

trial and success

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Head of clinical trials at the Toronto Sunnybrook Regional Cancer Centre and a senior scientist at SWRI, Dr. Kathy Pritchard seems to draw from a bottomless well of energy. She dashes with her signature speed from one appointment to the next, interspersing patient care with research-related, teaching and administrative activities. No doubt this comes in handy for her leadership role in conducting studies that transform how breast cancer is treated.

Take the practice-changing letrozole trial. It enrolled over 5,000 postmenopausal women with breast cancer worldwide, one-third in Canada. Pritchard, as co-chair of the breast cancer site group of the National Cancer Institute of Canada, co-led the trial. Letrozole is a type of aromatase inhibitor, a class of drugs that has few bad side effects. The pill is given as an adjuvant therapy, that is, after the main therapy, like surgery or tamoxifen, to help stop the cancer from returning. It works by limiting the postmenopausal production of estrogen that tumours need to grow. In this study, Pritchard and colleagues wanted to see if letrozole improved disease-free survival in women who had taken tamoxifen for five years.

They got what they asked for and more. The trial was halted well before the planned end date, so startling were the results. Pritchard recalls the thrill of that extended “eureka” of realization. “It was very exciting, because halfway through the trial we did an interim analysis and found that in the letrozole group, patients had done much, much better,” she says.

The drug reduced the risk of recurrence by over 40%. It decreased local recurrences and the spread of cancer to other parts of the body. After a quick conference call, the group decided to stop the trial and reveal the outcome. *The New England Journal of Medicine* published the results in October 2003. Patients in the placebo group were quickly

offered letrozole. In early 2005, Health Canada approved letrozole for the treatment of breast cancer in postmenopausal women who have had the standard treatment of tamoxifen for five years.

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Research has shown, for example, that different therapies work best for certain groups of women. Herceptin works only for women who overexpress the HER2/neu protein. Adding chemotherapy boosts this effect. Letrozole works well for postmenopausal women. There are many and varied combinations. Accordingly, the research effort in this field has moved toward investigating individualized treatments.

Sunnybrook & Women’s is well placed with its expert staff at TSRCC and SWRI to advance this movement. In addition to conducting ongoing clinical trials, Pritchard has teamed with a multidisciplinary group, including Drs. Arun Seth, Steven Narod, Larry Paszat and Wedad Hanna, to explore the use of genomic profiling. They’re analyzing frozen tumour and normal tissue samples and matching them against information in databases on treatment outcomes. The aim is to find more accurate prognostic and predictive factors for breast cancer that can then be tested in clinical trials.

“It’s all about tailoring treatment to patients to ensure that individuals are getting the best treatment for their diseases,” says Pritchard. “In this way, we can offer the most hope.” **SR**

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