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Education Update: Fall 2026

By Dr. Sian Shuel,
Medical Education Lead, FPON

To support high-quality cancer care closer to home, BC Cancer Primary Care Program's Family Practice Oncology Network (FPON) continues to support educational initiatives for primary care, general practitioners in oncology and other healthcare professionals. Here's a snapshot of FPON's activities since the last Journal of Family Practice Oncology.

continued on page 3

BEST PRACTICE CANCER CARE GEMS

Recognizing Oncologic Emergencies in the Primary Care Setting – Part 2

By Dr. Sian Shuel, GP in Oncology
Medical Education Lead, FPON

Patients with cancer frequently present to primary care with symptoms related to treatment toxicity or disease progression. A subset of presentations represents time-sensitive oncologic emergencies, and delayed recognition may lead to significant morbidity or mortality.

Dr. Sian Shuel

This article, the second in a 2-part series, reviews 2 oncologic emergencies, namely tumour lysis syndrome (TLS) and cancer-related superior vena cava obstruction (SVCO) and outlines key recognition and early management strategies in the outpatient primary care setting. Part 1 of the series, on febrile neutropenia and malignant spinal cord compression, can be accessed here.

Tumour Lysis Syndrome (TLS)

Tumour lysis syndrome is the rapid breakdown of tumour cells[1]. These cells release massive amounts of intracellular contents into the bloodstream, including potassium, phosphates and nucleic acids, which are metabolized into uric acid. The resultant metabolic disturbances[2] including hyperkalemia, hyperphosphatemia, hyperuricemia, hypocalcemia, can lead to life-threatening consequences, including life-threatening arrhythmias, acute kidney injury and potentially tetany, seizures and death.

Risk factors for TLS include tumours with a high proliferative rate and significant sensitivity to chemotherapy, hematologic malignancies (but can be seen with some solid tumours ex. SCLC, breast), and high tumour burden. Patient factors such as pre-treatment hyperuricemia, pre-existing renal issues, and volume depletion also play a part. If the risk of TLS is high, preventative strategies such as hydration, frequent lab monitoring and hypouricemic therapy such as allopurinol are instituted by the oncology team.

Symptoms and signs of TLS largely reflect the associated metabolic abnormalities (Box 1 & Box 2). They can present as nonspecific and rapidly progress to life-threatening complications. TLS most commonly occurs within 72 hours of administering cancer

continued on page 2

While links to all our educational offerings can be found on our website bccancer.bc.ca/fpon, to improve our ability to communicate with community providers and healthcare partners about the latest Family Practice Oncology Network (FPON) news, educational updates, practice gems and other BC Cancer Primary Care communications including information on the electronic publishing of the twice-yearly Journal, please scan the QR code to sign up for our communications database.

Questions? Please contact us at fpon@bccancer.bc.ca

Disclaimer, If you experience difficulties with any hyperlinks, you may need to update your pdf reader.

Recognizing Oncologic Emergencies continued from page 1

Box 1
History in the Primary Care Office

- Nausea, vomiting, diarrhea, anorexia
- Lethargy, seizures
- Muscle cramps, tetany
- Fluid overload
- Flank pain / renal colic pain
- Cardiac dysrhythmias, syncope, sudden death

Box 2
Physical Exam in the Primary Care Office

Hyperkalemia

- Paresthesia, weakness, arrhythmias

AKI and uremia

- Lethargy
- Generalized pruritis
- Rales / rhonchi / edema from fluid overload
- Muffled heart sounds from uremia-associated pericarditis.

Hypocalcemia

- Carpal spasm, pedal spasm, tetany
- Chvostek sign
- Trousseau sign
- Wheezing with bronchospasm
- Seizure

therapy, but can, rarely, occur before treatment is started.

While there are specific criteria for the diagnosis of TLS, such as the Cairo-Bishop criteria (Box 3), primary care should watch for elevated levels of uric acid, potassium and phosphorus as well as hypocalcemia. If this is noted, the criteria can be looked up. There are shortcomings of the criteria beyond the scope of this article.

If TLS is recognized in the primary care setting, oral hydration should be encouraged while organizing transfer to the emergency room[3]. Subsequent management includes stat labs, close monitoring (including urine output, for cardiac dysrhythmias, and frequent lab work), IV hydration, and prompt correction of electrolyte abnormalities. Hyperuricemia may require rasburicase, which enzymatically converts uric acid to allantoin, which is 5-10 times more soluble in urine than uric acid. This helps prevent and

Box 3
Cairo-Bishop Criteria for diagnosis of TLS

Lab criteria: 2 or more of the following criteria in the same 24-hour period from 3 days before to 7 days after cytotoxic treatment initiation:

- Uric acid 25% increase from baseline or ≥ 476umol/L
- Potassium 25% increase from baseline or≥ 6.0 mmol/L
- Phosphorus 25% increase from baseline or≥ 1.45 mmol/L for adults (≥2.1mmol/L for children)
- Calcium 25% decrease from baseline or ≤ 1.75 mmol/L

Clinical diagnostic criteria: presence of lab tumour lysis syndrome plus one or more of the following:

- Creatinine > 1.5 times the ULN of an age-adjusted reference range
- Seizure
- Cardiac arrhythmia or sudden death

treat uric acid nephropathy. A nephrology consultation for consideration of dialysis may be required.

Cancer-Related Superior Vena Cava Obstruction

Cancer-related superior vena cava obstruction (SVCO) is the partial or complete obstruction of blood flow through the superior vena cava. Obstruction can be caused by direct invasion of the tumour into the SVC or by external compression of the SVC, leading to slowed blood flow and/or thrombosis.

Non-small cell lung cancer accounts for 50% of all cancer-associated SVCO, small cell lung cancer for 25% and Non - Hodgkin lymphoma for 10%. Indwelling venous access devices also increase the risk of venous thrombosis[4]

Clinical findings are related to venous congestion and an increase in venous pressures in the upper body (Box 4 & Box 5).[3] Consequences can include cerebral edema and upper respiratory compromise due to edema of the larynx and pharynx.

When SVCO is suspected, patients should be urgently transferred to the emergency department for imaging, monitoring, and intervention. Contrast-enhanced CT is the initial modality of choice because it is readily accessible and has high sensitivity

Box 4
History in the Primary Care Office[4,5]

- Edema – face, neck, upper extremities, chest
- Pain (classically central chest radiating into neck, face and arms)
- Head fullness (may be worse by bending forward or lying down)
- Distended neck veins
- Cough, dyspnea, stridor, hoarseness, dysphagia

Box 5
Physical Exam in the Primary Care Office

- Edema — face, neck and upper extremities
- Facial plethora
- Cyanosis
- Distended veins - neck and chest
- Stridor
- O2 sat and vitals
- Presence of an IV device
- Avoid tight clothing around the neck

and specificity for identifying central venous lesions.

Overall management is determined by symptom severity[5]. If symptoms are severe or life-threatening, patients are stabilized and transferred for emergent endovascular intervention. This is a true medical emergency requiring immediate intervention to reduce the risk of sudden respiratory failure and death. If stable, the decision regarding endovenous intervention depends on both the severity of symptoms and the suspicion of the tumour type. Intravenous steroids are useful in select settings, namely for patients receiving radiation therapy for severe airway obstruction not amenable to stenting, to reduce the risk of airway obstruction as a result of edema. Steroids are also indicated in cases of steroid-responsive malignancies such as certain types of lymphomas, but caution should be used if suspected lymphoma is not histologically confirmed, as steroids can obscure the diagnosis.

Family doctors and other primary care professionals are integral to the early detection of oncologic emergencies. Rapid recognition and timely coordination with emergency and oncology services substantially improve outcomes.

continued on page 3

Education Update
continued from page 1

FPON continues to host its complimentary accredited **Webcast Series for Primary Care** the third Thursday of most months. These webcasts are coordinated in collaboration with UBC Continuing Professional Development. Topics are chosen based on audience and FPON Webcast Working Group feedback. Recent webcasts have included *Trauma-Informed Cancer Care; Early Onset Cancer; Adolescents and Young Adults with Cancer: Unique Needs and Practical Resources; and Androgen Deprivation Therapy in Prostate Cancer: Mitigating Treatment-Related Toxicities and Addressing Questions on Testosterone Therapy and Prostate Cancer Risk.* Recordings, slides, and associated resources are available in the resource library at bccancer.bc.ca/fpon. Register here for the October 15th 8- 9 AM webinar on Malignant *Primary Brain Tumours: Guidance for Primary Care* and here for the November 19th webinar on *Managing Menopause in Patients with Hormone-Sensitive Cancers: Practical Strategies for Primary Care.*

In addition to the webcast series for primary care, FPON hosted the third in the **GPO Focused Webcast Series** on Ovarian Cancer Management for the GPO. This series was created to meet the ongoing learning needs of GPOs throughout BC and provide an opportunity to network with colleagues and oncologist speakers who share their care for patients. Plans are underway to continue this accredited evening series to keep GPOs abreast of the rapidly moving cancer treatment landscape and maintain networking opportunities.

Along with the GPO Focused Webcasts, FPON continues to offer **CPO Education**, its 4-week virtual half-day didactic sessions, as an accredited, complimentary knowledge refresh for BC's GPOs, oncology nurse practitioners, and BC Cancer associate physicians twice a year. These healthcare professionals can choose from approximately 70 hours of up to date teaching to meet their oncology learning needs without leaving their home community. CPO Education is the didactic component of the 8-week GPO Education, which is required for family physicians in BC to work as GPOs.

In addition to GPO Focused Webcasts and GPO Education, FPON has recently received accreditation for its yearly education session for GPOs at the BC Cancer Summit. Based on feedback from last year's session, FPON is changing the format from GPO Case Study Day to **Practical Tumour Site Updates for GPOs**. Participant feedback will continue to be gathered to support ongoing evaluation and improvement, helping meet the learning needs of those providing cancer care closer to home.

FPON develops brief, practical cancer care **Guidelines for Primary Care.** After completion of *Upper GI Guideline Part 1: Esophageal and Stomach Cancer* and *Part 2: Pancreatic Cancer, Neuroendocrine Tumours (NETs) of the Pancreas and Duodenum* last year, work is now underway on *Part 3: Hepatobiliary Tract*. Access these guidelines, along with others, at bccancer.bc.ca/fpon or here.

Based on the needs identified in the Primary Cancer Care Engagement & Needs Assessment Report, the **BC Cancer Primary Care Learning Sessions** were created as a series of accredited online self-directed learning modules. While the **Cervical Cancer module** was created last year, FPON has recently updated the **Breast and Lung online modules**, with updates to **Prostate and Colorectal** coming soon. Access the modules here.

BC Cancer Primary Care Program's FPON **Annual Education Day for Primary Care** will once again be held virtually in the spring. The Working Group, consisting of family physicians, nurse practitioners, and GPOs, met earlier this month to select the most relevant topics. Save the date for April 17th, and visit bccancer.bc.ca/fpon in the coming months to view the program agenda and register.

If you have feedback or suggestions for future educational initiatives, please email FPON's medical education lead at sian.shuel@bccancer.bc.ca

Recognizing Oncologic Emergencies
continued from page 2

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Exercise and Diet in Cancer Survivorship – Practical Guidance for Family Physicians

By Dr. Thomas Hedley, GP in Oncology
BC Cancer

Introduction

After a cancer diagnosis, many patients are motivated to make lifestyle changes and often prioritize increasing exercise and making healthier food choices[1]. In the survivorship setting, increasing exercise and adopting healthier eating patterns can improve symptoms, quality of life, and decrease risk of all-cause mortality and cancer-related mortality for some cancer types[2-5]. Most of the data on exercise and healthy eating patterns relates to breast, colorectal, and prostate cancer survivors[6], however there is emerging evidence of benefit on mortality outcomes and symptoms in other tumor sites[5,7].

