CCRAN
Colorectal Cancer Resource & Action Network

RISCC
Réseau d'informations et soutien pour le cancer colorectal

A PATIENT-FOCUSED ORGANIZATION

COLORECTAL CANCER TREATMENT & CLINICAL RESEARCH UPDATES

Month Ending July 16th, 2025

The following colorectal cancer treatment and research updates extend from June 20th, 2025, to July 16th, 2025, 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 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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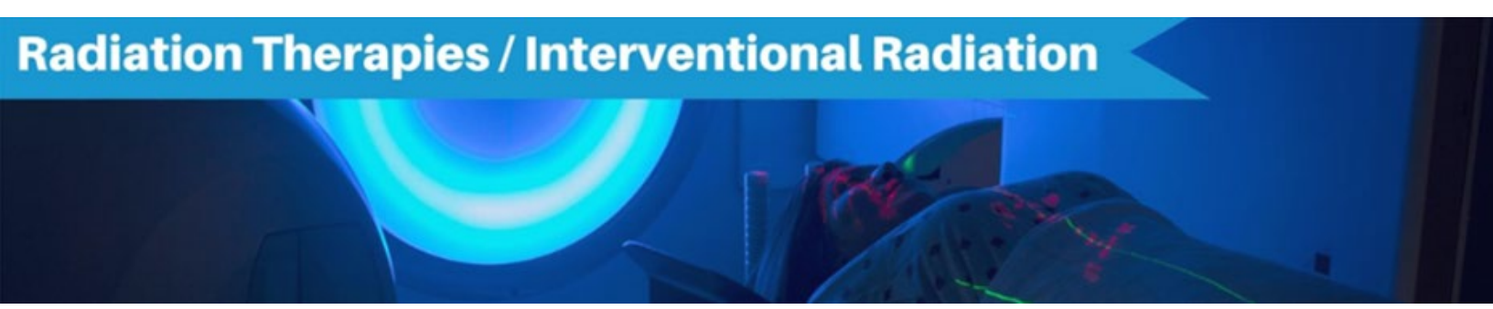

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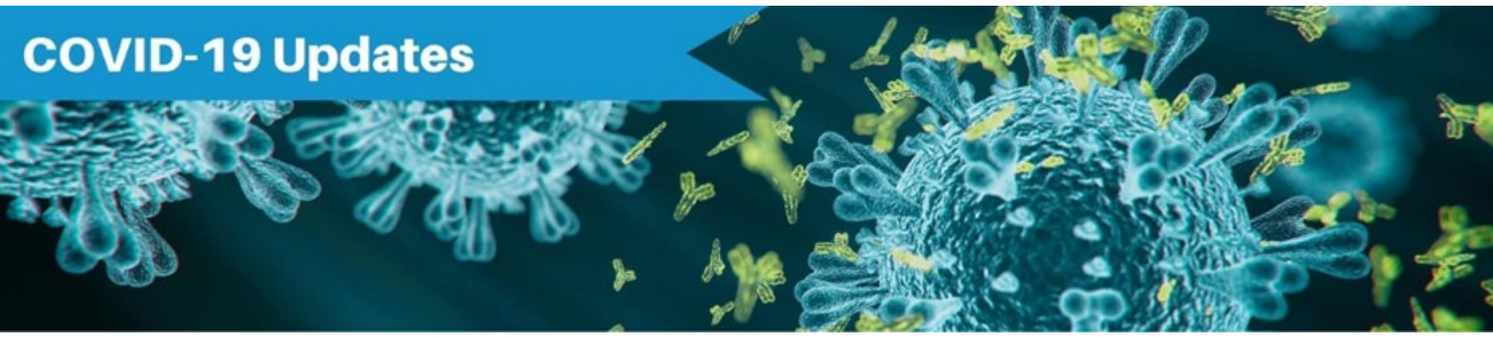


33. COVID-19 Vaccines in People with Cancer

Drug / Systemic Therapies

1. PERIOP-06 Study at Sunnybrook Hospital to Treat Liver Metastases (Dec 30/24)

We are inviting you to take part in a voluntary research study | PERIOP-06

Why are we doing this study?

The purpose of the PERIOP-06 clinical trial is to see how effective a new medication is. This new medication is called QBECO and is made by a Canadian company called Qu Biologics. We want to see if QBECO can prevent or slow colorectal cancer from coming back in patients who have had surgery to remove cancer that has spread to the liver. To do this, you will be randomly assigned to receive either QBECO or a placebo (a drug that looks like the study drug but contains no medication) so we can compare QBECO to the usual care. Both you and your study doctor will not know if you are receiving the study drug or placebo.

What are the possible benefits of taking part in this study?

- The QBECO medication may benefit you more than the usual care for your cancer.
- There is evidence that QBECO may be effective in preventing the growth of colorectal cancer in humans from a previous Phase I clinical trial.
- The information learned from this study might help other patients in the future.
- You will have close follow ups for 5 years after surgery.

What are the possible disadvantages & risks of taking part in this study?

- QBECO may not benefit you more than the usual care for your cancer.
- You may experience side effects from the QBECO medication.
- You can find more information below and in Section 13: "What risks can I expect from taking part in this study?" of the informed consent document.

Do I have to take part in this study?

Your participation is voluntary. You may choose not to participate. If you choose to participate, you may change your mind at any time. Regardless of your choice, your medical team will continue to take care of you.

Common Side Effects of QBECO

In 100 people receiving QBECO more than 5 and up to 15 may have the following side effects:

- Tenderness at the injection site. This typically gets better in 2 days. If the redness or swelling is bigger than 7 cm, please contact a member of the study team.
- Temporary mild fatigue following the first few doses of QBECO
- Temporary nausea
- Temporary fever
- Temporary headache
- Increased General Inflammation

Additional Drug Risks

QBECO is not known to interact with other drugs.

Rare And Serious Side Effects of QBECO

In 100 people receiving QBECO, 3 or fewer may have:

- Pancreatitis
  - Symptoms include: Abdominal or back pain, nausea, vomiting
- Hepatitis [inflammation of the liver]
- Electrolyte abnormalities [determined with lab test]
- Kidney failure

These serious side effects have only been reported in patients who were given QBECO to treat Crohn's disease and ulcerative colitis. No serious side effects were reported in 109 patients who received QBECO for advanced cancer.

What should I do if I am experiencing symptoms?

If you are experiencing these or any symptoms that you think are related to the study treatment, you should contact your cancer surgeon or the study coordinator to discuss. If the symptoms are serious and require emergency medical attention, then you should present to the emergency room and inform the medical team that you are participating in this study.

Visual Summary of Trial Activities

Day Relative to Surgery	Details	Trial Activities				Notes
		Blood Sample	QBECO Therapy or Placebo	MRI/CT scan	Other Assessments	
Eligibility Screening	The research team will confirm eligibility. Routine bloodwork will be done.	✓		✓	Survey and pregnancy test (if appropriate)	
-11 to -1 days	You will give yourself a subcutaneous injection (QBECO therapy or placebo) every 2 days before surgery for at least 11 days.		✓			If your surgery is delayed, you can take QBECO (or placebo) up to 120 days before surgery
Day of Surgery	You will have your surgery following the usual care procedures. Additionally, a sample of tumor tissue will be collected.	✓			Compliance and side effect assessment	The compliance and side effect assessment may be collected over the phone the day before the surgery
+1 and +4 (±1) Day(s)	You will be monitored in the hospital following your surgery. QBECO or placebo will be taken every 2 days.	✓	✓		Survey on day 4 (±1) only	
+7 to 41 Days	You will continue to give yourself a subcutaneous injection of QBECO therapy or placebo every 2 days after your surgery for 41 days.		✓			
+6 (±10 d) weeks	Once your injections are complete, you will have a follow-up appointment.	✓			Survey and side effect assessment	
+3, 6, 9, 12, 15, 18, 21, and 24 Months	To check for the progression of cancer, imaging and blood samples will be done every three months for 2 years after surgery.	✓		✓	Compliance and side effect assessment will be at 3 months only	There will be a range of ± 14 days for your 3 month visit and a range of ± 28 days for all remaining visits.
+2.5 to 5 Years	To check for the progression of cancer, imaging and a blood sample will be done every 6 months until 5 years after your surgery.	✓		✓		There will be a range of ± 28 days for all visits

Legend: Approximately half-day hospital visit; Overnight hospital visit; At your house

To learn more about this study, click here.

