The following colorectal cancer treatment and research updates extend from April 13th, 2023, to May 18th, 2023, inclusive and are intended for informational purposes only.

This content is not intended to be a substitute for professional medical advice. Always consult your treating physician or guidance of a qualified health professional with any questions you may have regarding your health or a medical condition. Never disregard the advice of a medical professional or delay in seeking it because of something you have read on this website.
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1. Phase II LEAP Clinical Trial For mCRC (May 10/23)

The purpose of this study is to determine the safety and efficacy of combination therapy with pembrolizumab (MK-3475) and Levantine (E7080/MK-7902) in patients with triple-negative breast cancer (TNBC), ovarian cancer, gastric cancer, colorectal cancer (CRC), glioblastoma (GBM), or biliary tract cancers (BTC). Participants will be enrolled in initial tumor-specific cohorts, which will be expanded if adequate efficacy is determined. The trial is available at the Odette Cancer Centre and at the Princess Margaret Cancer Centre in Toronto as well as the following Centres throughout Canada: Abbotsford, BC; Winnipeg, MB; CHU de Quebec.

For information, visit the link below.

https://clinicaltrials.gov/ct2/show/study/NCT03797326?term=A+Multicenter%2C+Open-label+Phase+2+Study+of+Lenvatinib+%28E7080%29+Plus+Pembrolizumab&show_locs=Y#locn

2. TRK Fusion Cancer and How to Test for It (May 13/23)

What is TRK fusion cancer?

- TRK (pronounced track) fusion cancer is a term used to describe cancers that are caused by a change to the neurotrophic tyrosine receptor kinase (NTRK) gene called a fusion
- During this fusion, an NTRK (pronounced en-track) gene joins together, or fuses, with a different gene
- This joining causes the body to make TRK fusion proteins, which can cause cancer cells to multiply and form a tumor
- The presence of TRK fusion proteins may be associated with more aggressive cancer

Having TRK fusion cancer doesn’t change your original diagnosis, it just means that your tumor is driven by an NTRK gene fusion

Testing is the only way to find out if NTRK gene fusion is driving your cancer

Who should be tested for NTRK gene fusions?

Your doctor may consider testing in people:
- with solid tumors that are metastatic, and
- who are likely to experience severe complications from surgical resection, and
- when there are no satisfactory treatments options available

It’s important to know what’s driving your cancer to help your doctor take action

FastTRK is a clinical testing program for diagnosing NTRK gene fusions

Supported by Bayer, TRK is a complimentary service for healthcare professionals to find out if their patients’ cancer has an NTRK gene fusion

Talk to your doctor about which tests are recommended for you
INTRODUCING

Tumour-Agnostic Therapies
Advances in precision medicine have brought therapies that specifically target what is driving a patient's cancer

Treatment with more traditional cancer therapies is based on where the tumour is located in the body.

Tumour agnostic therapies target a specific genomic change in the cancer cells regardless of where the tumour is located in the body.

Genomic changes in cancer cells are identified through diagnostic testing of the cancer cells. The results help clinicians decide on a treatment for each patient.

Advantages of tumour agnostic therapies:
- Targets the genomic change that is the root cause of the cancer to suppress tumour growth
- Harnesses our growing understanding of cancer biology
- Offers an innovative, new and effective approach to treating cancer

Change required to adopt tumour agnostic therapies in Canada:
- A shift in mindset: this is a new concept that differs from the traditional approach of treating cancer based on tumour location
- Access to genomic testing: identifying patients who would benefit from treatments requires a robust testing infrastructure
- An evolved, more adaptive assessment of treatments for public coverage is required that includes recognition of smaller patient populations, new clinical trial methods, and ability to examine new data over time

https://www.bayer.ca/en/media/news/?dt=TmpBPQ==&st=1
3. A Phase II, Open-label, Multicenter, Study of an Immunotherapeutic Treatment for the MSI High CRC Metastatic Population (May 13/23)

The purpose of this study is to look at the effectiveness of the vaccine DPX-Survivac in combination with the drugs cyclophosphamide and the immunotherapy Pembrolizumab in patients with solid cancers who are identified to be MSI-High. All patients will receive combination therapy of DPX-Survivac, cyclophosphamide, and pembrolizumab. Patients participating will know which treatment they are receiving. The trial is currently hosted at the Odette Cancer Centre, and a new site is opening at Mt. Sinai Hospital.

4. Phase III Study at the Odette Cancer Centre Comparing Arfolitixorin vs. Leucovorin in Combination with 5FU, Oxaliplatin and Bevacizumab in Patients with Advanced CRC (May 12/23)

The purpose of this study is to look at the effectiveness of the drug Arfolitixorin in combination with 5-fluorouracil (5FU), oxaliplatin, and bevacizumab in patients with colorectal cancer (CRC). Patients with advanced/metastatic CRC who meet certain criteria may be able to participate. There will be two groups of patients participating in this study;

- one group will receive Arfolitixorin in combination with 5FU, oxaliplatin, and bevacizumab,
- while the other group will receive the drug Leucovorin in combination with 5FU, oxaliplatin, and bevacizumab (standard of care).

The doctor and study staff will not know which group a patient is in. Patients will be randomized to receive one treatment or the other.

About Arfolitixorin:

Arfolitixorin is Isofol’s proprietary drug candidate being developed to increase the efficacy of standard of care chemotherapy for advanced CRC. The drug candidate is currently being studied in a global Phase 3 clinical trial. As the key active metabolite of the widely used folate-based drugs, arfolitixorin can potentially benefit all patients with advanced CRC, as it does not require complicated metabolic activation to become effective.

Treating cancer patients with arfolitixorin – The goals:

- When treating CRC, for example, arfolitixorin is administered in combination with 5-FU to increase cell mortality in circulating cancer cells and in cancerous tumours.
- Arfolitixorin is administered in conjunction with rescue therapy after high-dose treatment with the cytotoxic agent, methotrexate, in order to suppress the cytotoxic affect in surrounding healthy tissue. The treatment is used for certain types of cancer, such as osteosarcoma, a type of bone cancer. This involves administering arfolitixorin separately, 24 hours after the chemotherapy.

5. Immunotherapy Combined with Targeted Therapy in Patients with BRAF V600E–Mutated CRC (Apr.30/23)

In one of the first clinical trials combining immunotherapy and targeted therapy for patients with BRAF V600E–mutated colorectal cancer (CRC), researchers discovered that a combination regimen of dabrafenib, trametinib, and spartalizumab resulted in long-lasting responses. The study successfully met its primary endpoint and achieved a confirmed response rate of 24.3%, compared with a response rate of 7% in a prior trial where patients were treated with each of the same targeted therapies individually. The researchers also reported improved outcomes in one of the trial’s secondary endpoints: durability. Previously, patients with BRAF V600E–mutated CRC have seen only a short-lived clinical benefit after treatment with BRAF or MEK inhibitors. But the combination therapy resulted in an increased durability of response, with a median progression-free survival of 5 months compared with 3.5 months with BRAF or MEK inhibitors alone. The researchers noted that 57% of the patients continued with the treatment for more than 6 months and 18% continued for more than 1 year.