Dr. Thomas Hedley

Key Messages for Patients

To improve symptoms, outcomes and promote recovery of strength and function, here are the key messages to share with patients:

Movement is the mission - Exercise is the most powerful lifestyle behaviour to improve recovery, quality of life, and outcomes after a cancer diagnosis.

Food can be your fuel – Moving towards a more plant-rich diet, such as the Mediterranean diet, which is rich in vegetables, fruits, whole grains, beans, lentils, nuts, and seeds is associated with improved cancer outcomes.

Consistency is key – Make changes to your exercise routine and diet that feel sustainable for years to come. Consistently engaging in these behaviours over many years provides the greatest benefit to your health and cancer outcomes.

Practical Guidance for Family Physicians

Encourage patients to increase their general physical activity (i.e. decrease sitting time) and engage in exercise with cardiovascular and/or strength training as their abilities allow. The most physically active breast, prostate, and colorectal cancer survivors have a 30-40% lower risk of cancer-specific and all-cause mortality compared to the least active survivors[6]. To improve symptoms including fatigue, anxiety, depression, and lymphedema, as well as physical function and quality of life, exercise prescriptions for cancer survivors are shown in the table below[2,3].

Exercise needs to be adapted to each patient given the high prevalence of symptoms like fatigue, neuropathy, post-surgical limb dysfunction, pain, lymphedema or changes in exercise tolerance after cancer treatments[8]. Table 2 suggests programs, apps, videos and handouts to support patients in exercising.

A plant-rich eating pattern, such as the Mediterranean diet, the DASH diet, or the Planetary Health Diet, is currently the most well-supported dietary approach after a cancer diagnosis to reduce risk of all-cause and cancer specific mortality[9] and improve quality of life[10,11]. Practical targets for this type of plant-rich eating pattern would be: 1 serving of dairy per day; 1 serving of fish or poultry or eggs per day; and 1 serving of red meat per week with a base of lentils, beans, soy foods, whole grains, vegetables, fruits, nuts, seeds, and plant oils high in unsaturated fats, while minimizing processed meats and sugar sweetened beverages[12]. Cancer survivors who followed this eating pattern most closely post-diagnosis had reduced risks of cancer-related and all-cause mortality compared with those who were least adherent to this eating pattern[5].

Many patients will make losing weight their primary goal of increasing their exercise and making healthier food choices. For certain cancer types, a healthy body weight post-diagnosis may be associated with decreased risk of mortality compared with BMI in the overweight or obese categories[6,13]. However, weight loss is complex and can be difficult due to a multitude of symptomatic, psychological, and physiological factors after treatment. Patients can be encouraged that increasing physical activity and eating a healthful plant-rich diet may improve their symptoms, functioning, and health outcomes even if these behaviour changes don't result in weight loss[2,14-17].

Conclusion

After a cancer diagnosis, many patients are either preparing to make a change or actively trying to change their lifestyle habits. Primary care providers are well-positioned to provide evidence-based guidance or link patients to resources to support their behaviour change[18]. Table 2 provides resources to support patients with their exercise and nutrition. Overall, patients can be empowered with the knowledge that what they eat and how they move can make a difference in how they recover and thrive after cancer treatment.

continued on page 5

Table 1: Exercise prescriptions for cancer survivors to improve symptoms and quality of life.

Type of Exercise	Cardiovascular Exercise Alone	Strength Exercise Alone	Combination of Strength and Cardiovascular Exercise
Sessions per week	3	2-3	4-5
Minutes per session	30 minutes	30 minutes	30 minutes
Intensity	Moderate	N/A	Moderate-vigorous for cardiovascular exercise
Duration	At least 12 weeks	At least 12 weeks	At least 12 weeks
Examples or Specifics	Brisk walking, light biking, dancing, swimming	2-3 sets of 8-15 repetitions for each major muscle groups	-2-3 sessions of 30 minutes cardio per week -2 sessions of 30 minutes strength training per week, training all major muscle groups

Exercise and Diet in Cancer Survivorship continued from page 4

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Table 2: Resources for cancer survivors to support exercise and dietary changes

Source, description and link
BC Cancer Website: Videos with general nutritional guidance for cancer survivors www.bccancer.bc.ca/health-info/coping-with-cancer/nutrition-support
Inspire Health: Free access to virtual group exercise classes, nutritional counselling with dietitians https://inspirehealth.ca
Prehab Rx: Free app that provides virtual exercise prescriptions and programs to cancer patients by kinesiologists www.prehabrx.ca/#personas
Thrive Health Services: Free evidence-based exercise resources for cancer survivors https://thrivehealthservices.com
rebuild After cancer: Low cost 6-week virtual exercise program for cancer survivors by an US oncology exercise professional. www.mylifestyleshift.com/courses/rebuild
Cancer Nutrition Companion Cookbook: Free e-cookbook exploring "plant-based cooking for side effects of cancer and its treatment" www.gildasclubtoronto.org/wp-content/uploads/2023/03/Cancer-Nutrition-Companion-Cookbook_e-book2023.pdf
BC Cancer Website: Patient handout - Managing Fatigue with Exercise www.bccancer.bc.ca/coping-and-support-site/Documents/Support%20Programs/BCCancer_Exercise_MaximizingEnergyReducingFatigue.pdf

Nutrition, exercise, and cancer: resources for family physicians and patients

By Elena Popova,
BC Cancer Clinical Librarian

Family physicians are increasingly expected to advise patients on diet, physical activity, body weight, and alcohol use. While the evidence base continues to grow, translating research findings into practical discussions can be challenging in busy primary care settings. Trusted open-access resources can help by translating evidence into accessible guidance and educational materials for patients throughout the cancer continuum.

Elena Popova

Prevention: focus on weight, alcohol, nutrition, and physical activity

Many cancers are associated with modifiable lifestyle factors. Resources from the World Cancer Research Fund (WCRF), BC Cancer, HealthLink BC, and the Canadian Cancer Society (see ***References and resources*** *below*) provide an evidence-informed framework that emphasizes maintaining a healthy body weight, engaging in regular physical activity, following nutritious diet, and limiting alcohol consumption. The WCRF Cancer Prevention Recommendations offer a comprehensive summary of the current evidence and can serve as a starting point for conversations about lifestyle and cancer prevention.

Nutrition during cancer treatment

Following a cancer diagnosis, nutrition concerns shift toward supporting treatment tolerance, symptom management, and nutritional status. Patients frequently seek information about eating during chemotherapy, radiation therapy, or surgery, particularly when symptoms affect food intake. BC Cancer's Oncology Nutrition program provides symptom-management guidelines and patient handouts addressing common concerns such as nausea, taste changes, dry mouth, mucositis, diarrhea, and unwanted weight gain. These peer-reviewed resources were developed by oncology dietitians and are intended to support clinicians providing nutritional care to people with cancer. The symptom-specific guidelines provide concise, evidence-informed recommendations that can facilitate patient education and reinforce messages delivered by oncology teams. The resources also support continuity of care as patients move between specialized cancer centres and community-based providers.

Exercise during and after treatment

Historically, patients with cancer were often advised to rest. Current evidence supports the opposite approach for most individuals. Family physicians can reinforce evidence-based information using publicly available materials from HealthLink BC and BC Cancer. These sources summarize evidence indicating that regular physical activity is associated with cancer prevention and may help reduce the impact of treatment-related side effects. They also direct patients to exercise programs and community-based supportive care available in British Columbia. Referral to BC Cancer supportive care services, InspireHealth, and other community organizations may help patients access ongoing support and evidence-informed information about physical activity.

Survivorship and long-term health

As cancer survivorship continues to grow, primary care assumes an increasingly important role in long-term follow-up. Once acute treatment-related side effects have resolved, discussions often return to broader lifestyle factors, including healthy body weight, regular physical activity, alcohol use, and dietary patterns. The resources listed below provide reliable, patient-friendly information that can support these conversations and help patients access trustworthy guidance as they navigate life after cancer treatment.

How the BC Cancer Library supports patients and survivors

The BC Cancer Library provides patient-friendly information to support healthy living during and after cancer treatment. Patients and survivors frequently seek guidance on nutrition, physical activity, weight management, and other lifestyle factors that may contribute to overall well-being and recovery. The library connects individuals with evidence-informed information, educational materials, and self-management tools that align with BC Cancer recommendations for healthy living and survivorship.

While many BC Cancer services are no longer available once active treatment is complete, the BC Cancer Library remains accessible to anyone living in British Columbia and Yukon, at any stage of their cancer journey. Through free access to trusted information on nutrition, exercise, and lifestyle, the library helps patients and survivors make informed choices that support their long-term health and quality of life.

Among many available resources, **Library Pathfinders** are designed to help patients, survivors, caregivers, and healthcare providers quickly identify high-quality information without having to search multiple sources. The pathfinders are curated, printable guides that bring together books, eBooks, websites, videos, patient education materials, and community support programs on specific topics. Some of the topics to explore are:

- Exercise and Fitness
- Nutrition for People with Cancer

References and resources:

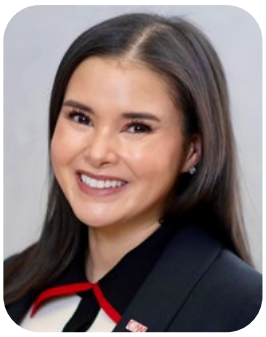
1. BC Cancer: **Preventing cancer: Nutrition & Exercise**
   www.bccancer.bc.ca/prevention/nutrition-exercise
2. World Cancer Research Fund (WCRF): **Our Cancer Prevention Recommendations**
   www.wcrf.org/preventing-cancer/cancer-prevention/our-cancer-prevention-recommendations/

continued on page 10

Breast Cancer Screening After Age 75: An Individualized Decision

By Charlotte Yong-Hing MD FRCPC FCAR Medical Director, Breast Screening Program, BC Cancer, Clinical Associate Professor & Vice Chair Equity, Diversity and Inclusion, Radiology, UBC

In BC, new and returning screening participants aged 75 and older can get a screening mammogram every 1 or 2 years (based on their risk level) if they are in good general health. They will not receive a reminder letter, but they can continue to get screened.



Dr. Charlotte Yong-Hing

While a referral is not required, all patients aged 75 and older, regardless of whether they have ever screened before, are encouraged to discuss with a health care provider whether screening is right for them every time before booking a mammogram. This is because while breast cancer risk continues to increase with age, decisions about screening become more individualized after age 75.

If a patient aged 75 or older chooses to get a screening mammogram after a discussion with a health care provider, they can make a screening mammography appointment by calling a screening centre directly or the Client Services Centre at 604-877-6187 (toll-free: 1-800-663-9203).

Remember: If a patient is experiencing breast symptoms (such as a lump, discharge, or pain), refer for diagnostic imaging regardless of their age. Do not refer the patient to the Breast Screening Program – screening is for asymptomatic patients only.

Why is an individualized approach to breast screening after age 75 recommended?

Adults over 75 are a highly heterogeneous population when it comes to health status. Some individuals are living with multiple chronic health conditions and significantly depend on others for their daily activities. Others remain healthy, independent, and active with life expectancies measured in decades rather than years. A healthy 80-year-old may be more likely to benefit from screening than a frail 76-year-old. Thus, it is important to consider their health and any co-morbidities they may have, while balancing the benefits and limitations of screening, their values, and their quality and quantity of life.

For example, if a patient who is managing multiple comorbidities needed follow-up testing or even breast cancer treatment after a screening mammogram, would they be able to withstand the testing and/or treatment? How would it impact how their other health conditions are managed? Alternatively, if getting screened provides reassurance to the patient, is that a benefit that outweighs the potential impact of follow-up testing or treatment on their health?

Recognizing this, BC Cancer does not recommend an automatic stop to screening at age 75. Instead, individuals over 75 are encouraged to make an informed decision about getting screened.