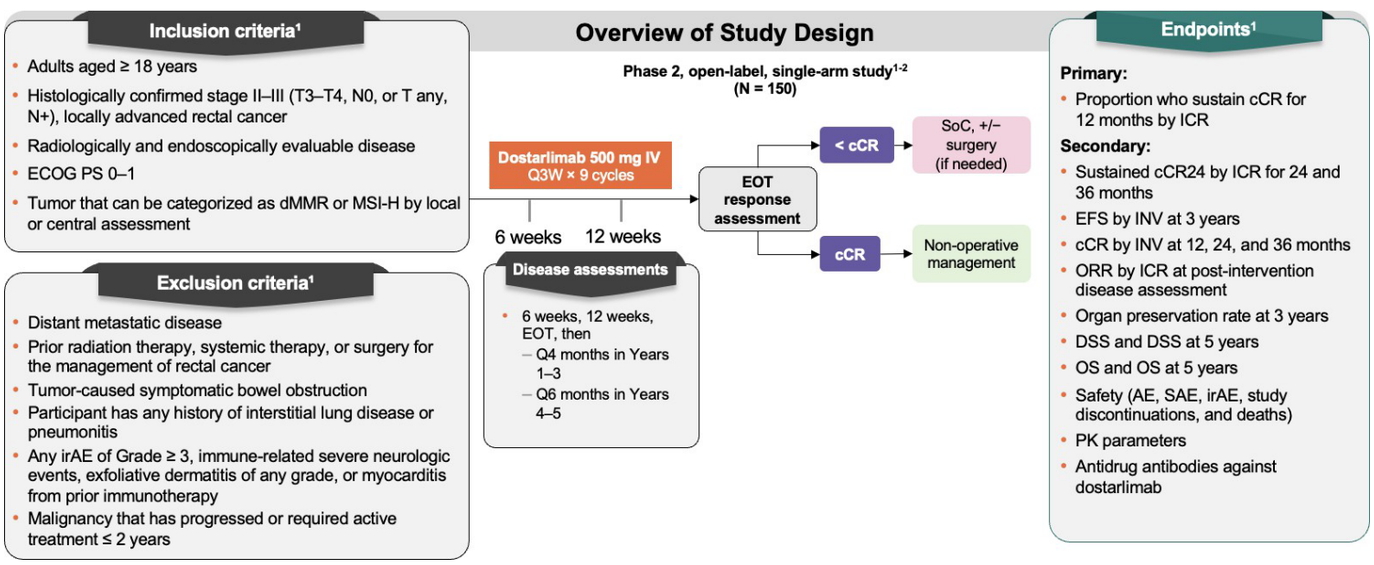
2. Available in Canada: AVENIO 324 Gene CGP Panel Matched to FoundationONE CDx Panel (Jan 1/25)

For more information, please visit the OncoHelix website.

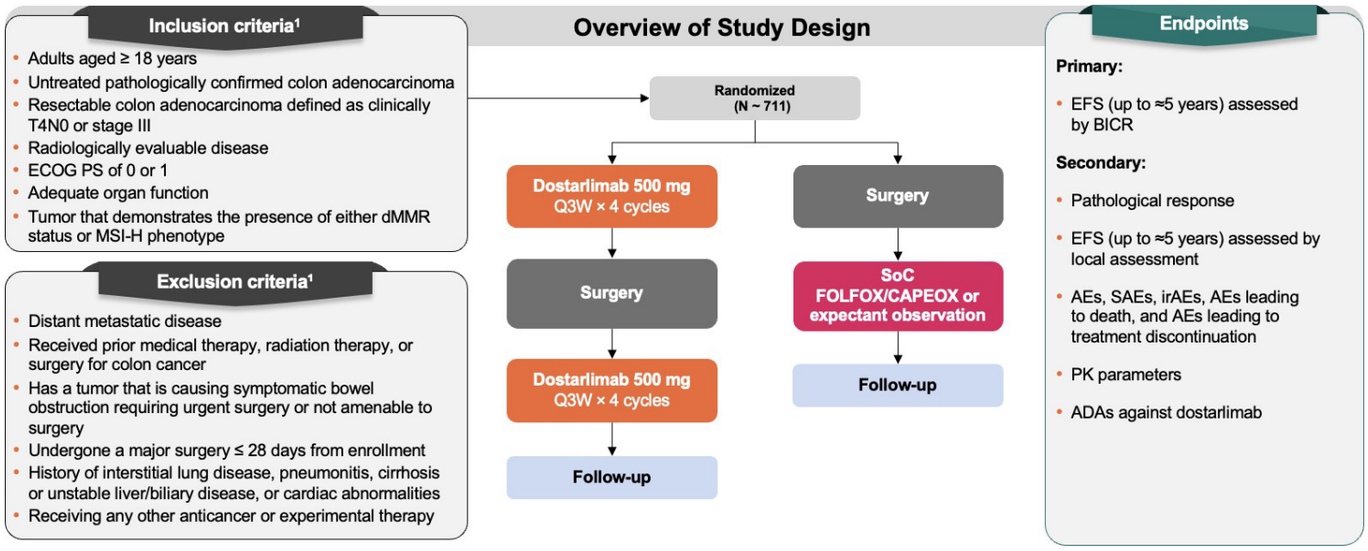
3. AZUR-1 and AZUR-2 Dostarlimab Trials Open in Canada (Jan 13/25)

Dostarlimab is an IgG 4 isotype humanized monoclonal antibody meaning it is made in a lab to serve as substitute antibodies that can restore, enhance, modify or mimic the immune system's attack on unwanted cells. In this case, dostarlimab blocks the interaction of PD-1 to its ligands PD-L1 and PD-L2 found on tumour cells. By blocking PD-1 activity, dostarlimab activates T cells allowing them to attack cancer cells by detecting and killing them. Dostarlimab has been approved for adult patients with mismatch repair-deficient (MMR-D) recurrent or advanced endometrial cancer (EC) in the US, and for MMR-D/microsatellite instability-high (MSI-H) recurrent or advanced EC in the EU. The drug is being investigated in multiple tumour types and in combination with other anticancer agents.

AZUR-1: Phase 2 Study
A single-arm, open label study of dostarlimab monotherapy in participants with untreated stage 2/3 MMR-D/MSI-H locally advanced rectal cancer.



AZUR-2: Phase 3 Study
An open-label, randomized study of peri-operative dostarlimab monotherapy vs standard of care in participants with untreated T4N0 or stage 3 MMR-D/MSI-H resectable colon cancer.



Please connect with CCRAN to receive a list of participating clinical trial sites in Canada.

4. MOUNTAINEER-03: A Study of Tucatinib with Trastuzumab and mFOLFOX6 Versus Standard of Care Treatment in First-line HER2+ mCRC (Jan 11/25)

This study is being done to find out if tucatinib with other cancer drugs works better than standard of care to treat participants with HER2 positive colorectal cancer. This study will also determine what side effects happen when participants take this combination of drugs. A side effect is anything a drug does to the body besides treating your disease.

Participants in this study have colorectal cancer that has spread through the body (metastatic) and/or cannot be removed with surgery (unresectable).

