so it is special interests.

Medscape: The USPSTF recommendations followed those in Europe and many other parts of the world. Even some other US organizations have produced similar guidelines in the past, so it seems as though they might really favor similar guidelines.

Dr. Alexander: Not all organizations listen to the views of their expert panels. There is a **difference between science and social or political will**. Social will and political will are important, vital for public policy making, legislation, or regulation, but they may be very different from the science. We all know that the EPA [US Environmental Protection Agency] and OSHA [Occupational Safety and Health Administration] very often do not listen to their scientific bodies because of social or political will. That's fine; it's their choice, but it's not because of science.

Medscape: The Senate recently passed an amendment to The Patient Protection and Affordable Care Act guaranteeing no-cost breast screening for women in their 40s, although they didn't mandate about age and said the decision whether or not to have a mammogram should be left to the patient and her doctor. This was obviously social/political.

Dr. Alexander: Absolutely, and that's fine. That's their job, but it wasn't because of science.

Medscape: The USPSTF was unlucky to be caught up in the current healthcare debate. It gave the impression that they were trying to reduce healthcare spending by coverage for mammograms.

Dr. Alexander: The **Task Force voted on the recommendations in July 2008**. It was very unfortunate that they were released at the time when they were, because then the **Task Force got pulled into the political debate. The members are not federal employees or members of the presidential administration, and they did not discuss costs or health insurance coverage**. Their recommendations should not be politicized.