



Major breast cancer breakthrough at BC Cancer Agency

For the first time in history, BC Cancer Agency scientists have decoded all of the three billion letters in the DNA sequence of a metastatic lobular breast cancer tumour, a type of breast cancer which accounts for about 10 per cent of all breast cancers, and have found all of the mutations, or “spelling” mistakes that caused the cancer to spread.

The landmark study, published as the October 8th cover story in the prestigious international science journal *Nature*, helps unlock the secrets of how cancer begins and spreads, thus pointing the way to the development of new breast cancer treatment targets and therapies.

“I never thought I would see this in my lifetime,” said Dr. Samuel Aparicio, head of the breast cancer research program and research team leader at the

BC Cancer Agency. “This is a watershed event in our ability to understand the causes of breast cancer and to develop personalized medicines for our patients. The number of doors that can now be opened to future research is considerable.”

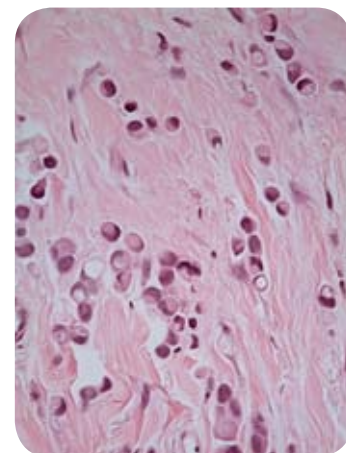
Partnering with the BC Cancer Agency’s Genome Sciences Centre, Dr. Aparicio’s team used the latest in next-generation DNA sequencing technology to study the evolution of a single patient’s lobular breast cancer tumour over a nine-year interval. They found 32 mutations in the metastatic cancer tumour and then looked to see how many of those same spelling mistakes were present in the original tumour. The result was surprising - only five of the 32 could have been present in all of the cells of the primary tumour, thus fingering them as the criminals

that caused the disease to get started in the first place. These five mutations were previously unknown to researchers as playing a role in cancer.

“This study demonstrates the remarkable capacity of next-generation DNA sequencing technology,” says Dr. Marco Marra, Director of the BC Cancer Agency’s Genome Sciences Centre. “The project that decoded the first human genome in 2001 took years and an enormous amount of funding. We were able to sequence the breast cancer genome in weeks and at a fraction of the cost.”

“Through our research at the BC Cancer Agency, we are dedicated to finding new and novel ways to detect cancer earlier and to develop more enhanced treatments,” said Brian Schmidt Interim President,

BC Cancer Agency and Senior Vice President, Provincial Services, Population and Public Health, PHSA. “This discovery is a wonderful example of how investment in research is helping to pave the way toward better outcomes for cancer patients in the future.”



Primary lobular breast cancer tumour cells. Source: BC Cancer Agency

Ramping up: BCCA Centre of Excellence for Functional Imaging

Ever-present coffee in hand, Dr. Don Wilson is Medical Director for the BCCA’s Centre of Excellence for Functional Imaging now nearing construction completion.

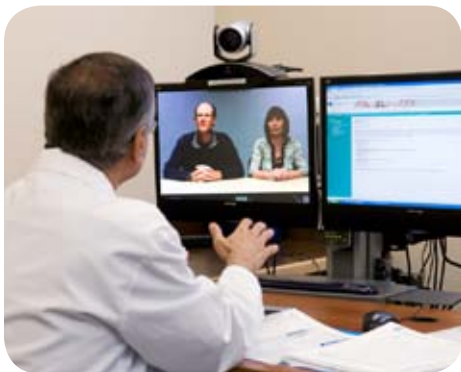


Construction to complete the BC Cancer Agency’s Centre of Excellence for Functional Imaging is now nearing completion which will soon enable the Agency:

- to improve diagnosis and treatment planning by using PET (positive emission tomography) scans conducted with its own supply of radiotracers;
- to build research programs for the discovery, development and application of new radiotracers;
- to apply new advances in imaging to improve early diagnosis and management of cancers; and
- to collaborate in the growing national and international network of functional imaging programs.

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CME webcasts – accessible oncology expertise



The Family Practice Oncology Network is using interactive Webcast technology to offer monthly CME presentations and welcomes family physicians from throughout the province to join in.

BC Cancer Agency GPO, Council Member and Chair of the Network's CME Working Group, Dr. Shirley Howdle, notes: "CME Webcasts provide an excellent opportunity to gain useful, current oncology information from the comfort of your

own office or home. We feature a different speaker the fourth Thursday of each month who gives a 40 minute presentation and then takes questions for the remainder of the hour. It's easy – and free – to participate and you are eligible to receive one Mainpro-M1 credit for each session attended. These Webcasts also provide a great chance for physicians and oncologists to interact and discuss topical issues."

During the Webcast, the presenter is live on camera, the presentation is on screen and there are options to communicate and interact by online chat and through the phone line. Topics covered to date include:

- Case Studies in Colorectal Cancer;
- Endometrial Cancer;
- Understanding Radiation Therapy;
- Oncology in the Primary Care Setting;
- Prostate Cancer 2009; and
- Bone Metastases and Radiation Therapy.

The next CME Webcast is scheduled for 8-9:00 a.m., Thursday, November 26 and will feature Tracy Truant and Brenda Ross of the BC Cancer Agency's CAMEO Program presenting: Talking to Oncology Patients about Complementary Medicine: An Evidence-Based Approach. Suggestions for future topics are always welcome.

For more information please contact Jennifer Wolfe at jawolfe@telus.net.

To participate enter <http://chier.acrobat.com/fpon/> into the address bar of your Internet browser and join the meeting as a Guest. Then join the conference call portion by dialling 604.899.2339 in the Lower Mainland or 1.877.385.4099 elsewhere and entering the code 5440964#. We hope you will join us!

Ramping up continued from page 1

The Centre began conducting the province's first combined PET/CT scans on adult and pediatric oncology patients in 2005 with radiotracers (called ^{18}F - FDG, a special type of sugar molecule attached to a radioactive isotope) supplied twice daily by TRIUMF at the University of British Columbia. Once construction is complete and the equipment fully installed and commissioned, this 6,000 square foot Centre will include its own 22 ton cyclotron carefully positioned in a specially constructed concrete vault, an ^{18}F - FDG production facility to combine the materials required to produce the radiotracers, facilities to develop and produce new radiotracers and a PET/CT scanner. Close proximity is required of these components to maximize efficiency in part due to the short lifespan of these radiotracers (radionuclide half lives range from seconds to an hour or more).

Dr. Don Wilson is the Medical Director of the Centre and has played a key role since its inception. He shares his insights here on the Centre's development, operations and future plans.

Can you describe the process behind PET/CT scans and the benefits they bring?

Dr. Wilson: PET technology has been around since the 1950s. It's seen phenomenal growth since then from a basic research tool to an established standard of care for imaging in many cancer settings. The procedure itself is non-invasive providing whole body imaging that enables physicians to more accurately diagnose and manage disease. A PET scan of a patient injected with the radiotracer detects metabolic changes at the cellular level by monitoring which cells absorb the radiotracer. Malignant cells, in particular, are very metabolically active and use the sugar, glucose, as an energy source. ^{18}F - FDG is a glucose analogue and because it is labelled with the isotope 18-Fluoride we can measure and image where in the body the tracer is being taken up. A PET scan shows whether a lesion is metabolically active and, fused with a CT scan, shows exactly where in the body the lesion is located. Together, these tests are highly effective at showing the presence and progression of disease and its response to treatment. The supporting technology is also constantly evolving.

What types of patients would benefit from these scans?