Participants will be assigned randomly to the tucatinib group or standard of care group. The tucatinib group will get tucatinib, trastuzumab, and mFOLFOX6. The standard of care group will get either:

- mFOLFOX6 alone,
- mFOLFOX6 with bevacizumab, or
- mFOLFOX6 with cetuximab mFOLFOX6 is a combination of multiple drugs. All of the drugs given in this study are used to treat this type of cancer.

To learn more about this trial, as well as the inclusion/exclusion criteria, click here.

5. CARMA BROS: Canadian Cancers with Rare Molecular Alterations (CARMA) - Basket Real-world Observational Study (BROS) (Dec 31/24)

This study will collect data on Canadian cancer patients that have uncommon/rare changes in their tumours, such as alterations/rearrangements in the genetic material inside cells - known as deoxyribonucleic acid, or DNA, which acts as a map and gives directions to the cells on how to make other substances the body needs - because some of these changes have been found to respond to different drugs that help to stop the cancer. These rare changes occur in genes such as but not limited to ALK, EGFR, ROS1, BRAF, and NTRK which have targeted drugs in a family known as tyrosine kinase inhibitors (TKIs), and KRAS G12C mutation, which now has a targeted inhibitor drug therapy for patients with non-small cell lung cancer (NSCLC). The goals for the study are to compare the natural history of such cancers and the treatment outcomes, including toxicities and patient-reported outcomes, for the different therapies.

Primary outcome measures include composite of progression free survival (PFS) or overall survival (OS). The secondary outcome measures include brain metastasis/other metastatic tumours, EORTC quality of life questionnaires (QLQ) - cancer patient-reported health related quality of life, EQ-5D-5L - patient-reported health related quality of life measure, and patient-reported economic impact. The estimated primary completion date is December 2025. To learn more about this study, click here.

6. CRC.10: Colon Cancer Adjuvant Chemotherapy Based on Evaluation of Residual Disease (ctDNA) (Dec 30/24)

CRC.10 is a Phase II/III which trial will evaluate what kind of chemotherapy to recommend based on evaluation of residual disease. Circulating tumour DNA (ctDNA) shed into the bloodstream represents a highly specific and sensitive approach (especially with serial monitoring) for identifying microscopic or residual tumour cells in colon cancer patients. Colon cancer patients who do not have detectable ctDNA (ctDNA-) are at a much lower risk of recurrence and may not need adjuvant chemotherapy. Furthermore, for colon cancer patients with detectable ctDNA (ctDNA+) who are at a very high risk of recurrence, the optimal adjuvant chemotherapy regimen has not been established. This study evaluates what adjuvant chemotherapy is recommended to patients based on the presence or absences of circulating tumour DNA (ctDNA) after surgery for early-stage colon cancer.

Inclusion Criteria:
- No radiographic evidence of overt metastatic disease within 45 days prior to study entry
- Must have had an en bloc complete gross resection of tumour
- Distal extent of the tumour must be ≥ 12 cm from the anal verge on colonoscopy

Exclusion Criteria:
- Colon cancer histology other than adenocarcinoma
- Tumour-related bowel perforation
- History of bone marrow or solid organ transplantation

Contacts for trial:

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Please connect with CCRAN to receive a list of other participating clinical trial sites in Canada.

7. Anti-EGFR Rechallenge in mCRC (Nov 24/24)

Advancements in screening, supportive care, and the development of targeted therapies have significantly enhanced the median overall survival (mOS) of patients with metastatic colorectal cancer (mCRC). Anti-epidermal growth factor receptor (EGFR) inhibitors such as panitumumab and cetuximab, represent cornerstone therapeutic regimens for patients with wild-type (WT) KRAS/NRAS/BRAFV600EmCRC in both first and second-line settings. However, despite the progress facilitated by these treatment modalities, most patients invariably experience disease progression after achieving any clinical benefit to first-line anti-EGFR treatment, which is often associated with the development of acquired resistance mutations. Some patients may regain sensitivity to anti-EGFR agents after alternative therapies, suggesting a potential benefit for rechallenge strategies.

A systematic search of the MEDLINE, EMBASE, and Cochrane databases was conducted between October 28 and December 24, 2023, to identify clinical trials *investigating treatment regimens incorporating panitumumab or cetuximab as a rechallenge strategy*. Of the 13 articles that met the predetermined inclusion criteria, 12 were phase II studies, encompassing 92.3% of the patient population. Cetuximab was administered to 302 patients (75.1%), whereas panitumumab was utilized in 100 patients (24.9%). A pooled analysis of eight studies demonstrated an objective response rate of 20.50% and a disease control rate of 67.35%. The median progression-free survival was estimated at

3.5 months, with a median OS of 9.8 months. Patients exhibiting RAS wild-type status in circulating tumour DNA (ctDNA) analysis derived enhanced benefits from anti-EGFR rechallenge. Common grade 3 or higher treatment-related adverse events included neutropenia (22.8%) and rash (14.9%).

This meta-analysis underscores the efficacy and safety of anti-EGFR rechallenge *as a promising therapeutic approach for a subset of patients afflicted with mCRC*. The observed correlation between wild-type RAS status and improved OS signals the prospect of precision oncology in guiding treatment decisions. To learn more, click here.

8. Takeda's FRUZAQLA™ Patient Support Program for Previously Treated mCRC (Dec 13/24)

As of December 11, 2024, FRUZAQLA™ is available by prescription, providing an additional option for patients living with metastatic colorectal cancer (mCRC).

FRUZAQLA™ (fruquintinib capsules) is indicated for the treatment of adult patients with mCRC who have been previously treated with or are not considered candidates for available standard therapies, including fluoropyrimidine-, oxaliplatin-, and irinotecan-based chemotherapy, an anti-VEGF agent, an anti-EGFR agent (if RAS wild- type), and either trifluridine- tipiracil or regorafenib.

Takeda is offering a program to support eligible patients in accessing FRUZAQLA through its OnePath® Patient Support Program. This program is designed to address different aspects of patient needs from drug navigation to financial assistance and support to provide ongoing access to medication during the transition to broader public and private insurance coverage. Takeda understands the urgency in treating late stage mCRC when no other approved therapeutic option exists, and they expect public and private insurers to act quickly to ensure all patients who can benefit from this treatment get access as soon as possible. To learn more about OnePath® Patient Support Program, click here.

Image Source: https://www.empr.com/drug/fruzaqla/
https://onepath.ca/

9. Long-term Aspirin Use Decreased PIK3CA-Mutated Colorectal Cancer Recurrence (Feb 21/24)

The ALASCCA trial, presented at the 2025 Gastrointestinal Cancer Symposium, showed 3 years of aspirin use reduced the risk of colorectal cancer coming back by 50% for patients with certain genetic mutations (PIK3CA) in their cancer, when compared with placebo. This is important because it provides a potential new, safe, and inexpensive treatment option that doesn't require chemotherapy or surgery.

The trial tested two groups of patients: one with a specific mutation in PIK3CA (Group A) and another with other mutations in the PI3K pathway (Group B). In both groups, aspirin significantly reduced the risk of cancer recurrence compared to a placebo. In Group A, the recurrence rate dropped from 14.1% to 7.7%, and in Group B, it went from 16.8% to 7.7%. The treatment was generally safe, with some adverse effects noted – although this was remarked to be expected.

This study highlights the potential of aspirin to help prevent cancer recurrence, especially for patients with certain genetic mutations, and emphasizes the importance of genomic testing in personalizing treatment for colorectal cancer. To learn more, click here.

