The following colorectal cancer treatment and research updates extend from January 13th, 2022, to February 17th, 2022, 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.

CONTENT

1. Phase II LEAP Clinical Trial to Treat mCRC
2. TRK Fusion Cancer and How to Test for It
3. A Phase II, Open-Label, Multicentre, Study of an Immunotherapeutic Treatment for the MSI High CRC Metastatic Population
4. Phase III Study at the Odette Cancer Centre Comparing Arfolitixorin vs. Leucovorin: Both in Combination with SFU, Oxaliplatin, and Bevacizumab in Patients with Advanced CRC
5. Three-Drug Combination Active in mCRC Subset
6. Nivolumab Regimen Misses PFS Endpoint but Shows Promise in mCRC
7. Trastuzumab Deruxtecan Shows Encouraging Efficacy for HER2+ mCRC
8. Cabozantinib plus Durvalumab Shows Efficacy in Subset of Patients with CRC

DRUGS / SYSTEMIC THERAPIES

SURGICAL THERAPIES

9. Hepatic Artery Infusion Pump (HAIP) Chemotherapy Program — Sunnybrook Hospital
10. Living Donor Liver Transplantation for Unresectable CRC Liver Metastases
11. PIPAC-OX in Patients with Colorectal Peritoneal Metastases — A Systematic Review

RADIATION THERAPIES/INTERVENTIONAL RADIOLOGY
12. Study Offered at the Odette Cancer Centre to Treat Recurrent Rectal Cancer

13. Trends in the Incidence of Young-Onset CRC with a Focus on Years Approaching Screening Age
14. Earlier Colorectal Screening Bolstered by Real-World Data
15. Liquid Biopsy Detects Cancer Progression Much Earlier Than Imaging
16. CRC Screening Rates Low Among Breast and Prostate Cancer Survivors in Single Center Study
17. Guardant Health Targets CRC Screening in 2022

18. Young Adult CRC Clinic Available at Sunnybrook Hospital
19. CCRAN’s Partnership with “Count Me In”
20. Ulcerative Colitis and Colon Cancer: What Is Your Risk?
21. Fight Colorectal Cancer Launches its Plan to Find a Cure
22. Late-Stage CRC Is More Common Than Ever in Young Adults, Study Says
23. Genomic Profiling Uncovers Mutations More Enriched in Early-Onset CRC
24. Can KRAS Positive Colorectal and Lung Cancer Finally be Targeted?
25. Understanding Polyps and Their CRC Counterparts

27. Mediterranean Diet May Lower Cancer Risk
28. Weight Loss Reduces Risk of Growths Linked to CRC

29. Choosing What Mask to Wear Can Be Confusing
30. CDC: Third Dose Guarded Immunocompromised from Severe COVID
31. Omicron BA.2 Variant May Be Extra Transmissible
32. The Latest on COVID-19
1. Phase II LEAP Clinical Trial For mCRC (Sept.10/21)

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 (Feb.16/21)
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.

1. Patients undergo a biopsy to obtain a sample for testing
2. Tissue is sent to lab to test for genomic changes
3. Results sent to clinician to help decide on treatment

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 (Sept. 16/21)

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 (Sept. 16/21)

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 effect 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.

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

5. Three-Drug Combination Active in mCRC Subset (Jan. 24/22)

A three-drug combination demonstrated activity for patients with microsatellite-stable, BRAF V600E-positive metastatic colorectal cancer, according to study results presented at ASCO Gastrointestinal Cancers Symposium. The regimen — which consisted of encorafenib, cetuximab and nivolumab — demonstrated activity for patients with microsatellite-stable, BRAF V600E-positive metastatic colorectal cancer (mCRC). A previous study showed the combination of these agents extended survival compared with traditional therapy for patients with BRAF V600E-positive mCRC. However, median time on study was about 4 months, and only 20% of patients responded to treatment.