Dr. Wilson: We worked with the BCCA

Provincial Tumour Groups to develop evidence-based guidelines for the use of PET scans. Currently, 95% of the clinical indications for PET are in the area of oncology with other potentially growing roles in the fields of neurology, cardiology and imaging of inflammatory conditions. With regard to oncology, there are certain cancers where PET plays a crucial role in diagnosis and disease management. For adults, these include non-small lung cancer, lymphoma, head and neck cancer thyroid cancer, colorectal carcinoma, testicular and gynaecologic cancer. For children, these include lymphoma, sarcoma, neuroblastoma, brain, and thyroid carcinoma. All PET/CT scanning conducted at the BCCA is currently performed under two different clinical trial applications (one for adult and one for pediatric oncology) with Health Canada. These are in place while BCCA produced ^{18}F - FDG goes through the Canadian approval process and to help the BCCA to assess the impact of PET/CT on patient management.

Will TRIUMF continue to play a role?

Dr. Wilson: TRIUMF has been an important collaborator from the beginning. TRIUMF has a long and rich history of isotope production and radiochemistry *continued on page 3*

*Ramping up
continued from page 2*

support of the Neuro PET research program at UBC and currently produces ¹⁸F for the clinical program at BCCA in addition to some novel radiotracers for clinical research. We look forward to an ongoing and expanded collaboration with TRIUMF around radioisotope supply, research and development.

How do you see the Centre's research role evolving?

Dr. Wilson: The cyclotron will allow us to produce ¹⁸F for clinical PET/CT scans and a variety of other isotopes that can be incorporated into many other potential radiotracers. The Centre provides a huge opportunity for clinical research including the ability to develop new radiotracers to help us better understand the basic biology of cancer

in-vivo and take advantage of this information to better provide more individualized cancer treatments. We are learning much more about cancer at the molecular level, for example, including why some drugs work in certain situations and others don't. Dr. François Bénéard, our BC Leadership Chair in Functional Imaging, is heading our research team.

What is the availability of PET technology in other parts of BC and Canada?

The Centre here includes the only PET/CT scanner in BC to date, but we are planning for expansion to improve patient access to PET/CT across the province in the future. Elsewhere in Canada, there are publicly funded PET/CT programs in Alberta, Manitoba, Ontario, Quebec, Nova Scotia and New Brunswick. Quebec, in particular, is leading the way with 12 PET/CT scanners accommodating 21,000

patient scans per year.

What is current patient load for PET/CT scans at the BCCA?

Dr. Wilson: We are at clinical capacity with our single PET/CT scanner and conduct an average of 14 patient scans per day, but the demand is much greater. To date, we've seen 9,932 patients averaging 3,100 per year. In urgent cases, patients are waiting three to seven weeks for a scan and up to three months for non-urgent cases. These scans are publicly funded and are available to BC residents as long as they meet clinical indications and are referred by a treating BC physician. We are happy to receive calls or emails from physicians to discuss whether a scan is appropriate for their patients.

Contact Dr. Don Wilson at 604.707.5979 or dowilson@bccancer.bc.ca

Landmark BC Cancer Agency study re: HPV testing

*By Laurie Smith, BN, RN, CCRP
Manager, HPV FOCAL Study, BC Cancer Agency*

Many health care practitioners in the province are collaborating with investigators at the BC Cancer Agency on the HPV FOCAL Study to evaluate HPV testing as the primary tool for the detection of cervical cancer and its precursors. The first female participant consented in December 2007 in Vancouver and since then, the study expanded to include Victoria, and by the fall of 2009, Kelowna. Currently, over 7,000 women are enrolled in this important woman's health initiative. HPV FOCAL will ultimately assist in determining the future of cervical cancer screening in the province of BC and potentially the nation.

In the last several years, more and more research has been published illustrating the importance and relevance of HPV DNA testing in cervical cancer screening. The evidence is clear that newer technologies have the potential to advance and improve screening for cervical cancer and its precursors compared to screening with the pap smear alone. HPV DNA testing is significantly more sensitive than cytology testing at detecting high grade cervical intraepithelial neoplasia. However, HPV testing is less specific than cytology testing because it can detect transient lesions that



do not lead to cytological abnormalities. Based on successful programs and research conducted globally, the FOCAL Study utilizes both technologies to maximize the benefits of each. HPV testing is performed first, followed by cytology testing (to assess for cervical abnormalities) on any woman testing HPV positive. In addition, because of the increased sensitivity of HPV testing, the screening interval can be extended with its adoption.

Currently 145 health care practitioners are inviting women from their practices to participate in this study. More women in the province are learning of the benefits

of HPV testing and asking for it from their practitioners. The physicians involved find their female patients are enthusiastic and interested in participating and welcome the opportunity to be offered improved technology. HPV FOCAL is operated through a Study Centre at the BC Cancer Agency. Study Centre telephone lines are open Monday to Friday and offer resources and information to family physicians, their office staff and study participants. Study Centre clerks are trained to perform preliminary recruitment procedures for potential participants and answer any questions women in the study may have, ultimately saving time at the family physician's office.

The BC Cancer Agency is proud to be conducting this landmark study with health care practitioners in our province. It is the largest undertaking of its kind in an organized cervical cancer screening program and has already obtained recognition at various international scientific presentations. The data gathered in this study will provide valuable information to other organized programs in Canada and around the world. To become a collaborator on the HPV FOCAL Study, or for more information, please contact the Study Centre at 1.877.707.5955 or, email hpvfocal@bccancer.bc.ca.

New clinics fast-track breast cancer diagnosis in Lower Mainland

Several rapid-access breast cancer diagnosis pilot clinics are now open to patients in the Lower Mainland with the aim of quickly catching potential cases of breast cancer. Supported by a \$5 million investment from the Province's Lower Mainland Innovation and Integration Fund, these clinics are based on the European best-practice model – a single point of intake where diagnostic testing for breast cancer is coordinated and organized within 21 days. The clinics are located at Providence Health Care's Mount Saint Joseph Hospital (MSJ) in Vancouver, Surrey Memorial Hospital, Royal Columbian Hospital in New Westminster and soon at BC Women's Hospital & Health Centre in Vancouver. The latter is a collaborative effort with the BC Cancer Agency and X-Ray 505, an accredited diagnostic imaging facility.

The goal of each of the clinics is to reduce

the wait time from referral to diagnosis, and increase patient access to care by streamlining the diagnosis process. Patients at risk of breast cancer typically require many separately scheduled visits to different health care providers at physically different settings at each stage of the diagnostic and treatment pathway, often creating unnecessary gaps and delays in care. At these rapid-access clinics, all diagnostic tests and exams are done on site with a core team of multidisciplinary staff who work together to carefully follow every patient.

The MSJ clinic began accepting patients in May, has treated 244 patients to date, and reduced the average wait time from about 45 days to six. The Royal Columbian and Surrey Memorial Hospital Clinics both began operation in April, and combined have performed nearly 600 diagnostic procedures.

The clinic at BC Women's Hospital & Health Centre will open this fall. This clinic will also offer access, within four working days, to breast medical oncologists for locally advanced breast cancer cases for timely investigation and initiation of pre-operative chemotherapy if required.

Patients are accepted at these clinics as a result of an abnormal screen found through the Screening Mammography Program or upon referral by their family physician.

Contact these Rapid Access Breast Clinics at:
MSJ Hospital, 604.874.1141 ext. 78511
Royal Columbian Hospital, 604.523.8812
Surrey Memorial Hospital,
604.585.5666 ext. 3842
BC Women's Hospital and & Health Centre,
604.875.3705

Fraser Valley Cancer Centre pilot program streamlines care for locally advanced breast cancer patients

Physicians in the Fraser Health region whose patients present with locally advanced breast cancer – a palpable mass of >5 cm, involvement of the skin (erythema, peau d'orange or erosion through the skin) or a clinically fixed breast or axillary mass) – are encouraged to refer them to the recently launched Locally Advanced Breast Cancer Clinic at the BC Cancer Agency's Fraser Valley Centre in Surrey. This

Clinic began operation as a pilot program in March and to date has worked with 29 patients.

Referrals to this Clinic, aimed to expedite care for these patients, do not require a tissue diagnosis from a surgeon and patients are usually seen within a week.

