

# Breast cancer death rates in Canada didn't improve with mammograms

Annual screening in women 45-59 at average risk doesn't reduce breast cancer mortality beyond physical exam

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Mammography screening makes no difference to breast cancer death rates but it can lead to harm from over-diagnosis, a 25-year study of nearly 90,000 women suggests.

In Monday's issue of the British Medical journal, Canadian researchers conclude annual screening in women aged 45 to 59 at average risk does not reduce breast cancer mortality any more than a physical exam.

"Twenty-two per cent of women with screen-detected invasive breast cancer got treatment that they really didn't need," says study author Dr. Cornelia Baines, a retired professor at the University of Toronto's Dalla Lana School of Public Health.

"All over-diagnosis results in unnecessary surgery, unnecessary chemotherapy, unnecessary radiotherapy and unnecessary hormonal therapy," she says.

In the [Canadian national breast screening study](#), women aged 40 to 49 were randomly assigned to receive mammograms annually for five years while women in a control group had a single physical exam. All participants aged 50 to 59 had a physical breast exam each year.

Over the course of the study, 3,250 women in the mammography group and 3,133 in the control group were diagnosed with breast cancer. There were 500 deaths from breast cancer in the mammography group and 505 among those who didn't receive mammogram screenings.

"We'd explain by saying in Canada that both groups of women when diagnosed had excellent treatment and therefore enjoyed the same opportunity for being saved by treatment," Baines said of the equal mortality rates.

The trial was very well run, said Dr. Amir Eitan, a medical oncologist at Toronto's Princess Margaret Cancer Centre, commenting on the study.

"The bottom line is that as breast cancer treatment improves, the outcomes of average risk patients diagnosed at an earlier stage thanks to mammography and those diagnosed later due to lack of mammography become similar," he said in an email.

Cancer researchers are trying to find ways to find the subset of women, such as those at higher risk because of genetic susceptibility, who could benefit from early detection.

In the meantime, Baines wants all women who are going to be screened to be completely informed about

the benefits and disadvantages of mammography.

Currently, the Canadian Task Force on Preventive Health Care recommends routine screening every two to three years among women aged 50 to 69 at average risk of breast cancer. Provinces run breast screening programs.

The new findings won't change mammography recommendations at Cancer Care Ontario, said Dr. Derek Muradali, the agency's radiologist in chief.

Since science can't tell which cancers need to be treated and which do not, all breast cancers are treated despite the same risk of over-diagnosis, Muradali said.

The study's authors said their results support a suggestion from researchers in Denmark that policy-makers should [urgently "reassess"](#) the rationale for screening.

A journal editorial published with the study called it the only trial to enrol participants in the modern treatment era among women who were educated about physical breast exams. In the editorial, Dr. Mette Kalager from University of Oslo called for more efficient ways to reconsider priorities and recommendations for mammography screening.

"This is not an easy task, because governments, research funders, scientists, and medical practitioners may have vested interests in continuing activities that are well-established," the editorial concludes.

For individual women, the screening debate can be confusing, said Marija Bojic, 43, of Toronto.

"I want to know how it would apply to me? Bojic said after a fitness class. "How do I know if my tumour, if I had one, is not going to lead to anything?"

No population study can answer what will happen in the case of a single diagnosis.

With files from CBC's Ioanna Roumeliotis