BC Cancer Agency
CARE + RESEARCH
An agency of the Provincial Health Services Authority

Surgical Oncology Network Newsletter

ISSUE 28, SPRING 2016 | www.bccancer.bc.ca

In This Issue...

MARK YOUR CALENDARS!

SON FALL UPDATE 2016

October 22, 2016
Four Seasons Hotel
Vancouver

BREAST RECONSTRUCTION: *STATE OF THE ART*

DR. SHEINA MACADAM
PLASTIC SURGEON
SON BREAST TUMOUR GROUP MEMBER

Breast reconstruction rates are increasing but still less than half of women that undergo mastectomy will get reconstruction. This is due to several factors: proximity of the patient to a plastic surgeon (access), the general surgeon's knowledge of breast reconstruction and who is eligible, patient preference and logistic issues such as timing.

A 2013 study out of Sloan Kettering examined trends in breast reconstruction from the years 1998 to 2008 using the Nationwide Inpatient Sample database. They showed a 78% increase in reconstruction rates from 20% in 1998 to 37% in 2008. Autologous reconstruction remained stable, whereas implant use increased 11% per year. Women may be choosing implant reconstruction for a number of reasons: reapproval of silicone may contribute to more widespread acceptance; women younger than 49 years constitute an increasing proportion of the breast reconstructive pool and these women may have inadequate adiposity to permit autologous reconstruction or prefer to avoid the extended recovery and donor-site morbidity of this modality; cultural shifts may be occurring - women may now prefer the nonptotic appearance of implants relative to the natural appearance of autologous tissue; and lastly increased experience with implants in the setting of irradiation demonstrates acceptable outcomes.

Surgical Advances

A number of recent advances have occurred that have improved the results of breast reconstruction.

1. Nipple-Sparing Mastectomy

The benefits of nipple-sparing procedures include: maintenance of the native nipple shape, volume, projection, colour and texture, symmetry with the contralateral breast in a unilateral case, the potential for increased psychological satisfaction, improved overall body image and improved overall satisfaction with reconstruction.

Even if we perform NSM and show there is no nipple involvement after nipple core there is still a risk of recurrence in the nipple and this is what patients ask about. Of an approximate total of 1,826 NSMs performed for breast cancer treatment published in recent literature only three local recurrences within the NAC were reported. This represents a proportion of local events of 0.16% attributed to NAC preservation. It is noteworthy to mention that most of these studies have a short follow-up, thus still rendering definite conclusions based on this information premature.

Continued on Page 2

Continued from Page 1

41 year-old patient who underwent bilateral nipple-sparing mastectomies for right invasive ductal carcinoma. Reconstruction was performed using bilateral deep inferior epigastric artery perforator flaps.

2. Silicone Implants

In November 2006 the FDA approved silicone gel filled implants. Despite frequent local complications and adverse outcomes, the FDA determined that the benefits and risks of breast implants were sufficiently well understood for women to make informed decisions about their use. A recent post market approval study has shown a 25% risk of capsular contracture over 10 years in breast reconstruction patients, a 1% risk per year of rupture, high satisfaction and low risk of connective tissue disease.

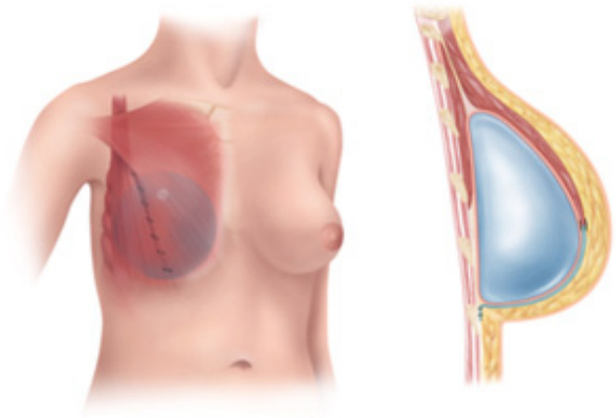
Another important factor to consider is patient satisfaction. Two studies one from our group at UBC and one from Memorial Sloan Kettering Cancer Center have shown that patients that undergo breast reconstruction with silicone implants report significantly higher satisfaction with the results of reconstruction than those who received saline. We also studied patient satisfaction comparing round versus shaped silicone gel implants and found high overall satisfaction, with no difference in satisfaction between these two types of silicone implants.