10. Intermittent or Continuous Panitumumab Plus Fluorouracil, Leucovorin, and Irinotecan for First-Line Treatment of RAS and BRAF Wild-Type Metastatic Colorectal Cancer: The IMPROVE Trial (Mar 21/25)

IMPROVE (ClinicalTrials.gov identifier: NCT04425239) was an open-label, multicenter, randomized phase II noncomparative trial. Patients with unresectable *RAS*/*BRAF* wild-type (no mutation in *RAS* or *BRAF* genes) mCRC were randomly assigned (1:1) to receive FOLFIRI plus panitumumab continuously until progression (arm A) or intermittently, with treatment-free intervals (arm B) until progression on treatment, toxicity, or death. The primary end point was progression-free survival on treatment (PFSot) at 12 months. At a median follow-up of 43.2 months (IQR, 35.0-50.5), median PFSot was 11.2 and 17.5 months with 12-month PFSot rates of 45.7% and 58.5%, for arms A and B, respectively. The overall response rates were 68.1% and 61.2%, and median overall survival rates were 36.3 and 35.1 months in arms A and B, respectively. The overall rate of grade >2 skin panitumumab-related adverse events was 30.3% in arm A and 17.9% in arm B.

Intermittent FOLFIRI plus panitumumab after the induction phase was feasible, and results in reduced toxicity while allowing patients more time off treatment.

https://ascopubs.org/doi/full/10.1200/JCO.24.00979?bid=465779787&md5=220ac69dc338eb64e93bf37eaed0835b&cid=DM19875

11. Guardant Health Launches Guardant360 Tissue, First Tissue Molecular Profiling Test with Comprehensive Multiomic Analysis to Provide a More Complete View of Cancer (May 21/25)

Guardant Health, Inc. announced the launch of Guardant360® Tissue, the first molecular profiling test for tumour tissue that incorporates comprehensive multiomics analysis—including DNA, RNA, AI-powered PD-L1 and genome-wide methylation data—to provide researchers and cancer care teams with a more comprehensive view of cancer.

- Powered by Guardant Infinity smart liquid biopsy platform, advanced multiomic test evaluates genomic, epigenomic and RNA-based molecular data
- First tissue comprehensive genomic profiling test to offer genome-wide tumour methylation analysis
- Advanced molecular profiling test requires 40% fewer tissue slides than industry norm, allowing researchers and oncologists to test more patients with less precious tissue

For biopharmaceutical partners, the Guardant360 Tissue test offers differentiated molecular profiling by its extensive and unique genomic and epigenomic offering. The test analyzes 742 DNA genes and fusions in 367 RNA genes, with the ability to provide genome-wide analysis of the tumour methylome.

Test results are available in less than two weeks.

https://investors.guardanthealth.com/press-releases/press-releases/2025/Guardant-Health-Launches-Guardant360-Tissue-First-Tissue-Molecular-Profiling-Test-with-Comprehensive-Multiomic-Analysis-to-Provide-a-More-Complete-View-of-Cancer/default.aspx

12. Investigating the Effects of Atezolizumab in People Whose Tumour DNA or RNA Indicates Possible

Sensitivity (CAPTIV-8) (June 20/25)

This is a Phase 2 study, which is undertaken after preliminary safety testing on a drug is completed and will involve approximately 200 participants. Participants are assigned to one of 8 cohorts based on their primary tumour type: breast, lung, gastrointestinal (GI), primary unknown, genitourinary (GU), sarcoma, gynecological, and 'other' cancer types. Participants in all cohorts will receive the same dose of atezolizumab (Tecentriq®) (1200 mg every 3 weeks). In the first stage for each cohort, 8 participants will be enrolled and if no participants respond to treatment, enrollment to that cohort will be closed. If 1 or more participants respond to treatment, up to 16 additional participants will be enrolled in that cohort. Participants continue treatment until they no longer may benefit from the treatment, or they decide to stop treatment.

This trial is running in Vancouver, B.C.

https://clinicaltrials.gov/study/NCT04273061?term=captiv8&rank=1

13. Alliance Presents Results from Phase III ATOMIC Trial Combining Atezolizumab with Chemotherapy for Patients with Stage III dMMR Colon Cancer at ASCO 2025 (June 20/25)

The Alliance for Clinical Trials in Oncology shared results from the ATOMIC (A021502) phase III trial, evaluating standard chemotherapy (FOLFOX) alone versus FOLFOX combined with atezolizumab (Tecentriq®) for patients with surgically resected stage III colon cancer and deficient DNA mismatch repair (dMMR). Sponsored by the National Cancer Institute (NCI) and conducted with Genentech (Roche Group), the trial met its primary goal, showing a significant improvement in disease-free survival (DFS) with atezolizumab, an anti-PD-L1 antibody, added to FOLFOX. The findings were presented by Dr. Frank Sinicrope at the 2025 ASCO Annual Meeting (June 10, 2025, 1:05 pm CDT, LBA1).

The ATOMIC trial, a multicenter, randomized, open-label study, enrolled 712 patients with stage III dMMR colon cancer from 2017 to 2023 in the US and Germany. Patients (median age 64, 55.1% female) were split evenly into two groups: FOLFOX alone for 6 months (357 patients) or FOLFOX plus atezolizumab, with atezolizumab continued alone for another 6 months (355 patients). Most tumours were proximal (83.8%), with 46.1% low-risk and 53.9% high-risk. The main outcome was DFS, with secondary outcomes of overall survival (OS) and adverse events (AEs).

Results showed a 50% reduced risk of recurrence or death with atezolizumab plus FOLFOX (hazard ratio 0.50, 95% CI 0.34-0.72, p<0.0001). Three-year DFS was 86.4% with atezolizumab vs. 76.6% with FOLFOX alone, with 125 DFS events observed after 37.2 months. “These results could change clinical practice for stage III dMMR colon cancer,” said Dr. Fang-Shu Ou, lead biostatistician.

The safety profile matched known FOLFOX and atezolizumab toxicities, with manageable immune-related AEs. The treatment of stage III colorectal cancer has long relied on FOLFOX, but outcomes need improvement. ATOMIC shows immunotherapy can enhance outcomes for dMMR (MSI-H) tumours.

https://e3.eurekalert.org/news-releases/1085871
https://dailynews.ascopubs.org/do/asco25-first-look-dr-julie-gralow-atomic

14. Encorafenib, Cetuximab, and mFOLFOX6 in *BRAF*-Mutated Colorectal Cancer (BREAKWATER) (June 20/25)

In a phase 3, open-label trial, first-line treatment for BRAF V600E–mutated metastatic colorectal cancer, a highly aggressive subtype with poor prognosis, was evaluated. Patients received either encorafenib plus cetuximab (EC) with or without chemotherapy (mFOLFOX6: oxaliplatin, leucovorin, fluorouracil), or standard care (chemotherapy with or without bevacizumab). The trial previously met one primary endpoint, showing a significantly better objective response rate with EC+mFOLFOX6 compared to standard care (odds ratio 2.44, P<0.001), leading to accelerated FDA approval of this combination for first-line treatment of BRAF V600E–mutated metastatic colorectal cancer.

Patients with untreated BRAF V600E–mutated metastatic colorectal cancer were randomized to EC, EC+mFOLFOX6, or standard care. The two primary endpoints were objective response (previously reported) and progression-free survival (PFS) for EC+mFOLFOX6 versus standard care, assessed by blinded independent central review. Overall survival (OS) was a key secondary endpoint.

EC+mFOLFOX6 significantly extended PFS compared to standard care (median 12.8 vs. 7.1 months; hazard ratio for progression or death 0.53, 95% CI 0.41–0.68, P<0.001). An interim analysis also showed significantly longer OS with EC+mFOLFOX6 (median 30.3 vs. 15.1 months; hazard ratio for death 0.49, 95% CI 0.38–0.63, P<0.001). Serious adverse events occurred in 46.1% of EC+mFOLFOX6 patients and 38.9% of standard-care patients, with safety profiles consistent with known risks of each treatment.

CCRAN is proudly leading an HTA (Health Technology Assessment) patient input submission for this therapeutic regimen and patients/caregivers with lived experience are asked to reach out to Cassandra.m@ccran.org

https://www.nejm.org/doi/full/10.1056/NEJMoa2501912

15. The Importance of Timing in Immunotherapy: A Systematic Review (June 20/25)

In recent years, immunotherapy has emerged as a first-line treatment for metastatic colorectal cancer patients with mismatch repair deficient (dMMR) tumours. The body's circadian clock regulates essential biological functions, including immune response and metabolism, and its disruption can create an immunosuppressive environment conducive to tumour progression. Chronotherapy, which examines the influence of circadian rhythms on treatment efficacy, presents a promising approach to optimizing immunotherapy outcomes.

