

The Voice of Progress

Donor News from The Princess Margaret Hospital Foundation

www.pmhf.ca

Breakthrough study links breast density to breast cancer

Like many friends of Princess Margaret Hospital, you understand the importance of supporting research that focuses on strategies to prevent cancer. Dr. Norman Boyd, head of the Division of Epidemiology and Statistics at the Ontario Cancer Institute (OCI), the research arm of Princess Margaret Hospital, and his colleagues have discovered that among women over 40, denser breast tissue may mean greater cancer risk. Their findings were published in the January 2007 issue of the *New England Journal of Medicine*.

“This study establishes that breast density is an extremely important risk factor for developing breast cancer,” says Dr. Boyd. “Depending on a woman's age, between 16 and 30 per cent of breast cancer can be attributed to extensive density. Other risk factors, including family history, account for a much smaller proportion of the disease.” Dr. Boyd and his team of researchers compared different breast densities with the risk of breast cancer in more than 1,000 women with breast cancer and 1,000 who did not have the disease. The women were screened in the National Breast Screening Study, The Ontario Breast Screening Program and the Screening Mammography Program of British Columbia.



Dr. Norman Boyd (top left) and his research team

Based on the mammograms, women with extensive density were five times more likely to be diagnosed with breast cancer during the study period, pointing to the possibility that dense breasts might harbour faster growing tumours. Similar results were found when researchers considered other breast cancer risk factors.

In addition to increasing the risk of breast cancer, dense breast tissue also makes cancer more difficult to see in a mammogram. Breast tissue is made up of fat, supporting tissue and the epithelium that forms ducts and lobules. These tissues affect the passage of

X-rays differently. As a result, fat appears dark on a mammogram while denser tissues such as the epithelium, appear light. Breast tissue density decreases with age and on average, women lose about one per cent of their breast density each year.

The team's research suggests other imaging techniques, including ultrasound, MRI and digital mammography, might help spot such tumours earlier.

Your ongoing support of The Princess Margaret Hospital Foundation helps make major research breakthroughs possible - the key to conquering cancer.

Our thanks for your support for the 2007 Rose Appeal

For the second year in a row, PMH supporters are giving hope to cancer patients and their families through the Rose Appeal. Thousands of paper roses, bearing the names of mothers, grandmothers, daughters, sisters and friends who have been touched by

cancer, are on display in the PMH atrium. While the event honours Mother's Day, roses are also dedicated to men fighting this disease. The roses are an inspiring reminder of the ongoing need to support breakthrough research,

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Cancer stem cell research captures media attention

Dr. John Dick, Senior Scientist at Princess Margaret Hospital and professor of molecular and medical genetics at the University of Toronto, and his colleagues received widespread coverage in news media across Canada for their study linking



cancer stem cells to colon cancer. They have shown that a small and rare subset of cancer stem cells (CSCs) are capable of sustaining tumours in the colon by rejuvenating themselves and differentiating into other tumour-forming cells.

According to Dr. Dick, "Colon cancer stem cells are the driving force initiating and sustaining these tumours ... you have to find and kill each of these colon cancer stem cells to truly cure the disease."

The PMH researchers' work may help design new therapeutic tools for colorectal cancer, the second leading cause of death from cancer in Canada.

In addition to leading this exciting research breakthrough, Dr. Dick is a recent recipient of one of five Canada Foundation for Innovation (CFI) awards for his initiative, "The Cancer Stem Cell Centre." The centre will focus expertise, infrastructure and technologies on developing breakthrough CSC therapies.

As a friend of PMH, you can take pride in supporting the work of Dr. Dick and his colleagues whose recent accomplishments could lead to significant improvements in outcomes for cancer patients. Your continued support is vital to the success of promising research initiatives that could lead to more breakthroughs in the future.