The findings suggested how targeted therapies in combination with immunotherapies may drive a greater immune response and improve treatment overall. This merits further clinical investigation and preclinical experiments to determine the best targeted approach to increase immune reactivity against [BRAF-mutated] CRC. The researchers acknowledged that the implications of their research may go well beyond CRC.

https://sunnybrook.ca/trials/item/?i=293&page=49335 and https://clinicaltrials.gov/ct2/show/NCT03750786
https://isofolmedical.com/arfolitixorin/

Bayer Inc. is pleased to announce that effective February 24, 2023, VITRAKVI® (larotrectinib) is covered in Ontario under the Exceptional Access Program (EAP).

VITRAKVI® (larotrectinib), indicated for the treatment of adult and pediatric patients with solid tumours that have a Neurotrophic Tyrosine Receptor Kinase (NTRK) gene fusion without a known acquired resistance mutation, are metastatic or where surgical resection is likely to result in severe morbidity, and have no satisfactory treatment options, has been issued marketing authorization with conditions, pending the results of trials to verify its clinical benefit. Patients should be advised of the nature of the authorization. For further information refer to Health Canada’s Notice of Compliance with Conditions web site.

The EAP reimbursement criteria for VITRAKVI® are as follows:
For the treatment of unresectable locally advanced, or metastatic solid tumours in patients meeting ALL the following criteria;
1. Tumour is documented to have a neurotrophic tyrosine receptor kinase (NTRK) gene fusion without a known acquired resistance mutation; AND
2. Has failed all standard treatment for their tumour site; AND
3. Is not a candidate for surgery and/or radiation as it may lead to substantial morbidity; AND
4. Has an Eastern Cooperative Oncology Group (ECOG) Performance Status of 0 to 2 for adults or 0 to 3 for children (<18 years old); AND
5. Larotrectinib is used as monotherapy.

Notes:
• The patient’s NTRK gene fusion report must be submitted with the application.
• The patient’s baseline radiographic evaluation (i.e., CT and/or MRI) should be provided on the initial funding application to EAP.
• Patients with symptomatic brain metastases, unstable cardiovascular disease, or on treatments that are strong CYP3A4 inhibitors or inducers should be carefully considered and monitored.
• Further details of the reimbursement criteria can be found here.

Product information:
VITRAKVI® is limited to distribution through specialty pharmacy networks and cancer centre pharmacies. Product is currently available for order from McKesson Distribution and DEX Wholesale. Please see product information below:

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7. Hepatic Artery Infusion Pump (HAIP) Chemotherapy Program – Sunnybrook Odette Cancer Centre (May 1/23)

The HAIP program is a first-in-Canada for individuals where colon or rectal cancer (colorectal cancer) has spread to the liver and cannot be removed with surgery. The program involves a coordinated, multidisciplinary team approach to care, with close collaboration across surgical oncology, medical oncology (chemotherapy), interventional radiology, nuclear medicine, and oncology nursing. The Hepatic Artery Infusion Pump (HAIP) is a small, disc-shaped device that is surgically implanted just below the skin of the patient and is connected via a catheter to the hepatic (main) artery of the liver. About 95 percent of the chemotherapy that is directed through this pump stays in the liver, sparing the rest of the body from side effects. Patients receive HAIP-directed chemotherapy in addition to regular intravenous (IV) chemotherapy (systemic chemotherapy), to reduce the number and size of tumours. **Drs. Paul Karanicolas and Michael Raphael** are the program leads and happy to see patients who may be eligible for the therapy.

Presently at Sunnybrook Odette Cancer Centre, HAIP is being used in patients with colorectal cancer that has spread to the liver that cannot be removed surgically and has not spread to anywhere else in the body. Patients who have few (1-5) and very small tumors in the lungs may be considered if the lung disease is deemed treatable prior to HAIP. If you believe you may benefit from this therapy and/or would like to learn more about the clinical trial, your medical oncologist or surgeon may fax a referral to **416-480-6179**. For more information on the HAIP clinical trial, please click on the link provided below.

http://sunnybrook.ca/content/?page=colorectal-colon-bowel-haip-chemotherapy
8. Living Donor Liver Transplantation for Unresectable CRC Liver Metastases (May 2/23)

Approximately half of all colorectal cancer (CRC) patients develop metastases, commonly to the liver and lung. Surgical removal of liver metastases (LM) is the only treatment option, though only 20-40% of patients are candidates for surgical therapy. Surgical therapy adds a significant survival benefit, with 5-year survival after liver resection for LM of 40-50%, compared to 10-20% 5-year survival for chemotherapy alone. Liver transplantation (LT) would remove all evident disease in cases where the colorectal metastases are isolated to the liver but considered unresectable.

While CRC LM is considered a contraindication for LT at most cancer centers, a single center in Oslo, Norway demonstrated a 5-year survival of 56%. A clinical trial sponsored by the University Health Network in Toronto will offer live donor liver transplantation (LDLT) to select patients with unresectable metastases limited to the liver and non-progressing on standard chemotherapy. Patients will be screened for liver transplant suitability and must also have a healthy living donor come forward for evaluation. Patients who undergo LDLT will be followed for survival, disease-free survival, and quality of life for 5 years and compared to a control group who discontinue the study before transplantation due to reasons other than cancer progression.

https://clinicaltrials.gov/ct2/show/NCT02864485

9. In Vivo Lung Perfusion (IVLP) for CRC Metastatic to Lung (May 9/23)

A new study is investigating a technique called In Vivo Lung Perfusion (IVLP) for delivering chemotherapy directly into the lungs at the time of surgery. Delivering chemotherapy directly to the lungs could potentially kill any microscopic cancer cells that are present in the lungs at the time of surgery, while sparing other major organs in the body from the side effects of chemotherapy.

At the University Health Network, this IVLP technique has been used recently in a Phase I study in patients with sarcoma, and they are now expanding on that experience to include patients with colorectal metastases. The purpose of this study is to test the safety of the IVLP technique and find the dose that seems right in humans. Participants are given oxaliplatin into one lung via IVLP and are watched very closely to see what side effects they have and to make sure the side effects are not severe. If the side effects are not severe, then more participants are asked to join the study and are given a higher dose of oxaliplatin. Participants joining the study later on will get higher doses of oxaliplatin than participants who join earlier. This will continue until a dose is found that causes severe but temporary side effects. The other lung will not be infused with anything, so that researchers can limit unforeseen toxicity to a single lung and see if one lung does better than the other.

The estimated enrolment is 10 participants, each with a diagnosis of colorectal carcinoma. The primary outcome is safety as measured by acute lung injury findings and the estimated primary completion date is January 1, 2027.
10. Study Offered at the Odette Cancer Centre to Treat Recurrent Rectal Cancer (May 9/23)

Magnetic resonance-guided focused ultrasound (MRg-FU) is a less invasive; outpatient modality being investigated for the thermal treatment of cancer. In MRg-FU, a specially designed transducer is used to focus a beam of low-intensity ultrasound energy into a small volume at a specific target site in the body. MR is used to identify and delineate the tumour, focus the ultrasound beam on the target, and provide a real-time thermal mapping to ensure accurate heating of the designated target with minimal affect to the adjacent healthy tissue. The focused ultrasound beam produces therapeutic hyperthermia (40-42°C) in the target field, causing protein denaturation and cell damage. Currently, there is no prospective clinical data reported on the use of MRg-FU in the setting of recurrent rectal cancer. Recurrent rectal cancer is a vexing clinical problem. Current retreatment protocols have limited efficacy. The addition of hyperthermia to radiation and chemotherapy may enhance the therapeutic response. With recent advances in technology, the investigators hypothesize that MRg-FU is technically feasible and can be safely used in combination with concurrent re-irradiation and chemotherapy for the treatment of recurrent rectal cancer without increased side-effects. The study is being offered at the Odette Cancer Centre. Here is the link to the study protocol:

https://clinicaltrials.gov/ct2/show/NCT02528175?term=magnetic+resonance+guided+focused+ultrasound&recr=Open&rank=1