3. Direct-to-Implant Reconstruction

Our traditional approach to alloplastic breast reconstruction had been total submuscular coverage of a tissue expander. This allowed us to deal with short term complications such as mastectomy flap necrosis (MFN) and provided ease of mind that we would have sufficient coverage to perform nipple reconstruction and second stage modifications.

We were seeing problems with this approach such as a lack of inferior projection and sometimes lack of definition of the IMF. Additionally, the pain of expansion was something that many patients feared. Acellular dermal matrices have been in use for breast reconstruction for about 10 years and came to our attention in 2009. The benefits are that it allows us to perform direct-to-implant (DTI) reconstruction in one stage.

We performed a cost analysis for the use of acellluar dermal matrix in a Canadian centre. This showed that DTI is cost-effective compared with traditional two-stage implant reconstruction when performed in a single stage. Being aware of the cost of acellular dermal matrix, we then went on to review our cases over a 2 year period in order to determine which patients were in fact getting their reconstruction in one stage. i.e. not needing revisional surgery. We found that smaller breast size was a predictor of success of one-stage reconstruction using acellular dermal matrix. We now routinely perform DTI in conjunction with a nipple-sparing approach in small-breasted women.



Total submuscular coverage of a tissue expander under pectoralis major medially and pectoralis minor laterally (left). Partial submuscular coverage with lower pole acellular dermal matrix sling (right).

51 year-old patient who underwent bilateral nipple-sparing mastectomies and implant reconstruction (one-stage with AlloDerm and tear drop shaped, 295g implant on the right) and tissue expander/implant reconstruction on the left.

4. Muscle-Sparing Autologous Reconstruction

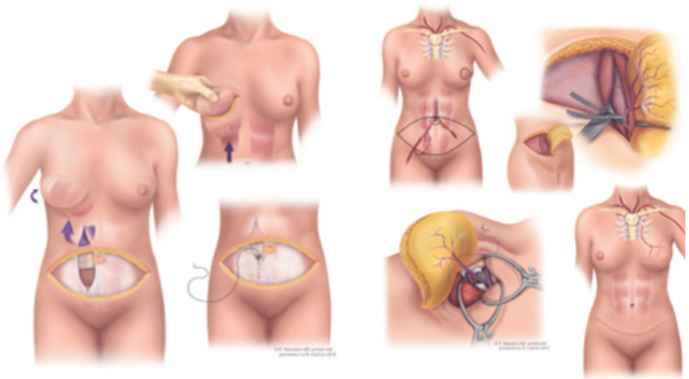
Initially autologous breast reconstruction began with movement of tissue that was still attached to its blood supply. In the case of the abdomen this is called the TRAM flap and in the case of the back tissue this is called the latissimus flap. This moves the abdominal or back tissue but also sacrifices the entire muscle that that tissue is attached to which can lead to an increased risk of hernia and bulge on the abdomen.

In order to reduce the risk of abdominal problems such as

a hernia or a bulge, surgeons started to perform these free TRAM flaps with less and less muscle attached. TRAM flaps were done with just a small piece of muscle attached which are known as muscle-sparing free TRAM flaps. Eventually surgeons performed this flap with no muscle attached and this type of flap is known as a perforator flap.

Perforator flaps are performed when a surgeon isolates a single blood vessel and traces that blood vessel through muscle so that we don't have to remove muscle and cause problems where the muscle would have been. There are a number of areas where we can take tissue from and these include the abdomen – this flap is known as the DIEP flap, the buttock which is known as the SGAP flap or the IGAP flap, and the inner thigh which is known as the TUG flap.

We compared all patients (n=388) who underwent autologous breast reconstruction using either DIEP or pedicled TRAM flaps from January 2002 until January 2012. We found that 21% of pTRAM patients had a bulge or a hernia postoperatively compared with 3% of patients undergoing DIEP. 13% of the pTRAM patients with bulge or hernia required surgery to correct this. Controlling for confounders, the odds of hernia/bulge were 8 times higher in the pTRAM group. While the DIEP surgery requires a longer operative time, this may be offset by the reduced rate of abdominal wall morbidity post-operatively.