“Our objective with this Service,” states Dr. Frances Wong, one of the program's oncologists and Chief Physician for both the BCCA's Fraser Valley and Abbotsford Centres,” is to provide the quickest possible access to specialized care and to replace the conventional referral pattern for these patients who have advanced disease and the highest need to have the appropriate treatments with no delay.”

“This will replace the typical process a patient may go through – where she sees her doctor, is referred to get a mammogram, goes back to her doctor who refers her to get a biopsy, then back again to her doctor, and finally to a surgeon or to the BC Cancer Agency for treatment. This delay not only greatly increases the patient's anxiety and stress level, but also provides opportunity for the disease to spread.”

The Locally Advanced Breast Cancer Clinic provides a multidisciplinary approach enabling patients to meet with all the necessary specialists – a medical oncologist, a radiation oncologist, and a surgeon who may perform the biopsy – at one time. Chemotherapy or radiation therapy can then be delivered, if required, at the treatment centre most appropriate for the patient and surgery, if recommended, can be

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Colleen Sherriff (left) is the Breast Cancer Care Coordinator for the new Locally Advanced Breast Cancer Clinic at the BC Cancer Agency's Fraser Valley Centre. She's shown here with one of the oncologists involved in the clinic, Dr. Frances Wong, Chief Physician for both the BCCA's Fraser Valley and Abbotsford Centres.

Physicians – key partners in the provincial HPV vaccine

*By Dr. Gina Ogilvie, Associate Director,
Division of STI/HIV Prevention and Control,
BC Centre for Disease Control*

In September 2008, the province of British Columbia in Canada embarked on a voluntary, school based HPV vaccination program for girls in Grade 6 and Grade 9. The HPV vaccine is fully funded by the public health program in the province, and the vaccine is delivered as part of a comprehensive school based vaccination program. Trained public health nurses offer these vaccines in all public and independent schools through the entire province free of cost. In the first year of the HPV vaccine program, almost 65% of girls in Grade 6 received the vaccine.

International data from clinical trials and use in the population continues to confirm the safety and efficacy of the HPV vaccine. Data has shown protection against HPV infection for over five years in girls who received the vaccine. The vaccine has better serological response in younger girls than older girls, and is efficacious in preventing acquisition of HPV, but does not impact on pre-existing HPV infections. These data confirm the benefit of offering this vaccine to girls in Grade 6, as they will receive both the maximum benefit and best response to the vaccine.

In keeping with findings from the clinical



BC Centre for Disease Control
An agency of the Provincial Health Services Authority

trials, the most commonly reported side effects in BC related to injection of the vaccine, and include pain, redness and swelling at the injection site. These are

common and resolve within a few days. Fainting within a short time following vaccination has been observed with this vaccine in BC and in other

countries. No hospitalizations following an adverse event were reported in the province, and there have been no reports of Guillain-Barré syndrome, encephalitis, transverse myelitis, autoimmune disorders or death.

As part of the province's comprehensive HPV vaccine evaluation program, we approached parents across the province to determine factors associated with receipt of the first dose of the HPV vaccine in girls in Grade 6 in British Columbia. We surveyed over 2,000 parents in the province. Parents were asked to list both a main (single) reason and any reason for their vaccine choice. The main reasons for having daughter receive the HPV vaccine was the effectiveness of the vaccine (47.9%); advice from a physician (8.7%); concerns about daughter's health (8.4%). The main reasons for not having a daughter receive the HPV vaccine was concerns about HPV vaccine safety (29.2%); preference to wait until daughter is older (15.6%) and not enough information to make an informed decision (12.6%). In parents, who listed that

they preferred to have their daughter wait as either their main or one of their reasons (n=337), over 46.3% identified that they felt they needed more safety data and 27.0% felt that their daughter was not at risk for sexual activity in Grade 6 but may be when they were older.

Data has confirmed that physicians are key partners in ensuring maximal uptake of the HPV vaccine. Parents and girls turn to them for information on the efficacy, safety and utility of the HPV vaccine. Both international data and data from the province have confirmed that this vaccine is a safe and important health initiative for women, and physicians can continue to play a critical role in supporting parents in their decision to have their daughters receive the HPV vaccine.

*Contact Dr. Gina Ogilvie at
gina.ogilvie@bccdc.ca.*

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*Fraser Valley Cancer Centre pilot program
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done by a surgeon in the patient's community or one of the clinic surgeons, depending on patient preference. New patient consultation slots are reserved for the Clinic on a weekly basis at the Fraser Valley Centre.

Breast Cancer Care Coordinator, Colleen Sherriff, helps each patient and their family through the process providing them with the resources and support they need as they transition from diagnosis to treatment for their cancer. "The longest any of our patients has had to wait, using the processes in our clinic, from diagnosis to treatment is 11 days. The average wait time can be weeks to several months using traditional processes."

This program came to fruition thanks to the vision and drive of the late Dr. Brian Norris and support from nearly 350 donors to the BC Cancer Foundation and the Weekend to End Breast Cancer.

*For more information please contact
Colleen Sherriff at 604.707.5900 ext. 4956
or csherriff@bccancer.bc.ca*

Healthy female volunteers needed for HPV vaccine study

Physicians with patients ages 16-26 years are asked to encourage them to consider taking part in a study on Human Papillomavirus (HPV) vaccines. HPV can cause both genital warts and cervical cancer in women.

- The study is being done to determine if a new vaccine will be similar to the currently available vaccine in preventing HPV infection and the development of cervical cancer.

- All subjects will receive either the current vaccine presently approved in Canada for use in females age 9 to 26 or a new vaccine.

*For more information please contact: The
HPV Recruitment Centre at 604.875.2424
ext. 4878 or HPVStudy@cw.bc.ca.*

*The study is being conducted by the
UBC Department of Obstetrics and
Gynaecology.*

Life-long surveillance of childhood cancer survivors

By Dr. Chris Fryer, FRCP(C), Medical Consultant, Provincial Pediatric Oncology/Hematology Network and Dr. Sheila Pritchard FRCP(C), Consultant Pediatric Oncologist

Dr. Mary McBride's article on Educational Outcomes on page 7 illustrates just one of many problems relating to survivors of childhood cancer. More than 80 percent of children diagnosed with cancer can be expected to be long-term survivors (over 2,500 survivors in BC). Many of these survivors are unaware that they may face significant, long-term risks to their health and well-being. The most serious are second cancers, cardiovascular disease and endocrinological abnormalities primarily associated with radiation, anthracycline and alkylator therapy.^{1,2} There is an obligation to educate both general practitioners and survivors about the potential late effects of treatment and to provide a life-long surveillance program for the prevention and early detection of such effects. Unfortunately, a comprehensive long-term surveillance program is currently lacking in BC. Such a

program, overseen by pediatric and radiation oncologists as the most knowledgeable concerning the therapies and late effects, will provide the opportunity to gain new knowledge about the long-term effects of newer cancer therapies as well as optimizing follow-up for our patients. New knowledge can be used to minimize harmful health effects for future generations of patients.

The Provincial Pediatric Oncology/Hematology Network, with the assistance of the General Practitioners in Oncology program at the BCCA, is developing an awareness program to rectify these deficits by:

- Providing evidence based guidelines for the follow-up of adult survivors of childhood cancer. This information will be provided to all general practitioners in BC via newsletters, publication in the BCMJ and appropriate Websites.
- Counselling all survivors reaching age 17 years with regard to therapies received, future health risks and individualized surveillance recommendations as well as

obtaining permission for future contact and a written report for themselves and their general practitioner.