11. Trends in the Incidence of Young-Onset CRC with a Focus on Years Approaching Screening Age (May 10/23)

With recent evidence for the increasing risk of young-onset colorectal cancer (yCRC), the objective of this population-based longitudinal study was to evaluate the incidence of yCRC in one-year age increments, particularly focusing on the screening age of 50 years. The study was conducted using linked administrative health databases in British Columbia, Canada including a provincial cancer registry, inpatient/outpatient visits, and vital statistics from January 1, 1986 to December 31, 2016. Researchers calculated the incidence rates per 100,000 at every age from 20 to 60 years and estimated annual percent change in incidence (APCI) of yCRC using joinpoint regression analysis. 3,614 individuals were identified with yCRC (49.9% women). The incidence of CRC steadily rose from 20 to 60 years, with a marked increase from 49 to 50 years. Furthermore, there was a trend of increased incidence of yCRC among women. Analyses stratified by age yielded APCI's of 2.49% and 0.12% for women aged 30-39 years and 40-49 years, respectively and 2.97% and 1.86% for men. These findings indicate a steady increase over one-year age increments in the risk of yCRC during the years approaching and beyond screening age. These findings highlight the need to raise awareness as well as continue discussions regarding considerations of lowering the screening age.

https://academic.oup.com/jnci/advance-article/doi/10.1093/jnci/djaa220/6119347?guestAccessKey=af490637-e51e-44d0-81b9-d1f2df7b60e9
12. Now Available in Canada: AVENIO 324 Gene CGP Panel Matched to FoundationONE CDx Panel (May 1/23)

NOW AVAILABLE IN CANADA

AVENIO® 324 gene CGP Panel Matched to FoundationONE® CDx panel

The AVENIO® 324 gene CGP panel analysis is powered by FoundationONE® Analysis Platform

Order AVENIO CGP Test Today

For more information, please visit the OncoHelix website.

13. LifeLabs Launches Signatera, Offering Canadians an Innovative and Personalized Approach to Managing Cancer (May 1/23)

LifeLabs is pleased to share the launch of Signatera, a highly sensitive, personalized molecular residual disease assay (MRD) test developed by Natera for treatment monitoring and molecular residual disease (MRD) assessment in patients previously diagnosed with cancer. This innovative test uses circulating tumor DNA (ctDNA) and is personalized for each patient to help assess recurrence risk and identify relapse up to two years earlier than the current standard of care tools. The clinical utility of Signatera across cancer types has been validated by multiple studies. In those trials, Signatera demonstrated predictive values such as:

Signatera testing involves two phases with pre-supplied collection kits. The first phase is an initial test that analyzes both a tumour tissue and blood sample, and the second phase involves subsequent blood tests on an as-needed basis. It is a safe, non-invasive way to monitor ctDNA levels to help physicians understand treatment efficacy and detect relapse without the inconvenience of repeated tissue biopsies and/or imaging.


14. Natera Announces Publication of Prospective, Multi-Site CIRCULATE Study in Nature Medicine Demonstrating Signatera’s Ability to Predict Chemotherapy Benefit in CRC (May 1/23)

Natera, Inc., a global leader in cell-free DNA testing, announced the publication of a new study in *Nature Medicine*, which demonstrates the ability of the Signatera molecular residual disease (MRD) test to identify patients with stage
II-IV colorectal cancer (CRC) who are at an increased risk of recurrence and predict who is likely to benefit from adjuvant chemotherapy (ACT).

The paper describes results from the GALAXY arm of the ongoing CIRCULATE-Japan trial, which is one of the largest and most comprehensive prospective studies of MRD testing in resectable CRC. The data builds on results previously presented at the 2022 ASCO Gastrointestinal Cancers Symposium (ASCO GI), now with median clinical follow-up extended to 16.74 months and DFS assessment at 18 months.

In the study, 1,039 patients with stage II-IV resectable CRC were monitored prospectively using the Signatera MRD test. Key takeaways include:

- Post-surgical MRD status was predictive of chemotherapy benefit
- Post-surgical MRD status was the most significant prognostic risk factor for recurrence, in a multivariate analysis that accounted for all clinicopathological risk factors currently used for prognostication (HR 10.82, p-value <0.001).
- Pre-surgical detection rate of 95.9% in patients with pathologic stage II-III disease and 93.1% in patients with stage II-IV disease.
- Signatera dynamics are indicative of treatment response

This study provides strong evidence that Signatera MRD-positive patients will benefit significantly from adjuvant therapy, while MRD-negative patients may be safely observed, regardless of clinical or pathological stage.


15. CRC Recurrence Predicted Early by Methylation-Based Liquid Biopsy Test (Apr.21/23)

New research suggests DNA methylation markers in circulating tumor DNA (ctDNA) can help to identify colorectal cancer (CRC) patients at increased risk of disease recurrence early who may benefit from more intensive treatment regimens. The markers can potentially help doctors make decisions, especially for postoperative patient selection for adjuvant chemotherapy, assessment of duration and intensity of treatment, and prognostic patient care.

For a multicenter prospective study published in *JAMA Oncology*, the researchers used a multi-locus qPCR assay dubbed ColonAiQ to search for half a dozen DNA methylation-based CRC ctDNA markers in more than 1,200 blood samples from 299 individuals with stage I to stage III CRC, including samples collected before and after surgery, as well as after treatment, including adjuvant chemotherapy, if applicable. Based on samples collected every three months for up to two years, the team found that the methylation-based ctDNA detection approach picked up CRC cases with residual disease after surgery or adjuvant chemotherapy after therapy, pointing to the possibility of using methylation markers for cost-effective disease monitoring.

The results suggested that longitudinal changes of ctDNA methylation are effective to monitor disease progression from minimal residual disease (MRD) to recurrence. Overall, the team saw disease recurrence in 55 of the CRC patients, representing more than 18 percent of the study participants. Those relapses were more common in individuals with ctDNA-positive blood samples before surgery and a month out from surgery.

While ctDNA has become a promising avenue for monitoring MRD, approaches that rely on tumor mutation detection can become costly and are not easily transferred from one patient to the next, prompting investigators involved in the current study to focus on DNA methylation features that may be more common across CRC tumors.


16. How to Detect Colon Cancer Without a Colonoscopy (Apr.27/23)

Current screening guidelines suggest that everyone should get their first colonoscopy at age 45 in the United States if they are at average risk for colon cancer. But the bowel prep for a colonoscopy and having to take a day off deters many people from getting screened for colon cancer.

While a colonoscopy is the gold standard test for colon cancer screening in the U.S., there are other tests available. Some of these include:
1. **Fecal immunochemical test (FIT):** This is an inexpensive, at-home, stool-based test that looks for proteins found in the blood. Blood in the stool could be a sign of colon cancer, and a positive FIT test would signal that you need to get a colonoscopy. If you choose to do a FIT test instead of a colonoscopy, it’s recommended to get tested every year in the U.S., or every two years in Canada.

