

## Double mastectomy halves death risk for women *with* BRCA-related breast cancer

Study shows benefit of double mastectomy beyond preventing breast cancer to increasing longevity in women with breast cancer who have a BRCA1 or BRCA2 mutation

TORONTO, ON, February 11, 2014 — Women with BRCA-related breast cancer who have a double mastectomy are nearly 50 per cent less likely to die of breast cancer within 20 years of diagnosis compared to women who have a single mastectomy, according to a new study led by Women's College Hospital's Kelly Metcalfe.

The findings, published in the *British Medical Journal*, suggest a double mastectomy may be an effective first-line treatment for women with early-stage breast cancer who carry a BRCA1 or BRCA2 genetic mutation. The BRCA1/2 genes belong to a class of genes that typically act to protect individuals from acquiring cancer, yet women who inherit a mutated form of the genes have a high risk of developing breast and ovarian cancers.

"Women with a BRCA mutation have a 60 to 70 per cent chance of developing breast cancer in their lifetime, and once diagnosed, a further 34 per cent chance of developing breast cancer in the opposite breast within 15 years," said Kelly Metcalfe, an adjunct scientist at Women's College Research Institute and professor at the University of Toronto. "For these women, we need to think about treating the first breast cancer, but also about preventing a second breast cancer."

To compare the survival rates of women with BRCA-related breast cancers, researchers assessed the medical records of 390 women with stage one or two breast cancer and a BRCA1 or BRCA2 mutation. The women were required to have been initially treated with a single or double mastectomy. The researchers found:

- Women who had a double mastectomy had a 48% greater likelihood of surviving compared to women with a single mastectomy
- For women who developed a new breast cancer in the opposite breast, the risk of dying of breast cancer was doubled
- At twenty years, the survival rate was 88% for women with a double mastectomy and 66% for women with a single mastectomy

"Our study's results provide evidence that in order to improve survival in women with BRCA-associated breast cancer, we need to prevent new breast cancers from developing after an initial diagnosis," said Dr. Steven Narod, a co-author of the study and a senior scientist at Women's College Research Institute. "This study highlights the importance of providing genetic testing for BRCA1 and BRCA2 at the time of breast cancer diagnosis if appropriate. This genetic information could help women make decisions that ultimately may increase their chance of surviving breast cancer."

Last year, Hollywood actress Angelina Jolie, publicly announced her decision to opt for a double mastectomy and breast reconstruction surgery after discovering she had the BRCA1 gene. The then 37 year-old actress said doctors estimated she had a 50 per cent risk of developing ovarian cancer and an 87 per cent risk of breast cancer.

While existing research widely supports the benefit of a double mastectomy in preventing breast cancer in women with the gene mutation, the study's researchers caution more research is necessary to confirm the benefit of a double mastectomy in reducing the risk of death in women diagnosed with BRCA-related breast cancer.

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