This systematic review explores whether the timing of immunotherapy administration affects key patient outcomes, including overall survival (OS), progression-free survival (PFS), response rates, and mortality. A total of 21 studies involving 3,682 patients with a mean age of 64.7 were analyzed. Immunotherapy was administered for various cancers, the most common being melanoma, non-small cell lung cancer, and renal cell carcinoma. Infusion timing varied across studies, with cutoff points for early versus late administration ranging from 11:37 a.m. to 4:30 p.m., the most common being 4:30 p.m. Most studies reported improved OS and PFS in patients receiving earlier infusions, with survival benefits ranging from +2.7 to +26.6 months, with a mean of +15.1 months, and PFS extensions from -0.5 to +28.3 months, with a mean of +8.1 months. Additionally, complete and partial response rates were higher in early infusion groups. However, findings on mortality rates were inconsistent. These results suggest that the timing of immunotherapy administration may significantly impact treatment efficacy, potentially due to interactions with circadian rhythms. Further research is needed to establish standardized guidelines for optimizing infusion timing to enhance patient outcomes, and to see if these research findings are relevant within the colorectal cancer population.

https://pmc.ncbi.nlm.nih.gov/articles/PMC12103892/

16. BOT/BAL Achieves 42% Two-Year Survival in Refractory MSS CRC in Phase 3 Trial (July 8 /25)

Botensilimab (BOT) is a novel CTLA-4 inhibitor designed to activate both innate and adaptive immune responses, especially in "cold" tumours—tumours that are traditionally resistant to standard immunotherapies. It primes and activates T cells, reduces intratumoral regulatory T cells, stimulates myeloid cells, and promotes durable memory responses.

Balstilimab (BAL) is a PD-1 inhibitor which enhances T-cell activation and immune-mediated tumour destruction.

Combined, BOT/BAL has demonstrated potent and durable anti-tumour activity across multiple cancers, including colorectal cancer. In the fully enrolled expanded cohort of 123 patients with microsatellite-stable metastatic colorectal cancer (MSS mCRC) and no active liver metastases (NLM), the combination of BOT/BAL demonstrated clinically meaningful efficacy, with durable responses, a survival plateau, and a manageable safety profile—all in a population that had been heavily pre-treated and received the therapeutic protocol in later lines of therapy. It was reported at the 2025 ESMO Gastrointestinal Cancers Congress (ESMO-GI) in Barcelona, Spain that the BOT/BAL combination achieved a two-year survival rate of 42% in the clinical trial. Additionally, 20% of patients were alive and off treatment at data cut-off, suggesting treatment-free survival and the potential for durable immune-mediated disease control. Updated data presentations are expected in late 2025.

https://www.theglobeandmail.com/investing/markets/stocks/AGEN-Q/pressreleases/33246751/agenus-bot-bal-achieves-42-two-year-survival-in-refractory-mss-crc-advances-toward-registration-with-fda-alignment-on-phase-3/

Agenus' Investigator's Forum 2025: BOT/BAL Advancing Immunotherapy in Solid Tumors - OncoDaily

Surgical Therapies

17. Hepatic Artery Infusion Pump (HAIP) Chemotherapy Program – Sunnybrook Odette Cancer Centre (Dec 17/24)

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 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 so that a surgeon can go in and remove what is left. **Drs. Paul Karanicolas and Michael Raphael** are the program leads and happy to see patients who may be eligible for the therapy.

This treatment is best for fit, motivated patients who want to adopt an aggressive treatment philosophy. Patients need to have no or very limited cancer outside the liver, and be well enough to undergo an operation. Special testing is done to ensure that the blood flow to the liver is appropriate to allow the treatment to be safely offered. About 105 patients have had the pump implanted at Sunnybrook since HAIP's inception eight years ago. HAIP is such a special program that involves a coordinated, multidisciplinary team approach to care, with close collaboration across surgical oncology, medical oncology (chemotherapy), interventional radiology, nuclear medicine and oncology nursing. A patient's first point of contact is Christina Kim, the nurse practitioner who oversees the program and helps every patient navigate the HAIP journey.

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 here.

18. Living Donor Liver Transplantation for Unresectable CRC Liver Metastases (Jan 12/25)

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 curative treatment option, though only 20-40% of patients are candidates for liver resection. Surgical therapy offers 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.

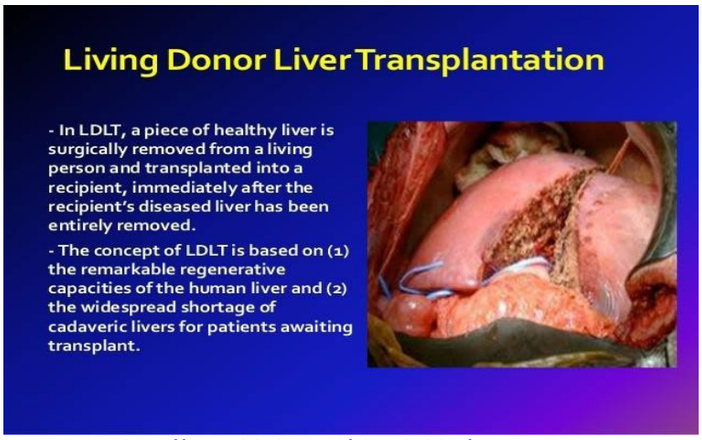


Image Source: ***https://www.slideshare.net/AhmedAdel65/preoperative***

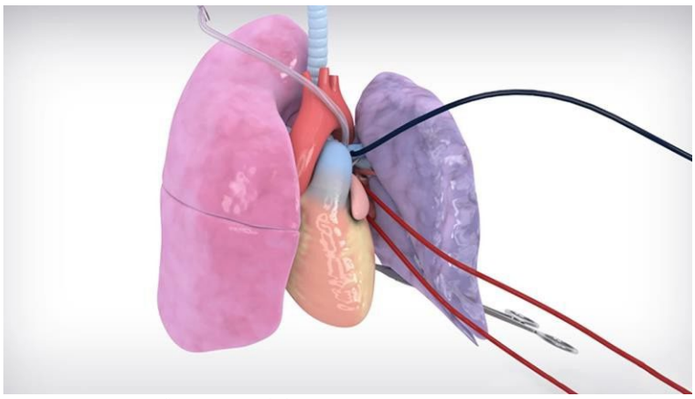
While CRC LM is considered a contraindication for LT at most cancer centers, a single center in Oslo, Norway demonstrated a 5-year survival of 56%. A clinical trial at the University Health Network in Toronto is offering living donor liver transplantation (LDLT) to select patients with unresectable metastases limited to the liver and are non-progressing on standard chemotherapy. Patients are 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. To learn more, click here.

19. In Vivo Lung Perfusion (IVLP) for CRC Metastatic to Lung (Jan 9/25)

This 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.

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. 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 primary outcome is safety as measured by acute lung injury findings and the estimated primary completion date is January 1, 2027. To learn more, click here.



In Vivo Lung Perfusion Model
Image Source: https://pie.med.utoronto.ca/TVASurg/project/in-vivo-lung-perfusion/

20. DRAGON-2: An International Multicenter Randomized Controlled Trial to Compare Combined Portal and Hepatic Vein Embolization (PVE/HVE) With PVE Alone in Patients with Colorectal Liver Cancer Metastases (CRLM) and a Small Future Liver Remnant (FLR) (Mar 21/25)

This study is investigating ways to improve surgery for patients with colorectal cancer that has spread to the liver. Surgery to remove these liver lesions (resection) can significantly improve survival and may even lead to a cure in up to 40% of patients.