Researchers conducted a single-institution, single-arm phase 1/phase 2 trial to assess the three-drug combination for 26 patients with treatment-refractory microsatellite-stable, BRAF V600E-positive mCRC. “Overall, this regimen was safe and well-tolerated,” Morris said. “There were no unexpected or surprising toxicities from the combination.” The response analysis included 22 patients. Median follow-up was 16.3 months. Researchers reported an overall response rate (ORR) of 50% and a disease control rate of 96%, with median progression free survival (PFS) of 7.4 months and median overall survival (OS) of 15.1 months. Median duration of response was 7.7 months.


6. Nivolumab Regimen Misses PFS Endpoint but Shows Promise in mCRC (Jan. 27/22)

First-line nivolumab plus standard of care chemotherapy failed to prolong 1-year PFS among patients with metastatic colorectal cancer (mCRC), according to study results presented at ASCO Gastrointestinal Cancers Symposium. However, findings from the phase 2/phase 3 CheckMate 9x8 trial showed the immune checkpoint inhibitor nivolumab plus FOLFOX and bevacizumab conferred higher PFS rates after 1 year compared with standard-of-care chemotherapy alone.
Results showed median 1-year PFS of 11.9 months for both treatment groups. However, the nivolumab combination conferred a PFS rate at 15 months of 45% compared with 21.5% for standard of care. Moreover, the combination conferred an 18-month PFS rate of 28% vs. 9% for standard of care. Researchers additionally observed an overall response rate (ORR) of 60% and median duration of response of 12.9 months with the nivolumab combination compared with an ORR of 46% and median duration of response of 9.3 months with standard of care.


7. Trastuzumab Deruxtecan Shows Encouraging Efficacy for HER2+ mCRC (Jan.23/22)

Trastuzumab deruxtecan (T-DXd) as a monotherapy displayed encouraging results for patients with HER2-positive metastatic colorectal cancer (mCRC), according to data from an extended follow-up study by Takayuki Yoshino, MD, PhD, from the National Cancer Center Hospital East in Kashiwa, Japan, at the 2022 Gastrointestinal Cancers Symposium.

Patients were randomized to 3 cohorts:
- cohort A (n = 53) had patients who were immunohistochecmistry (IHC) 3-positive or IHC 2-positive/in situ hybridization (ISH)-positive;
- cohort B (n = 15) had patients who were IHC 2-positive/ISH-negative; and
- cohort C (n = 18) had patients who were IHC 1-positive.

Patients in cohort A had an overall response rate (ORR) of 45.3%, a median duration of response (DOR) of 7.0 months, a median progression-free survival (PFS) of 6.9 months, and a median overall survival (OS) of 15.5 months. No patients remain on treatment. Disease control rate (DCR) among cohorts was
- 83.0% for cohort A,
- 60.0% for cohort B, and
- 22.2% for cohort C.

These promising results support continued research of T-DXd in patients with HER2-positive mCRC.

https://www.cancernetwork.com/view/trastuzumab-deruxtecan-shows-encouraging-efficacy-for-her2-metastatic-colorectal-cancer

8. Cabozantinib plus Durvalumab Shows Efficacy in Subset of Patients with CRC (Jan.28/22)

The combination of cabozantinib and durvalumab appeared safe and demonstrated efficacy among a small cohort of patients with advanced mismatch repair-proficient/microsatellite-stable colorectal cancer (CRC), according to study results. The 29 patients evaluable for the efficacy analysis had an ORR of 27.6%, confirmed partial response rate of 20.7% and disease control rate of 86.2%. Researchers reported median PFS of 3.8 months and median OS of 9.1 months, as well as a 6-month PFS rate of 34.5%. In a subgroup of patients with wild-type RAS (n = 12), researchers observed an ORR of 50% and a disease control rate of 83.3%. Additionally, analysis showed median PFS of 6.3 months and median OS of 21.8 months.


9. Hepatic Artery Infusion Pump (HAIP) Chemotherapy Program – Sunnybrook Odette Cancer Centre (Oct.15/21)

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

10. Living Donor Liver Transplantation for Unresectable CRC Liver Metastases (Oct.1/21)

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 are 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

11. PIPAC-OX in Patients with Colorectal Peritoneal Metastases — A Systematic Review (Feb.08/22)

This study aimed to systematically review all clinical studies reporting safety and efficacy outcomes of pressurized intraperitoneal aerosol chemotherapy (PIPAC) with oxaliplatin (PIPAC-OX) in patients with colorectal peritoneal metastases (CPM), as it is increasingly used as a palliative treatment option. The study searched to identify clinical studies including at least one patient with CPM treated with PIPAC-OX and reported on the following outcomes:

• adverse events,
• tumor response,
• quality of life,
• secondary cytoreductive surgery,
• progression-free survival,
• overall survival, and
• environmental safety of PIPAC-OX.