- Contacting former patients to provide them with similar information and informing their general practitioners.
 - Providing links to existing recommendations by BC Children's Hospital Oncology Program www.kidscancer.bc.ca and the Children's Oncology Group Website: www-survivorshipguidelines.org/
 - Making additional information available through Marion Nelson of BC Children's Hospital Long-Term Follow Up Nurse Clinician @ 604-875-2345 ext 4827 or e-mail mnelson@cw.bc.ca
1. Oeffinger KC, Mertens AC, Sklar CA, et al. Chronic health conditions in adult survivors of childhood cancer. *NEJM* 2006; 355:1572-82. *Cancer* 2008;113:2188-97
 2. Geenen MM, Cardous-Ubbink, MC Kremer LC, et al. Medical assessment of adverse health outcomes in long-term survivors of childhood cancer. *JAMA* 2007; 297:2705-15

Supporting pediatric oncology – the pediatric oncology/hematology network

Children and adolescents with cancer differ greatly from adults from disease pathology right through to appearance, rate of growth, and response to



Paulina Chen is a pediatric oncology nurse and coordinates the activities of the Pediatric Oncology/Hematology Network based at BC Children's Hospital.

treatment. As such, all patients under 17 who are suspected of having, or are diagnosed, with cancer are referred to BC Children's Hospital for initial evaluation and therapy. The BC Cancer Agency works closely with BC Children's Hospital and the Provincial Pediatric Oncology/Hematology Network – a multidisciplinary group of health care professionals and parent advocates – to enable seamless and integrated care for patients and their families.

“Our Network exists to reduce the burden of cancer and blood disorders in children and adolescents living in BC,” states Paulina Chen, a pediatric oncology nurse at BC Children's Hospital who recently took on the

role of Network coordinator. “We want to ensure that all childhood cancer patients in BC have access to comprehensive care including appropriate diagnosis, management, follow-up and, if need be, end-of-life care. I work closely with the pediatric oncology hospital nurses in Prince George, Kelowna, Surrey and Victoria, and others throughout the province to ensure their learning needs are met and to enable a smooth transition in care between BC Children's Hospital and patients' home communities.”

“We also work directly with Family Practice Oncology Network to provide the pediatric portion of their Preceptor Program. This includes one full

day at BC Children's Hospital led by Dr. Chris Fryer and various other specialists. Preceptors who



choose to concentrate further on pediatric oncology take part in a lengthier hands-on practicum including time in the out-patient oncology clinic and the application of protocols.”

To learn more about the Provincial Pediatric Oncology/Hematology Network, please visit www.kidscancer.bc.ca or contact Paulina Chen at ppchen@cw.bc.ca.

Educational outcomes among childhood cancer survivors in BC

By Dr. Mary McBride, Program Leader, CAYACS, and Senior Scientist, Cancer Control Research, BC Cancer Research Centre, BC Cancer Agency

Advances in medical treatment have dramatically increased survival rates for children diagnosed with cancer: now over 80% of those diagnosed under 15 years of age in BC live five years or more post-diagnosis¹. Consequently, there is a growing population of survivors within the education system, many of whom may experience educational difficulties^{2,3,4,5}. There is evidence of adverse neurocognitive late effects of treatment, in particular cranial or craniospinal radiation therapy (CRT) and/or intrathecal methotrexate (IT MTX)^{6,7,8}, which may inhibit educational performance. However, most studies to date were single-institution studies, or studies of a single diagnosis group, and were based on self-reports of a limited number of outcomes. A recently-published BC Cancer Agency study of survivors in the BC school system has provided a comprehensive assessment of survivors' educational outcomes using standardized outcome measures, and risk factors for poor achievement. This study

is part of a larger Canadian Cancer Society Research Institute (CSRI)-funded Program to investigate survivor issues among those who were diagnosed with a cancer at a young age.

For the study, all individuals diagnosed with a cancer in BC under age 15 who survived at least five years from diagnosis were identified from the BC cancer registry; 782 of these survivors had administrative school records for Kindergarten to Grade 12 available from the BC Ministry of Education from 1995-2004. Treatment information for these survivors was abstracted from health records at BC Children's Hospital and the BC Cancer Agency. Survivors' educational results were compared to those for a randomly-selected, age and gender-matched comparison group of 8,386 BC schoolchildren. All education data was provided to the investigators on an anonymized basis.

Survivors of central nervous system (CNS) tumours had statistically significant Foundation Skills Assessment (FSA) test deficits in numeracy and reading (adjusted odds ratios from 0.2-0.6 in various grades, indicating 20% to 60% of the achievement of the general student population); leukemia survivors also had lower FSA scores, although

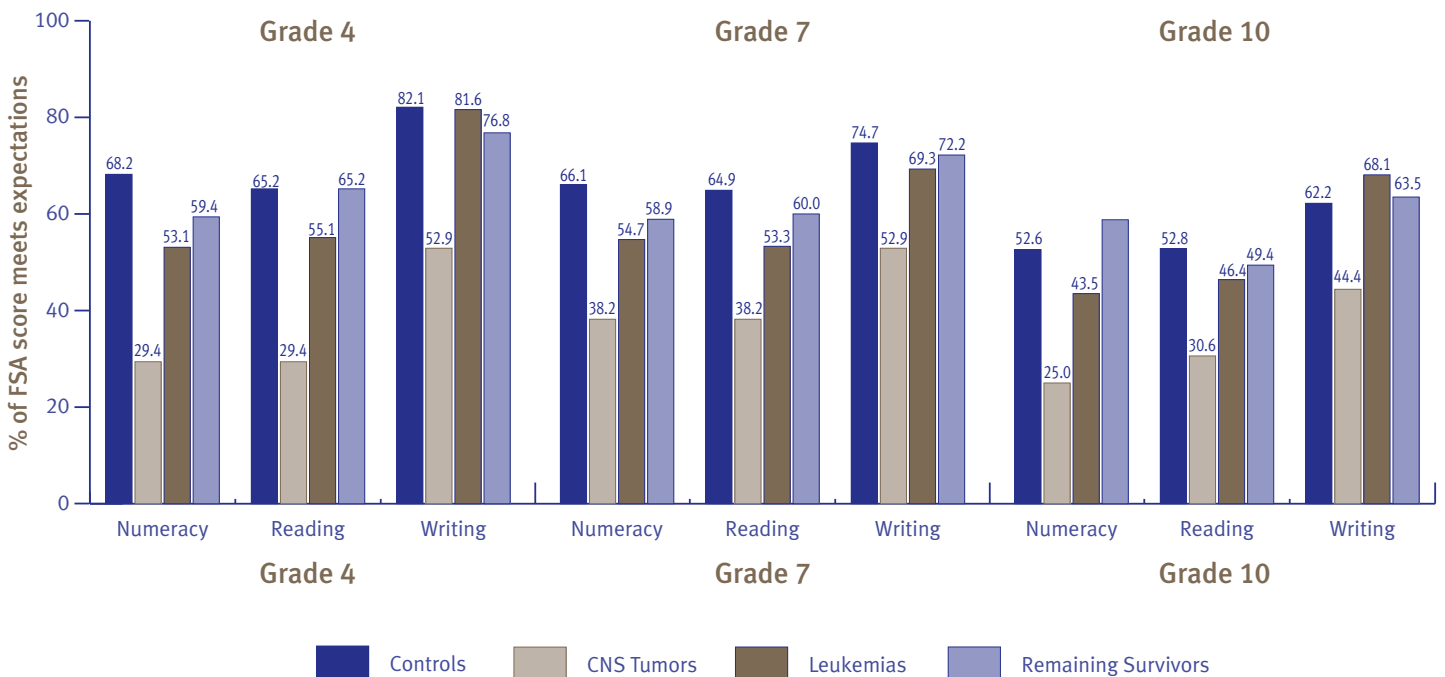
most differences were not statistically significant. Survivors of other diagnoses demonstrated no significant differences in FSA scores. Survivors were three times more likely than the general school population group to receive special education (32.5% vs. 14.1%), after adjustment for other factors, and had more physical, visual, and hearing disability designations. Females and those who had received radiation treatment, in particular cranial radiation, were at increased risk for poor educational outcomes.

Students who were enrolled in special education had worse educational outcomes, whether or not they were survivors, and the achievement differential between those with and without a special education designation was similar for both groups.

