NEW SUBTYPE OF BREAST CANCER LINKED WITH POORER PROGNOSIS AND DISTINCT RELAPSE PATTERN

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Large Canadian-based study identifies unique patterns of breast cancer relapse for patients with triple-negative breast cancer

August 1, 2007 (Toronto, ON) - According to results of a study published in Clinical Cancer Research, women with breast cancer that is estrogen receptor-negative, progesterone receptor-negative, and HER2-negative (triple-negative breast cancer) are more likely than other women with breast cancer to experience a relapse of their cancer. The highest risk of relapse is in the first 2 to 3 years after diagnosis.

"To confirm both the aggressive nature of triple-negative breast cancers regardless of other tumour features, and the distinct pattern of relapse will help identify those patients who need aggressive treatment upfront", says Dr. Rebecca Dent, medical oncologist, Odette Cancer Centre, Sunnybrook, who together with Dr. Steven Narod, scientist, Women's College Hospital are among the authors of this collaborative study between Sunnybrook Health Sciences Centre and Women's College Hospital.

The study shows women with triple-negative breast cancer were almost twice as likely to develop distant relapse even after accounting for other factors related to relapse such as tumour size and involvement of lymph nodes. The pattern of relapse had a distinctly rapidly rising rate in the first 2 years following diagnosis, a peak at 2 to 3 years followed by a decline over the next 5. Unlike other breast cancers where the risk of relapse and death remains throughout the entire study period, most triple-negative breast cancer patients who had no evidence of progression after 8 years, did not recur thereafter. Despite having a high risk of early recurrence, triple-negative breast cancer patients who remain disease-free for 8 years are unlikely to die of breast cancer and may be "cured" of their disease. If triple-negative breast cancer patients did experience a relapse in this study, the median survival time from relapse to death was 9 months, compared to 20 months for other types of breast cancer.

The study also identified specific characteristics of triple-negative breast cancers to include the mean age of diagnosis as younger at age 53, compared to other breast cancers at age 58. Tumours were larger and of higher grade, with 66 per cent of triple-negative breast cancer having high grade tumours compared to 28 per cent in other breast cancers. Mean tumour size was also larger in triple negative breast cancer patients. Only 36 per cent of triple-negative tumours were under 2 centimetres, compared to 63 per cent of other breast cancers.

"The overall goal is to identify new targeted therapies to improve the outcomes for this younger group of women with breast cancer just as we identified Trastuzumab (Herceptin) for women with HER2 positive breast cancer," says Dent.

Researchers evaluated 1601 patients diagnosed with invasive breast cancer from 1987 to 1997. 180 of these patients were identified as having triple-negative breast cancer. All patients were followed for a median of 8 years and up to 17 years from diagnosis. Data was available on patient's age at diagnosis, lymph node status, tumor grade and size, treatment (surgery, chemotherapy, tamoxifen therapy and radiation), relapse and sites of relapse, and mortality.

The triple-negative breast cancer subtype represents approximately 15 percent of all breast cancers diagnosed.

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