Of 28 included studies, only 14 non-comparative studies separately reported at least one outcome of PIPAC-OX for CPM, of which only two studies specifically focused on this group. These 14 studies reported:

• adverse events (5 studies),
• tumor response (5 studies),
• secondary cytoreductive surgery (4 studies),
• progression-free survival (1 study),
• overall survival (5 studies), and
• environmental safety (2 studies).

Except for 5 studies (describing 26 patients), none of the included studies stratified their results for PIPAC-OX monotherapy and PIPAC-OX with concomitant systemic therapy, and none of the studies reporting survival outcomes stratified results for line of palliative treatment, complicating interpretation.
The currently available evidence for the use of PIPAC-OX in patients with CPM is limited and difficult to interpret, mainly since the majority of studies did not stratify their results for PIPAC-OX monotherapy versus PIPAC-OX with the use of systemic therapy. Investigators of future studies including patients receiving PIPAC-OX for CPM are encouraged to report separate outcomes for this particular group, to stratify their results for PIPAC-OX monotherapy versus PIPAC-OX with concomitant systemic therapy, and to stratify survival outcomes for line of palliative treatment.

Image Source: https://www.parashospitals.com/blogs/is-pipac-a-very-risky-procedure/

**RADIATION THERAPIES/INTERVENTIONAL RADIOLOGY**

12. Study Offered at the Odette Cancer Centre to Treat Recurrent Rectal Cancer (Oct.9/21)

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 effect 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

**SCREENING**

13. Trends in the Incidence of Young-Onset CRC with a Focus on Years Approaching Screening Age (Feb. 17/22)

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-d12df7bd0c9

14. Earlier Colorectal Screening Bolstered by Real-World Data (Jan.10/22)

Guidelines that recently lowered the colorectal screening age to 45 for all individuals of average risk in the U.S. were right on track, suggested a retrospective study of predictors for advanced premalignant lesions (APLs) and colorectal cancer (CRC). The American College of Gastroenterology (ACG) first lowered the age to start colorectal screening from 50 to 45 for African Americans in 2009. The American Cancer Society expanded that in 2018 to all average-risk individuals, regardless of race or ethnicity, as did the U.S. Preventive Services Task Force in 2020 and the ACG in 2021.

Early-onset colorectal cancer (CRC) makes up 12% of all CRC cases, with cases in those under 45 accounting for 6% of all cases. Researchers examined the GI Quality Improvement Consortium Registry, comprising nearly 3 million colonoscopies across 21 states.

Adjusted multivariate logistic regression showed greater risk for advanced premalignant lesions (APLs) and CRC associated with:

- being white,
- increasing age,
- male,
- having a family history of colorectal cancer or polyps, and
- having a colonoscopy for bleeding or screening.

Data also suggests that clinically important lesions occur about 5 years earlier in individuals with a family history of CRC, compared to those without a family history.

https://www.medpagetoday.com/gastroenterology/coloncancer/96579

15. Liquid Biopsy Detects Cancer Progression Much Earlier Than Imaging (Jan.03/22)

Most cancer patients are unnecessarily treated with chemotherapy or immunotherapy and continue to receive chemotherapy after it has stopped working. The ineffective use of chemotherapy exposes cancer patients to unnecessary side effects, inconvenience, cost, and delays access to the next potentially beneficial treatment. What if a simple blood test were available that could quickly determine when chemotherapy was ineffective? Research using liquid biopsy analyses of serial changes in cell free DNA suggests cancer progression can be detected much earlier than with radiographic testing.

Blood contains an abundance of information about a patient’s cancer and immune response, from cells including cell free DNA and small vesicles from the tumor and its environment. Advances in biology and technology enable a simple blood draw - a liquid biopsy - to provide clinically actionable information about cancer diagnosis and treatment.

