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Provincial Health Services Authority

Surgery Network Newsletter

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COVID-19 SURGICAL ONCOLOGY TRANSFER NETWORK ON UBCRETICULUM.COM

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Necessity is the mother of invention, and during the early days of the COVID-19 pandemic we realized that there was a necessity for some kind of organized means of transferring cancer patients from hospitals that could no longer perform urgent surgery due to COVID-19 to others that could.

Dr. Carl Brown, Dr. Morad Hameed, and I sent some emails back and forth and we came up with the concept for the transfer network. A map function hosted on the ubcreticulum.com website was created by the web magicians at Actualize8 and the feature went live on April 6, 2020.

The Transfer Network principles are as follows:

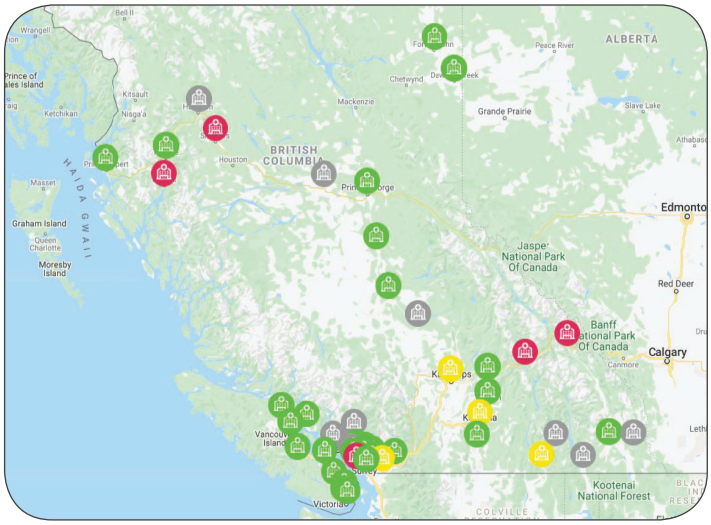
1. **Patient should be ready, willing and available.**
2. **Patient should already be assessed by their local surgeon and fully investigated.**
3. **Patient should not have symptoms of COVID, history of travel or high risk contacts within 14 days and ideally be COVID swab negative.**
4. **The case should ideally be reviewed at MDC and deemed urgent enough not to delay surgical care.**
5. **Ideally, a discussion of options has occurred and patient has an idea of the exact surgery they want.**
6. **The sending surgeon contacts the site lead surgeon of a "green" hospital directly or via the coordinator to be put in touch with a receiving surgeon for the specific surgery needed.**
7. **The sending and receiving surgeons discuss the case.**
8. **The receiving surgeon conducts a tele-consultation whenever feasible or in person and books the patient at their hospital.**
9. **Patient has surgery at green hospital.**

IN THIS ISSUE

Taryn Zabolotniuk, a 3rd year medical student temporarily unemployed due to COVID, volunteered to manage the network, updating the live status of each site and creating a contact surgeon for each hospital.

To change your hospital status or designate a different contact for your site contact Taryn Zabolotniuk at *taryn.z@alumni.ubc.ca*

You can find the Transfer Nework on *ubcreticulum.com* (sign up for free on the site if you haven't already), currently under "Connect" then "Hospital Status".



THE MAP FEATURE ON THE UBCRETICULUM WEBSITE

- ACCESS FOR ONCOLOGY SURGERY
- THREATENED ACCESSS
- NO ACCESS

BREAST IMPLANT ASSOCIATED ANAPLASTIC LARGE CELL LYMPHOMA

DR. REBECCA NELSON, *PLASTIC AND RECONSTRUCTIVE SURGEON*, BURNABY
DR. PETER LENNOX, *PLASTIC AND RECONSTRUCTIVE SURGEON*, VANCOUVER

DR. REBECCA NELSON

Breast implant associated large cell lymphoma or BIA-ALCL was first described in 1997[1], with the number of cases on the rise. It is now a distinct entity recognized by the World Health Organization, with 656 cases worldwide reported to date, including 17 deaths[2]. Textured breast implants were first introduced in 1968 as a way to reduce the formation of capsular scarring around the implant[3]. The cause of BIA-ALCL is not fully understood but is likely the result of multiple factors, including the high surface area of textured implants, genetic factors, gram negative bacteria, and chronic peri-implant inflammation[4].

AT-RISK POPULATION

Patients with textured surface breast implants, including both reconstructive and cosmetic patients, are at risk for developing BIA-ALCL.

INCIDENCE AND RISK IN CANADA

A total of 31 cases have been reported in Canada as of May 2019, with no deaths[5]. The incidence is 1 in 3,565 for patients with Allergan Biocell macro-textured implants, and 1 in 98,000 for patients with Mentor Siltex micro-textured implants[5]. These rates are evolving as we learn more about the disease and improve our ability to monitor and detect it.

ETIOLOGY

BIA-ALCL is a T-cell lymphoma characterized by CD30+ and Anaplastic Lymphoma Kinase (ALK) negative cells[4]. Susceptible patients may also have specific genetic disruptions, such as mutations in the JAK-STAT signalling pathway.