Pedicled TRAM flap (left), deep inferior epigastric artery perforator flap (DIEP) (right).

5. Mastectomy Flap Necrosis

This results from any insult leading to vascular comromise of the breast skin envelope. Potential risk factors include: high BMI, smoking, radiation, high mastectomy weight , age, reconstruction method (ex: DIEP and traction on flap), flap thickness, mastectomy technique such incision type, and resection technique (cautery/ scissors + tumescent).

We performed a 10-year review of 718 of our patients that underwent immediate reconstruction using either implants or autologous techniques. Our overall rate of MFN was 13% over the ten- year period, but we showed an increasing incidence over the past 5 years with increased use of nipple sparing mastectomy and direct-to-implant reconstruction, which may be putting more stress on mastectomy flaps. We found a significant association between MFN and high BMI, smoking, preop radiation and longer surgeries as well as a 40% risk of MFN with the Wise pattern mastectomy incision.

With the rate of MFN increasing we were wondering if there might be a cheap way to decrease this rate. We designed a randomized controlled trial in which patients were randomized to receive one application of 2% Nitroglycerin (NTG) ointment (45mg) or placebo. After a 2-year recruitment an interim analysis was performed which showed that the MFN rate overall was 24%. It occurred in 34% of patients receiving placebo and 13% of patients receiving NTG; a between-group difference of 18.5% (p=0.006, 95% CI: 5.3% to 31.0%). NTG ointment is a cheap and effective way to reduce MFN in the setting of immediate reconstruction.

Radiation and Reconstruction

There is considerable controversy surrounding the use of radiation therapy in the setting of reconstruction. Many studies report inferior cosmetic results and increased complications rates in irradiated TE/implant patients. Some radiation oncologists claim that a reconstruction, especially an implant, may limit the effectiveness of the radiation to the chest wall.

Radiation causes early and late skin changes. In implant reconstruction this may prevent appropriate expansion and increase capsular contracture as well as the risk of implant exposure. In autologous reconstruction it may cause flap fibrosis and contraction. Overall, it is generally better to perform autologous reconstruction in a patient who will be undergoing radiation. This allows non irradiated tissue to be transposed to the zone of radiation. In Vancouver we perform radiation prior to reconstruction if we will be performing an autologous reconstruction. If we are planning an alloplastic reconstruction, radiation is performed after the mastectomy and tissue expander placement. It is imperative that the patient be seen by a plastic surgeon prior to making a decision about reconstruction so that the patient is well informed of all options. If a patient undergoes mastectomy with no reconstruction and then requires radiation, the vast majority require autologous reconstruction as implant reconstruction is no longer a good option in the delayed setting.

We reviewed 604 alloplastic patients and compared those that received radiation to the tissue expander, to patients that did not require radiation therapy. We showed a higher complication rate in the radiated patients as well as twice the incidence of capsular contracture. However, 82% were categorized as having good or excellent aesthetic outcomes. In our centre, we still offer immediate non autologous reconstruction to appropriate patients who will need adjuvant therapy, knowing that they may need to convert to some type of autologous coverage.

Continued on Page 4

Anaplastic Large Cell Lymphoma

A systematic review by Kim et al (2011) examined the relationship between breast implants and anaplastic large-cell lymphoma or other non-Hodgkin's lymphoma. This review produced 34 articles that included 29 cases of anaplastic large-cell lymphoma and seven cases of other non-Hodgkin's lymphoma involving the breast. They proposed that a form of anaplastic large cell lymphoma, which clinically behaves more like the less aggressive primary cutaneous form of anaplastic lymphoma kinase–negative anaplastic large-cell lymphoma rather than the more aggressive systemic form, may be associated with breast implants.

While more research needs to be done to determine the exact relationship between implants and ALCL, increased attention to this possible correlation and increased awareness of the public may lead patients to request non alloplastic breast reconstruction.

SON Recommendation on Breast Reconstruction in BC

The option of breast reconstruction should be discussed with patients undergoing mastectomy. Various patient factors (eg. increased BMI, active smoking, etc.) may affect eligibility or options for reconstruction as well as outcomes. Referral to a breast reconstruction specialist is recommended when reconstruction is considered. A discussion with your local breast reconstruction specialist may be beneficial to establish criteria for referral for reconstruction in your local area.