Researchers suggests that cancer progression can be accurately predicted in ~ 8 weeks using cfDNA obtained by liquid biopsy - long before conventional imaging techniques could make a definitive call. This blood-based approach is consistent across multiple types of cancer and treatments, including immunotherapy.

Image Source: https://past.pmwcintl.com/sessionthemes-liquidbiopsy/

16. CRC Screening Rates Low Among Breast and Prostate Cancer Survivors in Single Center Study (Feb.04/22)

Patients who survived breast or prostate cancer had a low rate of colorectal cancer (CRC) screenings, with factors such as gender, comorbidities, and residence being associated with receiving a screening, according to findings from a single center study based in Southern Maryland. Results from the study indicated that, overall, 51% of survivors received a colonoscopy for CRC, including 54% of prostate and 44% of breast cancer survivors. Some factors such as being older than 65 years, surviving breast cancer vs prostate cancer, and living in a large vs small metropolitan area were associated with lower odds of undergoing a screening for CRC.

“These findings suggest the importance of secondary cancer prevention in survivorship care plans for [patients with] breast and prostate cancer and effective implementation of such plans within the primary care system,” the investigators wrote.
17. Guardant Health Targets CRC Screening in 2022 (Feb.08/22)

Guardant Health CEO Helmy Eltoukhy told MedTech Dive the precision oncology company plans to launch a liquid biopsy for colorectal cancer (CRC) screening in the first half of the year, called Guardant Shield, and which is meant to challenge Exact Sciences’ Cologuard as well as invasive colonoscopies. "If you asked patients what they prefer, a blood test, Cologuard, [fecal immunochemical test] or colonoscopy, 64% of patients prefer blood over all other modalities combined. That’s pretty compelling, and that’s regardless of sensitivity,” Eltoukhy said.

Guardant in December announced it reached its target enrollment of 12,750 patients in ECLIPSE, a prospective, multi-site registrational study to evaluate the performance of the company’s LUNAR-2 blood test to detect CRC in average-risk adults. The company expects results from its ECLIPSE trial in 2022 and plans to submit a premarket approval (PMA) submission for the Guardant Shield CRC screening test to the FDA in the second half of the year. In addition, it aims to launch the liquid biopsy as a lab-developed test in the first half of the year.

18. Young Adult CRC Clinic Available at Sunnybrook (Oct.12/21)

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), and his team at the Sunnybrook Health Sciences Centre understand the needs of this patient population.

Dr. Ashamalla belongs to a multidisciplinary team of experts in the Young Adult Colorectal Cancer Clinic who will work with young CRC patients, regardless of disease stage, to create an individualized treatment plan to support each patient through their cancer journey. Their 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
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 180 people from across the US & CA have said "Count Me In" to join the Colorectal Cancer Project. By sharing information via surveys and access to medical records & samples, patients can have an impact on the future of colorectal cancer. Learn more at JoinCountMeIn.org/Colorectal"

Ulcerative colitis (UC) is an inflammatory bowel disease that affects the large intestine, also known as the colon, and includes symptoms such as, bloody stools, pain, and persistent diarrhea. Research suggests that those with UC are 4 to 10 times more likely to be diagnosed with CRC compared with the general population.

The exact risk for CRC for people with UC varies depending on these 3 factors:

- **Duration of the disease**: It is believed that the risk of developing CRC starts to increase eight to 10 years following the onset of UC symptoms. One meta-analysis found that 10 years after onset, the risk is 1.6%; at 20 years, it increases to 8.3%; and 30 years after onset, it increases to 18.4%.
- **Severity of inflammation**: The more inflammation that is in your colon or rectum, the more damage there is to cells in the colon lining. This causes more cell turnover, which allows more opportunity for mutations (changes) in the DNA of these cells that can lead to cancer.
- **How much of the colon is affected**: Those with UC of the entire colon are at the highest risk. If UC only affects the left side of the colon, the risk of developing cancer is lower. And those with UC only in the rectum don't have a heightened risk of CRC.