How can I help patients aged 75 and older decide whether breast screening is beneficial for them?

When supporting patients aged 75 and older with their decision-making, consider their health and any co-morbidities they may have, the benefits and limitations of screening that matter most to them, their preferences, and their quality and quantity of life.

A helpful starting point is to consider whether an individual would want further investigation and treatment if breast cancer was found. For someone who would pursue diagnosis and treatment, screening may be appropriate. For someone with significant competing health concerns who would decline or not be able to withstand the follow-up testing or treatment, screening may offer little benefit. The decision is highly individual and should reflect the patient's goals of care and the impact on their quality of life.

Other considerations to help guide whether the benefit of screening and resulting treatment if needed outweigh the risks and potential impact on quality of life are:

- Does the patient have any serious health condition(s) that might shorten their life expectancy to less than 10 years?
- Would the patient be able to withstand a mammogram and any recommended follow-up tests?
- Will screening and finding breast cancer change the management of the patient?
- Is the patient undergoing any other treatments that would interfere or not be compatible with breast cancer treatment?
- Do you or your patient consider them to be strong enough to consider ongoing mammography screening appropriate?

These conversations also provide an opportunity to reflect on how age influences medical decision-making. Ageism in health care is increasingly recognized and can be subtle. It may appear as assumptions that older adults are not interested in screening, would not benefit from treatment, or are less concerned about a cancer diagnosis. It can also contribute to delays in investigating breast symptoms. A new breast lump, nipple change, skin change, or other concerning finding deserves appropriate assessment regardless of age.

Resources to support breast screening decision-making after age 75

Breast cancer risk does not end at 75, and neither should thoughtful conversations about screening. Older adults deserve the same individualized discussions about cancer prevention, diagnosis, and treatment as any other patient. The decision to start or continue screening should be guided by an individual's overall health, life expectancy, values, and preferences – not age alone.

To support these discussions, the BC Cancer Breast Screening Program has developed resources for patients and health care providers that outline the potential benefits and limitations of screening in this age group:

continued on page 10

BC CANCER BREAST SCREENING
Provincial Health Services Authority

Supporting Patients Aged 75 and Older with Breast Screening Decision-Making:

Information for Health Care Providers

In BC, screening mammograms are **available** to women and many Two-Spirit, transgender and non-binary individuals **aged 75 and older if they are in good general health**. While the BC Cancer Breast Screening Program does not send reminder letters to patients aged 75 and older, patients **can** get a screening mammogram every 1 or 2 years based on their risk level:

Average Risk

For asymptomatic women aged 75 and older with no family history of breast cancer or other high-risk factors, screening mammograms are available **every 2 years** if the patient is in good general health.

Higher than Average Risk

Screening mammograms are available **every year** for patients aged 75 and older who are in good general health, and who:

- Have a family history of breast cancer;

  OR
- Been diagnosed with Atypical Ductal Hyperplasia (ADH), Atypical Lobular Hyperplasia (ALH) or Classical Lobular Carcinoma in Situ (LCIS). Annual mammography through diagnostic testing is available.

High Risk

Screening mammograms are available **every year** for patients aged 75 and older who are in good general health, and who:

- Have two biological relatives (parent, child, sibling, grandparent, aunt, uncle, great-aunt, great-uncle) on the same side of the family diagnosed with breast cancer before age 50[2];
- Had thoracic radiation between ages 10 to 30;

  OR
- Are a known pathogenic gene variant[3] carrier or an untested family member of a known pathogenic gene variant carrier.

A **referral is not required**, but we encourage patients aged 75 and older to discuss with a health care provider about whether screening is beneficial for them and their health before booking a mammogram. This is because after the age of 75, screening and any recommended follow-up procedures or treatment may no longer benefit their health or quality of life as much as when they were younger.

Is screening beneficial for my patient and their health?

After the age of 75, the decision to get screened requires a comprehensive individualized approach. When supporting patients aged 75 and older with their decision-making, it's important to consider their health and any co-morbidities they may have, the benefits and limitations of screening that matter most to them, their preferences, and their quality and quantity of life.

Before the patient books their mammogram, encourage them to:

1. Review the Decision Aid: "Should I Get Screening Mammograms If I'm 75 or Older?" This resource guides patients to think about the benefits and limitations of breast screening that matter most to them, while reflecting on their health.

View online: www.bccancer.bc.ca/screening/Documents/Breast_Decision-Aid-75.pdf

Order print copies for your clinic: www.screeningbc.ca/order-materials

2. Discuss whether screening is beneficial based on their general health and the impact it will have on the rest of their life. To help guide your assessment of the patient's health, consider the following questions:

Does the benefit of screening and resulting treatment if needed outweigh the risks and potential impact on quality of life?

Specific considerations to determine this are:

- Does the patient have any serious health condition(s) that might shorten their life expectancy to less than 10 years?
- Would the patient be able to withstand a mammogram and any recommended follow-up tests?
- Will screening and finding breast cancer change the management of the patient?
- Is the patient undergoing any other treatments that would interfere or not be compatible with breast cancer treatment?
- Do you or your patient consider them to be strong enough to consider ongoing mammography screening appropriate?

See the next page for sample scenarios illustrating how and when these questions may be taken into consideration.

Version: May 2026

Sample Scenarios: Supporting Patients Aged 75+ with Breast Screening Decision-Making

While a patient aged 75 or older may meet the eligibility criteria for breast screening, there are many factors that could affect whether they would continue to benefit from screening. These include their health condition(s), the benefits and harms of screening that matter most to them, preferences, and quantity and quality of life.

In the following sample scenarios, all of the patients are over the age of 75 and eligible for breast screening. They are seeking input from you, their primary care provider, about whether they should get screened. As you review each scenario, think about:

- What questions about the patient's health, preferences and values will you ask or consider to assess whether screening may still be beneficial and appropriate?
- How will you discuss these topics with the patient in a patient-centered and compassionate way?

Miranda

Miranda is a 77-year-old woman with a history of falls and who recently started showing signs of dementia, including short-term memory loss, confusion and difficulty with everyday tasks. She is currently living on her own while she waits for a spot to become available at a long-term care home. Her daughter visits occasionally to help with chores and to take her to appointments. Miranda feels most relaxed and oriented when she has a routine.

Miranda is seeing you for a check-up. Her daughter remembers that Miranda's last mammogram was 2 years ago and asks you whether Miranda should get screened.

Questions you may consider to assess whether screening is appropriate for Miranda are:

- How does Miranda feel about getting a mammogram?
- Is Miranda strong enough to withstand a mammogram and any recommended follow-up tests or treatments?
- If Miranda needed any recommended follow-up tests or treatment, would her progressive memory problems, confusion and need for routine cause her to feel more anxious or stressed, and/or prevent her from attending follow-up appointments?

Wei

Wei just celebrated her 76th birthday. She has congestive heart failure, which makes it difficult for her to be mobile, and she is learning to manage her new diabetes diagnosis.

During her phone appointment for a medication refill, Wei asks if it is time for her annual mammogram. She says, "I don't want to die from breast cancer like my mother and sister did."

While Wei has serious health conditions that may make it harder for her to go for a mammogram and tolerate any follow-up tests or treatments, you wonder:

- How would not knowing whether she has breast cancer affect Wei's quality of life? Is peace of mind enough to outweigh the the risks of screening for Wei?
- Would screening and potential breast cancer treatment change how Wei's congestive heart failure and diabetes are managed?

Kiran

Kiran is your new 80-year-old patient, who joined your clinic after her primary care provider retired. During her intake appointment, she shares that she is very active in the community, lives with her son and his family, and enjoys going for walks everyday with her friends. Her main health concern is increasing pain in her knee due to arthritis but she is scheduled for a knee replacement surgery in 2 months.

Kiran recently attended a community workshop about cancer screening, which reminded her that her last mammogram was 6 years ago. She's wondering if she still needs to get screened.

To help Kiran make an informed decision, questions that may come to your mind are:

- How important is getting screened to Kiran?
- What does Kiran know about the benefits and limitations of screening after age 75?
- Depending on the timing of the mammogram, would Kiran be able to withstand the mammogram and any follow-up tests or treatments while recovering from her knee replacement?

Remember:

- In BC, screening mammograms are available to women and many Two-Spirit, transgender and non-binary individuals aged 75 and older if they are in good general health.
- While the Breast Screening Program does not send reminder letters to patients aged 75 and older, patients **can** get a screening mammogram every 1 or 2 years based on their risk level. A referrral is not required.

FPON's Annual Education Day for Primary Care

By Dr. Sian Shuel, GP in Oncology
Medical Education Lead, FPON

BC Cancer Primary Care Program's Family Practice Oncology Network once again hosted its Annual Education Day for Primary Care. This year's focus was on **Cancer Treatment-Related Toxicities: Practical Pearls for Primary Care Providers,** with engaging talks on systemic therapies, including cytotoxic chemotherapy, targeted cancer therapy, immune checkpoint inhibitors, and hormone therapy for prostate and breast cancer. The day also included dynamic presentations on Skin, Bladder, and Bowel: Addressing the Spectrum of Radiation Side Effects and on cancer-associated thrombosis. In addition to many practical pearls, the day generated practical resources for primary care practice.

In addition to medical knowledge content, as one participant shared, "The partnership between primary care and specialists was emphasized throughout, which I appreciated." The day inspired a practical resources list for primary care, and, in keeping with the spirit of collaboration, the list opens with contact information for the cancer care team at BC Cancer. Explore the resources below.

FPON's Annual Education Day – Cancer Treatment Related Toxicities Resources

BC Cancer Provincial Nursing Line for Patients 24/7 **1-833-818-ONCO (6626)**

BC Cancer Centre Phone Numbers to reach regional oncology team (bottom of page)

BC Cancer Symptom Management Guidelines: Nausea and Vomiting

BC Cancer Symptom Management Guidelines: Diarrhea

BC Cancer Magic Mouthwash – Prescription and FAQs

BC Cancer Exercise Support, including Exercise Prescription and Red Flags: Exercising During and After Cancer

Medications for Menopause-Associated Vasomotor and Genitourinary Symptoms (particularly pages 8 and 9)

Radiation Proctitis: McKeown DG, Gasalberti DP, Goldstein S. Radiation Proctitis. [Updated 2024 Jan 11]. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2026 Jan-. Available from: www.ncbi.nlm.nih.gov/sites/books/NBK559295/

Nutrition, exercise, and cancer: resources continued from page 6

3. BC Cancer: **Nutrition Information for patients** - includes handouts on eating-related issues www.bccancer.bc.ca/health-info/coping-with-cancer/nutrition-support
4. BC Cancer: **Nutrition Resources for clinicians** – includes symptom-specific guidelines www.bccancer.bc.ca/health-professionals/clinical-resources/nutrition#Guidelines
5. BC Cancer: **Alcohol and cancer treatment** www.bccancer.bc.ca/health-info/coping-with-cancer/alcohol-cancer-treatment
6. American Cancer Society: **Nutrition and physical activity during and after cancer treatment** www.cancer.org/cancer/supportive-care/nutrition-activity-with-cancer.html
7. HealthLink BC: **Cancer and healthy eating** www.healthlinkbc.ca/living-well/food-and-nutrition/conditions/cancer
8. HealthLink BC: **Physical activity and cancer** www.healthlinkbc.ca/living-well/physical-activity/active-for-health/chronic-conditions/cancer
9. Canadian Cancer Society: **Eating well when you have cancer** (PDF available online in English, French, Chinese; print booklet available at BC Cancer Library) https://cancer.ca/en/cancer-information/resources/publications/eating-well-when-you-have-cancer
10. BC Cancer Library: **contact information and Pathfinders** www.bccancer.bc.ca/our-services/services/library

Breast Screening in BC after age 75 continued from page 7

Fact Sheet for Health Care Providers: Supporting Patients Aged 75 and Older with Breast Screening Decision-Making

Decision Aid for Patients: Should I Get Screening Mammograms if I'm 75 or Older?

