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### ADMINISTRATIVE INFORMATION

**Support -** No.

**Review Stage at time of this submission -** Completed but not published.

**Conflicts of interest -** None declared.

**INPLASY registration number:** INPLASY202640067

**Amendments -** This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 19 April 2026 and was last updated on 19 April 2026.

### INTRODUCTION

**Review question / Objective** (1) patients diagnosed with colorectal cancer; (2) comparative study of prophylactic HIPEC vs. control group; (3) randomized controlled trials (RCTs) and well-designed non-RCTs (retrospective or prospective studies, cohort, case-control studies); (4) Pooled analysis amenable to the meta-analysis software.

**Condition being studied** Locally advanced colorectal cancer received prophylactic HIPEC.

### METHODS

**Participant or population** Locally advanced colorectal cancer.

**Intervention** Prophylactic HIPEC.

**Comparator** No prophylactic HIPEC.

**Study designs to be included** (1) patients diagnosed with colorectal cancer; (2) comparative study of prophylactic HIPEC vs. control group; (3) randomized controlled trials (RCTs) and well-designed non-RCTs (retrospective or prospective studies, cohort, case-control studies); (4) Pooled analysis amenable to the meta-analysis software; (5) article published in English language.

**Eligibility criteria** Inclusion criteria: (1) patients diagnosed with colorectal cancer; (2) comparative study of prophylactic HIPEC vs. control group; (3) randomized controlled trials (RCTs) and well-designed non-RCTs (retrospective or prospective studies, cohort, case-control studies); (4) Pooled analysis amenable to the meta-analysis software; (5) article published in English language. Exclusion criteria included (1) non-comparative or review articles, case reports, editorials, expert opinions, and letters (2) original data or full text that could not be retrieved or accessed. In case of overlapping series of patients, the most recent or higher quality publication was selected.

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**Information sources** Two authors (YCC, WTZC) searched the PubMed, Embase, and Web of Science databases for all publications comparing prophylactic HIPEC versus control a group in patients with locally advanced colorectal cancer and independently checked article titles and abstracts, and manually accessed the reference lists of all retrieved studies to complete the list of possible publications.

**Main outcome(s)** Peritoneum metastasis free survival, disease free survival, overall survival.

**Quality assessment / Risk of bias analysis** We used the modified Newcastle Ottawa Scale (NOS) for Quality assessment of retrospective study and quality assessment of randomized controlled trial is based on Cochrane Risk of Bias 2.

**Strategy of data synthesis** We calculated the odds ratios (ORs) and mean differences with 95% confidence intervals (CIs) for dichotomous and continuous variables. The survival outcome data were pooled using HRs and corresponding 95% CIs.

**Subgroup analysis** No subgroup analysis.

**Sensitivity analysis** Sensitivity test was done for 3 year and 5 year peritoneum metastasis free survival.

**Country(ies) involved** Taiwan.

**Keywords** prophylactic HIPEC; locally advanced colorectal cancer.

#### **Contributions of each author**

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Author 2 - Sheng Chi Chang.

Author 3 - Yuan Yao Tsai.

Author 4 - Tao Wei Ke.

Author 5 - Abe Fingerhut.

Author 6 - William Tzu Liang Chen.