21. Fight Colorectal Cancer Launches its Plan to Find a Cure (Jan.18/22)

Fight Colorectal Cancer (Fight CRC), the nation’s leading patient advocacy organization, revealed its Path to a Cure Report for colorectal cancer (CRC). Path to a Cure is designed to push the science forward for CRC and strengthen advocacy efforts. Out of the initiative has come the Path to a Cure Report, a plan that summarizes and communicates the way forward for the CRC community—a community that has seen very few treatment breakthroughs in the past.
decade and is anticipating colorectal cancer to become the number one cancer killer amongst 20–49-year-olds in the next eight years.

“As a community, there is tremendous potential when we coordinate our efforts toward common goals,” said Dr. Scott Kopetz, research and medical oncologist at MD Anderson Cancer Center. “This project brings together many of the thought leaders in the CRC community who are passionate about accelerating research and improving outcomes for colorectal cancer patients. Together, we can tackle big ideas with ambitions and meaningful impact!”


22. Late-Stage CRC Is More Common Than Ever in Young Adults, Study Says (Feb.08/22)

Researchers looked at 16 years of data from nearly 104,000 patients who developed a subtype of colorectal cancer (CRC) called adenocarcinoma.

Ultimately, the study found that those in their 20’s are being diagnosed with later-stage (and harder to treat) cancers—more so than ever before. Researchers noted that people in their 20’s had a 133% increase in rectal-only, distant stage cancer, while participants in their 30’s had a 97% increase, and those in their 40’s saw a 48% increase. Age wasn’t the only factor, researchers noted great disparities among racial groups. Those who identify as American Indian/Alaskan Native and Asian or Pacific Islander had very low representation and were ultimately excluded from the study. But Black and Hispanic Americans in their 20’s had the highest rate of late-stage cancer among all reported groups.

“It’s really unusual. And it’s alarming,” Andrew Vorenberg, M.D., a board-certified colon and rectal surgeon at Colon and Rectal Specialists, says of the research. He adds that it’s also possible younger patients are ignoring symptoms, allowing for the disease to mutate and spread much more aggressively. Harvey Kaufman, M.D., senior medical director of Quest Diagnostics adds that colorectal cancer has a link to weight, and given adolescent obesity rates are on the rise, there could be a connection there. Though, more research is needed to classify this as a definitive link.

Image Source: https://daytonnews.com/2022/02/08/late-stage-colorectal-cancer-rising-in-young-adults/

23. Genomic Profiling Uncovers Mutations More Enriched in Early-Onset CRC (Jan.24/22)

Patients with early-onset and late-onset colorectal cancer (CRC) showed no significant differences in regards to tissue and plasma genomic profiles, but a greater enrichment of the BRCA1 and PTEN mutations were noted in the tissue of those with early-onset disease.

Seeking to examine and compare the genetic profiles of patients with early-onset and late-onset colorectal cancer, next-generation sequencing data of 1477 patients with MSI-stable (MSS) CRC were analyzed, of which 1029 were tissue (18.7% early-onset) and 448 plasma (17.8% early-onset) tests. Same sex distribution was shown between both groups, with early-onset patients showing a significantly lower prevalence of Caucasian ethnicity vs late-onset counterparts. Of 68 CRC-related genes examined in tissue, 2 were significantly more enriched in those with early-onset disease vs late-onset—the BRCA1 mutation and PTEN mutation.


24. Can KRAS Positive Colorectal and Lung Cancer Finally be Targeted? (Jan.22/22)

Updated results of the Phase 1/2 KRYSALT–1 study evaluating adagrasib alone or in combination with cetuximab in patients with heavily pretreated colorectal cancer (CRC) harboring a KRASG12C mutation were presented during the Presidential Symposium at the European Society for Medical Oncology Congress (ESMO) 2021. KRYSALT–1 is an open-label Phase 1/2 multiple expansion cohort trial evaluating adagrasib as monotherapy and in combination with other anticancer therapies in patients with advanced solid tumors harboring a KRASG12C mutation.

The Adagrasib monotherapy arm has a response rate (RR) of 22%, while Adagrasib plus cetuximab has a RR of 43%. Side effects included nausea (54%),
diarrhea (51%), vomiting (35%), fatigue (32%) and increased levels of an enzyme that indicates minor liver irritation (20%).