For more information about breast screening in BC

Visit www.screeningbc.ca/health-professionals/breast

Complete the free e-learning module, Breast Screening in BC (developed in collaboration with UBC CPD)

To stay informed about the latest resources and updates for health care providers, subscribe to BC Cancer Screening's Health Care Provider E-Newsletter. This quarterly e-newsletter highlights resources, tools, and information to help you support patients to prevent cancer and participate in breast, cervix, colon and/or lung screening.

Colon Screening: Polyposis Update 2026

By Jennifer J Telford MD MPH FRCPC
Medical Director, BC Colon Screening Program
Clinical Professor of Medicine, UBC

The BC Colon Screening Program records the pathology of all precancerous lesions removed during initial colonoscopy following an abnormal fecal immunochemical test (FIT), as well as those identified and removed during subsequent surveillance colonoscopies. Now more than 10 years into the program, many participants have undergone multiple colonoscopies and have had numerous precancerous lesions removed. Through a review of program data, we have identified thousands of individuals who meet criteria for polyposis, highlighting an opportunity to support the management of these individuals and their families.

Dr. Jennifer Telford

In fall 2025, a multidisciplinary working group was established, comprising physicians, nurse practitioners, and program patient coordinators from across the province, along with the BC Colon Screening Program's Colonoscopy Leads and experts from the Hereditary Cancer Program (HCP).

The group developed educational resources for patients, primary care providers, and colonoscopists, and established a process for the management of individuals with polyposis. This process incorporates updated eligibility criteria for genetic testing and the mainstream genetic testing pathway whereby colonoscopists (or other providers) can order genetic testing directly for eligible patients without HCP referral. Patients with positive results or those who meet specific polyposis criteria are reflexively referred for genetic counselling with the HCP. The "Supporting Patients with Polyposis: Information for Health Care Providers" support document has been developed to help provide guidance on this screening process.

BC CANCER COLON SCREENING
Provincial Health Services Authority

Supporting Patients with Polyposis:
Information for Health Care Providers

Polyposis is defined by numerous polyps detected at colonoscopy and is diagnosed when the cumulative number of polyps removed during a patient's lifetime reaches certain thresholds. Patients with polyposis are at higher risk of developing colon cancer and require more frequent colonoscopy surveillance and may be at higher risk of other types of cancers. Polyposis is categorized by the histology of the polyps: adenoma, serrated lesion or hamartoma.

What causes polyposis?

For most people, there is no known cause for their polyposis. However, some people are born with a **pathogenic germline variant** (genetic mutation that can be inherited) associated with a **polyposis syndrome**. Patients with polyposis may be eligible for genetic testing to assess whether they have a pathogenic germline variant.

Adenomatous Polyposis

- 10 or more adenomas
- May be caused by a pathogenic germline variant
- **Screening for extra-colonic cancers required:**
  - Screening for gastric and duodenal (ampullary) cancers
  - Screening for thyroid and skin cancer

Examples of Adenomatous Polyposis Syndromes:

APC-Associated Familial Adenomatous Polyposis (FAP)

- Autosomal dominant inheritance
- Two types:
  1. **Classic Familial Adenomatous Polyposis:** > 100 adenomas develop in teenage years with colon cancer by age 30 without colectomy
  2. **Attenuated FAP (AFAP):** < 100 adenomas between ages 40 to 60 years

MUTYH-Associated Adenomatous Polyposis (MAP)

- Autosomal recessive inheritance: Both alleles must be affected (homozygous)
- < 100 adenomas develop between ages 40 to 60 years
- Some patients have serrated polyposis

Serrated Polyposis Syndrome

- Has either:
  1. 5 or more serrated polyps proximal to the rectum, all ≥ 5 mm, with 2 ≥ 10 mm; **OR**
  2. More than 20 serrated polyps of any size distributed throughout the colon with ≥ 5 proximal to the rectum
- Autosomal dominant inheritance
- May be associated with MUTYH pathogenic germline variant

Hamartomatous Polyposis Syndromes

- Rare, autosomal dominant inheritance
- Suspect when 2 or more hamartomas identified
- Gene affected, clinical features and risk of extra-colonic cancers vary depending on the syndrome:
  - Peutz-Jeghers Syndrome
  - Juvenile Polyposis Syndrome
  - Cowden's Syndrome
  - Bannayan-Ruvalcaba-Riley Syndrome
  - Hereditary Mixed Polyposis Syndrome

What do patients with polyposis need to know?

Polyposis refers to many polyps found during colonoscopy. There are different types of polyposis depending on the kind of polyp found.

For most people, the cause of polyposis is not known. Some people are born with a change in their genes called **pathogenic germline variants**. These genetic changes can cause polyposis. They are diagnosed with a blood test.

People with polyposis are at higher risk of colon cancer. Regular colonoscopy is required to remove polyps, which can prevent cancer. Screening for other types of cancer may be recommended for people with polyposis.

Close biological relatives of people with polyposis should have a colonoscopy. If there is a pathogenic germline variant found in a family, then biological relatives can also have genetic testing.

Version: April 2026

Recommended Next Steps for Patients with Polyposis

Patient has colonoscopy and is diagnosed with polyposis

Colonoscopist Consultation[1]

Colonoscopist addresses with the patient:

- Their polyposis diagnosis and what it means
- Their colonoscopy surveillance interval
- Whether upper GI cancer screening is recommended
- Whether biological relatives need to be screened
- Whether they are eligible for genetic testing
- Whether they would be eligible for Hereditary Cancer Program (HCP) assessment after genetic testing

Next Steps Based on Patient's Eligibility for Genetic Testing

Patient is **eligible** for genetic testing

Patient **declines** genetic testing

Patient is **ineligible** for genetic testing

Colonoscopist orders mainstream genetic testing
(completes Mainstream Hereditary Cancer Multi-Gene Panel Lab Requisition)

Colonoscopist provides ongoing care to patient

Patient **receives** genetic testing results

Pathogenic variant **found**

Pathogenic variant **not found**

Automatic referral to HCP if ≥ 20 adenomas and/or ≥2 hamartomas

Automatic referral to HCP; Provides recommendations for patient and their biological relatives

Who is eligible for genetic testing?

Patients who have:

- 10 to 19 adenomas found ≤ 60 years; **OR**
- ≥ 20 adenomas found at any age; **OR**
- Serrated Polyposis Syndrome[2]; **OR**
- ≥ 2 hamartomas

Who is eligible for HCP evaluation?

Patients who are eligible for and undergo genetic testing are automatically referred to HCP[3] if they have:

- A genetic test result where a pathogenic variant is found[4]; **OR**
- The indication for genetic testing was either:
  - ≥ 20 adenomas found at any age; **or**
  - ≥ 2 hamartomas

[1] The colonoscopist who completed the last colonoscopy for the patient where the patient met the threshold for polyposis will complete the consultation.
[2] Refer to the first page for the Serrated Polyposis Syndrome criteria.
[3] Health care provider does not need to directly refer the patient.
[4] Patients ≤ 60 years with 10 to 19 adenomas, and patients with Serrated Polyposis Syndrome, will be referred for HCP evaluation only if their genetic test result finds a pathogenic variant.

Helpful Resources

Information about Specialists Ordering Genetic Testing

Lab Requisition: Mainstream Hereditary Cancer Multi-Gene Panel (Genetic Testing)

Video for Patients: Information about Genetic Testing

BC CANCER CERVIX SCREENING
Provincial Health Services Authority

It's Safe to Rescreen in 5 Years:
Facts about HPV Primary Screening

Since January 2024, cervix screening in BC has been transitioning from cytology to HPV testing as the primary screening method. With the transition to HPV testing, **patients who are at average risk and do not have HPV detected in their sample are recommended to rescreen in 5 years (instead of 3 years with cytology).** Here's why:

When HPV is not detected, the risk of developing precancerous lesions within 5 years is low.

Most CIN 2+ and CIN 3+ that are detected occur after 7 years.

HPV testing is more sensitive than cytology, for patient- and provider-collected samples.

The high sensitivity and high negative predictive value of HPV testing means when HPV is not detected in a sample, it's very unlikely that there are any changes to the cervix.

HPV is often cleared or controlled by the body's immune system within 2 years.

Cervix screening looks for persistent high-risk HPV infections that could cause precancerous lesions.

Cervical cancer takes 15 to 20 years to develop in immunocompetent people.

Cytology screening required screening more often because it has a low sensitivity and may have missed cell changes in previous screens — **not** because cervical cancer develops quickly.

Waiting 5 years to rescreen can prevent the harms of overscreening and overdiagnosis.

This allows the body to manage transient HPV infections that wouldn't have required diagnostic testing or treatment.

See the next page for more information.

Version: June 2026

What the Evidence Says about the Safety of the 5-Year Interval and Patient-Collected Samples

The evidence supports the safety of a longer screening interval of 5 years with HPV testing:

- Among those in the HPV FOCAL Trial who did **not** have HPV detected in their sample (Figure 1)[1]:
  - The risk of CIN 2+ was low: 0.21% at 5 years, 0.35% at 8 years and 0.82% at 10 years
  - The majority of CIN 2+ and CIN 3+ that were detected occurred after 7 years
- A 2026 analysis from the HPV FOCAL Trial found that the risk of CIN 2+ at 9 years after HPV was not detected in a sample was similar to the risk at 3 years after normal cytology.[2]
- HPV testing is more sensitive than cytology for detecting CIN 2+ with a sensitivity of 96% as compared to 53% for cytology (Figure 2). Another advantage to HPV testing is the negative predictive value, which approaches 100%.[3]

The evidence supports the use of patient-collected HPV samples as an equivalent alternative to a provider-collected liquid-based cytology (LBC) sample:

- In BC, the Roche cobas® polymerase chain reaction (PCR) based assay is used for both patient-collected and provider-collected samples to test for HPV. The landmark IMPROVE Trial — the first randomized non-inferiority trial — demonstrated that HPV self-sampling with a PCR-based assay was non-inferior to clinician-collected sampling for CIN 2+ detection.
- A meta-analysis of 56 studies found a relative sensitivity of 0.99 for PCR-based assays on self-collected versus clinician-collected samples.[4]

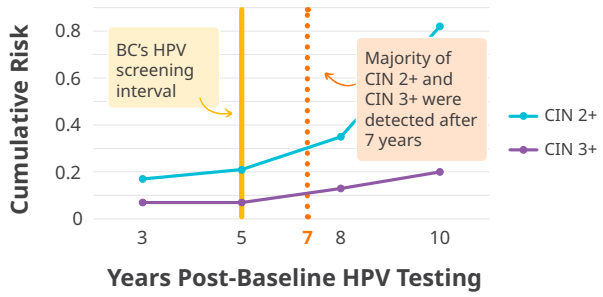


Figure 1: Cumulative risk of CIN 2+ and CIN 3+ over the HPV FOCAL Trial's 10-year follow-up period.

	HPV Testing	Cytology
One-time sensitivity in detecting CIN 2 or worse	96.1% (94.2–97.4%)	53.0% (48.6–57.4%)
One-time sensitivity in detecting CIN 3 or worse	90.7% (90.4–91.1%)	96.3% (96.1–96.5%)

Figure 2: Sensitivity of HPV testing and cytology in detecting CIN 2+ and CIN 3+.

5-Year HPV Screening Interval in Other Jurisdictions: An Evidence-Based Recommendation

The 5-year screening interval in BC and in other countries is grounded in research demonstrating the safety of extending the interval for people at average risk, in both patient- and provider-collected samples.