Summary of the 2015 BC Provincial Breast Tumour Group Retreat

Dr. Elaine McKevitt
Chair, SON Breast Tumour Group and CPD-KT Committee

Biology and Pathology

Molecular and genomic research is identifying different subtypes of breast cancer with distinct clinical profiles. It is hoped that in the future tumour profiling will guide clinical decision making. Dr. Sam Aparicio (BCCA) is hoping to develop a repository of tumour samples on a provincial scale that would be used in combination with data from the breast cancer outcomes unit to profile the clinical outcomes of the different biological subtypes of breast cancer. He is developing a program that would have nurse coordinators at the major BC Cancer Agency centres to help with consent and linkages to clinical data.

The BCCA sites at Victoria and Kelowna have developed a research platform in which patients are approached for a blood sample and consent for their data to be used in Research Ethics Board approved studies and consent to contact for future studies. More recently, in Vancouver, the consent also includes permission to use remaining tumour tissue in REB approved studies. It is hoped that this research strategy will facilitate future research, particularly regarding outcomes.

Pathology presentations looked at details in determining Her2 and ER positivity and the clinical relevance of weak ER positivity and borderline Her 2 results. The message that I took from these presentations was that there could be additional treatment recommended in patients with equivocal Her2 and that patients that were weakly ER positive may need treatment along the lines of triple negative cancers. This may affect surgeons in smaller communities. Patients with weakly ER positive tumours or equivocal Her2 would benefit from multidisciplinary review.

Surgical Oncology

Staging of breast cancer patients was reviewed by Dr. Rebecca Warburton. Patients presenting with stage 1 breast cancer have a chance of metastasis to the liver, lung, and bone of less than 1% and patients presenting with stage 2 breast cancer have a chance of metastasis of 3%. Many jurisdictions are no longer recommending preoperative staging for early stage breast cancer. Dr. Warburton presented results from a study from the American Society of Breast Surgeons that showed abnormalities in preoperative bloodwork and chest xray in 25% of 987 patients but no patients had metastatic disease identified (see table).

Additionally, PET scanning is being used for staging (instead of CT and bone scan) in an increasing number of patients with stage 3 disease which raises the question as to whether or not surgeons should be arranging metastatic work ups prior to patients being seen at the BCCA. In Alberta a system was set up where staging investigations were ordered by nurse navigators at the time of referral to the cancer centres with the understanding that oncology would take responsibility to review and follow up investigations. Preoperative MRI was also reviewed and current studies are recommending against routine preoperative MRI. It was discussed that it will be important to convey this message to our local radiologists as it is felt that some MRIs are being done because the patient has a radiology report where it was recommended.

It was also discussed that since patients with a positive sentinel node biopsy are often no longer having a completion axillary lymph node dissection, we may be overtreating patients with minimal axillary disease that is not palpable and identified on

routine preoperative axillary ultrasound as they are now having complete axillary lymph node dissection followed by radiotherapy. The surgical oncology breast tumour group is going to review this issue to see if there is a group of patients that we should no longer recommend have routine axillary ultrasound.

Recommendation: Considering the current evidence and guidelines Dr Warburton recommended that staging occur post operatively for patients with early stage breast cancer based on pathologic stage.

Completion Axillary Node Dissection

An update on completion axillary lymph node dissection following a positive sentinel node biopsy was presented by Dr. Tanya Berrang, a radiation oncologist from Victoria. The guidelines developed by the breast tumour group post publication of the Z11 trial have now been updated. The MA 20 trial has shown benefit to axillary radiation in patients with positive lymph nodes and it is now considered standard in BC to offer axillary radiation to patients with positive lymph nodes.

The AMAROS study showed similar low axillary recurrence rates with either a completion axillary dissection or axillary radiation following a positive sentinel node biopsy; however, patients having both an axillary dissection and axillary radiation have increased risk of lymphedema. When considering results from these studied patients, having sentinel node biopsy and a completion axillary dissection with axillary radiation may have a lymphedema risk of up to 60%. It is now recommended that patients with positive sentinel nodes be referred to the BCCA for multidisciplinary review prior to completion axillary node dissection.

Patients with higher risk tumours are being counselled that a completion axillary dissection will lead to increased lymphedema risk but might reduce the risk of local recurrence. However, it is recognized that these patients will have an overall higher systemic risk so the possible benefit to local recurrence may be overshadowed by the systemic risk.