However, for some patients, removing the lesions requires taking out a large portion of the liver. If the remaining liver is too small, it may not function properly after surgery, leading to serious complications.

To prevent this, doctors use a technique called portal vein embolization (PVE) to encourage the remaining part of the liver to grow before surgery. A new technique, called PVE/HVE, blocks both the portal and hepatic veins, and may help the liver grow faster and better than PVE alone.

This study will compare these two techniques to determine which one is safer and more effective in helping patients prepare for liver surgery.

To learn more about this trial, click here.

21. Does surgical intervention contribute to survival for patients with para-aortic lymph node metastasis from colorectal cancer? (April 18/25)

Patients diagnosed with para-aortic lymph node metastasis (PALNM) from CRC at the Japanese Society for Cancer of the Colon and Rectum Institutions between January 2011 and December 2015 were analyzed. Those who had received surgical resection and those who did not were matched one-on-one.. A total of 77 matched pairs extracted from 347 patients at 36 institutions were compared. Thirty-one (40.3%) patients each in the surgical resection and chemotherapy groups had distant metastasis other than PALNM, and the most dominant organ was the liver in 18 (23.4%) patients in both groups. In the surgical resection group, 56 (72.7%) patients achieved curative resection of all disease lesions. Three- and 5-year relapse-free survival of patients who achieved curative resection were 24.4% and 24.4%, respectively. Three- and 5-year overall survival (OS) of patients in the surgical resection were 68.4% and 40.2%, which were significantly better than that in the chemotherapy groups (40.9% and 27.7%), respectively (Log-rank p= 0.003).

The OS of patients with surgical resection for PALNM was significantly better than those without surgical resection. These results highlight the benefit of surgical intervention to survival for patients with resectable PALNM.

https://onlinelibrary.wiley.com/doi/pdf/10.1002/ags3.70019

Radiation Therapies / Interventional Radiation

22. Ultra-high Dose Radiation for Liver Metastasis Using MR-guided Treatment with Stereotactic Ablative Single-fraction (ULTRAS) (Mar 21/25)

This study is testing a new way to treat liver metastases using high-dose radiation therapy. It compares two types of **stereotactic body radiotherapy (SBRT),** a precise radiation treatment: one that delivers an ultra-high dose in a single session and another that provides the current standard high dose. The goal is to determine whether the ultra-high dose can control tumours more effectively while keeping side effects low.

For many colorectal cancer patients whose cancer has spread to the liver, surgery is not an option. SBRT offers an alternative, but the best radiation dose for treating liver metastases is still uncertain. This trial focuses on patients with colorectal cancer and certain other cancers who have one to three liver lesions that meet specific size and location criteria. Participants must be in good overall health, have well-functioning livers, and not have had previous treatments that could interfere with the study. To learn more about the study, as well as inclusion/exclusion criteria, click here.

https://clinicaltrials.gov/study/NCT06362395

Screening

23. Modeling The Economic and Health Impact of Lowering the Recommended Colorectal Cancer Screening Age in Canada Using Fecal Immunochemical Test Versus Colonoscopy (April 18/25)

Rising rates of early-onset colorectal cancer (CRC) in Canada suggest earlier screening may be warranted. Canadian guidelines recommend biennial screening at age 50 with a fecal immunochemical test (FIT). FIT at age 45 and 40 increased colonoscopy demand by 3.9% and 6.6% over the lifetime of screening. Colonoscopy screening resulted in 89.0%–116.7% more colonoscopies than FIT 50. Screening and total costs increased in all scenarios but treatment costs decreased. FIT 45 and FIT 40 reduced incidence by 103 and 161, and CRC deaths by 43 and 71 per 100,000. Colonoscopy screening led to 858–954 fewer cases and 260–303 fewer deaths. FIT 45 and FIT 40 had incremental cost-effectiveness ratios (ICERs) of $5,850 per quality-adjusted life year (QALY) and $7,038 per QALY versus FIT 50. Colonoscopy scenarios had ICERs of $2,743–$7,509 per QALY.

Updated screening can reduce the CRC burden in younger populations. Increasing FIT screening with earlier initiation is more feasible logistically than increasing colonoscopy availability with colonoscopy approaches. Impact: These findings may inform future guideline revisions in Canada addressing early-onset CRC.

https://aacrjournals.org/cebp/article-abstract/doi/10.1158/1055-9965.EPI-24-1488/754629/Modeling-the-Economic-and-Health-Impact-of?redirectedFrom=fulltext

24. Early FIT Screening Tied to Big Reduction in CRC Mortality (July 18/25)

A new analysis provided “strong” support for starting fecal immunochemical test (FIT) screening at ages 40-49 rather than at the currently recommended age of 50.

An exploratory initiative that offered FIT screening to residents aged 40-49 years in two Taiwan municipalities gave researchers an opportunity to test whether early screening made a real difference in colorectal cancer (CRC) mortality and incidence. They found that it did.

Both outcomes were “significantly lowered” with early screening compared with regular screening (starting at age 50), the authors found. Those who underwent early screening had lower CRC incidence (26.1 vs 42.6 per 100,000 person-years) and mortality (3.2 vs 7.4 per 100,000 person-years), with similar results after propensity score-matched analyses and in an extended nonadherence adjustment model.

https://www.medscape.com/viewarticle/early-fit-screening-tied-big-reduction-crc-mortality-2025a1000fs4?ecd=mkm_ret_250706_mscpmrk_onc_crc_etid7539887&uac=173940BY&implD=7539887

Other

25. Young Adult CRC Clinic Available at Sunnybrook (Jan 5/25)

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.

Dr. Shady Ashamalla, Head
Young Adult Colorectal Cancer Program

Dr. Petra Wildgoose, Lead
Young Adult Colorectal Cancer Program

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.

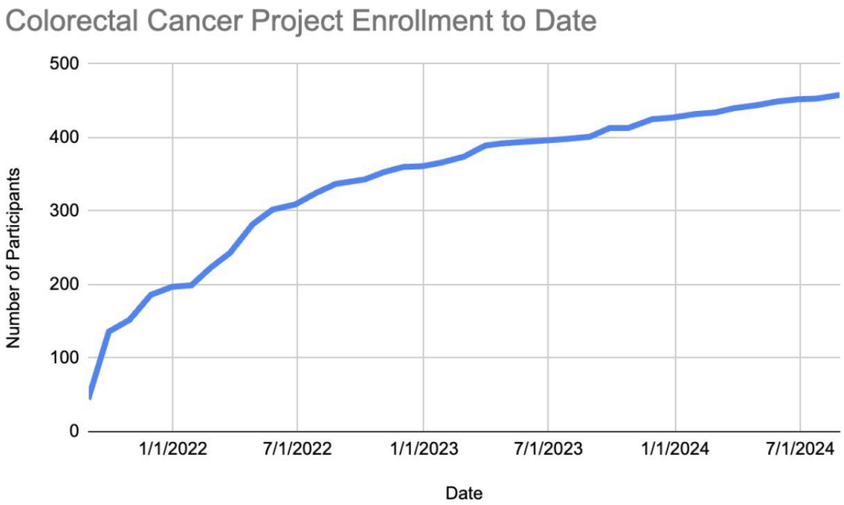
http://sunnybrook.ca/content/?page=young-adult-colorectal-cancer-clinic

26. CCRAN's Partnership with "Count Me In" (Dec 18/24)

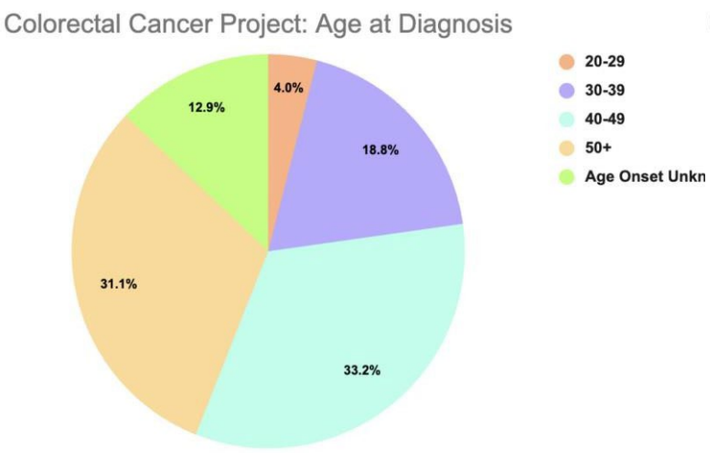
CCRAN is proud to partner with Count Me In (CMI), on The Colorectal Cancer Project. This project is open to anyone in the United States or Canada who has ever been diagnosed with colorectal cancer (CRC).