2. **Stool FIT/DNA test:** This at-home test is a combination of FIT and looking at molecular changes, such as DNA mutations, in the stool. A positive test would signal that you need to get a colonoscopy. This test is recommended every three years in the U.S.
   - Stool-based tests are pretty good at detecting colon cancer, but not precancerous polyps

3. **Virtual colonoscopy:** This is a CT scan that generates a two-dimensional image, then computerized software generates three-dimensional images of your colon. Your doctor will look at these images, checking for polyps or other abnormalities.
   - Virtual colonoscopies require the same prep as a colonoscopy, and if your doctor finds anything during the virtual colonoscopy, you’ll need a colonoscopy.

There’s a lot of interest in new testing options. For instance, blood-based testing is increasing in interest because it would be easy to do, relatively inexpensive and amenable to point-of-care testing. The majority of studies are looking at alternative testing that involves multi-marker tests – that is, tests that involve multiple technologies, such as DNA and protein. The new push is to develop alternate tests that will detect not just one type of cancer, like colon cancer, but multiple types of cancer.

https://www.mdanderson.org/cancerwise/how-to-detect-colon-cancer-without-a-colonoscopy.h00-159617856.html

17. **AI in Colonoscopy: Disconnect Grows Between Academic, Community Studies (May 9/23)**

Companies may have hit a patch of rough road as they race to put artificial intelligence (AI) to work in the colonoscopy suite, as results with systems deployed in community settings aren't matching the numbers put up in university-based registration trials.

Several academic trials presented here at the annual Digestive Disease Week (DDW) conference highlighted great improvements in adenoma detection rates (ADR) and other quality parameters when endoscopists used computer-aided detection systems (known as CADe) to flag polyps and other lesions, as opposed to conventional human visualization. Yet other studies conducted in community hospitals and outpatient centers, including some randomized trials, for the most part failed to find significant improvements. Moreover, expectations that endoscopists whose past performance appeared suboptimal would see more improvement in ADR with CADe support weren’t borne out.

Explanations for the disconnect are only speculative at this point, with the inherent lack of operator blinding in these studies cited as one possible reason. But more important, perhaps, CADe only goes so far. It can’t pick up polyps hidden behind folds, and issues such as quality of bowel preparation may confound. And ultimately, the clinician-operators decide what to do with polyps flagged by these systems, and thus the systems’ success or failure rests ultimately with them. For instance, clinicians who see what might be a polyp on their screen that the system doesn’t flag might be induced to go against their own judgment and dismiss it; they might also ignore "boxed" polyps that don’t match what they think a polyp should look like.

So should every gastroenterologist think about installing a CADe system? It may be inevitable. As one speaker commented, surgeons who have shunned use of robotic aids are now seen as being "left behind," and the same is likely to happen to endoscopists who don’t keep up with technology.

https://www.medpagetoday.com/meetingcoverage/ddw/104429

18. **Young Adult CRC Clinic Available at Sunnybrook (May 5/23)**

A recent study led by the University of Toronto doctors has observed a rise in colorectal cancer (CRC) rates in patients under the age of 50. The study mirrors findings from the U.S., Australia and Europe. The growing CRC rates in young people come after decades of declining rates in people over 50, which have occurred most likely due to increased use of CRC screening (through population-based screening programs) which can identify and remove precancerous polyps. Patients diagnosed under the age of 50 have a unique set of needs, challenges and worries. They are unlike those diagnosed over the age of 50. **Dr. Shady Ashamalla (colorectal cancer surgical oncologist), along with Dr. Petra**
Wildgoose (Hepatobiliary and Colorectal Oncology Surgical Assistant), and their team at the Sunnybrook Health Sciences Centre understand the needs of this patient population.

Both belong to a multidisciplinary team of experts in the Young Adult Colorectal Cancer Clinic who work with young CRC patients, regardless of disease stage, to create an individualized treatment plan to support each patient through their cancer journey. Patients’ needs and concerns will be addressed as they relate to:

- Fertility concerns and issues
- Young children at home
- Dating/intimacy issues
- Challenges at work
- Concerns about hereditary cancer
- Relationships with family and friends
- Psychological stress due to any or all of the above

The team of experts consists of:

- Oncologists (medical, surgical, radiation)
- Social workers
- Psychologists
- Geneticists
- Nurse navigator

Should a patient wish to be referred to Sunnybrook, they may have their primary care physician, or their specialist refer them to Sunnybrook via the e-referral form, which can be accessed through the link appearing below. Once the referral is received, the Young Adult Colorectal Cancer Clinic will be notified if the patient is under the age of 50. An appointment will then be issued wherein the patient will meet with various members of the team to address their specific set of concerns.

http://sunnybrook.ca/content/?page=young-adult-colorectal-cancer-clinic

19. CCRAN’s Partnership with “Count Me In” (May 1/23)

CCRAN is proud to partner with Count Me In, a nonprofit research initiative, on The Colorectal Cancer Project. This new project is open to anyone in the United States or Canada who has ever been diagnosed with colorectal cancer (CRC). Patients can find out more and join at JoinCountMeIn.org/Colorectal.

Through the project, patients are asked to complete surveys to share information about their experience with CRC, to share biological sample(s), and to allow for the research team to request copies of their medical records. The project team then de-identifies and shares data from these with the entire research community.

Every patient’s story holds a piece of the puzzle that can help us better understand CRC. By discovering more about what drives cancer and sharing this data, CCRAN and the Colorectal Cancer Project believe insights can be gained to develop more effective therapies. One of the aims of the project is to reach populations that have been understudied, including individuals who are diagnosed with CRC at a young age, individuals from marginalized communities who have historically been excluded from research, and patients with metastatic CRC. Together, we can accelerate our understanding of CRC. To learn more or sign up to participate, visit JoinCountMeIn.org/Colorectal.
“Count Me In”, a nonprofit cancer research initiative, is inviting all patients across the United States and Canada who have ever been diagnosed with colorectal cancer (CRC) to participate in research and help drive new discoveries related to this disease. The Colorectal Cancer Project will enable patients to easily share their samples, health information and personal lived experiences directly with researchers in order to accelerate the pace of research. Patients who have been diagnosed with CRC at any point in their lives can join the project by visiting JoinCountMeIn.org/colorectal. From there, patients will be invited to share information about their experience through surveys and to provide access to medical records as well as saliva samples and optional blood, stool, and/or stored tissue samples for study and analysis. Researchers from the Broad Institute of MIT and Harvard and Dana-Farber Cancer Institute use this information to generate databases of clinical, genomic, molecular, and patient-reported data that is then de-identified and shared with researchers everywhere. To date, more than 9,000 patients with different cancers have joined Count Me In and shared their data. "We still do not know why there is an alarming rise in CRC in young adults”, said Andrea Cercek, MD Co-Director, Center for Young Onset Colorectal and Gastrointestinal Cancers Memorial Sloan Kettering Cancer Center and co-scientific leader of the Colorectal Cancer Project. "What we do know is that this is a global phenomenon that affects otherwise healthy individuals with no known risk factors. The Colorectal Cancer Project will provide researchers important information that will lead to a better understanding of this disease.”

Over 250 patients have joined the Colorectal Cancer Project since the launch in fall 2021. Every patient that joins the Colorectal Cancer Project enables us to learn more about colorectal cancer. Pts diagnosed at any age, whether newly diagnosed or years from their diagnosis, can enroll. If you have ever been diagnosed with colorectal cancer, you can visit JoinCountMeIn.org/Colorectal to enroll and have a direct impact on research and future treatment strategies.
Every colorectal cancer patient’s story holds a piece of the puzzle that can help us better understand how to treat this disease. Join our partners at @joincountmein to help generate more data for CRC by sharing your medical records, samples, and unique experiences with researchers everywhere.