Recommendation: It is recommended that patients be referred for multidisciplinary review prior to performing a completion axillary node dissection

Genetics

The BCCA genetics program is receiving an increasing number of referrals from both an increased interest in genetic testing due to public awareness and an expanding list of indications for testing. New indications for testing are triple negative tumours , adopted people, and families with no available living affected relative. They are looking at different ways of delivering genetic counselling in order to decrease waitlists.

For patients at high risk of breast cancer, annual MRI screening is covered for patients with BRCA mutations and a history of mantle radiation in the treatment of Hodgkin's lymphoma. The high risk program is proposing that MRI screening be covered for patients with more than a 30% lifetime risk of breast cancer. Although this has not yet been approved in BC, it is happening in other provinces and it may affect how we counsel higher risk patients.

Radiation

Dr. Scott Tyldesley looked at whether the BCCA should follow the SSO/ASTRO guideline that lumpectomy margins with no tumour on ink do not need re-excision. He pointed out that the meta-analysis did show an increased recurrence rate with close (<2mm margins) compared to clear margins and this has also been shown in studies done by the Breast Cancer Outcomes Unit here in BC. It is known that patients with age <40, extensive DCIS, lobular histology, lymphovascular invasion, multiple margins involved, grade 3 disease, and node positive disease have an increased local recurrence rate and consideration should be given to re-excision in these patients. The radiation oncologists and SON breast tumour group are going to work on updating the BCCA cancer management guidelines.

Medial Hemisphere Lesions

Recent studies have shown a benefit to radiation of regional nodes in medial breast cancers, so post mastectomy radiation is considered in patients with a medial cancer and thought to have a 1-2% overall survival benefit.

Low Risk Breast Cancers

The LUMINA study is accruing in BC and Ontario looking at the question of whether radiotherapy can be avoided in low risk breast cancers. Patients are eligible if they are more than 60 years of age and have a grade 1 or 2 tumour that is ER positive and less than 2cm with margins greater than 2mm. Patients that have a low Ki 67 score (genetic profile luminal A tumours) will not receive radiation.

This data may affect how we all discuss mastectomy with our patients but could particularly affect patients in rural communities that previously opted for a mastectomy in order to avoid radiation. Some such patients may now be appropriately treated with lumpectomy alone.

Recommendation: I now tell older patients with low grade T1 tumours that they may be eligible for lumpectomy alone and suggest that we begin with a lumpectomy.

Neoadjuvant Therapy

The role of neoadjuvant therapy was discussed. Neoadjuvant chemotherapy has traditionally been used in inflammatory breast cancer or advanced/unresectable breast cancer or to downsize a tumour to allow for breast conserving therapy. The role of neoadjuvant chemotherapy in primary operable breast

cancer was discussed. The most current thinking on theoretical/additional benefits to neoadjuvant therapy over adjuvant therapy are:

1. It may be associated with improved survival – (waiting for modern data. B18 accrued 1988-1993 and showed equivalent survival to neoadjuvant and adjuvant chemo).
2. May help to select optimal adjuvant hormonal agents.
3. Provides supportive 'reassurance' to patients and clinicians of 'appropriate' treatment.
4. Tissue acquisition for understanding biology and assessment of predictive biomarkers/assays.
5. Accelerated drug development and clinical validation.
6. Select optimal patients for additional 'consolidative' systemic therapy (residual disease trials).

Each regional cancer centre is approaching neoadjuvant treatment in slightly different ways and approaches in your region should be discussed with your local medical oncologists.

Recommendation: With recent changes in radiotherapy and chemotherapy the decisions about operative approach for primary operable breast cancer are more complicated. Surgical management of the breast and axilla is evolving. Future management of breast cancer patients may involve more preoperative multidisciplinary discussion and the SON is currently advocating for regional cancer programs to engage with local cancer surgeons to optimize patient management.

New Normal: Support for people who have finished treatment for breast or colorectal cancer

The Canadian Cancer Society has recently introduced New Normal: a service for patients who have completed treatment for breast or colorectal cancer to offer support as patients adjust to life after cancer.

New Normal is a free and confidential telephone based peer support program available to people living in BC and the Yukon. Volunteers with specialized training provide emotional support based on shared experience and are able to share appropriate resources.

