

More Benefit Than Harm From Mammography: IARC Update

Pam Harrison | June 09, 2015

Women between 50 and 69 years of age who participate in screening mammography have about a 40% reduction in the risk for death from breast cancer, an update from the International Agency for Research on Cancer (IARC) Working Group concludes.

The updated report was published online June 3 in the *New England Journal of Medicine*.

If all women in the same age group who are invited to participate in screening mammography are considered, the average reduction in the risk for mortality from breast cancer is 23%.

There is also a "substantial" reduction in the risk for death from breast cancer in women between 70 and 74 years of age who either attend or who are invited to attend a screening mammography program.

In contrast, evidence supporting the benefit of screening mammography in women younger than 50 years was limited, so the IARC Working Group did not find overt benefit from screening mammography in younger women.

These new conclusions extend those issued in 2002, when the IARC Working Group last considered the evidence. At that time, the IACR concluded that "the efficacy of screening by mammography as the sole means of screening in reducing mortality from breast cancer was sufficient for women 50 to 69 years of age, limited for women 40 to 49 years of age and inadequate for women younger than 40 or older than 69 years of age."

"Recent improvements in treatment outcomes for late-stage breast cancer and concerns regarding overdiagnosis called for reconsideration," the current Working Group writes.

Recent years have seen a huge public debate about the value of screening mammography, as reported by *Medscape Medical News* on numerous occasions, with an increasing focus on potential harms.

The IARC Analysis

The IARC brought together a working group of 29 international experts from 16 countries to assess the benefits and harms associated with breast cancer screening with mammography.

Results from 40 case-control and cohort studies from high-income countries were analyzed for the benefits vs the harms of screening mammography in different age groups.

"The most important harms associated with early detection of breast cancer through mammographic screening are false positive results, overdiagnosis and possibly radiation-induced cancer," the authors observe.

Estimates of the cumulative risk for false positive results differ between organized programs, but the group estimates that it is approximately 20% for a woman who has undergone 10 mammographic screenings between age 50 and 70 years.

On the other hand, fewer than 5% of all false positive test results lead to an invasive procedure, the group points out.

Estimates of overdiagnosis of breast cancer from screening mammography based on several calculations range from between 1% to 10%, the group adds.

The estimated cumulative risk for death from breast cancer attributable to radiation from mammographic screening is from 1 to 10 per 100,000 women, depending on age and the frequency and duration of screening.

Echoing the finding of others, the Working Group concluded that data from available studies generally did not show a reduction in breast cancer–related mortality when breast self-examination was either taught or practiced competently and regularly.

"Screening for breast cancer aims to reduce mortality from this cancer as well as the morbidity associated with advanced stages of the disease through early detection in asymptomatic women," the Working Group notes.

"And the key to achieving the greatest potential effects from this screening is providing early access to effective diagnostic and treatment services," they conclude.

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