

Screening Mammography Radiation Fact Sheet

B.C. Cancer Agency medical experts recommend that women aged 40 to 79 have a screening mammogram at least every two years. Screening Mammography offers the best chance of finding breast cancer early.

The Screening Mammography Program of B.C.

The Screening Mammography Program of B.C. (SMPBC) provides screening mammograms to British Columbia women through a network of 34 centres and 3 mobile van services. The equipment used in each of these facilities is similar and is required to meet Health Canada standards and be accredited by the Canadian Association of Radiologists (CAR).

Mammography Radiation Levels

Radiation is a part of the natural environment and we are all exposed to it throughout our lives. The primary sources of this radiation are from rays arriving from outside the earth and from naturally occurring radioactive compounds which exist in rocks and soil. This background radiation is usually very low.

Radiation comes in several forms and not all are equally harmful. A mammography system use x-rays and does not produce more harmful radiation such as alpha or beta particles or gamma rays. In a screening mammogram, x-rays are produced at a dose which minimizes the possibility of harm whilst providing a detailed image in which early cancer can be seen. The amount of radiation from a screening mammogram is about the same as three months of background radiation which corresponds to a 12% increase in radiation exposure to women being screened every two years. This may initially seem to be a significant amount, but this must be measured against the benefits of having a screening mammogram.

Risks vs. Benefits

Screening mammography offers women the best chance of finding breast cancer early. Finding breast cancer early means more treatment options and a better chance for cure. As recognized by the World Health Organization and by health agencies around the world, large bodies of scientific evidence have shown that the mortality rate from breast cancer can be cut by about a third with regular screening mammograms.

How do these risks and benefits balance? Approximately 250,000 screening mammograms are performed annually by the SMPBC which identify 1000 cancers and prevents 150 deaths from breast cancer each year. Using published rates from the World Health Organization there is expected to be one extra case of breast cancer caused by these 250,000 mammograms.

For more information about the Screening Mammography Program of BC, please contact the Central Office at 604.877.6200