

# Metachronous contralateral ovarian cancer after interval successful pregnancy

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## Summary

Close follow-up and complete surgical staging after childbearing in early stage mucinous ovarian cancer (mOC) patients who have undergone fertility sparing surgery are important to prevent the recurrence of disease.

**Key words:** Ovarian cancer; Mucinous adenocarcinoma; Metachronous; Fertility-sparing; Laparoscopic surgery; Conservative surgery; Pregnancy.

## Introduction

Mucinous ovarian cancers (mOCs) are usually diagnosed while in their early-stages and occur more commonly than other epithelial ovarian cancers in young patients [1]. Several studies have proven that fertility-sparing surgery has a negligible impact on oncological outcomes in cases of epithelial ovarian cancer [2]. Laparoscopic fertility-sparing surgery may be a preferred option for women with early-stage mOCs who wish to preserve their fertility. However, counselling regarding the risk of recurrence is advised, even if that risk is small. In addition, it is imperative that patients undergo regular follow-up. The authors report a case of metachronous contralateral mucinous adenocarcinoma of the ovary after interval successful pregnancy.

## Case Report

A 34-year-old woman presented with a pelvic mass extending up to the umbilical level for one month. Sonographic findings showed unilateral cystic masses measuring 14 cm in diameter at the left ovary. The patient's serum CA-125 level was mildly elevated (59.1 kU/L). Laparoscopic conservative surgery was arranged, as the patient wished to retain her fertility. Laparoscopic findings showed a large ovarian mass on the left side (Figure 1). No macroscopic disease was detected on the peritoneal surface. The uterus, right ovary, and omentum appeared grossly normal.

Laparoscopic conservative surgery was performed, which consisted of left salpingo-oophorectomy, omentectomy, and multiple peritoneal biopsies. There was no residual disease after surgery. The final pathological report showed positive cytology for grade 1 adenocarcinoma and mucinous adenocarcinoma at the left ovary and the left fallopian tube. The results of the omentum and the peritoneal biopsies were unremarkable. Stage IC1 mucinous adenocarcinoma of the left ovary was diagnosed according to FIGO classification.

The patient received the six cycles of adjuvant chemotherapy

(cisplatin 75 mg/m<sup>2</sup> + cyclophosphamide 750 mg/m<sup>2</sup>). No subsequent evidence of tumor recurrence was detected. After one year of complete adjuvant chemotherapy, the patient conceived naturally and gave cesarean birth to a term baby weighing 3,125 grams, with no evidence of cancer in the right side of the ovary or pelvic cavity (the results of cytological and peritoneal biopsies were negative for cancer). Five months later, a cystic mass 10 cm in diameter was detected on the right side of the ovary, and laparoscopic complete surgical staging was performed without gross residual tumor. The final pathological report showed grade 1 mucinous adenocarcinoma of the right side of the ovary, which was found to be positive for adenocarcinoma according to cytological examination. Otherwise, specimens were within normal limit. Metachronous contralateral ovarian cancer was diagnosed. Subsequently, the patient underwent regular follow-up after com-

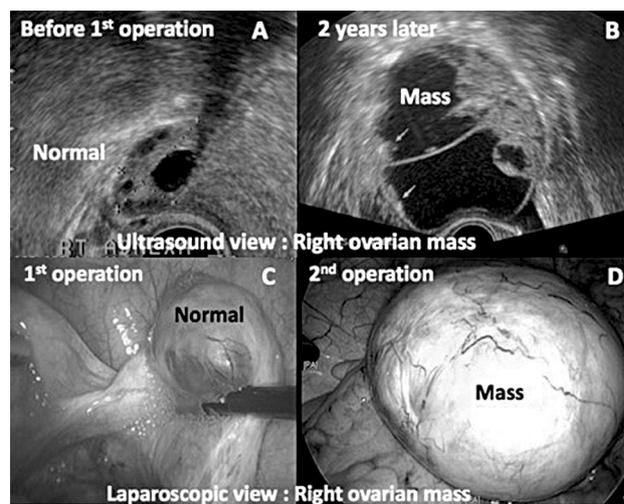


Figure 1. — Ultrasound views (A and B) and intraoperative (C and D) findings of an ovarian mass at the first operation that appeared normal and two years later in the second operation (a large ovarian mass 10 cm in diameter at the right side of ovary).

pleting another six cycles of adjuvant chemotherapy (carboplatin AUC 5 + taxol 175 mg/m<sup>2</sup>) with no evidence of cancerous recurrence. The follow-up time was 60 months.

## Discussion

Primary mOC accounts for 10-15% of all invasive epithelial ovarian cancers [3]. Since early-stage mucinous carcinoma is commonly reported in young women [4], laparoscopic fertility-sparing surgery is considered in these cases more often than in those involving other histologic subtypes. Previous studies found there to be no differences in terms of long-term overall survival, disease free survival, or recurrence rates between fertility-sparing surgery and radical surgery in women with Stage I mucinous cystadenocarcinoma [4]. In the present case, the patient underwent laparoscopic fertility-sparing surgery due to her young age and the ovarian cancer being at an early stage.

Regular follow-up examinations are imperative after laparoscopic fertility-sparing surgery. A clinical and ultrasonography evaluation every three months and a major imaging evaluation every six months is recommended [5]. In the present case, the patient underwent clinical and serum tumor marker assessment every three months and abdominopelvic computer tomography and chest X-ray every six months.

European Society for Medical Oncology (ESMO) Clinical Practice guidelines recommend that the interval after completion of treatment should be at least six months in order to reduce the possible teratogenic effect of chemotherapy [6]. In the present case, the patient conceived spontaneously one year after the last cycle of adjuvant platinum-based chemotherapy and delivered a healthy term baby without obstetric or oncological complications.

Owing to a lack of strong scientific evidence, eradication surgery after childbearing is recommended to prevent cancer recurrence, as late reoccurrence after conservative treatment has been reported [7]. The patient in the present case had a cancer recurrence after five months of negative malignancy, which was a result of the second surgery (cesarean birth). She, thus, underwent completion of laparoscopic surgery. Subsequently, she has shown no evidence of recurrence of disease after 60 months follow-up.

## Conclusion

Laparoscopic fertility-sparing is safe and feasible in patients with early-stage mucinous epithelial ovarian cancer. Close follow-up and complete surgical staging after childbearing are important in early-stage mOC patients who have undergone fertility-sparing surgery in order to prevent the recurrence of disease.

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