Learn more at JoinCountMeIn.org/colorectal


20. Patients and Caregivers Needed to Help Shape Early Research for a CRC Therapy (May 10/23)

The Project:
Site specific immunomodulators (SSis) are a new class of therapy, made from dead bacteria. This therapy is designed to help the body’s own defense system (“immune cells”) fight cancer. SSis may be a potential new treatment for colorectal cancer and have already been shown to be safe in cancer patients. Our team of scientists and clinicians are planning a clinical trial to determine if SSis can increase the number of patients who survive colorectal cancer metastatic to the liver. The trial will start this Fall and is being led by Dr. Rebecca Auer (Ottawa) and Dr. Paul Karanikolas (Sunnybrook).

Why do we need your help?
We want patients and family members to help us shape our research, which aims to improve the experience of trial participants.
We are currently looking for patients, caregivers, or family members to join our team. As a part of our team, you will:
- Participate in group meetings (online and/or in person) with the research team from May 2022 to March 2024
- Help brainstorm and draft resources and documents for future trial participants
- Provide input on research to evaluate the usefulness of the developed resources

Who can apply?
We are looking for individuals with any of the following:
- A patient, family member, or a caregiver, with lived experience of colorectal cancer, liver metastases, and/or liver surgery
- Interested in helping shape research to assess a new therapy for colorectal cancer

No previous experience with SSis or research is necessary. An orientation session will provide more information about the research project, and we encourage you to ask any questions you have at any time.

In appreciation for your time, partners will receive compensation for attendance at meetings and activities.

If you are interested in joining our team or would like more information:
Please contact Meredith Conboy, Research Assistant, The Ottawa Hospital Research Institute
Email: mconboy@ohri.ca
21. Under 50 National Colorectal Cancer Information/Support Group Now Available at CCRAN! (May 2/23)

ARE YOU AN EARLY AGE ONSET (<50 YEARS) COLORECTAL CANCER PATIENT OR CAREGIVER LOOKING FOR INFORMATION OR SUPPORT?

Meet Hayley Painter R.N. and proud survivor of metastatic colorectal cancer!

Hayley will be assuming the lead on CCRAN’s Monthly National Under 50 Colorectal Cancer Information/Support Group Meetings!

When: Every third Sunday of the month
Time: 7:00 – 9:00 p.m.
Where: Via Zoom
To Register: Hayley.p@ccran.org

Please join Hayley as she will deliver important treatment updates and provide optimal support to each patient in their colorectal cancer journey at these support group meetings. To register for the meeting, please contact Hayley at hayley.p@ccran.org.

22. CaringVirtually: A Virtual Care Oncology Patient Study (Apr.27/23)

Majd Ghadban and Julia Stoneman are co-leading a study to understand cancer patient experiences with using virtual care as a method of healthcare delivery during the COVID-19 pandemic. The study is being undertaken by a network of national oncology patient organizations in Canada known as CONECTed: Collective Oncology Network for Exchange, Cancer care innovation, Treatment access and Education.

More information about CONECTed can be found on its website: https://conected.io/

In addition to Majd Ghadban and Julia Stoneman, the study team includes Jessica Finucane, Ed.S., Dr. Ambreen Sayani, Postdoctoral Fellow – CIHR Patient-Oriented Research, Leadership Stream at the Women’s College Research Institute, Women’s College Hospital, Louise Binder, Health Policy Consultant, Save Your Skin Foundation and member of CONECTed’s Steering Committee, and Dr. Tim Ramsay, Scientific Director, Ottawa Methods Centre.

Study Purpose

The purpose of this study is to understand cancer patient experiences using virtual care during the COVID-19 pandemic, and to develop recommendations that will help to ensure adoption and adaptation of equitable, equal, consistent, and comprehensive virtual care best practices across Canada. To achieve the objectives of this project, one-on-one interviews will be conducted with cancer patients who have used virtual care during the COVID-19 pandemic as part of their cancer care. These interviews are offered in both English and French, for which an honourarium will be provided. Study findings will be used to develop reports, which will be made public. The findings will also be used to inform future studies in the area of virtual care and oncology.

For more information, please click on the PDFs below.
A new artificial intelligence (AI) model designed by researchers at Harvard Medical School and National Cheng Kung University in Taiwan could bring much-needed clarity to doctors delivering prognoses and deciding on treatments for patients with colorectal cancer (CRC). Solely by looking at images of tumor samples (microscopic depictions of cancer cells), the new tool accurately predicts how aggressive a colorectal tumor is, how likely the patient is to survive with and without disease recurrence, and what the optimal therapy might be for them. The new tool goes beyond many current AI tools, which primarily perform tasks that replicate or optimize human expertise. The new tool, by comparison, detects and interprets visual patterns on microscopy images that are indiscernible to the human eye.

The researchers caution that any individual patient’s prognosis depends on multiple factors and that no model can perfectly predict any given patient’s survival. However, they add, the new model could be useful in guiding clinicians to...
follow up more closely, consider more aggressive treatments, or recommend clinical trials testing experimental therapies if their patients have worse predicted prognoses based on the tool’s assessment.


A Memorial Sloan Kettering Cancer Center (MSK) research team led by computational biologist Henry Walch, MS, has found that colorectal cancer (CRC) patients of African ancestry are less likely to have tumors that respond well to two important classes of newer treatments: immunotherapy and targeted therapy. These treatments work better against tumors that have certain genetic mutations — or have a larger number of mutations overall. The research found that a smaller fraction of the Black patients whose tumors were sequenced at MSK had molecular profiles that could be targeted by these therapies.

The new study comparing outcomes among people of different ancestries found:

- People of African ancestry had a significantly shorter median survival time after diagnosis — about two-thirds as long — than patients of all other ancestry groups.
- The presence of some genetic mutations that can typically be used to group patients into predicted outcomes was not helpful in predicting outcomes in patients of African ancestry.
- Patients of African ancestry whose tumors were sequenced at MSK were about 30% less likely to have the mutations that would make them good candidates for immunotherapy.

The findings suggest that the type of molecular profiles observed in the tumors of patients with African ancestry could reduce the number of options that these patients have for treatment. They also underscore the need to include racially diverse populations in cancer research and drug development studies.


26. Study Reveals Potential Target for Precision CRC Treatment (Apr.26/23)

Around 40% of patients with colorectal cancer (CRC) have a mutation in a gene known as KRAS. When not mutated, the KRAS gene encodes for a protein that promotes normal cell growth and division. But mutated versions of the gene are linked to several types of cancer, including lung cancer, pancreatic cancer, and CRC. Colorectal tumors with this mutation are more drug resistant than others, making them more difficult to treat.

Yale researchers wondered whether there were specific altered metabolic pathways in tumors with KRAS mutations. Using tissue samples from 200 patients, they found that not only were there metabolite differences between tumors and healthy tissue, there were also differences between the tumors found in men and those found in women and between the tumors of men with KRAS mutations and men without. Further analysis revealed that compared to other patients, men with KRAS mutations had tumor cells with suppressed ferroptosis, which is a type of cell death. It is important to note that you want cell death to be occurring in cancer, you want the drugs to be killing the cells. So it’s important to have ferroptosis occurring.