Survivors who received radiation therapy, particularly CRT, were significantly more likely to have physical and hearing disabilities and poor educational achievement, compared to those who had not received radiation. CNS survivors who received CRT had the poorest FSA outcomes, with less than 20% of this group meeting expectations on all 9 FSA examinations. Survivors who received

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Educational outcomes of survivors vs. comparison group



Preceptor Profile: Dr. Jaco Fourie in Terrace

Dr. Jaco Fourie is a 2006 graduate of the Family Practice Oncology Network's Preceptor Program and leads a very busy and enriched life in Terrace, BC. Originally from South Africa, Dr. Fourie completed his initial medical studies at the University of Orange Free State in South Africa. He then spent six months in Newfoundland, three years in Saskatchewan and completed the Canadian licensing examinations at Foothills Hospital in Calgary, Alberta. He has resided in Terrace for the past 15 years where he runs a full-service family practice with hospital privileges, provides after-hours care in the local Emergency Room on evenings and weekends, and serves as Regional Director of the BC Ambulance Service. He is also the CAME (civil aviation medical examiner) for the Skeena region.

Dr. Fourie shares his experience with the Preceptor Program which he describes as opening up a whole new world with regard to his approach to cancer and to medicine.

Dr. Fourie: I have always had a special interest in oncology; have had cancer in my family and a large number of cancer patients. Chemotherapy has become increasingly complex and I saw the Preceptor Program as an opportunity to build on my interest and to address the inefficiencies in care that can arise in smaller communities due to the lack of an integrated cancer management program.

It is very difficult for busy family physicians from peripheral areas to leave their practice for the two months required to complete the program, but I can assure you it is well

worth it. The program changed my practice immensely, stimulating my interest in academic medicine and refining my approach to cancer care. In particular, I gained an understanding of the increasing complexities of cancer care including evolving protocols, new and improved diagnostic and prognostic technology and the approach to cancer as a chronic disease process. The emphasis on maintaining adequate surveillance of patients for recurrence and progression of disease and the need to provide follow-up care for the rest of their lives has had discernible spin-offs and an impact on outcomes of cancer in our area.

The sessions on palliative care were also very helpful including the increasing emphasis on the micromanagement of symptoms. As the primary resource for palliative patients in my community, this training was appreciated and, in fact, I would like to have spent more time in this area.

Overall, the training enables individual doctors to make a noticeable impact in their community and to immerse themselves into the complexities of cancer care in the 21st Century while staying connected to a vast



Along with running a busy family practice in Terrace, Dr. Jaco Fourie is an avid fly fisher, archer and rugged outdoors enthusiast.

resource and collegial support system at the BCCA. The contacts established during Preceptor training are invaluable and the communications, knowledge translation and continuing medical education are all maintained to build further on the solid foundation of Preceptor training. The syllabus and presenters are outstanding. You have some of the best oncologists and scientists in their respective fields in the world providing lectures and the opportunity to interact and learn from them is an invaluable privilege.

I would encourage anyone considering the Preceptor Program to do whatever it takes to participate especially if you have a true interest in the science of cancer and are committed to improve all aspects of care to your own as well as your community's cancer patients. Along with the training, you also need to be willing to self-study and to build on the knowledge base after the program by participating in the multiple events provided by CAGPO (Canadian Association of General Practitioners in Oncology) and the BCCA. You must be willing to be available as a resource, intermediary and "knowledge translator" for the BCCA at all times in the community which carries with it a large responsibility, but also immense professional satisfaction.

Contact Dr. Jaco Fourie at j.fourie@telus.net. For more information on the Preceptor Program contact Gail Compton at gcompton@bccancer.bc.ca or visit www.bccancer.bc.ca/hi/fpon.

News from the hereditary cancer program

Enclosed with this issue of the Family Practice Oncology Network Newsletter is the first Hereditary Cancer Program Newsletter. Contents include: information about new hereditary cancer resources for use in your practice, case studies, and answers to some frequently asked questions. Future issues will provide updates and address specific hereditary cancer topics in more detail. Your feedback and suggestions for topics are welcome and can be directed to the program's Nurse Educator, Mary McCullum at mmccullum@bccancer.bc.ca or 604.877.6000, local 2325.



Strengthen your oncology skills with the preceptor program

If you have a special interest in oncology, and are keen to pursue it and serve as resource for your community, then please consider the Preceptor Program offered twice yearly by the Family Practice Oncology Network. This eight-week program is designed to help family physicians, particularly those outside major urban centres, gain the skills and knowledge to develop their practice in oncology, to become well informed on chronic disease management and palliative care and to enable cancer patients to receive care closer to home. Graduates of the program will be able to administer chemotherapy in their community and support all aspects of oncology care.

The Preceptor Program, developed with the support of the University of British Columbia's Department of Family Practice Enhanced Skills Program, has a flexible, modular design to meet the needs of family physicians who often find it challenging to leave their practice for professional development. The first two weeks include introductory sessions held at the BC Cancer Agency's Vancouver Centre every February and September. The remaining six weeks can be completed within six months at any of the Agency's five Regional Centres including the Vancouver Island Centre in Victoria, the Abbotsford Centre, the Centre for the Southern Interior in Kelowna, the Fraser Valley Centre in Surrey and Vancouver. Participants can tailor their learning at these sessions to complement their interests and the needs of their home community.

Participants who complete the Preceptor Program are eligible to receive credits from the College of Family Physicians of Canada.

Those who are from REAP eligible (Rural Education Action Plan as defined by the BC Medical Association, the Ministry of Health

To date, 58 family physicians have enrolled in the Preceptor Program from 34 different communities in the province.

and the University of British Columbia) communities can apply through UBC to receive a stipend and to have their travel and accommodation expenses covered. Physicians from other communities can

apply to UBC's Department of Family Practice Enhanced Skills Program to receive remuneration at a third year residency level while they are in the program.

The Network will also cover the cost for new Preceptors of their first year membership in the Canadian Association of General Practitioners in Oncology (value \$100) – www.cos/cagpo.

For more information please visit www.bccancer.bc.ca/hpi/fpon or contact Network Manager, Gail Compton at gcompton@bccancer.bc.ca.



Dr. Robert Newman, a GPO in Dawson Creek, is also a member of the Family Practice Oncology Network Council and chairs the working group responsible for the Preceptor Program.

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chemotherapy were almost three times more likely to have a physical disability compared to those who received no chemotherapy. Survivors who received IT MTX were more likely to be enrolled in special education than those who did not receive IT MTX.

Conclusions:

This is the first population-based cohort study to utilize standardized measures

to examine educational late effects of survivors of all childhood cancers. By utilizing a geographically-defined cohort and a randomly sampled comparison group, and standardized achievement measures from administrative data, potential bias due to incomplete or non-representative subject sampling and recruitment, loss to follow-up, self-report and recall, are minimized.

These results have implications for the management of cancer survivors in the

education system. Survivors and parents, clinicians, and educators all need to be aware of at-risk groups, potential educational difficulties and associated risk factors, so as to meet long term educational needs⁷. Sharing of risk information between clinicians, parents, and school personnel is fundamental in addressing the transition to school⁹. Early identification of problems^{10,11} and regular monitoring of progress over time¹² in the school system is essential in providing
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Message from the chair

By Dr. Phil White, Chair and Medical Director of the Family Practice Oncology Network and family physician in Kelowna



No one can deny the fact that family doctors are playing an increasingly important role in cancer care particularly with regard to cancer screening, diagnosis and follow-up. The

use of proper protocols and guidelines is instrumental in our ability to deliver such complex care effectively — kind of like the checklist that every safety conscious airplane pilot consults before take-off. A pilot who disregards this checklist is setting him/herself up for disaster. Such is the Network's rationale for putting forth great effort to develop these guidelines — customized to meet the needs of family physicians and prepared in a manner that is familiar to all doctors in the province.