Country	Age Criteria	Interval (Years)	Collection Methods	Year Self-Screening First Offered
Australia	Ages 25 to 74	5	Provider-collected LBC Vaginal swab† (Copan FLOQSwab)	2017
Denmark	Ages 27 to 64	5	Provider-collected LBC Vaginal swab† (Rovers Evalyn Brush; Copan SensiGrip)	2017
Italy	Ages 30 to 64	5	Provider-collected LBC Vaginal swab† (Copan FLOQSwab)	2020
Netherlands	Ages 30 to 60	Ages 30 to 39: 5 Ages 40 to 60: 10	Provider-collected LBC Vaginal swab† (Copan FLOQSwab)	2017
New Zealand	Ages 25 to 69	5	Provider-collected LBC Vaginal swab† (Copan FLOQSwab)	2023
Norway	Ages 34 to 69	5	Provider-collected LBC Vaginal swab† (Copan FLOQSwab)	2023
Sweden	Ages 23 to 70	Ages 23 to 49: 5 Ages 50 to 70: 7	Varies by region	2017

†A vaginal swab could be patient- or provider-collected.

[1] A. Gottschlich, D. van Niekerk, L. W. Smith, L. Gondara, J. Melnikow, D. A. Cook, M. Lee, G. Stuart, R. E. Martin, S. Peacock, E. L. Franco, A. Coldman, M. Krajden and G. Ogilvie. "Assessing 10-year safety of a single negative HPV test for cervical cancer screening: Evidence from FOCAL-DECADE cohort," *Cancer Epidemiology, Biomarkers, and Prevention*, vol. 30, pp. 22-29, 2021.
[2] A. Gottschlich, L. W. Smith, Q. Hong, S. Dabee, L. Gondara, D. Cook, R. Elwood Martin, J. Melnikow, S. Peacock, L. Proctor, G. Stuart, E. L. Franco, M. Krajden, G. S. Ogilvie, "HPV, cytology, and cotest cervical cancer screening and the risk of precancer," *JAMA Network Open*, vol. 9, p. e261304, 2026.
[3] M-H. Mayrand, E. Duarte-Franco, I. Rodrigues, S. D. Walter, J. Hanley, A. Ferenczy, S. Ratnam, F. Coutlée and E. L. Franco for the Canadian Cervical Cancer Screening Trial Study Group, "Human Papillomavirus DNA versus Papanicolaou screening tests for cervical cancer," *The New England Journal of Medicine*, vol. 357, pp. 1579-1588, 2007.
[4] M. Arbyn, S. B. Smith, S. Temin, F. Sultana, P. Castle and Collaboration on Self-Sampling and HPV Testing, "Detecting cervical precancer and reaching underscreened women by using HPV testing on self samples: updated meta-analyses," *British Medical Journal*, vol. 363, p. k4823, 2018.

Saving Lives from Ovarian Cancer Through Prevention

Ovarian cancer is the deadliest of all the gynecologic cancers and is more deadly than breast cancer, and family physicians and other primary care practitioners have the power to change this. The bleak 44% five-year survival rate of ovarian cancer is due in large part to the advanced stage at which the cancer is typically diagnosed. Without a screening test, reliable diagnostic tests, or red flag symptoms, there has not been any tools in the primary care toolbox to combat ovarian cancer – until now.

Prevention is the most effective way to save lives from cancer, including ovarian cancer. Effective prevention relies upon the role of family physicians and other primary care practitioners in their ongoing relationship with their patients. To determine the appropriate action, it is first important to understand that recommended preventative strategies will depend on an individual's estimated lifetime risk of developing ovarian cancer. All people born with ovaries are at some risk of developing the disease, but some are at an increased risk due to an inherited mutation in an ovarian cancer risk gene. If a person does not have an inherited mutation in an ovarian cancer risk gene, then they are at a 1.4% lifetime risk of developing ovarian cancer. There are more than 10 ovarian cancer risk genes; estimated lifetime risk for those with an inherited mutation can range from 3% to 44%.

Family physicians and other primary care practitioners should discuss personal and family history of all types of cancers on both sides of a patient's family to determine if they may be at risk of having an inherited mutation in an ovarian cancer risk gene. These suspicions should be confirmed with genetic testing. If results find an inherited mutation in an ovarian cancer risk gene, then risk-reducing salpingo-oophorectomy (RRSO) – the surgical removal of both ovaries and both fallopian tubes – and appropriate long-term follow-up care is recommended. Recommended age for RRSO will depend on the person's genetic mutation.

For those at average (1.4%) lifetime risk, this discussion should include opportunistic salpingectomy (OS) with patients who are undergoing unrelated pelvic or abdominal surgery, such as tubal ligation, hysterectomy, C-section, or bowel surgery. OS is the removal of the fallopian tubes and is associated with a reduction in ovarian cancer risk, as the most common and deadly type of ovarian cancer – high grade serous ovarian cancer – originates in the fallopian tubes.

For this same average risk group, the use of oral contraceptives is recommended to reduce ovarian cancer risk, as research has found that when used for 5 years or more, oral contraceptives reduce the risk of ovarian cancer by 50%. This risk reduction persists even decades after ceasing use.

Research conducted by Ovarian Cancer Canada and published in *Current Oncology* found that these pathways to ovarian cancer prevention are not well taken up across Canada. Therefore, Ovarian Cancer Canada established the Ovarian Cancer Prevention Task Force, convening leading experts from across Canada to optimize the pathway to ovarian cancer prevention. This task force consists of gynecologic oncologists, family doctors, nurse practitioners, genetics counsellors, menopause specialists, researchers, patients, and previvors (people at high risk for ovarian and related cancers due to a known mutation in an ovarian cancer risk gene, but without a diagnosis) from across the country.

The Ovarian Cancer Prevention Task Force has developed two resources for the primary care setting to ensure that family physicians, other primary care practitioners and their patients know how to prevent ovarian cancer:

- A one-page handout for primary care providers on how to assess patient risk of ovarian cancer and the associated referral pathways.
- A waiting room poster for patients that can be posted by clinic staff.

You can view and download these resources now by clicking here. You can also order hard copies of these resources, free of charge, by clicking here.

Please join us in spreading the word about ovarian cancer prevention to your colleagues. All patients deserve this.

Thyroid Cancer: What Primary Care Practitioners Need to Know When Caring for Their Patients

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Dr. Shivraj Riar

The incidence of thyroid cancer in Canada increased from 1984 to 2013, followed by a subsequent decline; the most recent projections estimate 6,100 cases in 2026.[1] Low-risk differentiated thyroid cancer (DTC), with an excellent treatment response, is associated with a recurrence risk of less than 2% and a 20-year disease specific mortality of less than 1%.[2]

In alignment with the 2025 American Thyroid Association DTC Guidelines and the Follow-up and Transition of Care for Low Recurrence Risk Thyroid Cancer Patients in Canada, thyroid cancer care is undergoing a major evolution.[2,3] This shift is centred around de-escalation of care, and for the first time, provides guidance on when to consider cessation of surveillance.

For patients who have undergone hemithyroidectomy, recommended follow-up includes a one-time post-operative measurement of thyroglobulin (TG) with thyroglobulin antibodies (TGAB), annual thyroid-stimulating hormone (TSH) monitoring (targeted within the reference range), and ultrasound surveillance at 1–3 years. Consideration may then be given to cessation of all monitoring after 5–8-years. Transition to primary care can also be considered at year 2 years post HT[3] (Table 1).

For patients undergoing total thyroidectomy (TT) without radioactive iodine (RAI), the new target for a biochemical excellent response is <2.5 ng/mL as well as a TSH level within the normal reference range. In this population, ultrasound is recommended at 1–3-year intervals following the initial assessment, with consideration of discontinuation between years 5–8 in patients demonstrating an excellent response; Canadian guidelines also recommend cessation of surveillance at year 5. (Table 2)

continued on page 18

Hemithyroidectomy Targets	ATA DTC 2025	Canadian Consensus Guidelines
TG and TGAB	No Target Assess TG and TGAB at 6–12 weeks post surgery to ensure not metastatic.	No Target Assess TG and TGAB once post-operatively. Consider further imaging if TG >100 ng/mL
TSH Target	TSH within the normal laboratory reference range.	TSH within the normal laboratory reference range.
Ultrasound Surveillance	Neck U/S: Perform at 6–12 months post-operatively. If clear, continue every 1–3 years for 5–8 years.	Neck U/S: Perform at 6–12 months post-operatively. If clear, perform a repeat exam at 3–5 years, with either discontinuation or continued monitoring at 5-year intervals.
Cessation of All Surveillance	TSH: Annual monitoring (no end date) TG/TGAB: Not applicable U/S: Discontinue between years 5–8. Follow contralateral nodules as per ATA Thyroid Nodule guidelines.	TSH: Annual monitoring (no end date) TG/TGAB: Not Applicable U/S: Consider every 5 years (no end date) or as determined by nodule findings.

Table 1: Long Term Follow-up of Low-Risk DTC Patients who Undergo Hemithyroidectomy Who Demonstrate an Excellent Response

Abbreviations: ATA: American Thyroid Association; DTC: differentiated thyroid cancer; TG: thyroglobulin; TGAB: thyroglobulin with thyroglobulin antibodies; TSH: thyroid-stimulating hormone; U/S: ultrasound

Total Thyroidectomy Without RAI Targets	ATA DTC 2025	Canadian Consensus Guidelines
TG and TGAB	Non-stimulated TG <2.5 ng/mL with negative TGAB and no evidence of disease on imaging: Excellent Response. Annual monitoring of TG/TGAB.	Non-stimulated TG <2.5 ng/mL with negative TGAB and no evidence of disease on imaging: Excellent Response. Annual monitoring of TG/TGAB.
TSH Target	TSH within the normal laboratory reference range: Annual monitoring of TSH.	TSH within the normal laboratory reference range: Annual monitoring of TSH.
Ultrasound Surveillance	Neck U/S: Perform at 1–3 years for 5–8 years with discontinuation after unless changes are observed in TG or TGAB levels.	Neck U/S: Perform within the first 2 years post-operatively, followed by a repeat exam at 3–5 years.
Cessation of ALL Surveillance	Consider at 10–15 years.	TSH: Annual monitoring (no end date) TG/TGAB: Discontinue at 10 years. U/S: Consider discontinuation at 5 years.

Table 2: Long Term Follow-up for Low-Risk DTC Patients who Undergo Total Thyroidectomy without RAI with and Demonstrate an Excellent Response

Abbreviations: ATA: American Thyroid Association; DTC: differentiated thyroid cancer; RAI: radioactive iodine; TG: thyroglobulin; TGAB: thyroglobulin with thyroglobulin antibodies; TSH: thyroid-stimulating hormone; U/S: ultrasound

Update: Hereditary Cancer Program Eligibility Criteria

The eligibility criteria for genetic testing and assessment at the Hereditary Cancer Program (HCP) were updated in March 2026. Advances in cancer treatment and expanding clinical indications have significantly increased the number of patients seeking hereditary cancer evaluation. To maintain timely access for those most likely to benefit, referral and testing criteria have been refined.

The updated criteria prioritize individuals at higher likelihood of hereditary cancer, including those with:

- A known pathogenic variant in the family
- A relevant personal history of cancer, tumours, or polyps
- A first degree relative with specific cancers
- A ≥5–10% predicted hereditary cancer risk based on validated risk prediction tools

As a result, some individuals who were previously eligible - such as unaffected patients with lower risk family history or lower polyp burden - may no longer meet criteria. Patients already referred who do not meet the updated eligibility will receive written notification, along with their referring provider.

For patients with a personal diagnosis of a relevant cancer or tumour, **mainstream genetic testing** is often the fastest option to access genetic test results that can be incorporated into their care plan. This means that patients are offered genetic testing directly by their care team, who also disclose the results. If a pathogenic variant is identified, a reflex referral will be placed to the Hereditary Cancer Program to discuss the implications of the positive result for the patient and their family. You can read more about mainstream testing including how to order testing for your patients here.