This study reveals a new target for precision-based treatment. It also allows for treatment to be tailored based on sex and mutation status. In the future, for instance, a drug that targets ferroptosis could be used to treat men with KRAS mutations.


27. 4 Reasons People Are Living Longer with Late-Stage Colon Cancer (Apr.28/23)

The survival rate for late-stage colon cancer (cancer that has spread to other parts of the body) has steadily improved over the last ten years, according to research on late-stage patients in Nature. “Many of us (physicians) in this specialty can remember when survival was estimated at 22 months from diagnosis, at the most, and usually more like 12 to 18
months," says Anton Bilchik, M.D., Ph.D., surgical oncologist and director of the Gastrointestinal and Hepatobiliary Program at Saint John's Cancer Institute in California. "With the major advancements we’re seeing, that’s now at 32 to 36 months and based on trajectory, we could get to 42 months within the next decade."

**Reason #1: Better Surgical Techniques**

Over the past decade, engineers and doctors have refined the surgical options for addressing tumors in both the colon and in the liver, where colon cancer tends to spread most. Surgeons are pushing the boundaries and employing techniques that simply wouldn’t have seemed possible a decade ago. For example, robotic surgery for colorectal cancer (CRC) provides surgeons with a three-dimensional surgical view, eliminates even the smallest tremor when using surgical instruments, and can be done in a minimally invasive way—which improves recovery outcomes.

**Reason #2: Tailored Therapies and Better Pathology**

It used to be that colon-cancer treatment was limited to chemotherapy medications, surgery and radiation. New treatments such as immunotherapies, improved chemo regimens, and targeted therapies are all proving more effective than what’s been used in the past and they come with fewer side effects too. Significant advances in pathology (how doctors diagnose colon cancer) are driving those changes in treatment, she says. Each tumor is now characterized in a more specific, detailed way that looks at biomarkers and genetic mutations. Armed with that comprehensive information, treatment can be highly individualized.

**Reason #3: Multidisciplinary Teamwork**

Although cancer care has always required a health team, that group of professionals has expanded to be more robust. In addition to working as an oncologist, late-stage colon cancer patients today are likely to consult with nurses, social workers, clinical dietitians, surgeons, hospitalists, patient advocates, spiritual advisors, clinical trial researchers, radiation oncologists, and interventional radiologists. Research on people with colon cancer suggests that these types of teams lead to significantly higher survival rates in the treatment of colorectal cancer, in part because the collaboration can lead to better diagnostic and therapeutic processes.

**Reason #4: Improved Post-Treatment Support**

The impact of cancer treatment on emotional health is finally getting the attention it deserves. For example, a study in the *Medical Clinics of North America* on cancer survivors noted that some people have ongoing cancer-related anxiety, or depression, as well as post-traumatic stress as a result of their experience. Additionally, for some cancer patients, no matter what kind of cancer they have, there has been a feeling of being abandoned after treatment is done, even if they’re still seeing an oncology team. The better quality emotional support a medical team provides after treatment has concluded (along with symptom management and pain relief), the better quality of life people with late-stage colon cancer are able to enjoy. Improved quality of life can have a positive effect on survival timeframes.


To better understand if medicinal cannabis can safely and effectively relieve cancer pain, researchers studied the treatment responses of 358 adults with cancer over a period of 3.5 years. Over 72% of patients reported having pain symptoms, with a small number of people reporting nausea, anxiety, insomnia or other symptoms. Patients were authorized a range of cannabis products — 25% used THC-dominant products, 38% used THC:CBD-balanced products and 17% used CBD-dominant products. Over half of patients took the product by mouth.

Patients’ pain symptoms decreased over the year-long follow-up, researchers found. This included worst and average pain intensity, overall pain severity and a measure of how much the pain interfered with daily life. Products that had a balance of THC and CBD were associated with stronger pain relief compared to THC-dominant or CBD-dominant products. The authors of the new study also found that the total number of medications that patients took decreased at each quarterly check-up. Opioid use was lower at the first three check-ups. In addition, medicinal cannabis seemed to be safe, the study found, with sleepiness and fatigue the most commonly reported side effects.
29. These 4 Symptoms Are Red Flags for Early-Onset CRC (May 4/23)

As more younger adults are being diagnosed with colorectal cancer (CRC), a new study pinpoints which symptoms should prompt a visit with your doctor. The researchers compared symptoms experienced by 5,075 CRC patients up to two years before their diagnosis with symptoms over that same time period for similar individuals who didn’t get colon cancer. About 1 in 5 people with CRC experienced at least one of the following symptoms between three months and two years before their cancer diagnosis, the study found:

- Anemia
- Bloody stools
- Diarrhea
- Abdominal pain

About half of the people with colon cancer experienced these symptoms in the three months before their diagnosis. Everyone, regardless of age, should recognize that symptoms such as ongoing abdominal pain and rectal bleeding, as well as lab tests showing anemia, could be a sign of CRC.

https://www.everydayhealth.com/colon-cancer/these-symptoms-are-red-flags-for-early-onset-colorectal-cancer/

30. Exercise for Cancer to Enhance Living Well (EXCEL) Study (May 11/23)

Exercise for Cancer to Enhance Living Well (EXCEL) is a 5-year Canada-wide project, which offers free, 12-week exercise classes designed specifically for individuals undergoing or recovering from cancer treatment. Classes are online through a secure video-conferencing platform, and where possible, in-person (post-COVID). Physical activity can help overcome treatment-related side effects such as fatigue and pain, improve mental health by reducing anxiety and depression, and improve overall quality of life for individuals living with and beyond cancer. Studies show that physical activity may even reduce the risk of recurrence for some cancers. Many urban centres in Canada offer cancer-specific exercise programs, however, rural and remote areas tend to lack exercise resources to support cancer survivors, resulting in lower activity levels, poorer health, and diminished quality of life. Thus, EXCEL targets cancer survivors living in rural and remote regions across Canada, empowering them to move more and providing opportunities to benefit from physical activity.

To learn more about the EXCEL study:
https://kinesiology.ucalgary.ca/labs/health-and-wellness/research/research-studies/exercise-cancer-enhance-living-well-excel

To hear about participant experiences: https://www.youtube.com/watch?v=c01oo4Yd3oA

31. These Foods May Increase Your Risk of CRC (Apr. 10/23)

While there are a number of things you cannot prevent in life, our diet is one of the main ways in which we can influence the likelihood of getting colorectal cancer (CRC). Karl Langberg, MD, a gastroenterologist with Hartford HealthCare’s Digestive Health Institute explained what foods should increase or lower your risk of CRC.

Don’t Eat This

- **Processed meats.** “Anything cured, salted, or having undergone chemical preservation” is best to avoid, Langberg says. He adds that reducing consumption of red meat in general is advised.
- **Speaking of meat - grilled meats.** “That yummy char on the outside of your grilled meat can cause cancer,” Langberg says. Studies have linked the chemicals left on your food by coal or gasoline with certain cancers.
- **Alcohol.** Moderate to heavy alcohol consumption is associated with increased risks of cancers of the colon and rectum compared with no alcohol consumption. Langberg notes that even one to three drinks a day can increase risk.