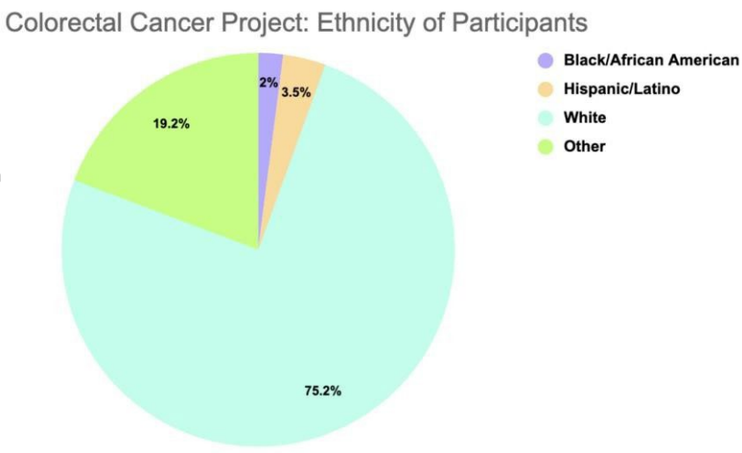
The Colorectal Cancer Project empowers patients to accelerate the pace of research by contributing their samples, health information, and personal lived experiences. Those who join will be invited to complete surveys about their experience with CRC, share biological sample(s), and give permission to the CMI research team to request copies of their medical records. The majority of participation can be done from the comfort of your own home and may take as little as 45 minutes. Then, researchers from the Broad Institute of MIT and Harvard and Dana Farber Cancer Institute compile and sequence this information to generate databases of clinical, genomic, molecular, and patient-reported data. This data will be de-identified and made available to researchers everywhere. Together, we can accelerate our understanding of CRC.

To date, more than 12,000 patients with different cancers have joined Count Me In and shared their data. However, "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."



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.





Join our partners at Count Me In to help generate more data for CRC by sharing your medical records, samples, and unique experiences with researchers everywhere.

CMI deeply appreciates the 458 individuals who have joined the Colorectal Cancer Project since its launch in Fall 2021. Every colorectal cancer patient's story holds a piece of the puzzle that can help us better understand how to treat this disease. To learn more or sign up to participate, visit JoinCountMeIn.org/Colorectal.

27. Signatera Out-of-Country Application Resources (Mar 21/25)

For those pursuing Signatera ctDNA testing, Lifelabs has created resources to support patients in Ontario and British Columbia in applying for out-of-country (OOC) funding applications. Though reimbursement is not guaranteed, interested patients are encouraged to discuss application to the OOC program with their oncologist prior to completing testing.

For further information and to access application resources, click here!

https://go.lifelabs.com/Signateraoutofcountry
https://www.lifelabs.com/lifelabs-launches-signatera-offering-canadians-an-innovative-and-personalized-approach-to-managing-cancer/
https://www.natera.com/company/news/nccn-strengthens-guidance-on-ctdna-in-colon-cancer-rectal-cancer-and-merkel-cell-carcinoma/
https://www.onclive.com/view/nccn-updates-ctdna-stance-in-colon-rectal-and-mcc-guidelines

28. Why Is Early-Onset CRC Rising? New Study Provides a Clue (June 20/25)

A new study links childhood exposure to colibactin, a DNA-damaging bacterial toxin, to early-onset colorectal cancer (CRC). Analyzing CRC biopsies from 981 patients across 11 countries, researchers found colibactin's mutational signatures (SBS88 and ID18) were 3.3 times more common in patients under 40 compared to those over 70. Colibactin was also tied to 25% of mutations inactivating the APC tumour suppressor gene. The study didn't account for lifestyle factors like diet or BMI, a noted limitation. This is the first evidence connecting colibactin-induced DNA damage to early-onset CRC, with exposure likely occurring in childhood, increasing cancer risk later.

https://www.medscape.com/viewarticle/why-early-onset-crc-rising-new-study-provides-clue-2025a1000a8p?ecd=mkm_ret_250531_mscpmrk_onc-top-content_etid7461756&uac=173940BY&implD=7461756

Nutrition / Healthy Lifestyle

29. Exercise for Cancer to Enhance Living Well (EXCEL) Study (Dec 29/24)

Exercise for Cancer to Enhance Living Well (EXCEL) is a 5-year Canada-wide project, which offers free, 8-12-week exercise classes designed specifically for individuals undergoing or recovering from cancer treatment. Classes are delivered online through a secure video-conferencing platform, and where possible, in-person. These group classes run for 60 minutes, twice a week for 8-12 weeks. They are offered three times a year: January, April, and September. Feel free to email

wellnesslab@ucalgary.ca to learn more and sign up.

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 centers 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


Are you living with or beyond cancer?
UNIVERSITY OF CALGARY
FACULTY OF KINESIOLOGY
Health and Wellness Lab
Want to get active but don't know where to start?
Join this FREE 12-Week Exercise Study
Exercise with your peers, under the guidance of instructors trained in exercise oncology.
Our programs are SAFE and effective!
Online or in-person
New programs start every January, April, and September
Time investment: Two, 60-min classes a week
Register TODAY by contacting us:
Email: wellnesslab@ucalgary.ca
Call: 403-210-8482
Website: ucalgary.ca/excel-cancer-exercise-program
Ethics ID: HREBA.CC-20.0098
Version date: 2023-08-08, V1
Funded by: Canadian Cancer Society, Canadian Institutes of Health Research, Alberta Cancer Foundation

30. BOOST-Up Study (Nov 20/24)

31. A Randomized Phase III Trial of the Impact of a Structured Exercise Program on Disease-Free Survival (DFS) in Stage 3 or High-Risk Stage 2 Colon Cancer: Canadian Cancer Trials Group (CCTG) CO.21 (CHALLENGE) (June 20/25)

From 2009 to 2024, 889 patients with stage 3 or high-risk stage 2 colon cancer were enrolled, split into a structured exercise program (SEP, 445 patients) or health education materials (HEM, 444 patients). The group was 51% female, with a median age of 61, and 90% had stage 3 disease. Compared to HEM, the SEP group significantly improved recreational physical activity, fitness (VO2max), and 6-minute walk distance, sustained over 3 years. After a median follow-up of 7.9 years, there were 224 disease-free survival (DFS) events (93 in SEP, 131 in HEM) and 107 deaths (41 in SEP, 66 in HEM). Five-year DFS was 80% for SEP vs. 74% for HEM (HR 0.72, p=0.017), and 8-year overall survival (OS) was 90% for SEP vs. 83% for HEM (HR 0.63, p=0.022). Physical function (SF-36 scale) improved significantly in SEP at 6 months (mean change 7.42 vs. 1.10, p<0.001) and lasted up to 24 months. Safety data showed 19% of SEP patients (79/428) had musculoskeletal issues vs. 12% in HEM (50/433), with 10% of SEP issues (8/79) linked to the exercise program.