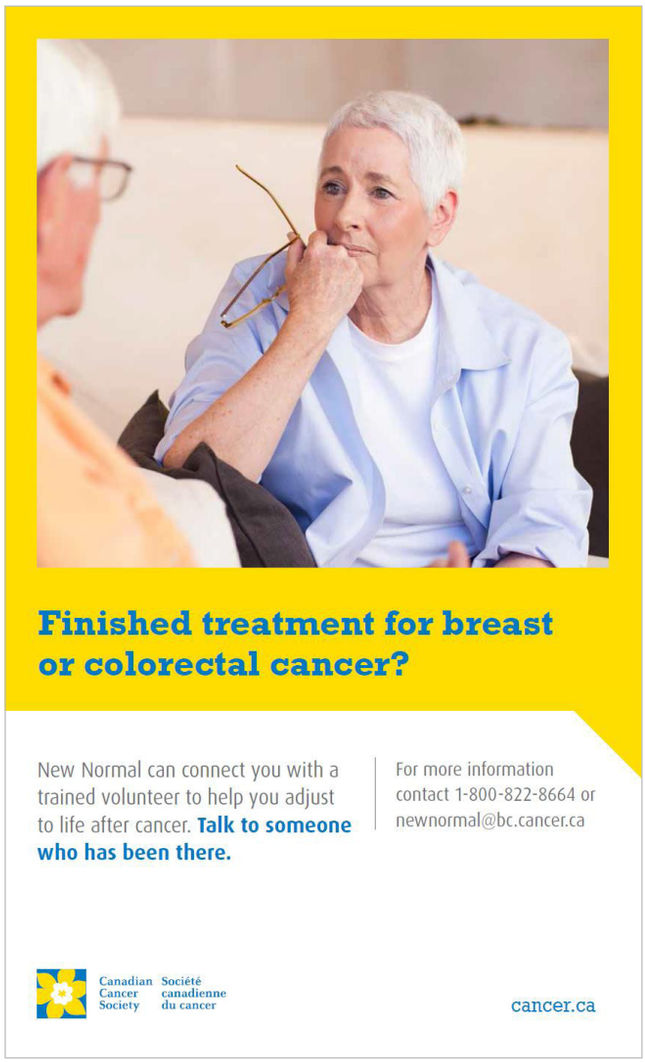
Program staff assess client suitability for the program and provide ongoing coaching and support to volunteers. Interpreters are available to assist with matches when required.

When speaking with patients who are nearing the end of, or have recently finished treatment for breast or colorectal cancer, please let them know that New Normal can help.

Healthcare providers can refer patients with their consent or patients can contact New Normal directly.

For more information or to request materials to share with patients, please call:

1-800-822-8664 or email **newnormal@bc.cancer.ca**



Breast Cancer Articles of Interest

Does a Positive Axillary Lymph Node Needle Biopsy Result Predict the Need for an Axillary Lymph Node Dissection in Clinically Node-Negative Breast Cancer Patients in the ACOSOG Z0011 Era?
Pilewskie, M (, Mautner SK, Stempel, M, Eaton, A, Morrow, M.
Annals of Surg Oncol. 2016 Apr; 23(4): 1123-1128. *www.ncbi.nlm.nih.gov/pubmed/26553439*

Is Sentinel Lymph Node Biopsy Indicated at Completion Mastectomy for Ductal Carcinoma in Situ?
Pilewskie, M, Karsten M (, Radosa J, Eaton A, King TA.
Annals of Surg Oncol. 2016 Mar; 9(3):1-6. *www.link.springer.com/article/10.1245%2Fs10434-016-5145-z*

Imaging for Distant Metastases in Women with Early-Stage Breast Cancer: A Population-based Cohort Study
Simos, D (, Catley C, Walraven C, Arnaout A, Booth C, McInnes M, Ferguson D, Dent S, Clemons M.
Canadian Medical Association Journal. 2015 Sep; 187(12): 387-397. *www.cmaj.ca/content/early/2015/06/22/cmaj.150003.abstract*

Thyroid Cancer: A Screening-Induced Epidemic In Korea?

