



# HIPEC and colorectal cancer

What is the evidence for hyperthermic intraoperative peritoneal chemotherapy (HIPEC) in the prevention of peritoneal carcinomatosis in patients with colorectal cancer?



## Summary

At present there is insufficient evidence to recommend hyperthermic intraoperative peritoneal chemotherapy (HIPEC) in the prevention of peritoneal carcinomatosis in patients with colorectal cancer.

There are 22 studies currently registered and recruiting, many related to patients with peritoneal carcinomatosis but not all, for instance [Efficacy of HIPEC in Patients With Colorectal Cancer at High Risk of Peritoneal Carcinomatosis](#).

(HIPEC) in the prevention of peritoneal carcinomatosis in patients with colorectal cancer is rated as an unproven treatment (amber patient safety rating).



## Evidence Review

### Guidelines

2020: NICE guideline on [Colorectal Cancer](#) makes no reference of HIPEC in the prevention of peritoneal carcinomatosis.

2019: the German Guideline Program in Oncology published [Evidenced-based Guideline for Colorectal Cancer](#) which, again, made no reference to peritoneal carcinomatosis.

2020: guideline [Indications for hyperthermic intraperitoneal chemotherapy with cytoreductive surgery: a clinical practice guideline](#) was produced via the Program in Evidence-Based Care together with the Surgical Oncology Program at Ontario Health (Cancer Care Ontario), which makes the following recommendation:

*Recommendation 4: There is insufficient evidence to recommend HIPEC with cytoreductive surgery for the prevention of peritoneal carcinomatosis in colorectal cancer outside the context of a clinical trial; however, HIPEC using oxaliplatin is not recommended.*





The guideline included a systematic review of the Indications for hyperthermic intraperitoneal chemotherapy with cytoreductive surgery: a systematic review (see later). The basis for the recommendation included:

*“In patients with T4 or perforated colon cancer receiving adjuvant HIPEC plus CRS and adjuvant systemic chemotherapy, the Working Group members determined increased survival did not occur.”*

## **Systematic reviews**

2018: [Primary curative surgery and preemptive or adjuvant hyperthermic peritoneal chemotherapy in colorectal cancer patients at high risk to develop peritoneal carcinomatosis. A systematic review](#)

Twelve studies were included and analysis divided in four categories, according to three different approaches for adjuvant intraperitoneal chemotherapy in CRC patients at high risk of developing PC:

- HIPEC, during primary surgery for CRC;
- EPIC, after primary surgery for CRC;
- early re-intervention (laparotomy or laparoscopy) and HIPEC;
- as second look laparotomy and HIPEC + CRS, several months after primary surgery.

The review concluded that: *“at present and because of the insufficient available evidence, preemptive intervention at the immediate postoperative adjuvant setting is recommended only in the setting of a registered clinical trial”*.

2020: a systematic review from this year [Indications for hyperthermic intraperitoneal chemotherapy with cytoreductive surgery: a systematic review](#), which reports:

*“There is insufficient evidence to recommend HIPEC with CRS for the prevention of or for the treatment of peritoneal colorectal carcinomatosis outside of a clinical trial.”*

We found three other reviews, due to age, that are highlighted for interest only, these were published in [2014](#), [2016](#) and another from [2016](#).

## **Randomised Controlled Trials (RCTs)**

We also looked for RCTs from 2019 and found one: [Adjuvant hyperthermic intraperitoneal chemotherapy in patients with locally advanced colon cancer \(COLOPEC\): a multicentre, open-label, randomised trial](#) which concluded:

*“In patients with T4 or perforated colon cancer, treatment with adjuvant HIPEC with oxaliplatin did not improve peritoneal metastasis-free survival at 18 months. Routine use of adjuvant HIPEC is not advocated on the basis of this trial.”*



**Health**

## **Evidence review #7 November 2020**

### **Ongoing Clinical Trials**

A search found 47 studies with the following breakdown:

- 7 completed
- 22 recruiting, many are related to patients with peritoneal carcinomatosis but not all, for instance Efficacy of HIPEC in Patients With Colorectal Cancer at High Risk of Peritoneal Carcinomatosis which is due to finish in 2026.
- 2 are active and not recruiting of which one Adjuvant HIPEC in High Risk Colon Cancer (COLOPEC) is relevant to this review and is due to finish in 2022.