25. Understanding Polyps and Their CRC Counterparts (Feb.11/22)

Researchers from Vanderbilt University have discovered how polyps develop into colorectal cancer (CRC). The researchers analyzed 62 tumor tissue samples using a variety of techniques including single-cell transcriptomics, genomics and immunohistopathology. Dr. Robert Coffey, Jr., Ingram Professor of Cancer Research at Vanderbilt University Medical Center explains that “using single-cell transcriptomics, [they] identified expression patterns that occurred within individual cells to identify cell characteristics unique to different polyps. [They] could then use genomics to evaluate whether the mutational patterns were related to these polyps and immunohistopathology to observe the spatial pattern of expression across the polyp.” The team discovered that in the serrated-polyp specific cells, genes were highly expressed that are not normally found in the colon. Specifically, these cells began expressing genes typically found in the upper gastrointestinal tract and other endodermal organs. The four genes include MUC5AC, MSLN, AQP5, CDX2.


NUTRITION/HEALTHY LIFESTYLE


Despite what we might wish were true, here’s what science tells us:

• We will not be able to stop all cancers from happening.
• Prevention means avoiding SOME of the cases that would otherwise occur.
• Cancer prevention does not refer to individual cancer cases. It’s looking at the big picture of a community, a country, or the world and trying to reduce the number of cancer cases.

Several studies, presented at the 2021 AICR Research Conference, add important insights into how following AICR’s Recommendations may lower the risk of specific cancers and help survivors. Those who most followed the Recommendations reported having a better quality of life overall, along with improved ability to carry a heavy shopping bag, walking and other physical functions, compared to those who least followed the Recommendations. Some of the recommendations can be found in the image below.

https://www.aicr.org/resources/blog/a-closer-look-at-cancer-prevention-and-risk/?utm_medium=email&utm_source=cancer_focus&utm_campaign=1_2022&sl_tc=&sourceid=&eType=EmailBlastContent&eId=b3a85810-9c36-4a20-a65f-8c5a3e09bd4f

27. Mediterranean Diet May Lower Cancer Risk (Feb.07/22)

The Mediterranean diet consistently has been linked to a lower risk of cancer, cardiovascular disease and mortality. A
traditional Mediterranean diet is rich in:
  • fish, olive oil, vegetables, whole grains, nuts, and legumes
and lower in:
  • red meat and dairy with modest alcohol consumption.
Studies suggest that adherence to this diet can both reduce an individual’s risk of developing cancer and delay the progression of cancer in those with a cancer diagnosis.

Some tips for boosting fruit and vegetable consumption include:
  • eating seasonally
  • serving fruit right along with salad and vegetables on the dinner table

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**28. Weight Loss Reduces Risk of Growths Linked to CRC (Feb.02/22)**

Researchers assessed weight change over 3 periods of adulthood in relation to colorectal adenoma using self-reported weight data in the Prostate, Lung, Colorectal, and Ovarian Cancer Screening Trial. Compared with maintaining a stable weight, weight loss in adulthood was associated with a 46% reduced risk for colorectal adenoma. The study authors also noted that weight gain in adulthood was associated with an increased chance of adenoma, particularly for weight gain greater than 6.6 pounds over 5 years. The research team suggests that healthy weight maintenance throughout adulthood is crucial in preventing colorectal adenoma. In addition, adults who are overweight or obese may be able to reduce their risk for developing colorectal adenoma by losing weight.

“Our findings suggest that avoiding weight gain in adulthood may help lower someone’s chance of developing a pre-cancerous growth called colorectal adenoma, which may in turn reduce the risk of developing colorectal cancer (CRC),” said study senior author Kathryn Hughes Barry, in a press release. “Based on our findings, we would not recommend weight loss for all adults. But the results suggest that overweight and obese adults may benefit from weight loss.”

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**Image Source:** [https://nutrition.org/living-mediterranean-lifestyle/](https://nutrition.org/living-mediterranean-lifestyle/)


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29. Choosing What Mask to Wear Can Be Confusing (Jan.14/22)

As COVID-19 cases hit record highs as a result of the highly contagious Omicron variant, people are re-evaluating what masks they should be wearing. “All masks are not created equal,” Anthony Santella, DrPH, director of the Doctor of Health Sciences program at the University of New Haven in Connecticut, told MedPage Today.