We are partnering with the Guidelines and Protocols Advisory Committee (GPAC), a joint committee of the Ministry of Health and the BC Medical Association, to prepare and distribute these guidelines

which, when finalized, will be relatively brief with appendices, and include a flow sheet and patient information hand-out (see story on page 15). They will be published on the Guidelines and Protocols Advisory Committee Website (www.BCGuidelines.ca) and available in a PDA format that physicians can easily access from the bedside. A typical use, for example, might be to determine how long tamoxifen should be prescribed and when it is most beneficial to switch to a newer agent.

Another Network initiative that I would like to draw your attention to is our CME Webcasts or 'Webinars' if you will (see story on page 2). These are held the fourth Thursday of every month each including a one-hour, live

oncology presentation that you can access and participate in from your home or office. We have held six of these sessions to date on subjects such as colorectal cancer, prostate cancer, and understanding radiation therapy. The presentations are outstanding and I would like to extend a personal invitation to you to join us.

Finally, the Network is also supporting the BC Agency's research efforts around HPV (see stories on pages 3 and 5) and I would like to encourage interested GPs to get on board with these efforts as the information garnered will be invaluable in years to come.

Contact Dr. Phil White at drwhitemd@shaw.ca

Educational outcomes continued from page 9

appropriate special education services or approaches to learning. The relationship between special education programs and achievement among survivors other than those surviving a CNS tumor or leukemia needs to be further explored to address the question of the contribution of special education to achievement in this group. Finally, although studies have consistently indicated that survivors experience adverse neurocognitive late effects, this risk needs to be directly linked with poor achievement in school¹³ and educational intervention opportunities¹⁴.

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Meet Dr. Mark Elwood – vice-president, family and community oncology at the BC Cancer Agency

Dr. Mark Elwood is a member of the executive leadership team at the BC Cancer Agency and, with Dr. Phil White, leads the small but mighty staff group working to further the objectives of the Family Practice Oncology Network, along with many other duties.

Dr. Elwood: “My role relates to the interface between BCCA specialist oncology services and community-based services, especially primary care, and also to wider aspects of cancer control for the whole population. As well as the Network, I am involved in the new pilot program for colorectal cancer screening in Penticton (see story on page 13), in developing screening for lung and oral cancer and for melanoma, and in cancer epidemiology research, mainly in melanoma. This incarnation

is my second at BCCA; I was the Agency’s first head of epidemiology (now Cancer Control Research) back in the 1970s. My first jobs were in general practice (in Ontario), and from the BCCA, I moved in 1981 to be professor and chair of Community Medicine and Epidemiology in the new medical school in Nottingham, England (including general practice, and we succeeded in establishing it as a separate department); then later, I had nearly 10 years in New Zealand in cancer epidemiology and screening (and sailing and skiing), and then several years in Australia in cancer control, as director of their National Cancer Control Initiative (now Cancer Australia). In all those roles, I have been involved in research and program development, mainly in cancer causes, prevention and early diagnosis,

and in teaching. As a result, we have friends and family in many interesting parts of the world!”

Dr. Elwood is an epidemiologist and public health specialist, and author of over 200 scientific papers and several books, including works on Cancer

Control (co-edited with Dr. Simon Sutcliffe, to be published next year), on skin cancers, on birth defects, and a postgraduate textbook, ‘Critical Appraisal of Epidemiological Studies and Clinical Trials’, now in its 3rd edition.

“It was only going to other places that made me fully realise the unique strengths of the BC Cancer Agency – it is clearly one of leading cancer care and cancer control organisations in any country,” notes Dr. Elwood. “Patient outcomes are amongst the best in the world, and the Agency is a leader in many areas, ranging from cervical screening to rational chemotherapy utilisation to innovative cancer genetics; and of course, in linking family practice and oncology!”



Dr. Mark Elwood is instrumental in helping the Network achieve its objectives.

Contact Dr. Elwood at melwood@bccancer.bc.ca

Predictive oncology in action – the clinical application of KRAS status in the treatment of metastatic colorectal cancer

By: Dr. Francine Aubin, GI Oncology Fellow and Dr. Sharlene Gill, Chair, BCCA GI Tumour Group

New treatments directed toward molecular targets have emerged to improve the prognosis of patients with metastatic colorectal cancer (mCRC). Cetuximab and panitumumab are two monoclonal antibodies that target the epidermal growth factor receptor (EGFR). They are used in the treatment of metastatic colorectal cancer, mainly in the third-line setting in patients refractory to irinotecan and oxaliplatin-based therapy. However, these agents are very expensive, associated with toxicity and are effective in only approximately 10-20% of unselected patients^(1,2,3). The identification of patients who are most likely to respond to

cetuximab and panitumumab is an important issue.

KRAS is the most frequently mutated oncogene in human colorectal cancer. The RAS proteins belong to the guanosine-5'-triphosphatase (GTase) superfamily, of which KRAS, NRAS and HRAS are the most widely known members. They transduce stimuli from surface growth receptor. Mutations in KRAS allow stimuli-independent activation that permits the cell to evade apoptosis and acquire a growth advantage. The number of KRAS mutations is limited; most involve codons 12 and 13. Different methods, based on the polymerase chain reaction (PCR), can be used to detect these mutations.⁽⁴⁾

Reports evaluating KRAS as a prognostic

factor in mCRC are conflicting^(5,6,7,8). However, analyses of data from several phase II and III clinical trials have recently shown that presence of KRAS mutation is an indicator of resistance to anti-EGFR therapy.⁽⁸⁻¹⁷⁾ Mutated KRAS results in constitutive activation of this oncogene which is downstream of the EGFR receptor, and hence unresponsive to attempts at therapeutic blockade of the surface EGFR receptor. The prevalence of KRAS mutation is 30-40%. Hence, tumour testing for KRAS status in patients with mCRC allows for the identification of those patients who may be candidates for cetuximab or panitumumab while, equally importantly, identifying those patients with mutated KRAS tumours who will not respond to this treatment and hence would

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High-risk subjects needed for early detection of lung cancer study



LUNG CANCER CANADA
Awareness. Support. Education.

Lung Cancer Canada, a public advocacy group for lung cancer patients, is partnering in this project to inform the public and health care policy decision makers of the results and to improve the outcome of lung cancer patients.

The BC Cancer Agency, St. Paul's Hospital and Vancouver General Hospital are taking part in a significant pan-Canadian study on the early detection of lung cancer for which researchers are seeking high-risk subjects to participate. Dr. Stephen Lam, Head of the Lung Cancer Prevention Program at the BC Cancer Research Centre, is one of the Project Leaders: "We are looking for 2,500 current and former long-term smokers to enrol in this study which is going to provide important baseline information on the value and feasibility of a Canada-wide lung cancer screening program."

Currently, lung cancer is the most common

cause of cancer death in Canada and worldwide and, by 2020, it is projected to be the fifth highest killer among all cancer and non-cancer diseases. The reason for this, and the fact that only 16% of lung cancer patients survive five years or more, is because the majority are diagnosed too late. If lung cancer is diagnosed and treated before it spreads outside the air passages, for example, the five year survival rate is over 77%.

This new study, involving seven major academic centres from coast to coast, will examine specific steps aimed at improving early detection of lung cancer. The first is to

fine-tune a population-based risk assessment model to better estimate people's level of risk. In addition to age, smoking and occupational exposure, other easily attainable information including family history, body height and weight and educational level (an estimate of the socioeconomic status) will be used to predict lung cancer risk more accurately. To improve accuracy further, the role of a simple breathing or blood test using a proteomic marker recently discovered at the BC Cancer Agency will be evaluated as well. A combination of spiral CT scan and autofluorescence bronchoscopy to comb the large bronchial tubes, small air passages and lung tissue will then be administered to detect early signs of lung cancer. Further, information will be gathered throughout the process to help determine the health care resources and budget required to implement a Canadian lung cancer screening program.

Enrolment criteria for study participants require that they be aged 50-75 and have smoked for 30 years or longer. For more information please call 1.888.988.5864.

