STROBE Statement----checklist of items that should be included in report of observational studies

	Item No	Recommendation	Page No	Relevant text from manuscript
Title and abstract	1	(a) Indicate the study's design with a commonly used term in the title or the abstract	2	A cross-sectional study was conducted.
		(*b*) Provide in the abstract an informative and balanced summary of what was done and what was found	2	To find the risk factors for delayed gastric emptying in ovarian cancer treated with CRS-HIPEC. Multivariable analysis revealed that age≥70 years and intraoperative hemorrhage≥800ml were independently associated with postoperative delayed gastric emptying after CRS-HIPEC.
Introduction				
Background/rationale	2	Explain the scientific background and rationale for the investigation being reported	2,3	Ovarian cancer, being the most frequent cause of death among gynecological malignancies in developed countries, is the seventh most common cancer in women globally. In recent years, CRS-HIPEC has emerged as an alternative for ovarian cancer. Some studies have shown promising results. The procedure involves a considerable proportion of bowel resection and anastomosis. DGE, a common complication after abdominal surgery, can cause discomfort and decrease quality of life postoperatively. Yet, little study has been focused on the DGE of ovarian cancer patients after CRS-HIPEC.

Objectives	3	State specific objectives, including any prespecified hypotheses	3	The aim of this study was to find the risk factors for DGE in advanced and recurrent ovarian cancer treated with CRS-HIPEC. Identification of patients at increased risk for DGE may aid patient identification as well as postoperative gastrointestinal management.
Methods				
Study design	4	Present key elements of study design early in the paper	3	From March 2014 to April 2018, 77 patients with pathologically diagnosed advanced and recurrent ovarian cancer treated by CRS-HIPEC at the Department of Peritoneal Cancer Surgery and Gynecology, Beijing, China, were enrolled into this study.
Setting	5	Describe the setting, locations, and relevant dates, including periods of recruitment, exposure, follow-up, and data collection	3	From March 2014 to April 2018, 77 patients with pathologically diagnosed advanced and recurrent ovarian cancer treated by CRS-HIPEC at the Department of Peritoneal Cancer Surgery and Gynecology, Beijing, China, were enrolled into this study.
Participants	6	(*a*) *Cohort study*—Give the eligibility criteria, and the sources and methods of selection of participants. Describe methods of follow-up *Case-control study*—Give the eligibility criteria, and the sources and methods of case ascertainment and control selection. Give the rationale for the choice of cases and controls *Cross-sectional study*—Give the eligibility criteria, and the sources and methods of selection of participants	3	From March 2014 to April 2018, 77 patients with pathologically diagnosed advanced and recurrent ovarian cancer treated by CRS-HIPEC at the Department of Peritoneal Cancer Surgery and Gynecology, Beijing, China, were enrolled into this study. The major inclusion and exclusion criteria, as well as preoperative evaluations were reported previously.

		(*b*) *Cohort study*—For matched studies, give matching criteria and number of exposed and unexposed *Case-control study*—For matched studies, give matching criteria and the number of controls per case		
Variables	7	Clearly define all outcomes, exposures, predictors, potential confounders, and effect modifiers. Give diagnostic criteria, if applicable	4	**2.3 The definition of clinically relevant postoperative DGE** **2.4 Parameters observed in the study** The demographic data including age, body mass index (BMI), concomitant disease, preoperative chemotherapy, serum CA-125 level and pleural effusion status. During CRS-HIPEC, we collected information about the operation time, intraoperative bleeding, the number of organs removed as well as intestinal resection and anastomosis. The NGT intubation time and eating status were recorded after CRS-HIPEC.
Data sources/ measurement	8*	For each variable of interest, give sources of data and details of methods of assessment (measurement). Describe comparability of assessment methods if there is more than one group	4	The NGT intubation time and eating status were recorded after CRS-HIPEC.
Bias	9	Describe any efforts to address potential sources of bias	3	The major inclusion and exclusion criteria, as well as preoperative evaluations were reported previously and were strictly implemented in this study to minimize bias.

Study size	10	Explain how the study size was arrived at	3	From March 2014 to April 2018, 77 patients with pathologically diagnosed advanced and recurrent ovarian cancer treated by CRS-HIPEC at the Department of Peritoneal Cancer Surgery and Gynecology, Beijing, China, were enrolled into this study. The major inclusion and exclusion criteria, as well as preoperative evaluations were reported previously and were strictly implemented in this study to minimize bias.
Quantitative variables	11	Explain how quantitative variables were handled in the analyses. If applicable, describe which groupings were chosen and why	4	Clinically relevant postoperative DGE was defined as the nasogastric tube (NGT) left in place for ≥8 days，or for ＜8 days but repeated emesis after removal of the NGT, and/or need for reinsertion of the NGT, or failure to tolerate unlimited oral intake by postoperative-day 14.
Statistical methods	12	(a) Describe all statistical methods, including those used to control for confounding	4	Data were expressed as median (range) and frequencies. Univariate analyses were performed in patients who experienced DGE compared with patients who did not, using Chi-square tests. A 95% confidence interval ($p < 0.05$) was considered for statistical significant differences. All the statistical significant variables in the univariate analysis were chosen for entry into the multivariable logistic regression model to determine factors that were independently associated with DGE.