Do Eat (or Drink) This

In general, the Mediterranean diet or a vegetarian or semi-vegetarian diet are healthiest for the colon, says Dr. Langberg. But these specific foods and drinks could all help prevent CRC:

- **Coffee.** “Coffee is full of antioxidants,” Langberg says. Studies have shown that drinking between one and four cups of coffee a day can reduce the chances of developing CRC by 26% and significantly lower risk of early death.
- **High-fiber foods.** A 2015 study suggested that “individuals consuming the highest intakes of dietary fiber have reduced risks of incident colorectal adenoma and distal colon cancer and that this effect of dietary fiber,
particularly from cereals and fruit, may begin early in colorectal carcinogenesis,” according to the National Institutes of Health. Langberg says sweet potatoes, broccoli, nuts, beans and fruits including raspberries, pears and apples are all good choices.

- **Calcium and dairy.** Dairy products lower the risk of colon cancer by binding up bile acids produced by the body as well as other toxic chemicals in the digestive tract and then deactivating them, Langberg says.


### 32. If You’re Trying to Prevent Colon Cancer, Start with Lifestyle, Diet Changes (Apr.14/23)

Diet, exercise and lifestyle have been shown to help reduce the risk for several diseases, including colon cancer or colorectal cancer (CRC). Data from the World Cancer Research Fund International shows there is strong evidence eating whole grains, dietary fiber and dairy products decreases a person’s risk for CRC. Staying physically active also can reduce your risk for the disease. On the other hand, eating red and processed meats, drinking alcohol and being overweight or obese increase a person’s risk for colon cancer. Along with diet and exercise, there are other factors that affect a person’s risk for colon cancer. According to the World Cancer Research Fund International, smoking two packs of cigarettes per day increases risk for colon cancer by roughly 40% and nearly doubles the risk for death from colon cancer. Inflammatory bowel diseases, like Crohn’s disease and ulcerative colitis, also increase the risk for colon cancer. More than one half of all colon cancer cases and deaths can be attributed to modifiable risk factors, like smoking, unhealthy diets, high alcohol consumption, physical inactivity and body weight.

About 140,000 people are diagnosed with CRC ever year, and for a cancer that is over 90% preventable in the first place, people need to know their family history, need to be proactive at trying to decrease their risk and then get their screening colonoscopies on time.


### 33. Drinking a Cup of Tea Every Day May Improve Survival for Patients with CRC (Apr.10/23)

Higher intake of a subclass of flavonoids was linked to reduced mortality for those diagnosed with colorectal cancer (CRC), and small increases in consumption of foods rich in the compound, like tea, may improve survival, data show. There is some experimental evidence supporting the anti-cancer effects of flavonoids “owing to their capability of interfering with epigenetic signaling cascades responsible for tumorigenesis and metastasis,” the researchers wrote. However, it is unknown if intake affects colorectal cancer (CRC) survival specifically, they added.

Researchers assessed the association between mortality and tea consumption and found that patients who drank one to three cups of tea (8 oz. per cup) already had a lower CRC-specific mortality than non-drinkers. In addition, as “the major source of flavan-3-ols and proanthocyanins,” tea showed an inverse association with both all-cause and CRC-specific mortality. These findings suggest the survival-improving benefit of a higher intake of flavan-3-ols in CRC survivors and provide novel evidence for dietary modifications in cancer management.


**Image Source:** https://www.healthline.com/nutrition/is-hot-tea-good-for-you

### 34. Overweight, Obesity May Be Larger Risk Factor for CRC Than Previously Thought (Apr.26/23)

Overweight and obesity could be larger risk factors for colorectal cancer (CRC) than prior evidence indicates, according to a study published in *JAMA Network Open*. Studies that do not consider pre-diagnostic (cancer-associated) weight loss may be underestimating how excess body fat factors into the risk for CRC.

Investigators analyzed how pre-diagnostic weight loss could impact the relationship between excess weight and CRC risk. They calculated BMI at various points in time prior to CRC diagnosis, focusing on weight changes in the 12 years leading up to cancer diagnosis. Measuring BMI 8 to 10 years prior to CRC diagnosis increased the positive association between overweight, obesity, and 5-unit BMI increase with the risk of CRC. High BMI as a risk factor for CRC was increased as earlier periods before diagnosis were examined, with the association being particularly pronounced using BMI at least 8 years before diagnosis. Therefore, involuntary pre-diagnostic weight loss may be a potential marker for early detection of CRC. In addition, it may play a similarly important role for other cancers and noncancer diseases associated with overweight and obesity, which should be addressed in further research.

35. Eating Garlic May Lower Risk of CRC (Apr.26/23)

In the present study, researchers explore the potential impact of garlic consumption on the risk of colorectal cancer (CRC) and the presence of bacterial deoxyribonucleic acid (DNA) in the bloodstream. Garlic consists of several non-digestible carbohydrates, polyphenols, and organosulfur compounds, many of which have been linked to a reduced risk of CRC. Garlic has been proposed to affect intestinal mucosa health and gut microbiota due to its antioxidant, antibacterial, and anti-inflammatory properties.

Data were obtained from a case-control study that was conducted between 2017 to 2019 at two university hospitals located in the metropolitan region of Milan, Italy. The study cohort consisted of 300 participants, including 100 with confirmed CRC, 100 with intestinal adenoma (IA), and 100 healthy controls. Garlic consumption was found to reduce the likelihood of CRC and IA and was linked to specific bacterial DNA features in the blood. Garlic consumption also had a direct correlation with certain taxa from *Corynebacteriales* and an inverse correlation with the relative abundance of taxa from *Clostridiales*. Further investigation is needed to determine if there are bacterial DNA markers in the blood that can identify unhealthy diets or disorders. This type of study could potentially lead to personalized treatment options based on garlic consumption and its effects on bacterial taxa prevalence and abundance.


36. Experts Say Universal Masking for COVID-19 in Hospitals is Not Necessary (Apr.20/23)

Universal masking in healthcare settings is no longer needed, a group of U.S. epidemiologists and infectious diseases experts proposed April 18 in a commentary published in the journal *Annals of Internal Medicine*. These policies, which were enacted early in the pandemic to reduce illness and death associated with COVID-19, required staff, patients and visitors to wear face masks in hospitals and other healthcare facilities. However, given recent shifts in the pandemic, the eight experts argue that healthcare settings should treat the coronavirus that causes COVID-19 like other endemic respiratory pathogens — using standard infection control practices.

With the arrival of effective vaccines and a large portion of the population who developed immunity from natural infection, transmission from individuals with asymptomatic infection is now less common than in the earlier stages of the pandemic. When SARS-CoV-2 first emerged, it was a silent spreader — more than 50% or so of transmissions resulted from people without symptoms, some studies found. In contrast, recent data — after the emergence of the Omicron variant — suggests that most transmissions now occur around or after the start of symptoms. Given the small number of studies, though, asymptomatic transmission is still a possibility, even among a population with a high level of immunity. With few mask-related policies in place, people will need to decide for themselves how much COVID-19-related risk they are comfortable with, and what steps to take. Researchers suggest that if a person is vulnerable [themselves], or they are caring for or living with people who are vulnerable, then wearing a mask may be the rational choice.


Anecdotal reports are surfacing that some people are developing tinnitus days after receiving one of the COVID-19 vaccines. The risk of developing tinnitus — a ringing in one or both ears — after COVID-19 vaccination appears to be
low, and while some studies have identified a link between the two, more data is needed to determine if tinnitus is a possible side effect of the vaccine.