Full updated criteria, referral form and clinical resources are available on the **BC Cancer Hereditary Cancer Program** website.

Thyroid Cancer: What Primary Care Practitioners Need to Know
continued from page 17

Furthermore, for patients undergoing TT with or without RAI who maintain an excellent response, continued biochemical monitoring beyond 10–15 years is not required. For patients having undergone TT with RAI, the threshold for a biochemical excellent response remains TG <0.2 ng/mL[2,3] (Table 3).

A TSH target within the normal reference range represents one of the most revolutionizing recommendations introduced in the 2025 ATA DTC guidelines for patients demonstrating an excellent response to therapy. The ATA now indicates that there is insufficient evidence to support TSH suppression in patients with low-risk disease.[2] Even among patients with intermediate- to high- risk disease, the utility of TSH suppression remains uncertain. ATA has simplified it that if there is concern for disease being present, targeting TSH below reference range is reasonable (rather than the old TSH of <0.1 or between 0.1-0.5) and if there is excellent response to target TSH within the normal reference range (rather than the old TSH 0.5-2.0).

Another important contribution of both the Canadian and 2025 ATA DTC guidelines is the provision of recommendations on the transition to primary care and when to consider cessation of follow-up.[2,3] The Canadian guidelines recommend transition of primary care between years 2–5.[3] For patients who maintain an excellent response following HT or TT with or without RAI, transfer to primary care can be considered at year[2,3] For patients with an ongoing indeterminate response, along with stable TG levels, or declining TGAB levels following TT with or without RAI, indeterminate lesion findings on ultrasound, or nonspecific thyroid bed lesions representing benign etiology, transition to primary care can be considered between years 3–5.[3]

Key elements of care for patients with low-risk thyroid cancer include reduced ultrasound surveillance, maintaining the TSH target within the normal reference range, annual TG/TGAB monitoring, and consideration of cessation of surveillance. Adoption of these principles will enhance patient care while maintaining excellent outcomes.

Total Thyroidectomy With RAI Targets	ATA DTC 2025	Canadian Consensus Guidelines
TG and TGAB	Non-stimulated TG <0.2 ng/mL with negative TGAB and no evidence of disease on imaging: Excellent Response.	Non-stimulated TG <0.2 ng/mL with negative TGAB and no evidence of disease on imaging: Excellent Response.
TSH Target	TSH within the normal laboratory reference range.	TSH level: 0.5-2 mIU/L
Ultrasound Surveillance	Neck U/S: Perform at 1–3 years for 5–8 years with discontinuation after unless changes are observed in TG or TGAB levels.	Neck U/S: Perform within first 2 years post-operatively, followed by a repeat exam at 3–5 years.
Cessation of ALL Surveillance	Consider at 10–15 years	TSH: Annual monitoring (no end date) TG/TGAB: Discontinue at 10 years. U/S: Consider discontinuation at 5 years.

Table 3: Long Term Follow-up for Low-Risk DTC Patients who Undergo Total Thyroidectomy with RAI with and Demonstrate an Excellent Response

Abbreviations: ATA: American Thyroid Association; DTC: differentiated thyroid cancer; RAI: radioactive iodine; TG: thyroglobulin; TGAB: thyroglobulin with thyroglobulin antibodies; TSH: thyroid-stimulating hormone; U/S: ultrasound

LINK to Spring 2025 Journal: Management of Thyroid Nodules with Ultrasound p.11

continued on page 20

The Vision and Creation of GPO Education with Dr. Judith Pike

By Dr. Sian Shuel, GP in Oncology
Medical Education Lead, FPON

Building Oncology Care Closer to Home

I had the opportunity to catch up with Dr. Judith Pike, one of the team members instrumental in creating BC Cancer's General Practitioner in Oncology (GPO) Education more than 20 years ago.

When Dr. Pike reflects on the origins of GPO Education and other Family Practice Oncology Network (FPON) initiatives in British Columbia, she notes that the education was meant to empower family physicians with the knowledge, confidence, and support needed to provide better cancer care in their communities.

"It's GP in Oncology, not GP Oncologists," she points out. "The role was always to work collaboratively with oncologists."

That philosophy helped shape what would become a successful community oncology education initiative, with attendees from all areas of BC, from the Yukon, and from every province and territory in Canada and from abroad.

A Journey into Oncology

Dr. Pike's path to oncology began long before the FPON was established. After graduating from medical school in Ireland in 1969 and completing an internship and a year of internal medicine training, she moved to Canada with her husband in 1971 to a UBC residency position in Obstetrics and Gynecology. One year later, she transferred to Internal Medicine at Shaughnessy Hospital.

What was intended to be a temporary move quickly evolved into a medical career in BC. After completing that additional training in internal medicine, Dr. Pike spent six years practicing family medicine in Powell River before returning to Vancouver in 1979 with her husband and three children.

In 1980, she joined BC Cancer as a Clinical Associate, conducting new patient assessments. As cancer care became increasingly complex, she became the first Clinical Associate to take on inpatient oncology work in 1985 within the Gynecologic Oncology tumour site, where she remained until 2011, when she retired.

Dr. Malcolm Moore, President of the BC Cancer Agency (left), and Dr. Bill Cavers, past President of the Doctors of BC (right), presented the 2015 Terry Fox Medals to Drs. Judith Pike and John Hay.

She then returned to post-retirement clinic duties in Abbotsford and later in Vancouver, until 2015.

A Growing Need

By 2002, BC Cancer leaders, in particular Dr. Simon Sutcliffe, BC Cancer Agency President and CEO, and Dr. Jack Critchley, Provincial Communities Oncology Lead, noted that the cancer care needs across the province were changing dramatically. New treatments were emerging, patients were living longer, and the province's widely dispersed, growing, and aging population meant increasing cancer care demand on the healthcare system.

Dr. Critchley was a man of vision with his finger on the pulse and challenges of primary care physicians. He recognized that family physicians were increasingly involved in caring for patients with cancer but, at that time, often lacked formal oncology training.

Dr. Pike also notes that there was a finite number of oncologists, whose oncology training required years, that cancer treatments were becoming more complicated, and that family physicians required oncology education to keep pace.

Dr. Critchley and Dr. Sutcliffe initiated a Provincial Needs Assessment in 2002. The response was overwhelming. Of 256 physicians who responded, 80 percent indicated a need for strengthened oncology knowledge, and 84 physicians expressed interest in a formal oncology preceptorship program.

The message was clear: community family physicians wanted more education and support. At the same time, much of BC's population lived far from the province's then four BC Cancer Centres, all of which were located in urban areas. For patients in smaller communities, access to cancer expertise was often limited.

Creating the Family Practice Oncology Network in 2002

Based on feedback from the Needs Assessment, the Family Practice Oncology Network (FPON) was established. The vision was to create a network of physicians who could serve as oncology resources within their communities, support colleagues and healthcare teams, and advocate for improved cancer care closer to home.

At an early planning meeting involving interested primary care physicians from across the province, Dr. Pike attended during her lunch break from clinical duties. By the end of the meeting, her name had

continued on page 20

GPO Education with Dr. Judith Pike continued from page 19

been assigned to lead development of one of the five newly formed FPON initiatives – the GPO Preceptorship Program, which would later be renamed GPO Education. The other proposed initiatives included an FPON Counsel, Primary Care Education, Communication and Research.

"It took about two years to build the Preceptorship Program," she says and is quick to credit Dr. Critchley and Dr. Sutcliffe for their vision, leadership and financial support. With the help of colleagues, Dr. Pike helped design what would become GPO Education. The team also worked with the UBC Department of Family Practice and the BC Medical Association (now Doctors of BC), which shared its vision for enhancing the skills of family physicians in several areas, including oncology.

Keeping Education Practical

One conversation proved notably influential. Dr. Susan O'Reilly, a medical oncologist at BC Cancer, offered Dr. Pike advice that would help shape the curriculum for years to come.

"Make what you teach practical," she said.

The team took that guidance seriously.

The one-week curriculum concentrated on common cancers, treatment complications, oncologic emergencies, radiation therapy, chemotherapy principles, cancer imaging, hereditary cancers, and the realities of caring for patients throughout the cancer journey.

Learning objectives were developed for every module. Initially, the program relied on clinical rotations to provide tumour-specific knowledge, but participant feedback revealed gaps in learning. In response, a second week of structured tumour-site education was added.

The result was a highly practical 8-week curriculum that not only trained community physicians but was eventually used to orient new staff joining BC Cancer.

Listening to Learners

From the beginning, participant feedback has driven and continues to drive program development.

Every lecture was evaluated. Participants were encouraged to identify what worked, what didn't, and what additional content they needed.

That devotion to continuous improvement became one of the program's greatest strengths.

"The most meaningful feedback was hearing that the course was crucial to their practice," says Dr. Pike. "And then making changes based on what they told us."

Measuring Impact Through Patients

For Dr. Pike, the program's success is illustrated through patient stories.

One memorable example involved a teenage girl with a newly diagnosed cancer in rural BC who was rapidly deteriorating. Pathology results were delayed as specimens were transferred between laboratories in an attempt to identify the cancer subtype. A GPO covering in that community recognized the urgency of the patient's clinical situation and advised immediate transfer to Vancouver rather than waiting for definitive pathology.

"Her condition was deteriorating by the minute," Dr. Pike recalls. "The GPO's advice helped get her transferred quickly. I was so proud of him."

Stories like this demonstrated the value of having knowledgeable physicians embedded in communities across the province.

Within five years of running the Preceptorship Program, eleven preceptorship cohorts had trained 61 physicians. Many went on to provide community cancer services in regional health authorities, work in cancer centres, support palliative care programs, and work closely with oncologists throughout BC. As of summer 2026, 183 GPOs from 33 different communities have completed GPO Education, and many other participants have completed the two-week didactic portion, including oncology nurse practitioners, UBC palliative care residents and BC Cancer associate physicians.

A Lasting Legacy

Although Dr. Pike officially retired from BC Cancer in 2010, she continued supporting oncology care in Vancouver until her full retirement in 2015. That same year, Dr. Pike received the prestigious Terry Fox Medal for her efforts in establishing the GPO Preceptorship Program.

She applauds the additional oncological educational opportunities currently available for primary care physicians in B.C.

These include the Monthly Webinars for primary care, the annual Cancer Conferences (one for primary care and another for GPOs), the Biannual Journal of Family Practice Oncology, Regional Cancer Care Education Sessions, Cancer Care online Guidelines and Protocols, Online Learning Modules, and Educational Opportunities offered by the Canadian Association of GPOs (CAGPO).

Today, she sees the ability to deliver education virtually as one of the greatest advances.

"People don't have to leave their communities or their families to upgrade their educational knowledge," she says. "We had physicians who could not participate" before the advent of virtual delivery. The transition to virtual delivery also brought the opportunity for practicing GPOs to update their knowledge regularly, given the rapidly changing therapeutic options available to patients.

More than two decades after its creation, the founding vision remains unchanged: helping ensure patients can receive cancer care close to home.

As Dr. Pike notes, the ultimate goal has always been simple. "When people are sick, they want to be home."

Through her leadership and dedication, countless patients across BC have been able to do exactly that.

Thyroid Cancer: What Primary Care Practitioners Need to Know continued from page 18

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Reshaping Adolescent and Young Adult Cancer Care, Together

Jennifer Wolfe, Research Program Coordinator, Anew Research Collaborative

June 2026 Webcast Highlights

Jennifer Wolfe

Imagine being sixteen years old, enjoying an active life in your hometown of Prince Rupert and looking forward to grade 11 – when you learn one evening after hours in your community hospital that the fatigue and growing pain in your knee is, in fact, not bursitis as diagnosed, but osteosarcoma requiring urgent, limb and lifesaving treatment at far away BC Children's Hospital. Your life, and that of your family, would change completely and irrevocably that day.