Disposable surgical masks -- traditionally seen in clinical settings and in countries that have previously worn masks during respiratory illness seasons -- are pretty low cost. "Is it the best [mask]? No. Does it work? Yes," Santella said, though "it depends on the setting you're in." KN95s are more fitted than surgical masks, and are not extremely uncomfortable for most people, he noted. In the case of airborne viruses, "the more fitted the better," especially in a densely populated area, he said. However, KN95s are generally not being handed out for free, as is sometimes the case with surgical masks.

N95 masks -- which are approved by the National Institute for Occupational Safety & Health (NIOSH) -- are not comfortable to wear for a long time, and really should be reserved for those in high-intensity settings with a lot of virus exposure, Santella said.

Overall, what may be most important, even amid the Omicron surge, is "ensuring that people are correctly and consistently using masks," Santella said. "That message sometimes gets forgotten."

30. CDC: Third Dose Guarded Immunocompromised from Severe COVID (Jan.27/22)

Three doses of mRNA vaccine was effective against severe COVID-19 for both immunocompetent and immunocompromised adults during the Delta wave, researchers found. From Aug. to Dec. 15, 2021, vaccine effectiveness (VE) against COVID-related hospitalization was 97% (95% CI 95-99) for immunocompetent adults who received a two-dose Pfizer or Moderna series followed by a booster dose and 88% (95% CI 81-93) for immunocompromised adults who received three doses of vaccine. Interestingly, a sensitivity analysis among patients with CDC-defined moderately to severely immunocompromising conditions showed a VE of 87% with three doses versus 65% with two doses.

Researchers analyzed data from 2,952 hospitalized patients, 1,385 cases and 1,567 controls. Of these, 36% had an immunocompromising condition. Not surprisingly, a higher proportion of immunocompromised patients were case patients [having COVID-like illness and tested positive for SARS-CoV-2 via nucleic acid amplification test (NAAT)[34%]] than controls [hospitalized with or without COVID-like illness, but tested negative via NAAT].

They reiterated the importance of immunocompromised adults receiving a third dose of mRNA vaccine at least 28 days after their second dose. In October, CDC also recommended that certain moderately or severely immunocompromised individuals should get a booster dose at least 6 months after completing their third dose, which has since been revised to 5 months.

31. Omicron BA.2 Variant May Be Extra Transmissible (Jan.24/22)

Late last week, the U.K. Health Security Agency designated BA.2 a "variant under investigation" as cases were doubling every 4 days and showing a 120% growth advantage over the original Omicron clade, known as BA.1, said Katelyn Jetelina, PhD, MPH, an epidemiologist at UT Health Science Center at Houston.

BA.2 is not a new sublineage. It was first detected in December and made headlines then as the "stealth" Omicron variant because it did not have the same s-gene target failure on PCR testing that BA.1 did. That's because it lacks the spike deletions 69-70 in BA.1, so s-gene targets still turn up positive. That means BA.2 doesn't have a special signal that tells labs it's Omicron, so labs now must go to genetic sequencing to identify variants.
If you have been exposed to Omicron BA.2 in your household, you have 39% probability of being infected within seven days. If you instead had been exposed to BA.1, the probability is 29%,” said lead study author Frederik Plesner, Copenhagen University, Statistics Denmark and Technical University of Denmark. That suggests BA.2 is around 33% more infectious than BA.1, he added.

A new study published in Nature Medicine has found that even mild cases of COVID-19 may increase the risk of heart issues a year later. The study looked at data from the U.S. Department of Veterans Affairs and found that even young people without major comorbidities were at increased risk for heart issues a year later. The people had tested positive before vaccines were widely available, so it’s unclear if being vaccinated would decrease the risk.

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.

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.

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.

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 @GovNL, 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
Yukon
Yukon: Find information about coronavirus (COVID-19)
Social media: Facebook @yukonhss, Twitter @hssyukon
Phone number: 811