Cancer stem cell research milestones at PMH / OCI at a glance

- 1961 - Drs. Ernest McCulloch and James Till prove in mice the existence of the first normal blood stem cell.
- 1973 - Drs. McCulloch and Till report that only one in 100 to one in 10,000 myeloma cells from mice can form tumours in a lab dish.
- 1988 - Dr. John Dick and colleagues create a mouse that carries a human blood system.
- 1989 - Dr. Dick and colleagues create a mouse with human leukemia.
- 1994 - Dr. Dick and colleagues isolate the first cancer stem cell, in acute myeloid leukemia.
- 1997 - Dr. Dick's team isolates cancer stem cells in three other forms of leukemia and presents their work as solid evidence of a cancer stem cell hypothesis.
- 2006 - Dr. Dick and colleagues identify abnormal stem cells as the source of colon cancer.

Research Breakthrough - New findings offer hope for more targeted treatments for thyroid cancer

PMH scientists, Drs. Sylvia Asa and Shereen Ezzat, have discovered that a cell adhesion molecule called CEACAM1 could be a potential marker for identifying thyroid tumours that are more likely to spread throughout the body. Cell Adhesion Molecules (CAMs) are proteins located on the

surface of cells and bind with other cells, much like the fibres of Velcro.

The researchers increased and decreased the amount of CEACAM1 in thyroid cancer cells to determine if the changed levels promoted the potential of cancer cells to multiply. They discovered that the molecule was

found mainly in small tumours that spread at an early stage. The study shows that excessive amounts of CEACAM1 in a tumour may indicate that more aggressive treatment is needed, leading to greater hope that these forms of thyroid cancer can be cured.

Gear up for The Ride to Conquer Cancer - June 2008

Do you enjoy a physical and mental challenge, or know someone who does? Want to support Canada's leading cancer research hospital? Then sign up for The Ride to Conquer Cancer or pass along the news to a friend or family member who likes to ride. It's going to be a fun and challenging 200 km bike journey

over one weekend, June 20-22, 2008. This new initiative from The Princess Margaret Hospital Foundation will raise funds for breakthrough cancer research. For more information about The Ride to Conquer Cancer, please visit www.conquercancer.ca or call (416) 815-RIDE (7433).



Thank you for lifting *Wings of Hope* to inspiring heights!

Last December, almost 9,000 paper doves were on display in the atrium of Princess Margaret Hospital, each inscribed with the name of a loved one who had survived a battle with cancer or in honour of their memory. Doves were also dedicated to caregivers and family members, as well to medical professionals, researchers, and volunteers at PMH.

The vast display of doves was a truly inspiring sight that lifted spirits and gave hope to cancer patients and their families visiting PMH in December and January. Senior Chaplain Gary

Payne led the Dove Dedication Ceremony on December 15th, with readings about the significance of the dove as a symbol of peace, hope, kindness and fidelity in many beliefs and cultures.

Wings of Hope was a truly uplifting appeal, raising more than \$600,000 for cancer research at PMH. Our heartfelt thanks to all of you who dedicated doves and made a gift to PMH, as well as to our dedicated PMH volunteers who gave their time to hang the thousands of doves in the display. Your efforts made a difference!



Each dove was dedicated to someone whose life was touched by cancer—whether a patient, caregiver, medical professional, or researcher.

New colorectal cancer screening program in Ontario could help save lives

You may remember reading about the Colon Cancer screening program pilot test at Princess Margaret Hospital in a 2006 issue of *The Voice of Progress*.

Thanks in part to your support for the program pilot test, Ontario has announced a province-wide screening program, the first of its kind in Canada. Individuals in the province aged 50 and over who are at average risk (i.e., with no symptoms or family history) can pick up an easy-to-use, at-home screening kit called the **fecal occult blood test** from doctors' offices, walk-in clinics, community health centres and, eventually, participating pharmacies. This new initiative

could help provide earlier detection and treatment for more than 7,000 Ontarians diagnosed with the disease each year.

