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Letter to Editor

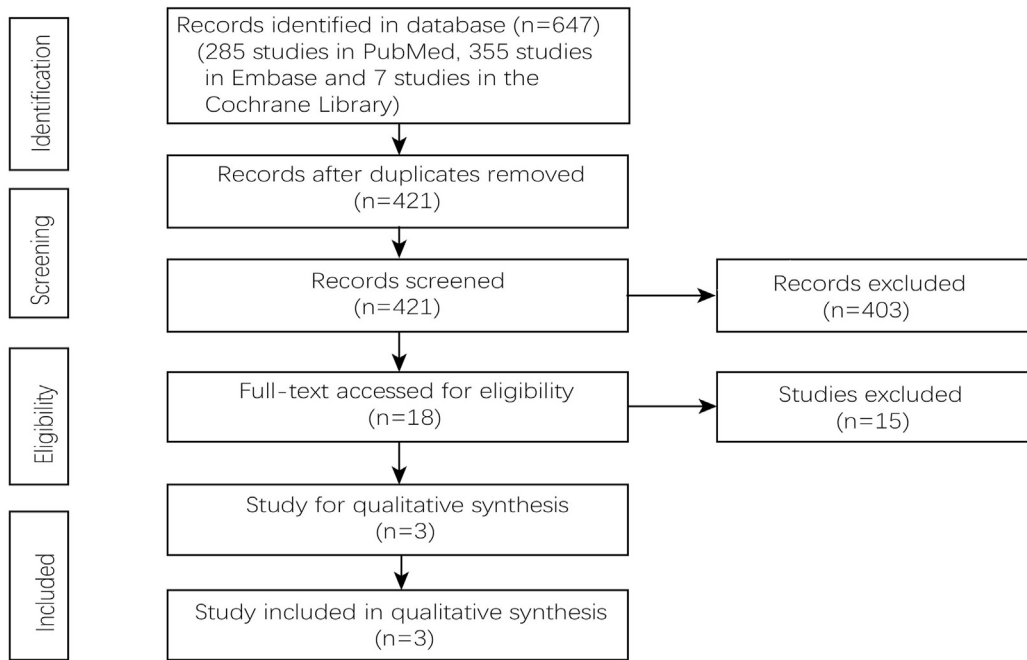
The safety of on gastrointestinal cancer surgery during COVID-19: A meta-analysis



To the editor,

Coronavirus disease 2019 (COVID-19) has been declared to be a global pandemic since 2019, and people suffered from the

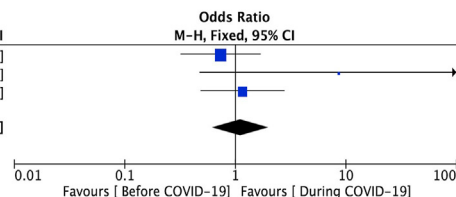
respiratory disease a lot.¹ Cancer patients were not firstly suffered COVID-19, however, due to COVID-19, patients would suffer delayed chemotherapy and surgery, which might cause poor survival.² The purpose of this meta-analysis was to evaluate the safety



a

Complications

Study or Subgroup	Before COVID-19		During COVID-19		Weight	Odds Ratio M-H, Fixed, 95% CI
	Events	Total	Events	Total		
Cui J 2021	21	205	9	67	55.1%	0.74 [0.32, 1.69]
Li YX 2020	6	68	0	41	2.5%	8.63 [0.47, 157.36]
Tschann P 2021	14	71	11	63	42.3%	1.16 [0.48, 2.78]
Total (95% CI)		344		171	100.0%	1.12 [0.63, 1.99]
Total events	41		20			
Heterogeneity: Chi ² = 2.88, df = 2 (P = 0.24); I ² = 30%						
Test for overall effect: Z = 0.38 (P = 0.71)						



b

Fig. 1. Meta-analysis of complications between before COVID-19 group and during COVID-19 group. a, Flowchart of study selection. b, Complications between before COVID-19 group and during COVID-19 group.

Table 1
Characteristics of the studies included in the meta-analysis.

Author	Year published	Country	Cancer type	Study design	Sample size				NOS
					Before COVID-19		During COVID-19		
					Complications	Total	Complications	Total	
Li YX	2020	China	GC	Retrospective	6	68	0	41	7
Tschann P	2021	Austria	CRC	Retrospective	14	71	11	63	8
Cui J	2021	China	CRC	Retrospective	21	205	9	67	8

Abbreviations: NOS, Newcastle–Ottawa Scale. GC, gastric cancer. CRC, colorectal cancer.

of on gastrointestinal cancer surgery during COVID-19.

PubMed, EMBASE and Cochrane Library database were searched for eligible studies on May 20, 2021. The search items were as follows (“COVID-19” OR “coronavirus” OR “SARS-CoV-2” OR “2019-nCoV” OR “SARS nCoV 2”) AND (“colorectal cancer” OR “colon cancer” OR “rectal cancer” OR “colorectal neoplasm” OR “colon neoplasm” OR “rectal neoplasm” OR “colorectal tumor” OR “colon tumor” OR “rectal tumor” OR “gastric cancer” OR “gastric carcinoma” OR “gastric neoplasms” OR “stomach cancer” OR “stomach carcinoma” OR “stomach neoplasms”). The search scope was limited to the title and abstract. A total of 647 studies (285 studies in PubMed, 355 in EMBASE and 7 in Cochrane Library database) were identified in the database, and after removing duplicates, 421 studies were left for initial screening. Finally, three studies were included in this meta-analysis (Fig. 1a).^{3–5} RevMan 5.3 (The Cochrane Collaboration, London, United Kingdom) was used to conduct data analysis in this meta-analysis.

The three studies were published between 2020 and 2021, and two studies were from China, one study was from Austria. The cancer type, study design, sample size and NOS (Newcastle–Ottawa Scale) score were shown in Table 1. After pooling up all the complications, no significant difference was found between before COVID-19 group and during COVID-19 group (OR = 1.12, 95% CI = 0.63 to 1.99, $p = 0.71$) (Fig. 1b).

Therefore, it is safe for surgeons performing gastrointestinal cancer surgery during COVID-19.

Ethics approval and consent statement

No applicable.

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Authors contribution

Conception and design of the research: Yong Cheng, Dong Peng. Acquisition of data: Xiao-Yu Liu; Analysis and interpretation of the data: Dong Peng, Xiao-Yu Liu. Statistical analysis: Dong Peng. Writing-original draft: Xiao-Bo Tan. Writing-review and editing: Yong Cheng.

Declaration of competing interest

The authors declare that they have no conflict of interest.

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