CLINICAL PRESENTATION

Patients typically present in the early stage, with a large seroma or effusion around the implant that occurs >1 year post-op[2], on average 8 years post-implantation[6]. Approximately one third of patients present with, or have an associated capsular mass, and the remaining few with distant metastasis.

DIAGNOSIS

The majority of cases are detected via aspiration of peri-implant fluid, which typically shows CD30+ staining T lymphocytes and a lack of ALK, with a number of other tumour antigens present[4]. Ultrasound investigation may demonstrate a capsular mass, which can be biopsied. CT, MRI and PET scanning can be used in select cases to diagnose distant disease (PET CT is standard in pre-op assessment).

MANAGEMENT

The NCCN has defined a standardized treatment protocol for patients, including urgent referral to a plastic surgeon, and complete surgical removal of the breast implant and capsule (i.e. en bloc resection), which is the mainstay of disease management[6]. Involved nodes may also be resected. Chemotherapy (brentuximab vedotin, an anti-CD30+ immunotherapy drug combination, as well as antracycline-based therapies) may be indicated for disseminated disease. Removal of textured implants without clinical suspicion of disease is not recommended. Plastic surgeons, however, are happy to discuss the risks with patients in office consultation[5].

OUTCOMES

With an indolent course, and disease limited to the effusion and capsule, cure rates approach 100%[7]. For later disease stages, including lymph node or distant metastases, cure rates are lower. The recurrence rate when complete surgical resection is performed is reported as 4% at 5 years[8].

References available on the BC Cancer Surgery Network website at www.bccancer.bc.ca/surgerynetwork. This article first appeared in the BC Cancer Journal of Family Practice Oncology issue 33.

For more information please contact Dr. Rebecca Nelson at *rebecca.nelson@fraserhealth.ca*

GENETIC TESTING FOR NEWLY DIAGNOSED BREAST CANCER PATIENTS

DR. RONA CHEIFETZ, *SURGICAL ONCOLOGIST; MEDICAL LEAD,* HEREDITARY HIGH RISK CLINIC, BC CANCER, VANCOUVER

DR. RONA CHEIFETZ

Last year, the American Society of Breast Surgeons (ASBS) issued a new consensus guideline on genetic testing for Hereditary Breast Cancer[1]. Based on a literature review, they recommended that genetic testing should be made available to all patients with a personal history of breast cancer. For newly diagnosed patients, the rationale for this recommendation was that identification of a pathogenic variant (PV; i.e. mutation) may impact local treatment recommendations (lumpectomy vs bilateral mastectomy) and systemic therapy. For these patients and those with a prior cancer history, identification of an inherited pathogenic variant allows family members to be offered genetic testing. This provides an opportunity to clarify their cancer risks and consider increased cancer surveillance and prevention options.

It is important to recognize that this change in recommendations (from testing for only those meeting recognized high risk criteria to testing everyone with a breast cancer diagnosis), did not come

from any new evidence regarding the risk of hereditary cancer. Overall, the risk of an inherited pathogenic variant as a cause of breast cancer remains 5-10%. However, the ASBS felt that given the significant reduction in the cost of private pay testing (currently in the realm of 250 USD), individuals should have the opportunity to choose to be tested.

The ASBS also stated that breast surgeons can identify individuals who are suitable for testing, inform patients of the risks and benefits, provide access to genetic testing, and also discuss risk management strategies for those patients who test positive[1].

Since the publication of this consensus guideline in February 2019, other organizations have responded with their own guidelines.

The US Preventive Services Task Force in August 2019 recommended that woman at high risk based on personal and family history be offered counselling and if indicated testing. They recommended against routine risk assessment, counselling or testing[2]. Similarly, the National Comprehensive Cancer Network recommend testing based on standard high risk criteria such as age, triple negative disease, family history and ancestry[3].

Similar recommendations were made by multiple other US health care organizations including the American College of Medical Genetics and the American Society of Clinical Oncology. Guidelines from the National Institute for Health and Care Excellence (NICE) in the UK are comparable to these US guidelines and are also followed by the European Society of Medical Oncology[2].

So, only the ASBS has recommended testing for all women with breast cancer.

Where does this leave the practicing surgeon in BC today?

First and foremost, surgeons should identify women with newly diagnosed breast cancer who meet referral criteria for publicly funded genetic testing. This requires a detailed cancer family history (including extended relatives such as grandparents, aunts, uncles and cousins).

In BC, genetic counselling and testing is offered through the BC Cancer Hereditary Cancer Program. Referral criteria for Hereditary Breast Cancer are available on the BC Cancer website *(www.bccancer.bc.ca/health-professionals/clinical-resources/hereditary-cancer)*, are summarized on the referral form, and are listed in the purple box in the next column.

Expedited testing is available if this will impact management decisions, and typically produces results in 2-6 weeks.

For women with newly diagnosed breast cancer who do not meet BC Cancer Hereditary Cancer Program referral criteria, surgeons should discuss the overall risk of an inherited pathogenic variant as a cause of breast cancer is less than 10%, but explain that private pay testing is an option if the patient wishes.

