A 55-year-old multiparous woman presented to the department of gynecology with complaints of pain and progressively increasing distension of the lower abdomen for 6 months and increasing breathlessness which manifested for 3 months. She gave a history of occasional hemoptysis 3–4 episodes in the past 3 months with the most recent episode 1 week prior. However, she denied any history of bleeding per vaginum. The patient attained menopause at the age of 44 years. Vitals were stable and physical examination revealed a firm to hard swelling in the lower abdomen of approximate size 20 cm × 15 cm (craniocaudal × mediolateral dimensions). Routine blood investigations were unremarkable. Her CA 125 levels were found to elevated at 970 IU/ml, while carcinoembryonic antigen and alpha-fetoprotein were normal.

The patient was referred to the department of radiology for imaging investigations. Ultrasonography revealed a giant solid-cystic mass lesion measuring 18 cm × 16 cm × 20 cm (mediolateral × anteroposterior × craniocaudal dimensions) in the abdominopelvic location predominantly in the midline and left adnexal region with multiple internal septations demonstrating vascularity and calcifications within [Figure 1a and b]. The hypoechoic solid component showed evidence of central vascularity on color Doppler [Figure 1c]. Left ovary could not be separately visualized. There was mild ascites and bilateral mild pleural effusions. The patient further underwent computed tomography of the chest which revealed evidence of thick-walled cystic lesions with smooth margins in the lingular segments of the left lung [Figure 2]. Based on the imaging findings, a diagnosis of mucinous cystadenocarcinoma of the left ovary with cystic metastases to the lungs was made and the patient was referred back to gynecology department for further management. The ultrasound appearances of the left adnexal mass lesion were described using the terms and definitions of the International Ovarian Tumor Analysis group and tested in accordance with the Assessment of Different NEoplasias in the adneXa (ADNEX) model and were compared with the final histological diagnosis. The adnexal mass had a maximal diameter of 200 mm, and the solid tissue had a maximal diameter of 42 mm. There were more than 10 cyst locules in the lesion and over 3 papillary projections in the cyst locules. No acoustic shadows were present posteriorly, and ascites were present. The CA 125 value was 970 U/mL. Based on the calculations of the ADNEX model, the overall malignancy risk value for the patient was 99.2%, and the relative risk index of borderline cancer was the highest (RR = 4.5). The patient underwent exploratory laparotomy with debulking of the left ovarian mass, total abdominal hysterectomy, and bilateral salpingo-oophorectomy. Histopathology examination of the resected specimen confirmed the diagnosis of ovarian mucinous cystadenocarcinoma. Postsurgery recovery period was uneventful and the patient was further referred to the department of oncology for further management. Six cycles of adjuvant chemotherapy have been administered 3 weeks.
Reddy: Giant mucinous cystadenocarcinoma of the ovary with cavitary metastases to lungs

apart with cisplatin plus paclitaxel. Thoracoscopic upper lobectomy of the left lung was performed 3 weeks after the last chemotherapy and histopathological analysis of frozen sections from the resected specimen confirmed mucinous cystadenocarcinoma. The excised specimen contained a mucinous mass that measured 5 cm × 4 cm in its greatest dimension. Subsequently, the patient has been discharged free of symptoms. The patient has been on regular follow-up for 6 months now and has been free of recurrence and metastases.

Mucinous cystadenocarcinoma of the ovary has a multiloculated appearance, thickened septae, and a solid or nodular component with internal vascularity which constitutes the greatest predictor of malignancy.[1] Mucinous cystadenocarcinoma has been rarely associated with malignant transformation of mature cystic teratoma of the ovary in which case it is termed as “collision tumor.”[2] Differential diagnosis for gross abdominal distension includes physiological uterine enlargement in pregnancy, pelvic endometriosis, fibromyomatosis, duplication cysts, mesenteric tumors, gross hydronephrosis, abdominal tuberculosis forming abdominal cocoon, mesenteric hydatid cyst, urachal cyst and ascites.[3] Malignant ovarian tumors such as leiomyosarcoma, undifferentiated sarcoma, carcinosarcoma, anaplastic carcinoma, and fibrosarcoma among others need to be ruled out.[4]

Giant mucinous cystadenocarcinoma of the ovary due to their unexpected presentation and risk of rapid size progression leading to compressive symptoms with added risk of metastatic spread might invariably require exploratory laparotomy and complete surgical resection to prevent perforation and spillage of tumor contents into the peritoneal cavity which can further complicate diagnosis and potentially result in inappropriate patient management. This report deserves a special mention as cystic pulmonary metastases of giant mucinous cystadenocarcinoma of the ovary are an extremely rare occurrence and further, the patient has been successfully treated and is currently symptom free. Delay in the diagnosis of ovarian malignancy has a direct relationship with poor prognostic outcomes on patient management.

**Ethical approval**

Ethical approval to report this case was obtained from the Institutional Ethics Committee, St. John’s Hospital (Ethics Committee Registration Number SJH/045/2021).

**Declaration of patient consent**

The authors certify that they have obtained all appropriate patient consent forms. In the form, the patient has given their consent for their images and other clinical information to be reported in the journal. The patient understands that their name and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

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**Conflicts of interest**

There are no conflicts of interest.

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**Figure 1:** (a) Transverse ultrasonography image demonstrating the mural component of the giant cystic lesion of the ovary. (b) Doppler ultrasonography image demonstrating multiple thickened septations with internal vascularity. (c) Transverse ultrasonography image demonstrating the dependent solid component of the lesion. Note is made of multiloculated appearance of the nondependent cystic component.

**Figure 2:** Axial chest computed tomography image demonstrating thick walled metastatic lesions with smooth margins and central cavitation involving lingular segments of the left upper lobe. Note the bilateral pleural effusions.
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