Carla Pajak MD; Sam M. Wiseman, MD FRCSC
Department of Surgery St. Paul's Hospital & University of British Columbia, Vancouver

Screening for cancer presents a unique opportunity for help but can also potentially lead to harm. The intuitive appeal of screening and early detection must be balanced by the equally significant perils of unnecessary interventions that can be both costly and risky. Thyroid cancer is among the most dramatic recent examples of the pitfalls of cancer screening, and reports from South Korea depict particularly informative case study.

Since 1999 Korea has offered extensive cancer screening to patients for a small co-payment, with the benefits of early cancer detection being widely publicized in the media. The option to include thyroid cancer screening (usually by neck ultrasound) comes at a mere additional cost of $30-50 USD. Thyroid screening of asymptomatic patients has also become commonplace in Korean "health check-ups" and even in GP offices which often have bedside ultrasounds for this purpose.

Not surprisingly, the incidence of thyroid cancer diagnosis has increased 15-fold between 1993 and 2011, with no change in mortality[1]. This dramatic rise in thyroid cancer diagnosis is not without associated complications. Among 15,000 Koreans who underwent thyroid surgery, 11% were rendered permanently hypoparathyroid and 2% had permanent vocal cord paralysis. These complications, in addition to the costs associated with lifelong thyroid replacement, are difficult to justify in the setting of no improvement in survival.

This predicament has left Korean physicians with the difficult task of trying to convince the Korean public to buy-in to some, but not all, cancer screening protocols. This is a challenging message to convey and despite efforts to do so in Korea, the rates of thyroid cancer screening are continuing to rise.

Thyroid cancer in Canada has some similarities to the Korean experience. In the past decade, the incidence of thyroid cancers in Canada has increased by 144% (from 1709 to 4172 cases per year), also with no change in overall mortality[2].

As in Korea, this trend likely reflects more medical imaging, though thyroid cancer screening is generally not carried out in Canada. We are now better able to detect the reservoir of subclinical thyroid cancer estimated in one study to be present in 1/3 of adults[3]. It is not surprising then that our enthusiastic diagnoses and resection of these cancers has failed to impact survival. In order to address this challenge the future identification of molecular prognosticators, or being able to not only determine if a thyroid lesion is cancer, but rather if it is a cancer that will be of clinical significance during an individual's lifetime, is critical.

This epidemic of screening in Korea is occurring at a time when public recognition of potentially "unnecessary care" is coming to the surface. A recent article in the New Yorker discussed the growing burden and costs of unnecessary care. In a single year approximately 25-42% of Medicare patients received at least one of 26 tests or interventions, which have been widely established as useless – conferring no measurable benefit while incurring risk[4].

The idea of appropriate application of health care is especially relevant to the Canadian context of socialized medicine. As physicians we are often gatekeepers and stewards of our system. As practioners who deal on a daily basis with cancer, our application of available screening tests must be both cautious and reasonable. The tenet of "primum non nocere" must underpin all of our interventions.

References:

1. Ahn HS, Kim HJ, Welch HG. Korea's thyroid-cancer "epidemic" - screening and overdiagnosis. N Engl J Med. 2014 Nov 6;371(19):1765-7

2. Shaw A, Semenciw R, Mery L. Cancer in Canada fact sheet series #1 - thyroid cancer in Canada. Chronic Dis Inj Can. 2014 Feb;34(1): 64-8.

3. Harach HR, Franssila KO, Wasenius VM. Occult papillary carcinoma of the thyroid: a "normal" finding in Finland -- a systematic autopsy study. Cancer 1985;56: 531-538.

4. Gawande, A. (2015, May 11). Overkill: An avalanche of unnecessary medical care is harming patients physically and financially. What can we do about it? The New Yorker.

SURGICAL ONCOLOGY NETWORK NEWS

SON Resident Travel Award for BC Surgery Residents/Fellows and Medical Students

This is a competitive award intended to motivate physicians and medical students early in their training, to pursue an interest in surgical oncology and to allow them to present research findings at conferences. Forms and guidelines are available online on the SON website.