Dr. Nivan Sharma, recent medical school graduate of the University of British Columbia, current family medicine resident at Nanaimo Regional General Hospital, and future General Practitioner in Oncology, was that sixteen-year-old. He shared his experience as a young person navigating cancer in BC/Yukon introducing the Family Practice Oncology Network's June 2026 Webcast, drawing attention to the distinct care and support challenges adolescents and young adults (AYAs) face and emphasizing the need to improve care particularly as incidences of AYA cancer continue to rise – 79% increase since the 1990s.

Nivan Sharma then – Dr. Nivan Sharma now is in residency with GPO ambitions.

AYA Cancer: Gaining Perspective

Nivan's insights set the stage for the Anew Research Collaborative, a Royal Roads University-based research program committed to improving AYA cancer care, to share AYA cancer statistics, highlight collaborative research defining priorities to improve care, and share efforts being undertaken together with AYAs, and partners at BC Cancer, BC Children's Hospital and in-community.

Priorities Defined

Over the past five years, Anew has worked closely with hundreds of AYAs, care providers and community organizations, using creative and innovative methods, to better understand the challenges and set tangible priorities to improve care. These include:

1. Care Coordination and Navigation
2. Counselling
3. Peer Support
4. Resources
5. Oncofertility Care
6. Support for Families and Caregivers
7. Virtual Care
8. Transitions in Care
9. Survivorship Care
10. End-of Life Care
11. Equity-Focused Care
12. Financial Support
13. Research

Improvements Thus Far

Recent collaborative efforts included:

- A successful counselling pilot held with BC Cancer connecting newly diagnosed AYAs with AYA experienced counsellors
- New resources developed to provide AYAs and care providers with the knowledge and tools to support timely fertility discussions, (https://anewresearch.ca/learnings-database/reshaping-young-adult-cancer-care-through-meaningful-engagement-with-young-adults-andcancer-care-allies-xpnxl)
- An AYA Resource page developed by AYAs for BC Cancer's website www.bccancer.bc.ca/health-info/adolescent-young-adult

AYA: anyone diagnosed with cancer between the ages of 15-39

- 9300 diagnoses in Canada annually
- 1200+ annually in BC/Yukon or >4 per day
- Survival rates for AYAs have not seen the same improvements as pediatric and older adult populations
- AYAs have limited access to clinical trials
- AYA survivors can live up to 60 years beyond treatment, and more than half will struggle with related health conditions
- 59% of AYA survivors show distress and anxiety about cancer recurrence and uncertainty about future health
- Only 50% of AYAs have a conversation with a care provider about how treatment may affect their fertility and only 13% proceed with fertility preservation.

Improvements Upcoming

Later this Fall, BC Cancer Vancouver is launching an AYA Oncology Program pilot including an AYA clinical resource nurse to help AYAs navigate through the care system including accessing resources and support.

How You Can Help AYAs Today

- Share AYA Resources
- Use Oncofertility Resources
- Recognize that AYAs have distinct needs and fears
- Encourage your AYA patients to connect with Anew and help create change, hello@anewresearch.ca, anewresearch.ca

BC Cancer AYA Resource Page

Fertility resources are included on the overall page under Fertility and sexual health tab

View this webcast: https://media.phsa.ca/home/iframeflash?url=BCCA/bccahealth\FPON_Jun_18_2026_Webcast_20260619

Neuroendocrine Tumours: A Primer for Primary Care

By Joao Paulo Solar Vasconcelos, MD, MSc
Medical Oncologist – BC Cancer Vancouver Centre

Neuroendocrine neoplasms (NENs) are a heterogeneous group of cancers arising from the diffuse neuroendocrine system in the body. They were previously considered rare, but a more accurate and contemporary description is uncommon and on the rise. Over the past several decades, the reported incidence of NENs has risen substantially, driven in part by improved imaging and awareness. The most common primary sites for these cancers are the lungs and the digestive system, usually the small intestine or pancreas. Nevertheless, almost any anatomic site in the body can be affected by NENs.

Dr. Joao Paulo Solar Vasconcelos

NENs can be divided histologically into well differentiated neuroendocrine tumours (NETs) and poorly differentiated neuroendocrine carcinomas (NECs). NECs are aggressive cancers with typically limited survival, whereas NETs are frequently indolent and associated with prolonged survival, often measured in years even when metastatic. NETs are further classified into grades 1 to 3 according to their pathological characteristics. Because most NETs present as localized disease, timely recognition is particularly important in their management.

NETs are notorious for long diagnostic delays, with reported median times from symptom onset to diagnosis ranging from 24 to 53 months in some series. Other groups have shown that nearly one third of small bowel NET patients are initially misdiagnosed with irritable bowel syndrome, and patients typically see their primary care provider around five times over 18 months before the diagnosis is made. About 31% are ultimately diagnosed following an unplanned emergency admission. Therefore, it is important that primary care providers keep a high index of suspicion and, where clinically appropriate, consider a NET in the differential earlier in patients with persistent, unexplained symptoms.

The presentation of a NET is heavily influenced by whether a tumour is non-functional or functional (hormone-secreting), and by its location. Non-functional NETs are often found incidentally or are associated with symptoms such as weight loss, fatigue, change in bowel habit, obstruction, shortness of breath, wheezing, or recurrent infection. Functional NETs can cause additional specific symptoms related to hormone secretion. The most commonly observed paraneoplastic manifestation is the classic carcinoid syndrome that includes flushing, diarrhea, and wheeze, and is usually provoked or exacerbated by the "5 Es": emotion, epinephrine, ethanol, eating, and exercise. Carcinoid syndrome can occur in up to 50% of patients with metastatic small bowel NETs and is associated with potential complications such as carcinoid heart disease, carcinoid crisis and mesenteric fibrosis. Other examples of manifestations of functional NETs include the necrolytic migratory erythema and diabetes seen with glucagonomas, refractory peptic ulcers from gastrinomas (Zollinger-Ellison syndrome), and refractory severe hypoglycemia from insulinomas.

When a NET is suspected, the work-up combines biochemistry, tissue, cross-sectional imaging as well as functional imaging. Histology defines the differentiation and grade, which together with disease burden drives a substantial part of the prognosis and treatment. Somatostatin receptor (SSTR) PET imaging now offers superior accuracy over older octreotide scans and conventional cross-sectional imaging and has become a standard of care in clinical practice. The key information necessary for an initial assessment includes the primary site, stage, grade, functional status, disease distribution and SSTR expression status.

The treatment of a patient with a NET is multidisciplinary and tailored to the individual. Locoregional options, including surgery, radiation and liver-directed therapies, can be considered at almost any point in the course of the disease. For small, localized, asymptomatic, sporadic, non-functional pancreatic NETs, active surveillance is increasingly accepted rather than upfront surgery. In advanced disease, systemic options include initial observation in selected cases, somatostatin analogues to control both hormone symptoms and tumour growth, targeted agents such as tyrosine kinase and mTOR inhibitors, chemotherapy, and peptide receptor radionuclide therapy (PRRT) for SSTR-positive disease.

NETs are more common than their reputation suggests, and their often subtle, non-specific presentation places primary care providers on the front line of recognition. A high index of suspicion, prompt investigation, and timely referral can meaningfully shorten a diagnostic journey that too often stretches over years. Most NETs are highly treatable, with effective options across both localized and advanced disease and prolonged survival even when metastatic. Early recognition allows patients to access treatment sooner and can potentially improve their outcomes.

Key clinical points

- Consider a NET in persistent, unexplained gastrointestinal or respiratory symptoms.
- Flushing, diarrhea, and wheezing together suggest carcinoid syndrome.
- Well-differentiated NETs are often slow growing; metastatic disease is not synonymous with a poor prognosis.
- Early referral can shorten the diagnostic journey and improve outcomes.

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Medical Cannabis Extracts for Cancer-Related Symptoms: a patient-centred BC Cancer-led multi-centre Canadian clinical trial

By Dr. Pippa Hawley, Palliative Medicine Specialist, Vancouver Centre

See preprint at www.medrxiv.org/content/10.64898/2026.05.31.26354558v1

Dr. Pippa Hawley

About half of cancer patients who try medical cannabis extracts for symptoms report overall benefits[1]. Multiple studies, including in BC, have found that up to a quarter of cancer patients take at least one kind of extract regularly.[2-4] As with responsiveness to cancer treatments, personal endocannabinoid physiology is determined by genetic and environmental factors, thus the response to cannabinoids will vary between individuals[5].

Parallel group clinical trials have shown only weak signals of benefit when unstable advanced cancer patients are offered a single kind of extracts vs placebo, with multiple confounding treatments allowed[6,7]. Most studies of this design fail to recruit or retain sufficient participants for adequate statistical analysis.

In 2025 a multi-centre clinical trial led by BC Cancer was completed using an "aggregate N-of-1" design. Each stable symptomatic patient acted as their own control, and all participants tried all three of the main kinds of extracts and a placebo oil. The products were high-quality research-grade oil extracts with a very low terpene content thus little taste or smell, facilitating excellent blinding. Participants had to "start low and go slow" with each extract, for 4 days each in randomized sequence, one cycle being 16 days. Up to three cycles were allowed, with personal dose optimization throughout.

Participants were recruited to three equal subgroups, based on their most troublesome symptom, either pain (30), anxiety (30) or sleep disturbance (31), 91 in total. One could consider this equivalent to a 4-arm parallel group study with 364 participants and perfect baseline matching. Clinical stability required throughout the study minimized confounding[8].

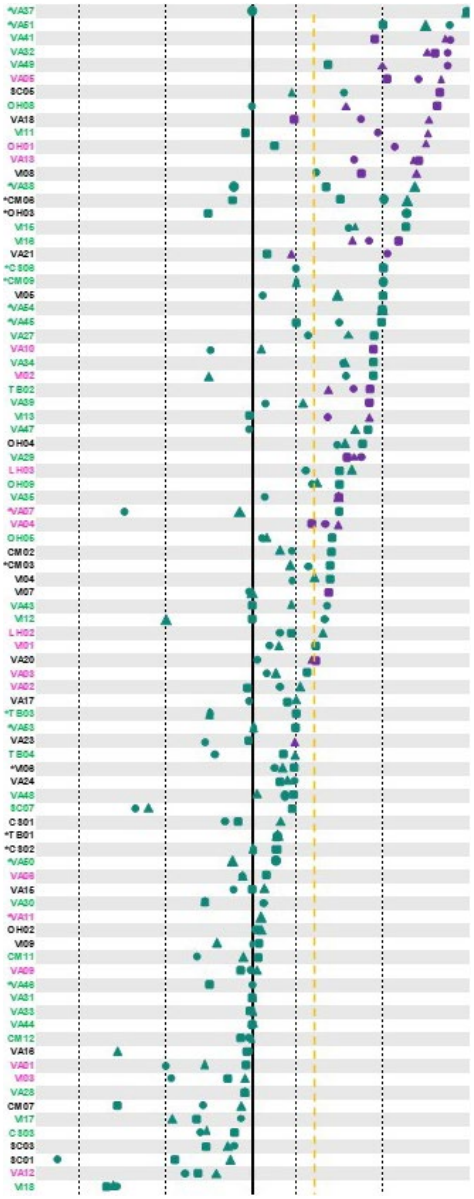

Figure 1. PGIC change in response to Oils

Effects were measured in three ways: firstly, the frequency of at least a 20% improvement in a Patient Global Impression of Change score for each oil as compared with placebo, secondly change in the Edmonton Symptom Assessment System score (modified with the addition of sleep and night sweats), and thirdly, blinded patient preference.