Should a patient be interested in pursuing private pay testing, pretest counselling should include a discussion of the different possible results:

- Personal history of breast* cancer diagnosed ≤ age 35.
- Personal history of breast* cancer diagnosed ≤ age 50 AND no family history known due to adoption.
- Personal history of "triple negative" (ER- PR- HER2-) breast cancer diagnosed ≤ age 60.
- Personal history of male breast cancer.
- Personal history of more than one primary breast* cancer diagnosis, at least one of which was diagnosed ≤ age 50.
- Personal history of ovarian** cancer at any age (pathology report required).
- Personal history of both breast* and ovarian** cancer.
- Personal history of breast or ovarian cancer and Ashkenazi Jewish heritage.
- Family history that includes one or more of the following:
    - A close relative with personal history as above.
    - Ashkenazi Jewish heritage and one or more relatives with breast cancer and/or ovarian cancer.
    - One case of ovarian cancer and one case of breast cancer in close female relatives.
    - Two or more cases of ovarian cancer in close relatives.
    - Two cases of breast cancer in close female relatives, both diagnosed ≤ age 50.
    - Three or more cases of breast cancer in close female relatives, with at least one diagnosed ≤ age 50.

* Breast cancer: includes DCIS (ductal carcinoma in situ); excludes LCIS (lobular carcinoma in situ).

**Ovarian cancer: refers to invasive non-mucinous epithelial ovarian cancer. Includes cancer of the fallopian tubes, primary peritoneal cancer, and STIC (serous tubal intraepithelial carcinoma); excludes borderline/lmp ovarian tumours.

- ***Positive*** - pathogenic variant identified; testing available to relatives.
- ***Inconclusive*** - variant of unknown significance identified; may or may not be related to why the patient developed breast cancer; no testing to relatives and no change in treatment or management recommendations.
- ***Negative*** - no variants identified; depending on the patient's personal and family history this may or may not be reassuring in regards to hereditary cancer in the family.

When multiple genes are tested using panel approaches, there is also the small possibility of unexpected positive results that may confer hereditary cancer risks unrelated to breast cancer.

The potential for future genetic discrimination should also be discussed. The Genetic Non-discrimination Act was established in Canada in 2017 making it a criminal offence for insurance companies or employers to ask about genetic test results or require genetic testing as part of entering into a contract. There were also changes made to the Human Rights Code regarding discrimination based on genetic test results/hereditary conditions. While these protections have been celebrated as a positive step towards reducing genetic discrimination, the law was challenged but has been upheld by the Supreme Court of Canada.

Patients can be referred to several of the available private pay sites. Testing should be done through an accredited clinical laboratory with access to genetic counselling services. Examples include:

• **Invitae** (*www.invitae.com).* Based in the United States. DNA sample (saliva) sent to the US for testing. Genetic counselling available with genetic testing. Depending on the test, it can be ordered by patient directly or may require a physician.

• **Color Genomics** (*www.color.com*). Based in the United States. DNA sample (saliva) sent to the US for testing. Genetic counselling available on request and can be ordered by patient directly.

Patients who test positive for a pathogenic variant through private pay testing should then be referred to the BC Cancer Hereditary Cancer Program for post-test counselling to review risk management recommendations and familial implications. Funded predictive genetic testing is available for relatives who are at significant risk for hereditary cancer.

References available on the BC Cancer Surgery Network website at www.bccancer.bc.ca/surgerynetwork

For more information please contact Dr. Rona Cheifetz at *rcheifetz@bccancer.bc.ca*

REGISTER NOW! BC CANCER SURGERY NETWORK FALL UPDATE 2020

SATURDAY OCTOBER 17, 2020, 8AM TO 12PM

This year the Network will be hosting our annual Fall Update conference virtually via Zoom due to the pandemic. It will be a half day event rather than the normal full day and will be free of charge. Registration for the event is now open! You can register via our website (www.bccancer.bc.ca/surgerynetwork), the PHSA Learning Hub, or by clicking this box (on digital copies of this newsletter).

NETWORK NEWS

2020 UBC/BC CANCER SURGERY NETWORK SUMMER STUDENT RESEARCH AWARD

Recipient: Shivani Mysuria
Project Title: A review of oncoplastic breast reduction surgery for breast cancer patients at Mount Saint Joseph Hospital.
Supervisor: Dr. Carol Dingee

2020 BC CANCER SURGERY NETWORK TRAVEL AWARDS

Recipient: Christina Lee
Event: Canadian Melanoma Conference 2020, February 22-22, Banff, Alberta
Project Title: Surveillance in High-Risk Melanoma: A Novel Approach to a National Expert Consensus Statement.
Supervisor: Dr. Noelle Davis

Recipient: Sita Ollek
Event: Pacific Coast Surgical Association Annual Meeting, February 14-17, California, USA.
Project Title: Location of the primary tumor within the breast: a unique predictor for local recurrence after skin sparing mastectomy with immediate reconstruction.
Supervisor: Dr. Noelle Davis

BC CANCER SURGERY NETWORK NEWSLETTER

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VISIT THE SURGERY NETWORK WEBSITE:
www.bccancer.bc.ca/surgerynetwork

The BC Cancer Surgery 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 BC Cancer.