2015 Recipients:

- **Jordan Eng,** Canadian Surgery Forum in Quebec City, September 17-20, 2015
  Uptake and impact of synoptic reporting on breast cancer operative reports in a community care setting
- **Dr. Cecily Jonker,** The American Society of Colon and Rectal Surgeons Annual Scientific Meeting in Boston, MA, May 30-June 3, 2015
  Transanal Endoscopic Microsurgery Resection of Rectal Neuroendocrine Tumours: A Single Center Canadian Experience
- **Dr. Ryan McColl,** The American Society of Colon and Rectal Surgeons Annual Scientific Meeting in Boston, MA, May 30-June 3, 2015
  Impact of Hospital Volume on Quality Indices for Rectal Cancer Surgery in British Columbia
- **Dr. Ekua Yorke,** BC Surgical Society Annual Spring Meeting, May 1, 2015, Whistler, BC
  Influence of Gender on the Clinical and Pathological Characteristics of Papillary Thyroid Cancer: Canadian Experience

SON/UBC Summer Student Research Program

The SON/UBC Summer Student Research Program provides undergraduate students with an opportunity to explore their interest in medical research by undertaking a project over the summer under the supervision of an investigator with an appointment in the Faculty of Medicine. For more information and to apply please visit http://med.ubc.ca/research/md_undergrad/funding/summer-student-research-program

2015 Recipients:

- **Amirreza Pakdel Sefidgar.** Supervisor: Dr. Eitan Prisman
  Project Title: A computational approach for patient-specific reconstruction of osseous defects in oro-facial cancers.
- **Linda (Xuan) Wang.** Supervisor: Dr. P Terry Phang
  Project Title: Evaluating quality of life after rectal cancer treatment.

SURGICAL ONCOLOGY NETWORK NEWSLETTER

Editor: Dr. Elaine McKevitt
Managing Editor: Yasmin Miller
Design and Layout: Wade Stow

To submit article ideas or for information, please contact:

Yasmin Miller
T 604 877 6000 x 672410,
E ymiller@bccancer.bc.ca

VISIT THE SURGICAL ONCOLOGY WEBSITE
www.bccancer.bc.ca/health-professionals/networks/surgical-oncology-network

The BC Surgical Oncology Network exists to promote and advance quality cancer surgery throughout the province, enable the integration of quality surgical oncology services into the formal cancer care system, and ensure that patients have the best possible outcomes through consistent access to high quality multidisciplinary care. To enhance appropriate, equitable and timely access to surgical services for cancer patients as close to home as possible, the Network supports communication and sharing of knowledge between subspecialty and community surgeons, their respective hospitals and the BC Cancer Agency.

The Council Executive oversees the implementation of the Network's mandate and is comprised of surgeons and senior health administrators representing all the health regions across the province. The three committees - Clinical Practice, Continuing Professional Development & Knowledge Transfer and Research & Outcomes Evaluation-assist with the planning, implementation and promotion of the Network's goals and priorities. The thirteen Surgical Tumour Groups advise on the issues and challenges in the surgical management of patients within each tumour site to improve the surgical management of cancer patients.

FALL UPDATE 2016 - SAVE THE DATE

The Surgical Oncology Network is pleased to host its annual Fall Update, a full-day course, at the Four Seasons Hotel in Vancouver on October 22. This year's CME accredited conference will focus on current breast, melanoma, and HPB cancer management. The program includes presentations from visiting speakers Dr. Greg McKinnon from Calgary and Dr. Alice Wei from Toronto, as well as many local experts. This conference is a must-attend for surgical oncologists, general surgeons, medical oncologists, radiation oncologists, and residents. Look for program and registration information to be added to our website in the next few months or contact Shahin Mahmoodi for more information. He can be reached at *shawn.mahmoodi@bccancer.bc.ca* or by calling 604-877-6000 ext 673269.

Upcoming Conferences

American Society of Breast Surgeons Meeting, Dallas, TX
April 13-17, 2016, www.breastsurgeons.org

The BC Surgical Society Meeting, Kamloops, BC
May 5-7 2016, www.bcss.ca

The American College of Surgeons 2016 Clinical Congress, Washington, DC
October 16-20 2016, www.facs.org/clincon2016

BC Surgical Oncology Network Fall Update, Vancouver, BC
October 22 2016, www.bccancer.bc.ca

The Western Surgical Association Meeting , Coronado, CA
November 5-8, 2016, www.westernsurg.org

Society of Surgical Oncology Annual Cancer Symposium, Seattle, WA
March 15-18, 2017, www.events.jspargo.com