The Centers for Disease Control and Prevention (CDC), which is currently looking into reports of vaccine-associated tinnitus, told USA Today that there currently doesn’t appear to be a link between tinnitus and COVID vaccination. Other shots, like the flu shot, are thought to trigger tinnitus, potentially due to the inflammatory response invoked by vaccinations, but it’s too soon to say if the COVID-19 shots can, too. It’s unclear whether it’s the vaccine itself, which can cause an inflammatory reaction in the body, or if it just happens because a lot of people get vaccines and tinnitus and you’re bound to have people who overlap.

According to Dr. Hamid R. Djalilian, about 10 to 15% of the population has tinnitus and estimates suggest 1% of the population can temporally develop tinnitus in any given year. If you vaccinate 70% of the population, 7% will have tinnitus and 0.7% will get tinnitus that year. “This could be because they were going to get tinnitus anyways and not necessarily from the vaccine,” Djalilian said.

https://www.healthline.com/health-news/is-the-covid-19-vaccine-linked-to-tinnitus-what-we-know?slot_pos=article_5&utm_source=Sailthru%20Email&utm_medium=Email&utm_campaign=daily&utm_content=2023-05-04&utm_term=s:hl_n:daily&apid=35071678&rvid=0f5576a60cbcf8355009cb5e3a7953abb892920ca3a337e264cf111d37c2ba#The-bottom-line:

38. Frequently Asked Questions for COVID-19

Q: What is COVID-19 (or novel Coronavirus Disease - 19)?

A: Coronaviruses are a large family of viruses that can cause illnesses in humans and animals. Coronaviruses can cause illnesses that range in severity from the common cold to more severe diseases such as Severe Acute Respiratory Syndrome (SARS) and most recently, COVID-19. COVID-19 or novel coronavirus originated from an outbreak in Wuhan, China in December 2019. The most common symptoms associated with COVID-19 can include fever, fatigue, and a dry cough. Though additional symptoms have now been linked with the disease, which may include aches and pains, nasal congestion, runny nose, sore throat, diarrhea, skin rash and vomiting. It is also possible to become infected with COVID-19 and not experience any symptoms or feeling ill. The spread of COVID-19 is mainly through the transmission of droplets from the nose or mouth when a person coughs, exhales or sneezes. These droplets land on surfaces around a nearby person. COVID-19 can be transmitted to that nearby person who may end up touching the surface contaminated with COVID-19 and then end up touching their nose, mouth, or eyes. A person can also contract COVID-19 through inhaling these droplets from someone with COVID-19. Although research is still ongoing, it is important to note that older populations (over the age of 65), those with a compromised immune system and those with pre-existing conditions including heart disease, high blood pressure, lung disease, diabetes or cancer may be at a higher risk of severe illness due to COVID-19.

https://www.who.int/news-room/q-a-detail/q-a-coronaviruses

Q: What can I do to avoid getting Coronavirus?

A: There are various ways in which we can reduce our risk of contracting COVID-19. Below are some measures suggested by the World Health Organization

1. Keep at least 2 metres (or 6 feet) between yourself and other people. This will reduce the risk of inhaling droplets from those infected with COVID-19.
2. Regularly clean your hands for at least 20 seconds with warm water and soap, or an alcohol-based hand rub. This will kill any viruses on your hands.
3. Avoid touching your eyes, nose and mouth. If the virus is on your hands, it can enter the body through these areas.
4. Follow good respiratory hygiene by covering your mouth and nose with a tissue or elbow when you cough and sneeze. This prevents the droplets from settling on surfaces or being released into the air around you.
5. Stay home as much as possible, especially if you are feeling unwell. If you think you may have the Coronavirus, please see “What should I do if I think I have Coronavirus?” section.
6. Please wear a face covering or mask in public when physical distancing is not possible.

https://www.who.int/news-room/q-a-detail/q-a-coronaviruses

Q: Are there special precautions that people with cancer can take?

A: People with cancer (and other chronic ailments such as heart disease, diabetes, high blood pressure and lung disease) are at a higher risk of severe illness due to COVID-19 as cancer is considered a pre-existing health issue. Some cancer treatments including chemotherapy, radiation and surgery can weaken the immune system, making it harder for the body to fight infections and viruses, such as Coronavirus. It is important to diligently follow the World Health Organization’s recommendations above to reduce the risk of contracting COVID-19. If you have any concerns about your risk, it is best to contact your doctor or healthcare team.
Q. Will anything change with regards to my cancer related medical visits?

As each patient and treatment plan is unique, it is always best to contact your health care provider for updated information about your treatment plan. In some cases, it is safe to delay cancer treatment until after the pandemic risk has decreased. In other cases, it may be safe to attend a clinic that is separate from where COVID-19 patients are being treated. Oral treatment options could be prescribed by your care provider virtually, without the need to attend the clinic. Finally, some follow-up appointments or discussions could be held virtually (via skype or zoom for example) or over the phone to minimize your risk. As we know, conditions and protocols are changing daily due to the nature of the COVID-19 outbreak, and vary based on location, therefore, the best first step is to reach out to your care provider for guidance.

https://www.cancer.gov/contact/emergencypreparedness/coronavirus

Should you wish to contact your local public health agency, please see below.

**Alberta**
COVID-19 info for Albertans
Social media: Instagram @albertahealthservices, Facebook @albertahealthservices, Twitter @GoAHealth
Phone number: 811

**British Columbia**
British Columbia COVID-19
Social media: Facebook @ImmunizeBC, Twitter @CDCofBC
Phone number: 811

**Manitoba**
Manitoba COVID-19
Social media: Facebook @manitobagovernment, Twitter @mbgov
Phone number: 1-888-315-9257

**New Brunswick**
New Brunswick Coronavirus
Social media: Facebook @GovNB, Twitter @Gov_NB, Instagram @gnbca
Phone number: 811

**Newfoundland and Labrador**
Newfoundland and Labrador COVID-19 information
Social media: Facebook @GovNL, Twitter @Gov_NL, Instagram @govnlsocial
Phone number: 811 or 1-888-709-2929

**Northwest Territories**
Northwest Territories coronavirus disease (COVID-19)
Social media: Facebook @NTHSSA
Phone number: 811

**Nova Scotia**
Nova Scotia novel coronavirus (COVID-19)
Social media: Facebook @NovaScotiaHealthAuthority , Twitter @healthns, Instagram @novascotiahealthauthority
Phone number: 811

**Nunavut**
Nunavut COVID-19 (novel coronavirus)
Social media: Facebook @GovofNunavut , Twitter @GovofNunavut, Instagram @governmentofnunavut
Phone number: 1-888-975-8601

**Ontario**
Ontario: The 2019 Novel Coronavirus (COVID-19)
Social media: Facebook @ONThealth, Twitter @ONThealth , Instagram @ongov
Phone number: 1-866-797-0000

**Prince Edward Island**
Prince Edward Island COVID-19
Social media: Facebook @GovPe, Twitter @InfoPEI,

**Quebec**
Coronavirus disease (COVID-19) in Québec
Social media: Facebook @GouvQc, Twitter @sante_qc
Phone number: 1-877-644-4545

**Saskatchewan**
Saskatchewan COVID-19
Social media: Facebook @SKGov, Twitter @SKGov
Phone number: 811

**Yukon**
Yukon: Find information about coronavirus (COVID-19)
Social media: Facebook @yukonhss, Twitter @hssyukon
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