171 st Interinstitutional Conference

March 13, 2026

Gynecologic Oncology Unit, Department of Obstetrics and Gynecology Siriraj Hospital

Identification data

- 15-year-old girl
- Hometown: Bangkok, Thailand
- Insurance: Universal Coverage Scheme (UCS), registered at another hospital
- Occupation: Student

Chief complaint

Left lower abdominal pain for 10 days

Present illness

10 days PTA, the patient developed mild, non-radiating left lower abdominal pain.

She also reported occasional abdominal fullness and early satiety. She denied history of a palpable mass, anorexia, weight loss, fever, abnormal vaginal bleeding or abnormal discharge. She was not taking any medications.

She underwent TRS and CTWA at another hospital then came to Siriraj.

Past history

- No underlying disease

- No previous surgery

- No history of food and drug allergy

- No current medication use

Gynecologic history

- Virgin

- LMP: November 15, 2025

- Regular menstrual cycle

- No dysmenorrhea

Physical examination

- General appearance: good consciousness
- Body weight 42 kg, Height 155 cm, BMI 17.48 kg/m 2
- Vital signs: BT 37 °C, BP 100/68 mmHg, PR 90 bpm, RR 18/min
- HEENT: not pale conjunctiva, no cervical lymphadenopathy
- Heart: normal S1 S2, no murmur
- Lung: clear and equal breath sound both lungs
- Abdomen: markedly distended, soft, mild tenderness over the mass, positive fluid

thrill, firm palpable mass occupying $^{2}/_{3}$ above pubic symphysis, non-mobile

- Extremities: no pitting edema
- Pelvic examination was not performed

Investigation

Transrectal sonography (TRS):

- Anteverted uterus measuring 5.88 x 3.23 cm. Normal myometrium. Endometrial thickness 10.77 mm

- Right ovary: solid cystic mass measuring 9.84 x 6.47 cm (90% solid component) with vascular flow

- Left ovary: biloculated hypoechogenic cyst measuring 4.47 x 4.14 cm with internal polypoid area, no vascular flow

CT whole abdomen

- Anteverted uterus measuring 2.9 × 4.2 cm

- Right ovary: 9.9 × 6 cm ill-defined border mass

- Left ovary: 3.3 × 4 cm cyst with 8 × 7 mm mural nodule

- Peritoneum and omentum: multiple nodular thickening up to 0.7 cm thick along peritoneal reflection; up to 1.6 cm thick along omentum of middle to lower abdomen.

- No significant lymph node enlargement.

- Intraperitoneal free fluid: 1.7 cm thick at right anterior subphrenic space, 2.3 cm thick at perisplenic space, 5.1 cm thick at right paracolic gutter, 2.3 cm thick at left paracolic gutter, 1.6 cm thick superior to urinary bladder.

- No hydronephrosis.

Tumor marker:

- CA-125 557 u/mL
- CA 19-9 : 0.73 u/mL
- CEA 1.24 ng/mL
- AFP 1.13 ng/mL
- β-hcg : 1.10 mIU/mL
- LDH 129 u/L

Differential diagnosis

1. Borderline epithelial ovarian tumor
2. Malignant germ cell tumor – immature teratoma
3. Juvenile granulosa cell tumor

Management

- Counseling patient and family : Diagnosis, Fertility sparing surgery,

second operation

- Set OR for exploratory laparotomy for fertility sparing surgical staging 17/12/2025
- Request for frozen section

- Intraop management : Right salpingo-oophorectomy , Right adnexa was sent to pathologist for frozen section
- Frozen section : **Serous tumor, at least borderline**
- **Operation:** Exploratory laparotomy for right salpingo-oophorectomy, left ovarian cystectomy, left paratubal cystectomy, omentectomy with tumor debulking with ascites fluid collection for cytology with lysis adhesion
- Finding :

  Yellowish ascites 1,900 mL

  Intra-abdominal adhesions between omentum and right adnexa

  Uterus: small size

  Left ovary: clear yellowish content cyst measuring 3 cm in diameter, solid nodule (1x1 cm), attached to posterior wall of uterus

  Right ovary: solid-cystic mass measuring 10 x 8 cm (predominantly solid) with papillary growth; accidentally ruptured; tumor packed in ovarian fossa

  Pelvic and para-aortic lymph nodes: no enlargement

  Omentum: swollen, no nodules

  Appendix, bowel, bladder, liver and diaphragm: unremarkable

  Tumor seeding at right infundibulopelvic ligament (4x3 cm), left anterior abdomen (5x2 cm), anterior of rectum (4×3 cm)

Both fallopian tubes: swollen, left paratubal cyst (2x1 cm)

No gross residual tumor

- Pathologic report :

  Ovary and fallopian tube, right:

  Ovary - **Serous borderline tumor with surface involvement**. No micropapillary pattern or stromal invasion identified

  Fallopian tube - **Serosal non-invasive desmoplastic implant**

  Adnexal ligament - Necrotizing inflammation with **noninvasive desmoplastic implant**

  Ovary, left: **Serous borderline tumor**, no surface involvement

  Left paratubal cyst: Paratubal cyst with noninvasive epithelial implant

  Omentum: **Noninvasive desmoplastic implant**

  Seeding at posterior wall of uterus: **Noninvasive desmoplastic implant**

  Left anterior peritoneum: **Noninvasive desmoplastic implant**

  Plaque anterior of rectum: **Noninvasive desmoplastic implant**

  Plaque at right infundibulopelvic ligament: Necrotizing inflammation with **noninvasive desmoplastic implant**

- Diagnosis : **Serous borderline tumor of ovary stage IC1**

Management after surgery :

1. Follow up next 3 months
   - Menstruation : regular cycle, resume at 1 month after surgery
   - U/S abdomen and TRS : not seen recurrent tumor

- Counselling patient and her family : high risk for recurrent
- Appointment for follow up every 3 months
- F/U CA 125, U/S abdomen/ TRS every visit

Summary :

A 15-year-old girl presented with lower abdominal pain, abdominal distension, and early satiety. Imaging demonstrated bilateral ovarian masses, massive ascites, and peritoneal thickening, with elevated CA-125 but negative germ cell tumor markers. She underwent fertility-sparing surgical staging with tumor debulking. Final pathology revealed bilateral serous borderline ovarian tumors with multiple noninvasive desmoplastic implants and no stromal invasion. Despite extensive peritoneal involvement, complete gross resection was achieved while preserving fertility potential, and the patient is currently under close surveillance.

Learning points: Borderline ovarian tumors can occur in adolescents and may mimic invasive ovarian malignancy clinically and radiologically. Comprehensive surgical staging and accurate pathologic evaluation, particularly distinguishing noninvasive from invasive implants, are essential because prognosis is generally favorable. Fertility-sparing surgery is an important management strategy in young patients