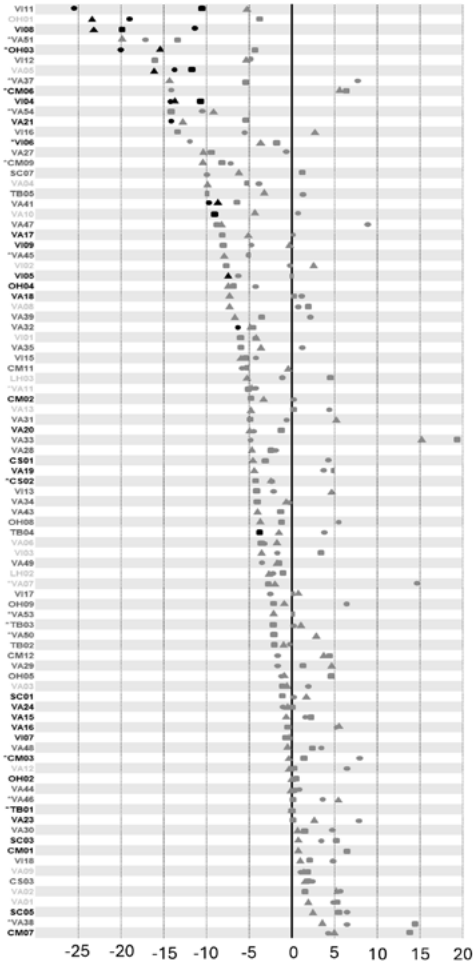

Figure 2. Point changes from Placebo

Fifty six percent of participants reported a clinically meaningful benefit from at least one extract as compared to placebo (Fig.1), supported by similar changes in total symptom burden (Fig.2), and a clear preference for at least one of the extracts in three quarters of participants (Fig.3).[9]

Each extract was equally likely to be preferred, confirming the importance of acknowledging individual cannabinoid physiology in product selection.

Mild side-effects were commonly seen during dose-finding, equally with placebo, but resolved rapidly on dose reduction or cessation, as is seen with drugs such as opioids and gabapentin/pregabalin, where tolerated and therapeutic doses vary between individuals.

continued on page 24

Medical Cannabis Extracts for Cancer-Related Symptoms continued from page 23

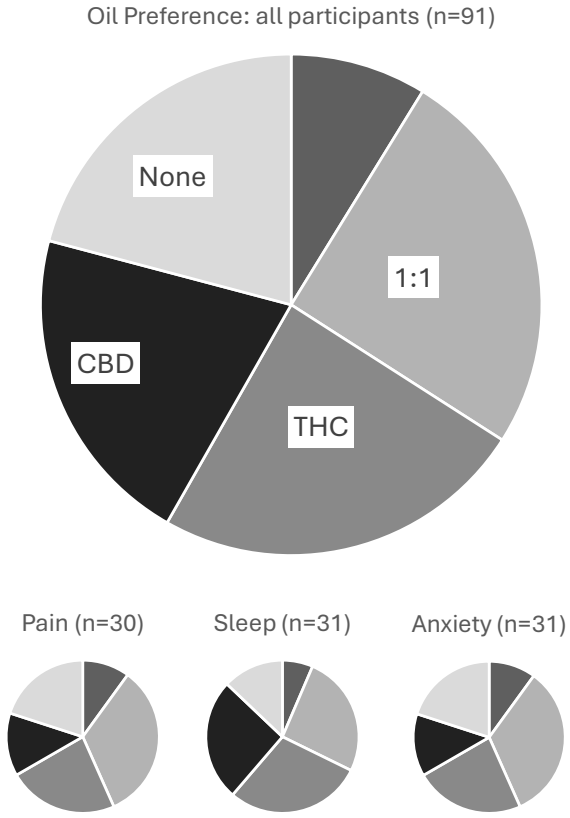

Figure 3. Blinded oil preference. Shading and order of each oil in arms pie charts the same as for all participants chart

The average personalized doses of THC and CBD were virtually the same and matched the total cannabinoid dose of the mixed oils, consistent with CBD having symptom-relieving effects additive to THC. A dose of 2.5mg of total cannabinoid was a safe starting dose for all products, and 5mg three times a day was the most common optimized dose for all three, irrespective of manufacturer and vehicle oil, though some participants who tolerated and benefited from higher doses. Discontinuation was rare but the causative extracts were distributed equally.

Small benefits in multiple symptoms added up to a clinically meaningful improvement in more than half the participants.

We now have a clear guideline for counselling patients, as follows:

Low-dose cannabinoid therapy (2.5 mg total cannabinoid to start with) up to q4h prn can offer relief for multiple symptoms with no more side-effects than other medications in stable patients without contraindications. Cannabinoids do not cause QT interval prolongation, extrapyramidal side-effects, respiratory depression or constipation. Drug interactions are rarely an issue at the low doses recommended for symptom management, however particular caution is advised in the presence of seizure disorders and unstable cardiac conditions or risk of falls, and interactions should always be checked for.

Patients should be counselled to buy a small amount of the three main oil extracts: THC; CBD and a 1:1 combination to try in turn, i.e., an open-label n-of-1 trial, ideally documenting their symptom severity including sleep. Inhalation, edibles and suppositories should be avoided. If helpful, dosing should be reviewed regularly, as with all medications.

Walk-in recreational dispensaries are federally prohibited from providing medical advice and their product quality is inconsistent. ***Using online Health Canada-approved medical producers ensures accuracy of labelling, absence of pesticide and mould residues***, and their receipts are eligible medical expenses for the CRA. See the BC Cancer website for navigation for patients[10] and health care professionals[11].

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More than just concrete: How LINAC pours are bringing radiation treatment closer to home

By Robin Latondresse, senior executive director, Major Capital Projects, Provincial Health Services Authority, and Cherie Taylor, executive director, Clinical Operations & Capital Redevelopment, BC Cancer

Robin Latondresse Cherie Taylor

When you pass by a construction site, you likely don't give much thought to what goes into a concrete pour. But at the new BC Cancer centres in Nanaimo, Kamloops and Surrey, these pours represent something far more significant.

Recently, each centre reached a key construction milestone with the concrete pour for the linear accelerator (LINAC) vaults, specialized rooms designed to house the machines that will deliver life-saving radiation therapy to thousands of patients each year.

New BC Cancer centre in Nanaimo

The Nanaimo centre will have four LINACs, Kamloops will have three LINACs and the new Surrey hospital and BC Cancer Centre will have room for six LINACs to deliver radiation treatment. The Nanaimo and Kamloops centres are set to open 2028 and Surrey in 2030. Construction is well underway across all three sites.

Expanding capacity for radiation treatment across BC

With Surrey's rapidly growing population, and many patients in the Interior and on Vancouver Island needing to travel long distances for radiation treatment, expanding care across the province is more important than ever.

New BC Cancer centre in Kamloops

The new LINACs will enhance treatment capacity across the province, helping more patients receive care closer to home and reducing the need for lengthy travel. For many patients and families, this means spending less time away from loved ones, support networks and communities during treatment.

With one in two British Columbians expected to be diagnosed with cancer during their lifetime, increasing treatment capacity is critical to ensuring timely care. The addition of three new BC Cancer centres in Surrey, Nanaimo and Kamloops will grow the provincial network to nine centres, helping deliver treatment to patients for years to come.

Planning the LINAC pours

Long before any concrete arrives on site, BC Cancer and host health authority subject matter experts, architects, engineers, and project managers work together to finalize the design.

Every detail is carefully planned, from the placement of steel reinforcement to the exact dimensions of the walls. Detailed plans are reviewed and verified, specialized formwork is constructed, and large amounts of reinforcing steel are installed throughout the structure.

Here are photos of the LINAC vaults taking shape and the future radiation treatment suites they will become.

New Surrey hospital and BC Cancer Centre

Although the concrete will eventually be hidden behind finished walls and equipment, it forms one of the most important parts of these new centres, supporting radiation treatment for decades to come.

Learn more about our new BC Cancer centres on our Projects and Priorities page.

Trauma-Informed Cancer Care

By Dr. Cathy Clelland, Medical Director, BC Cancer Primary Care Program

Dr. Cathy Clelland

The April 16, 2026 FPON Webcast on "Trauma-informed Cancer Care" with Dr. Hillary McBride presenting a goal that we should all be striving for: "When trauma informed care is the standard of care, all care becomes transformative care: protective, corrective, empowering." I first wrote an article about trauma-informed care of patients with cancer in the Spring of 2024 edition of the Journal of Family Practice Oncology (Page 24 https://www.bccancer.bc.ca/family-oncology-network-site/Documents/2024%20Spring%20FPONjournal%20May2.pdf). This was after hearing Dr. McBride speak about how taking a Trauma-informed approach in caring for people who are pregnant helps to improve patient experiences and outcomes. My biggest take away at that time was that "words and reactions matter". Not only what we as providers say and how we ask questions, but also how we interpret the responses we may get from our patients.

In her presentation focusing on patients with cancer, Dr. McBride presented data on the prevalence of cancer related post traumatic stress disorder (PTSD) from the paper by Cordova, M. J., Riba, M. B., & Spiegel, D. (2017). Post-traumatic stress disorder and cancer. *The lancet. Psychiatry*, 4(4), 330–338. https://doi.org/10.1016/S2215-0366(17)30014-7.

She reviewed how pre-traumatic, peri-traumatic and post-traumatic factors can influence outcome severity and symptom resolution and provided guidance for healthcare providers for offering trauma responsive and corrective care. This presentation is available for viewing on our website at and I would encourage everyone to watch this clinically beneficial webcast: https://media.phsa.ca/home/iframe?url=BCCA/bccahealth\FPON_Apr_16_2026_Webcast_20260417

Additionally, we have posted a great list of community virtual support groups and programs that you may find helpful for your patients: https://www.bccancer.bc.ca/coping-and-support-site/Documents/Support%20Programs/Community%20Virtual%20Support.pdf

References

Trauma-Informed Practice (TIP) – Resources, available at www2.gov.bc.ca/gov/content/health/managing-your-health/mental-health-substance-use/child-teen-mental-health/trauma-informed-practice-resources

Trauma-Informed Approaches in the Context of Cancer Care in Canada and the United States: A Scoping Review, available at https://pmc.ncbi.nlm.nih.gov/articles/PMC10594848/

Prevalence of Cancer-related PTSD

Populaton		Prevalence of Cancer Related PTSD (95% CI)
Adult patients:	Self report	7.3-13.8%
Adult patents:	Current	6.4%
	Lifetime	12.6%
	Subsyndromal	10-20%
Childhood patents:	Self report	0-12.5%
	SCID Current	4.7-20.8%
	SCID Lifetime	20.5-34. 7%
Partners of Patients:	Self report	28.6%
Parents of child patients:	Self report	9.8-44%
	SCID Current	6.2-25%
	SCID Lifetime	27-54%
Child siblings of child patients:	Self report	22.4%

As of 2013, Cancer is no longer a primary index event for PTSD diagnosis according to DSM-5

Cordova, M. J., Riba, M. B., & Spiegel, D. (2017). Post-traumatic stress disorder and cancer. *The lancet Psychiatry*, 4(4), 330-338. https://doi.org/10.1016/S2215-0366(17)30014-7

FOR MORE INFORMATION

To learn more about the Family Practice Oncology Network or become involved, please email FPON@bccancer.bc.ca or visit bccancer.bc.ca/fpon

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BC Cancer provides specialized cancer care services to communities across British Columbia, the territories of many distinct First Nations. We are grateful to all the First Nations who have cared for and nurtured this land for all time, including the xʷməθkwəy̓əm (Musqueam), Sḵwx̱wú7mesh Úxwumixw (Squamish), and səlilw̓ətaɬ (Tsleil-Waututh) First Nations on whose unceded and ancestral territory our head office is located.