Colorectal cancer is the second deadliest form of cancer in Canada, but there is a 90 percent chance it can be treated and cured, if detected early. Despite the compelling case for early detection, only one in five Ontarians over 50 years of age are currently screened for this disease. If you're over 50, please consider talking to your health care provider about whether you're at risk and if the screening test is right for you.

Our thanks...continued from page 1

compassionate care and exemplary teaching at Princess Margaret Hospital. It isn't too late to add your gift to the Rose Appeal: simply donate online at www.rosesforhope.ca (and enter code 9NWS9275 at the prompt) or call 416-956-6560 to make a donation by telephone.



The Weekend to End Breast Cancer needs your support



This year's Weekend to End Breast Cancer (WEBC) benefiting Princess Margaret Hospital is scheduled for **September 7 to 9, 2007**, marking the fifth anniversary of the this popular event. Over one amazing weekend, thousands of women and men will unite to walk 60 km in Toronto in a bold display of courage and commitment. It honours lives lost, celebrates survivors, and helps to find a cure for breast cancer. Response to WEBC has been overwhelming. Be sure to support one or more WEBC walkers this year. If you would like to volunteer for the event, please register at www.endcancer.ca. Proceeds from the event are used to fund breast cancer research, treatment and education programs at Princess Margaret Hospital.

Privacy Statement

The Princess Margaret Hospital Foundation is dedicated to supporting excellence in health care by raising funds for cancer research, patient care and education. We can only successfully fundraise with the support of our friends and community.

If as a supporter you wish to limit or alter the number and/or timing of the mailings you receive, please contact us at (416) 946-6560 to discuss your preferences.

We value all of our supporters and are committed to working with each for their benefit and that of the hospital. **We do not trade, rent or sell the names of our valued supporters.**

Should you wish to be removed from our fundraising list(s) at any time, please contact us at (416) 946-2114 or email: list.removal@pmhf.ca.

Hope and progress against cancer, every month of the year

Our valued *Partners for Hope* member, Fergus O'Donnell began giving on a monthly basis because he wanted to make an ongoing commitment to the work of Princess Margaret Hospital, especially cancer research, by providing a more predictable stream of income to PMH. He believes that monthly giving provides the greatest benefit with the least effort: "With a bit every month, as a donor you hardly even notice it, but it makes a difference cumulatively."

"Cancer seems to be so omnipresent and so cruel. There must be very few people whose lives

haven't been affected by some form of cancer, in some way or another. If one thinks about the people one knows — family members, friends, colleagues — who have either had cancer or who

have had a family member with it, it doesn't take long to come up with a very long list. Research to understand cancer and find better ways of dealing with it, and minimizing or eliminating its impact, is tremendously important."

"If people get in the habit of giving the equivalent of their daily coffee on a monthly basis (or whatever they can afford), they'd be struck by what a

donation they end up with at the end of the year. And if more people did that, each month of the year, the difference would be tremendous. And the great thing is that they wouldn't even miss the money

for a second. It's almost like getting something for nothing and when that something is hope and progress against cancer, that's an awfully good deal."

"With a bit every month, as a donor you hardly even notice it, but it makes a difference cumulatively."

For more information about becoming a member of *Partners for Hope*, please call Lori Ann Horley at (416) 946-4501, ext. 3107.

Partners for Hope

When you join our monthly giving club, *Partners for Hope*, you become an important partner in the world-class cancer research and treatment programs at Princess Margaret Hospital.

Your gifts are put to work each and every month — helping to make significant research and treatment breakthroughs a reality.

Joining *Partners for Hope* is easy: you can sign up on our secure web site, or by phone or fax at the numbers listed below. Or, you can complete and return the reply form in this newsletter.

610 University Avenue, Toronto, ON M5G 2M9

Tel: (416) 946-6560 Fax: (416) 946-6563 Toll Free: 1-866-224-6560 www.pmf.ca

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SPRING NEWSLETTER REPLY FORM

Yes, I will help support cancer research, patient care and education.

Enclosed is my gift of: \$35 \$50 \$100 \$250 Other \$ _____

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your support!**

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