Predictive oncology in action continued from page 11

be spared the unnecessary toxicity and cost of a trial of therapy.⁽¹⁸⁾

The BC Cancer Agency is one of the first provinces to approve funding for panitumumab and cetuximab (in combination with irinotecan) for patients with chemotherapy-refractory mCRC and wild-type KRAS status. Tumour testing for KRAS status is available through the BCCA clinical genetics lab in eligible patients (those who have already received irinotecan, oxaliplatin and 5FU, and are now being considered for third-line EGFR therapy).

Contact Dr. Sharlene Gill at sgill@bccancer.bc.ca and Dr. Francine Aubin at faubin@bccancer.bc.ca.

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Positive uptake for colorectal screening pilot

Reception toward the first pilot site of the BC Cancer Agency's Colon Check program, launched this past January in Penticton, is positive and paving the way for a second community to be added in the coming weeks. Colon Check is a three-year, \$3.8 million pilot program to test the effectiveness of a new screening program for the early detection of colorectal cancer.

Every day three people die of colorectal cancer in British Columbia, the second leading cause of cancer death in the province. If detected at its earliest stage, there is over a 90% chance of survival. Screening saves lives.

Eligible participants – asymptomatic men and women between the ages of 50 and 74 – receive an easy-to-use kit with which they conduct an immunochemical fecal occult blood test in the comfort of their own homes. The test, which enables the detection of non-visible blood in the stool, is then returned for analysis to the Provincial Health Services Authority Central Processing and Receiving Laboratory in Vancouver. Patients who test positive, as well as those identified as being at a higher risk of developing colon cancer, are referred for follow-up.

To date, 1,169 participants have registered for the program and 930 kits have been returned.

Preliminary results include:

- A positivity rate of approximately 8% with 69 participants being referred for colonoscopy;
- 128 participants indicated a first-degree relative family history of colorectal cancer and were also referred for colonoscopy;
- Since January 118 colonoscopies have been conducted and the polyp detection rate among positive iFOBT participants and those with a family history is approximately 68% and 45% respectively.

Although no cancers have been found to date, the program has identified many high risk adenomas.

Dr. Jeff Harries, Head of Family Practice in Penticton, is very supportive of the program:

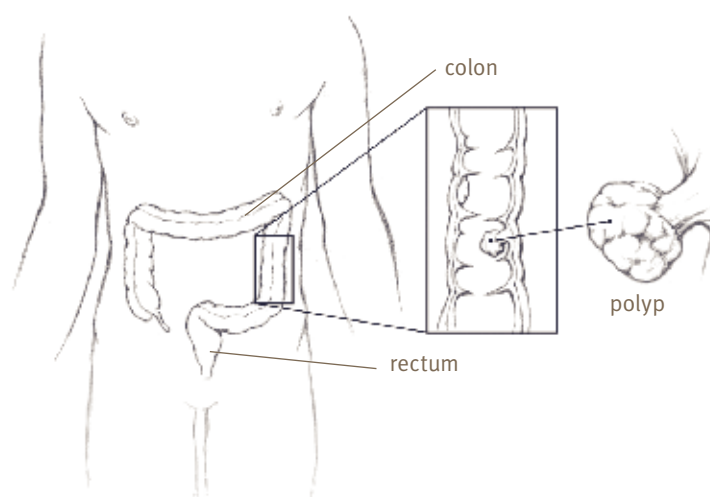
"The organization and resources that this program brings to colorectal screening are greatly improving not only the test itself, but also ensuring that those who should be screened have access."

Sharon Amyot, a local Colon Check participant, adds: "I had a colonoscopy following my test results and

ended up having seven polyps removed. If I hadn't participated, these could have turned into cancer. My experience with the nurse navigator was helpful as well. She explained what was happening and what was going to happen and the follow-up after the procedure was very good. I now know I have to be screened again. Colon Check is excellent preventative medicine."

Program organizers are continuing to promote and evaluate the program, including promotion with pharmacists, direct mailed invitations to Penticton residents, and focus groups to increase the uptake further.

For more information please Laura Swaré at 604.707.5913 or visit www.bccancer.ca/coloncheck



Predictive oncology in action continued from page 12

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Update on primary care physician education and engagement in the promotion of cancer screening in BC

By Tunde Olatunbosun, Project Manager, Division of Continuing Professional Development, UBC Faculty of Medicine

The current practices and attitudes of primary care physicians in the province towards cancer screening have been unclear. To clarify this, the UBC Division of Continuing Professional Development (UBC CPD) began conducting the first phase of a provincial wide needs assessment study into the perceptions and practice patterns of BC primary care physicians (*hereby referred to as physicians*) with regards to five specific cancers: breast, cervical, colorectal, prostate, and hereditary predisposition to cancer. This phase was conducted in the spring of 2009 with funding and collaboration provided by the BC Cancer Agency (BCCA).

The project team would like to acknowledge the Family Practice Oncology Network, British Columbia Medical Association, BC College of Family Physicians, the Society of General Practitioners of BC, as well as the UBC Department of Family Practice for their valued support in informing primary care physicians in the province of this important needs assessment.

The survey phase of the needs assessment was very successful with almost 900

physicians in the province providing feedback. Some preliminary results to highlight include: (i) over two-thirds of physician respondents agreed that screening for the above mentioned cancers can be advantageous for well patients; (ii) over three-quarters of physician respondents said their patients frequently request mammograms, Pap tests, and PSA testing, and further, their usual approach to informing well patients about the need for cancer screening occurs during routine patient visits, and scheduled checkups; (iii) most physicians are comfortable in performing screening procedures such as clinical breast exams, Pap tests, digital rectal exams as well as in interpreting the reported results of screening procedures.

Areas that appear to *more frequently* create challenges for physicians in discussing cancer screening with their well patients include: (i) patients with multiple health issues; (ii) the time it takes to explain the pros/cons of screening options; and (iii) patients with language barriers. The lack of availability of screening procedures such as colonoscopy and genetic testing was more frequently reported as creating difficulty in encouraging cancer screening for well patients.

The project team will continue with detailed analysis of data from the needs assessment

survey. Through October, we will invite physicians who indicated interest to participate in an interview or focus group in order to discuss the survey findings in more depth. Also, we are planning an upcoming accredited webinar on cancer screening, which will include content specifically based on the study findings.

Physician feedback in this initiative will be instrumental in the design of further educational programming, clinical support strategies, marketing materials and other engagement strategies to improve cancer screening practices and increase patient uptake in recommended cancer screening.

We sincerely thank all physicians who have participated in this initiative.

Dr. Bob Bluman (UBC CPD) is the principal investigator of this study, and Ms. Lisa Kan (BCCA), Dr. Brenna Lynn (UBC CPD), Dr. Ruth Elwood Martin (UBC Department of Family Practice), Mr. Tunde Olatunbosun (UBC CPD) and Ms. Laura Swaré (BCCA) are the co-investigators. Ms. Chloe Wu (UBC CPD) is a research team member.

For more information about this needs assessment study, please contact Project Manager, Mr. Tunde Olatunbosun (tunde.o@ubc.ca).

Community palliative care and guidelines

By Dr. Pippa Hawley, FRCPC, Palliative Medicine Specialist, BC Cancer Agency, Vancouver Centre and member of the Network's Guidelines and Protocols Working Groups on Palliative Care and Pain and Symptom Management

In the Pain and Symptom Management/Palliative Care clinics at the Vancouver Cancer Centre I have the opportunity to work with family doctors and other specialists from all over the province. I frequently hear that lack of time is a recurring problem, both for spending with patients and their families, and for education. A busy family doctor with a typical practice representing the demographics of their community may only care for four or

five patients a year with advanced cancer, sometimes even less in areas with a young population. Most complications of cancer are not commonly seen in other areas of practice, and can arise very quickly, causing extreme suffering. Family doctors need to find out how to assess and manage a symptom RIGHT NOW! Going through a textbook, finding old notes from a course, or searching the Internet can take up precious time, and may result in delay in appropriate patient management. Though many excellent palliative care guidelines have been developed, many are too lengthy or difficult to access, not designed for physicians, or not appropriate for the BC setting.

