We would like to thank the reviewers for their thoughtful responses, which we feel have improved the manuscript. Below are all of their suggestions and concerns followed by our responses.

Comments 1:

The introduction is brief and succinctly presents the key features of ESTs. It also briefly outlines issues with power morcellation. I think it requires some discussion around the carcinogenesis of EST; i.e. cell of origin, molecular features, aggressive vs indolent etc. I also think it would be beneficial to elaborate more on the issues with morcellation contained in the appropriately referenced opinion papers.

>Answer: Endodermal sinus tumors of the ovary (EST), also known as yolk sac tumors because they are derived from the primitive yolk sac, are the second most common malignant ovarian germ cell tumor (MOGCT) after dysgerminoma and account for 20% of MOGCTs and 1% of all ovarian malignancies. They are rare and highly malignant tumors that occur mainly in children and adolescents and are characterized by a large solid and cystic tumor[1]. Abdominal pain is the most common symptom experienced in 77% of patients, and an abdominal or pelvic mass is palpated in 74% of patients[2]. Serum alpha-Fetoprotein (AFP) levels increase in most ESTs and can be used as an indicator to monitor the disease progress and the patient response to treatment[3]. With the development of various combination chemotherapy regimens, the long-term survival of patients has improved, and many MOGCT patients have been able to undergo fertility-sparing surgery. Indeed, long-term survival has become common for almost all patients with early-stage tumors and most patients with advanced-stage tumors[4].

As various instruments have been developed to maximize the benefits of minimally invasive surgery, laparoscopic techniques are now widely used in the field of gynecological surgery. In particular, laparoscopic power morcellation is commonly used when performing laparoscopic supracervical hysterectomy or myomectomy, as the ability to remove large specimens through a small incision is highly advantageous[5]. In rare cases, it is also used in the removal of benign-appearing adnexal masses[6]. However, the use of power morcellation to remove solid adnexal masses is considered a contraindication because solid adnexal masses cannot be completely excluded from the possibility of being a malignant tumor (such as dysgerminoma, endodermal sinus tumor, Sertoli-Leydig cell tumor, etc.), even if the preoperative examination showed a high probability of benignity or a frozen biopsy performed during surgery is benign[7,8].

Here, we report a case of disseminated ovarian endodermal sinus tumors throughout the entire

peritoneal cavity after laparoscopic unilateral salpingo-oophorectomy using uncontained power morcellation.

Comments 2:

In summary, this is a novel case that highlights the problems with the use of uncontained power morcellation. It also could highlight alternative approaches to morcellation for MIS. It could also highlight alternative approaches with regards to fertility-sparing management. It is imperative that these issues are explored and discussed within the manuscript. The questions raised by the reviewers should be answered.

>Answer : Due to a personal mistake in the process of submitting the thesis, all the contents of the discussion were not included. I deeply apologize for my mistakes. The discussion of the revised manuscript includes management to preserve fertility and the reason and regrets of performing the treatment of this patent.

Please see the contents of the discussion:

Several complications related to power morcellation, such as ectopic leiomyoma (leiomyomatosis), endometriosis or ovarian remnant syndrome, dissemination of occult malignancy, and direct visceral injury (such as bladder, bowel, and ureteral injuries), have been reported to date. These are responsible for reducing the patient' s long-term survival[9]. For this reason, the FDA safety communication in 2014 announced a review showing concerns about laparoscopic power morcellation used in hysterectomy or myomectomy[10]. In detail, two contraindications are recommended. First, laparoscopic power morcellators are contraindicated in the removal of uterine tissue containing presumed benign fibroids in patients who are in the peri- or post-menopausal period or are candidates for en bloc tissue removal through the vagina or mini-laparotomy incision. Second, use of laparoscopic power morcellators is contraindicated in the gynecologic field to morcellate tissue that is known or suspected to contain malignancy. Since this announcement, various studies have been conducted to provide safer alternatives, such as a tissue containment system[5]. Recently, in February 2020, laparoscopic power morcellation for hysterectomy or myomectomy with only a tissue containment system was recommended for appropriate patient groups[11]. However, current data on the use of a tissue containment systems are still limited and more research is needed[12].

Scribner et al. reported a case of managing a large, benign-appearing adnexal mass by single-

site laparoscopy using a power morcellator and argued that it was a case showing the feasibility and potential safety of their technique[6]. However, Canis et al. reported a case in which a 12 cm, mainly solid ovarian mass was treated by laparoscopy[7]. The patient underwent unilateral salpingo-oophorectomy via laparoscopy, and the ovarian mass was diagnosed as a teratoma in a frozen biopsy obtained during surgery. The mass was morcellated and removed through a 4 cm abdominal incision. An immature teratoma was diagnosed on a permanent section, and 3 weeks later, a stage 4 peritoneal gliosis containing mature and immature implants was observed. The patient received chemotherapy, total hysterectomy with contralateral salpingo-oophorectomy, and debulking surgery. Based on this case, the authors stated that intraperitoneal morcellation should be considered a contraindication in the treatment of ovarian masses.

Surgical staging was not performed at the time of surgery in another hospital, but our patient could be estimated as surgical stage 1C because ruptured unilateral ovarian EST and non-existent pelvic extension (normal-appearing contralateral ovary and intraperitoneal organs in macroscopically) were identified. The patient was referred to our hospital 4 weeks after surgery, and exploratory laparotomy was performed, and the patient was diagnosed with metastatic stage 3C EST. To our knowledge, there have been no cases in which metastatic stage 3C EST has been diagnosed by spreading into the peritoneal cavity within a short period after laparoscopic unilateral salpingo-oophorectomy for the treatment of stage 1C EST.

EST occurs mostly in children or adolescent periods and responds well to platinum-based adjuvant chemotherapy. Therefore, in the case of early-stage MOGCTs including EST, the initial surgery performed is fertility-sparing surgery (unilateral salpingo-oophorectomy). Various methods of fertility-sparing cytoreductive surgery are performed according to the need for fertility preservation, bilateral involvement of the ovary, and the chemotherapy-sensitive nature in the case of advanced-stage tumors[4]. After consulting with the patient and family members, total abdominal hysterectomy, contralateral salpingo-oophorectomy, and lymphadenectomy with optimal debulking were determined. Postoperatively, the patient received adjuvant chemotherapy (BEP regimen) and continued to be disease-free for 6 years. Unfortunately, the patient is undergoing hormonal replacement therapy because of the surgical menopause condition and is experiencing a loss of fertility. We regret not performing fertility-sparing cytoreductive surgery instead of hysterectomy with bilateral salpingo-oophorectomy.

Metastatic dissemination caused by morcellation of solid adnexal masses is extremely rare. To the best of our knowledge, this is the first case report of laparoscopic uncontained power morcellation-induced dissemination of ovarian EST. This case highlights the possibility of

disseminated suspected malignancy after laparoscopic uncontained power morcellation as a method of solid adnexal mass extraction, and gynecologists should be cautious about using uncontained power morcellation for solid adnexal masses.

The authors did not provide original pictures. Please provide the original figure documents. Please prepare and arrange the figures using PowerPoint to ensure that all graphs or arrows or text portions can be reprocessed by the editor.

>Answer : I understood and prepared the file.

PMID and DOI numbers are missing in the reference list. Please provide the PubMed numbers and DOI citation numbers to the reference list and list all authors of the references.

>Answer : I understood and modified. The reference list was written according to the format of the reference, but the title of the reference No.12 was written in thick letters by the auto-analysis of BPG submitting system. I tried a few times, but it was not corrected, so we inform you that we proceeded as it is.

>I added acknowledgement in my manuscript.