		(b) Describe any methods used to examine subgroups and interactions	4	Univariate analyses were performed in patients who experienced DGE compared with patients who did not, using Chi-square tests. All the statistical significant variables in the univariate analysis were chosen for entry into the multivariable logistic regression model to determine factors that were independently associated with DGE.
		(c) Explain how missing data were addressed	4	Data of 77 patients without missing were expressed as median (range) and frequencies.
		(*d*) *Cohort study*—If applicable, explain how loss to follow-up was addressed *Case-control study*—If applicable, explain how matching of cases and controls was addressed *Cross-sectional study*—If applicable, describe analytical methods taking account of sampling strategy		Not applicable.
		(*e*) Describe any sensitivity analyses	4	Univariate analyses were performed in patients who experienced DGE compared with patients who did not, using Chi-square tests. All the statistical significant variables in the univariate analysis were chosen for entry into the multivariable logistic regression model to determine factors that were independently associated with DGE.
Results				
Participants	13*	(a) Report numbers of individuals at each stage of study—eg numbers potentially eligible, examined for eligibility, confirmed eligible, included in the study, completing follow-up, and analysed	5	A total of 77 patients with pathological confirmed ovarian cancer were enrolled in this study.
		(b) Give reasons for non-participation at each stage		Not applicable.
		(c) Consider use of a flow diagram		This study was a retrospective study and flow diagram was

				not used.
Descriptive data	14*	(a) Give characteristics of study participants (eg demographic, clinical, social) and information on exposures and potential confounders	5	**3.1 Demographic data and surgical characteristics** A total of 77 patients with pathological confirmed ovarian cancer were enrolled in this study, with a median age of 59 years (range 35-79 years).The median body mass index (BMI) of all the patients was 22.83kg/m2 (range13.8-33.98). 10% patient had Diabetes mellitus and 21% patient had high blood pressure. Preoperative chemotherapy was administered in 55 patients (71%), with an average number of 6 chemotherapy cycles per patient (range 0 to 25 cycles). Cytoreductive surgery plus HIPEC was indicated in 32 primary ovarian cancer patients (42%) and in the remaining 45 patients (58%) for recurrent disease. 62 patients (81%) had at least one previous pelvic surgery history. The median serum CA-125 level was 277.2U/ml (range 7.2-10001.0U/ml). The demographic data was shown in Table 1.
		(b) Indicate number of participants with missing data for each variable of interest		Not applicable.
		(c) *Cohort study*—Summarise follow-up time (eg, average and total amount)		
Outcome data	15*	*Cohort study*—Report numbers of outcome events or summary measures over time		
		Case-control study—Report numbers in each exposure category, or summary measures of exposure		

		Cross-sectional study—Report numbers of outcome events or summary measures	5	The incidence rate of DGE was 36 %(28/77).
Main results	16	(*a*) Give unadjusted estimates and, if applicable, confounder-adjusted estimates and their precision (eg, 95% confidence interval). Make clear which confounders were adjusted for and why they were included	5,6	Univariate analysis found BMI<23 kg/m2 (p=0.025), no pelvic surgery history (p=0.034), less than 7 previous chemotherapy cycles (p=0.037), operation time ≥7hours (p=0.047) and intraoperative hemorrhage≥ 800ml (p=0.008) to be associated with an increased rate of DGE (Table 3). Age and all the statistical significant variables in the univariate analysis, including BMI, pelvic surgery history， previous chemotherapy cycles, operation time and intraoperative hemorrhage were chosen for entry into the multivariable logistic regression model to determine factors that were independently associated with DGE. We found age ≥70 years (OR=7.127, 95%CI: 1.122-45.264, p=0.037) and intraoperative hemorrhage ≥800ml (OR=3.416, 95%CI: 1.067-10.939, p=0.039) to be independent risk factors for DGE after CRS-HIPEC in advanced and recurrent ovarian cancer patients (Table 4).
		(b) Report category boundaries when continuous variables were categorized	11,12 ,13	Category boundaries were reported when continuous variables were categorized in Table 3 and 4.eg age ≥70years or <70 years.
		(*c*) If relevant, consider translating estimates of relative risk into absolute risk for a meaningful time period	13	As shown in Table 4.
Other analyses	17	Report other analyses done—eg analyses of subgroups and interactions, and sensitivity analyses		No other analyses was down.
Discussion				
Key results	18	Summarise key results with reference to study objectives	6	In our analysis, we found that age ≥70 years and intraoperative hemorrhage ≥800ml were the independent risk factors for DGE

				after CRS-HIPEC in advanced and recurrent ovarian cancer patients.
Limitations	19	Discuss limitations of the study, taking into account sources of potential bias or imprecision. Discuss both direction and magnitude of any potential bias	6,7	Limitations in the present study need to be addressed. First, this is a retrospective study with a relatively limited sample size, a RCT study with large samples is needed to further certify the risk factors for DGE and its effects on longer prognosis. Second, fundamental studies are needed to illustrate the potential mechanisms.
Interpretation	20	Give a cautious overall interpretation of results considering objectives, limitations, multiplicity of analyses, results from similar studies, and other relevant evidence	7	In conclusion, strengthened intestinal management, including prolonged nasogastric intubation, using gastrointestinal motility drugs and enteral nutrition, should be applied to patients with age≥70 years or intraoperative hemorrhage≥800ml when undergoing CRS-HIPEC.
Generalisability	21	Discuss the generalisability (external validity) of the study results	7	In conclusion, strengthened intestinal management, including prolonged nasogastric intubation, using gastrointestinal motility drugs and enteral nutrition, should be applied to patients with age≥70 years or intraoperative hemorrhage≥800ml when undergoing CRS-HIPEC.
Other information				
Funding	22	Give the source of funding and the role of the funders for the present study and, if applicable, for the original study on which the present article is based	8	The study was supported by Beijing Natural Science Foundation (7202075) and 'Beijing Hospitals Authority' Ascent Plan (code: DFL20190701). Funders are mainly involved in the interpretation and publication of articles.

*Give information separately for cases and controls in case-control studies and, if applicable, for exposed and unexposed groups in cohort and cross-sectional studies