International and even Canadian guidelines may include treatments not available to us, yet fail to mention other excellent treatments/interventions we have. Special programs, such as the BC Palliative Drug Benefit Program, are province-specific, and knowledge of these is vital for good care planning.

In order to address this need for information the Family Practice Oncology Network and the BC Medical Association have formed a collaborative group with the mandate to produce clinical practice guidelines in Palliative Care for cancer patients, specific to the needs of busy family doctors in BC.

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Clinical practice guidelines for family physicians: progress report

Accessing quick and easy-to-use information is one of the top needs expressed by family physicians caring for cancer patients. The Family Practice Oncology Network, in its role to actively support these family physicians, undertook initiatives to address this need beginning first in the areas of palliative care and pain and symptom management for which information is most frequently sought. Earlier efforts included projects to adapt the existing lengthy BC Cancer Agency guidelines into a format which could be quickly and easily navigated by family physicians online or through their PDA.

This approach proved somewhat cumbersome, however, and the initiative evolved into its present format which includes a hard working partnership between the Family Practice Oncology Network and the provincial Guidelines and Protocols Advisory Committee (GPAC) jointly sponsored by the Ministry of Health and the BC Medical Association. Together, we are developing customized cancer care guidelines for family

physicians that follow GPAC's chronic disease management guideline format including brevity, evidence-based information, external review, a flow sheet and patient hand-out, and automatic distribution online and in a PDA format.

Dr. Neil Hilliard, Hospice Palliative Care Physician Coordinator Abbotsford and pain and symptom management clinic consultant for the BCCA's Abbotsford Centre, co-chairs three Network working groups developing the first evidence-based guidelines including the palliative approach to care, pain and symptom management and grief and bereavement. He shares his insight here on the process to date and what we can expect in the coming months.

Dr. Hilliard: We gained a great deal of momentum since our partnership with GPAC. The initial Palliative Approach to Care Guideline is complete and GPAC approved for external review by over 200 reviewers throughout BC. We are just receiving this feedback now and will be preparing a final draft for

submission to GPAC shortly. We are ready to submit the initial Pain and Symptom Management Guideline to GPAC for their approval prior to external review and we expect to make changes before this occurs. The last palliative guideline that we are working on focuses on grief and bereavement and we just recently completed our first draft. Next on the agenda are guidelines for colorectal, breast and prostate cancer.

Encouraging physician uptake of these guidelines will be of paramount importance. We are working with the General Practice Services Committee (equal BC Medical Association and Ministry of Health representation) to determine the most effective measures and are likely to include workshops and learning sessions through their Practice Support Program. We are also exploring the related option of fee codes as incentive for physicians to see complex cancer patients. These do not apply to cancer care at present and we believe that such incentive would provide a huge return on investment due to increased patient and family

satisfaction, prevention of crises and decreased hospital visits. Of equal importance, statistics also show that GPAC guidelines in general have only a 10-20% uptake while those including an incentive include uptakes of over 50%.

Contact Dr. Neil Hilliard at nhilliard@shaw.ca



Dr. Neil Hilliard, Hospice Palliative Care Physician Coordinator Abbotsford and pain and symptom management clinic consultant for the BCCA's Abbotsford Centre, co-chairs three Network working groups developing customized guidelines for family physicians on palliative care subjects.

Community palliative care and guidelines continued from page 14

There are three sections to the guideline: first a guide to the "Palliative Approach" to care, which addresses assessment, monitoring, and interventions which facilitate good management of the transitions patients go through with progressive disease, and planning for end of life. The second (and longest) section addresses specific symptoms, such as pain, nausea, constipation, delirium, dyspnea and fatigue. The third part addresses grief and bereavement.

Each part of the guideline includes assessment tools, algorithms, references and links to other reliable sources of information,

as well as all the documents that might be needed. Where there is good evidence to support a particular intervention, it has been recognized, but in palliative care the evidence is often just extensive clinical experience, and where guidance is required, consensus is also recognised. The mix of the working group ensures that no one contributor's personal opinions are over-represented, and consensus is reached in all parts of the guideline. Regional guidelines already developed in BC have been extensively consulted, and links to them are included.

As many of you will be well aware, there have been a lot of guidelines produced in the last decade, some of which have been useful and

have been accepted in clinical practice, but they are outnumbered by guidelines that never "caught on" for a variety of reasons. There are even guidelines published on how to produce a guideline! Our aim with this guideline is that it will be sufficiently informative and easy to follow that it will become an indispensable tool for the family doctor. We also welcome feedback, and as needed for all guidelines, will be updating it whenever new evidence, useful treatments or other interventions come along.

Contact Dr. Pippa Hawley at phawley@bccancer.bc.ca

For more information about the Network's role in developing clinical practice guidelines for family practitioners please see the story above.

Award Winners from Vancouver to Vernon



Dr. Connie Eaves, Vice-President, Discovery, BC Cancer Agency.

Dr. Connie Eaves (Vice-President, Discovery) has been awarded the Henry M. Stratton Medal

from the American Society of Hematology. Dr. Eaves receives the award for her remarkable achievements in the area of stem cell biology over more than two decades. Dr. Eaves has been on the cutting edge of adapting or introducing technologies related to stem cell biology, especially her ground-breaking techniques of using the long-term culture system to understand the proliferative and renewal properties of normal and malignant primitive human hematopoietic stem cells.

Dr. Ed Hardy, Medical Oncologist with the Vernon Community Cancer Centre, received the BC Cancer Agency's Centre for the Southern Interior Khong Khoo Community



Dr. Ed Hardy (left), Medical Oncologist with the Vernon Community Cancer Centre, receives the BCCA's Centre for the Southern Interior's community care award from Dr. Kong Khoo, for whom the award is named.

Care Award. Dr. Hardy was chosen this year for his tireless work on behalf of cancer patients in the Vernon area and for being a relentless advocate for the clinic.

"Dr. Hardy has made significant contributions to cancer care throughout the North Okanagan," says Dr. Kong Khoo, colleague and Medical Oncologist with the BC Cancer Agency's Centre for the Southern Interior. "He's been chief of staff and head of the Department

of Medicine at Vernon Jubilee Hospital and been involved with numerous fund raising events for cancer in the North Okanagan."

Dr. Hardy also recently received an award from Interior Health for his contributions to cancer and medical care in the Interior, and the Physician of the Year award from his peers in Vernon.

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New website launched for kids with cancer in the family

The BC Cancer Agency recently launched a new Website called Cancer in my Family (www.cancerinmyfamily.ca) aimed at children aged 8 to 12. The site provides a fun, interactive environment where children can explore, in an interactive way, their thoughts, feelings and questions about cancer. "Kids process things through fun, art and play," explains Carly Fleming, a clinical counsellor at the BC Cancer Agency in Vancouver. "This is a site is where they can feel safe, play games, create friendly characters – and learn about cancer at the same time."

Breast cancer survivor and mother, Deanna Van Der Burg of Surrey, struggled to find ways of helping her seven year-old son Ben understand what was happening and to answer his many questions: "When you're first diagnosed with cancer you're like a deer in the headlights," she notes. "The only person Ben had heard of with cancer was Terry Fox, who didn't survive. Explaining that there are lots of different types of cancer was tough, too."

Deanna and Ben were able to attend the Children's Group offered by BC Cancer

Agency's Fraser Valley Centre in Surrey (also offered at the Agency's Vancouver Centre) which was a very positive experience, but not one that's easily accessible to every family in BC. The new Website includes the same kind of resources as this program ensuring such help is available to everyone wherever and whenever they need it.

For more information please contact cancerinmyfamily@bccancer.bc.ca.



FOR MORE INFORMATION

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