



## THE DEBATE IS OVER; RECENT SWEDISH STUDY SHOWS GREAT SURVIVAL BENEFIT FROM MAMMOGRAPHY BETWEEN AGES 40-49

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### BACKGROUND

Currently most organizations in the United States recommend yearly mammograms beginning at age 40, including The American Cancer Society, The American College of Radiology, The National Comprehensive Cancer Network, The American College of Obstetricians and Gynecologists, The American Medical Association, and The American College of Surgeons.

This policy became a very hot topic late last year when the United States Preventive Services Task Force (USPSTF) recommended against regular screening mammography for women 40-49 years of age.<sup>1</sup> The USPSTF recommended screening every two years only for women 50-74 years of age, based on their estimate that screening mammography in women under 50 years provides only a 15% reduction in breast cancer mortality.

### UPDATE

Recent new data from a large Swedish study published in *Cancer* (on-line September 29, 2010), show that screening mammography from 40-49 years of age results in a much greater reduction in mortality from breast cancer than had previously been reported.<sup>2</sup> This study looked at mammography as it is actually used, rather than relying on statistical modeling like the USPSTF. Sweden introduced a nationwide mammography program in 1986 that targeted women who were 50-69 years of age. Individual counties were given the option to decide whether or not to invite women 40-49 years of age to be screened, and only about half the counties did so, which provided a control group that was unscreened. Screening invitations were issued every two years.

Overall, the study found that mammography decreased deaths from breast cancer by nearly 1/3.

Among the women who had been offered mammography screening from 1986-2005, there were 619 deaths from breast cancer, compared with 1,205 deaths in the control group who were not screened. The rate ratio was 0.74 (95% confidence 0.62-0.86) for women who were actually screened (a 29% reduction). The researchers estimated that to save one life in the 40-49 year old age group, 1,252 women were invited to be screened.

### IMPLICATIONS

The American College of Radiology has already described this study as a landmark. With more than 1 million women, and an average follow up of 16 years, this was the largest epidemiologic study of mammography in the 40-49 year old age group, according to the primary author, Dr. Hakan Jonsson, PhD, Associate Professor of Cancer Epidemiology at Umea University in Sweden. He said "that although it was not a randomized controlled trial, it captured a real-life experience of mammography in that age group." He further said that "the USPSTF data were based on a meta-analysis of 8 randomized clinical trials," but many of those trials were old, having been conducted more than 20 years ago. Dr. Daniel Kopans, Professor of Radiology at Harvard Medical School, stated that the Swedish data were "robust," far superior to the computer models from the USPSTF, and offer "direct proof that the benefit is almost twice as high as the estimate used by the USPSTF."

Dr. Kopans added that a threshold for screening that begins at age 50 is scientifically unsupported and has no biological basis. Although the same amount of screening will save more lives in the older age group, screening of younger women saves "more years of life." Therefore, in terms of life-years saved, screening

See accompanying commentary by Dr. Nitin Tanna in this issue.

younger women is actually more efficient than screening older women. Since younger women are more likely to be mothers with younger children, and are managing the lives of several others, these conclusions have even wider societal implications.

Although many have said that the debate is now over, we will have to see what future studies add to our understanding of this subject. I think this study is a significant aid in helping us educate our 40-49 year old women in the office.

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**REFERENCES**

1. USPSTF mammogram guidelines - 2009, [www.uspreventiveservicestaskforce.org/uspstf/uspsbrca](http://www.uspreventiveservicestaskforce.org/uspstf/uspsbrca).
2. Cancer online 9/29/10.

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