A 3-year structured exercise program post-chemotherapy improved DFS, OS, physical function, and fitness in these patients, and these findings suggest the implementation of a structured exercise program should become a standard of care following treatment for early-stage colorectal cancer.

https://ascopubs.org/doi/10.1200/JCO.2025.43.17_suppl.LBA3510
https://www.theglobeandmail.com/canada/article-exercise-improves-survival-for-colon-cancer-patients-study/
https://www.ctg.queensu.ca/cctg_news/landmark-clinical-trial-shows-exercise-improves-colon-cancer-survival
https://www.mdedge.com/fedprac/avaho/article/272573/oncology/can-lifestyle-changes-save-lives-colon-cancer
https://www.medscape.com/viewarticle/exercise-can-help-protect-against-cancer-fatigue-depression-2025a1000atc?ecd=mkm_ret_250531_mscpmrk_onc-top-content_etid7461756&uac=173940BY&impID=7461756

32. Sexual Health Outcomes After Colorectal Cancer Diagnosis in Females: A Population-Based Cohort Study (June 20/25)

Researchers studied health records from British Columbia (1985–2017) to compare 25,402 women with colorectal cancer (CRC, average age 69) to 254,020 women without cancer, matched by age in a 1:10 ratio. They looked at five sexual health issues: dyspareunia (painful sex), pelvic inflammatory disease, endometriosis, abnormal bleeding, and premature ovarian failure. Women with CRC had higher risks of dyspareunia (67% more likely), pelvic inflammatory disease (3.4 times more likely), and endometriosis (95% more likely) compared to women without cancer. Among women over 40, these risks remained, but for those 39 or younger, endometriosis wasn't linked to CRC, though premature ovarian failure was (75% more likely). Further analysis showed cancer treatments (surgery, chemo, radiation) were also linked to these sexual health issues.

https://academic.oup.com/jnci/advance-article/doi/10.1093/jnci/djaf120/8152734
https://www.medscape.com/viewarticle/colorectal-cancer-linked-adverse-sexual-health-outcomes-2025a1000frf?ecd=mkm_ret_250706_mscpmrk_onc_crc_etid7539887&uac=173940BY&impID=7539887

COVID-19 Updates

33. COVID-19 Vaccines in People with Cancer (Jan 1/25)

This article discusses some of the questions people with cancer (or with a history of cancer) or the people caring for them might have about the COVID-19 vaccines.

Should cancer patients and survivors get the COVID-19 vaccine?

The CDC and other expert groups generally recommend that all people, including people with cancer and cancer survivors, stay up to date with the most recent COVID-19 vaccines. Even if you've already had COVID-19, it's still important to be vaccinated. While the COVID-19 vaccines are safe for people with cancer, they might not be as protective as they are in people without cancer, especially for those with weakened immune systems. *Some cancer treatments like chemotherapy, radiation, stem cell or bone marrow transplant, or immunotherapy can affect the immune system, which might make the vaccine less effective*. People with certain types of cancers, like leukemias or lymphomas, can also have weakened immune systems, which might make the vaccine less effective. Because of this, there are different vaccine recommendations for people with weakened immune systems. **Since the situation for every person is different, it's best to discuss the benefits, possible risks, and timing of the COVID-19 vaccines with your cancer doctor.**

Should people with cancer get a specific COVID-19 vaccine?

A major difference between these vaccines is that the Pfizer-BioNTech and Moderna vaccines are mRNA vaccines, and the Novavax vaccine is a protein subunit vaccine. The current versions of all 3 of these vaccines have been updated to help boost the body's immune response against the newest omicron variants, which now account for the vast majority of COVID infections in the US. **The CDC recommends that people (regardless of their immune system status) stay up to date with COVID-19 vaccines, which includes getting one of the updated (2024-2025) vaccines**. The CDC doesn't recommend one vaccine over another. The updated Pfizer-BioNTech and Moderna mRNA vaccines are available for people aged 6 months or older, while the updated Novavax vaccine is available for people 12 and older.

COVID Vaccine Schedules for Immunocompromised Persons

Individuals with immunocompromising conditions, including those receiving immunosuppressive therapy are at increased risk for prolonged infection, serious complications from SARS-CoV-2 infection as well as reduced immune responses to vaccination and reduced vaccine effectiveness. Additional doses may help improve the immune response

and vaccine effectiveness in people who are moderately to severely immunocompromised. They are included in the group of people who should be vaccinated with an updated vaccine (JN.1 or KP.2) beginning in the fall of 2024.

Moderately to severely immunocompromised includes individuals with the following conditions:

- Immunocompromised due to solid tumour or hematologic malignancies or treatments for these conditions
- Solid-organ transplant and taking immunosuppressive therapy.
- Hematopoietic stem cell transplant (within 2 years of transplantation or taking immunosuppression therapy)

- Immunocompromise due to chimeric antigen receptor (CAR) T cell therapy targeting lymphocytes.
- Moderate to severe primary immunodeficiency with associated humoral and/or cell-mediated immunodeficiency or immune dysregulation.
- HIV with AIDS-defining illness or TB diagnosis in last 12 months before starting vaccine series, **or** severe immune compromise with CD4<200 cells/µL **or** CD4%<15%, **or** without HIV viral suppression.
- Recent treatment with the following categories of immunosuppressive therapies: anti-B cell therapies (monoclonal antibodies targeting CD19, CD20 and CD22), high-dose systemic corticosteroids, alkylating agents, antimetabolites, or tumour-necrosis factor (TNF) inhibitors and other biologic agents that are significantly immunosuppressive.
- Chronic kidney disease on dialysis.

The Canadian Immunization Guide for People 12 years of Age and Older:
For previously unvaccinated, immunocompromised individuals starting their vaccination, 2 doses of Moderna Spikevax, Pfizer-BioNTech Comirnaty, or Novavax Nuvaxovid are recommended and a third may be offered with an interval of 4 to 8 weeks between doses. Healthcare providers can use clinical discretion to determine the potential benefit of a third dose for those 5 years of age and over who are moderately to severely immunocompromised. However, new recipients of hematopoietic stem cell transplantation (HSCT) and chimeric antigen receptor (CAR) T cell therapy should be vaccinated with 3 doses beginning at 3 to 6 months post-HSCT/CAR T-cell therapy, regardless of previous vaccination history. *For those previously vaccinated*, the recommended interval is 6 months from the last COVID-19 vaccine dose. However, a shorter interval of at least 3 months may be used.

The CDC recommendations are a bit more complex for those who are moderately or severely immunocompromised.

For people 12 years of age or older:
- Those who have not been vaccinated should get 3 doses of the updated Moderna vaccine **OR** 3 doses of the updated Pfizer-BioNTech vaccine **OR** 2 doses of the updated Novavax vaccine.
- Those who have received 1 dose of a Moderna or Pfizer-BioNTech vaccine should get 2 doses of the updated version of the same vaccine.
- Those who have received 2 doses of a Moderna or Pfizer-BioNTech vaccine should get 1 dose of the updated version of the same vaccine.
- Those who have received 3 or more doses of a Moderna or Pfizer-BioNTech vaccine should get 1 dose of any of the updated vaccines.
- Those who have received 1 dose of the Novavax vaccine should get 1 dose of the updated Novavax vaccine.
- Those who have received 2 or more doses of the Novavax vaccine should get 1 dose of any updated vaccine.
- Those who have received 1 or more doses of the Johnson & Johnson (Janssen) vaccine should get 1 dose of any updated vaccine.

It's important to talk to your doctor about your immune status and if it could affect the best time for you to get the vaccine (and booster shots), as well as what else you can do to help lower your risk of COVID-19 infection.

https://www.cancer.org/cancer/managing-cancer/coronavirus-covid-19-and-cancer/covid-19-vaccines-in-people-with-cancer.html
https://www.canada.ca/en/public-health/services/publications/healthy-living/canadian-immunization-guide-part-4-active-vaccines/page-26-covid-19-vaccine.html#a5