

CASE IMAGE OPEN ACCESS

Should Sister Mary Joseph Nodule (SMJN) be Revisited?

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ABSTRACT

Sister Mary Joseph's nodule represents a rare sign of advanced abdominal or pelvic malignancy, which indicates a poor prognosis for the patient. All clinicians should be aware of its significance and urgently refer the patient for further investigation and management.

We present the case of a 56-year-old woman presented with abdominal distension and left iliac fossa pain. Her body mass index was 22, she had no previous surgical history, and no history of alcohol or tobacco use. Previous medical history included 2 vaginal deliveries and well-controlled hypertension. Imaging revealed a 30 cm complex multiseptated mass with increased vascularity, ascites, and suspicious omental deposits. The Ca125 blood test was marginally elevated to 37 IU/mL with normal Ca 19-9 and CEA. On clinical examination, there was a large immobile mass extending up to the xiphisternum and a firm fibrous umbilical nodule. Following multidisciplinary

consensus, the patient underwent level 3 debulking surgery, including removal of the large left adnexal mass, en bloc resection of the uterus, cervix, right tube, and ovary with the recto-sigmoid colon, stoma formation, pelvic and paraaortic lymph node assessment, appendectomy, total omentectomy, bladder peritonectomy, and removal of the umbilical/Sister Mary Joseph nodule. (Figures 1 and 2) The histopathology examination confirmed an aggressive high-grade ovarian malignancy (carcinosarcoma/malignant mural nodule of mixed sarcoma and anaplastic carcinoma, associated with a mucinous borderline tumor), with involvement of the umbilical nodule, FIGO

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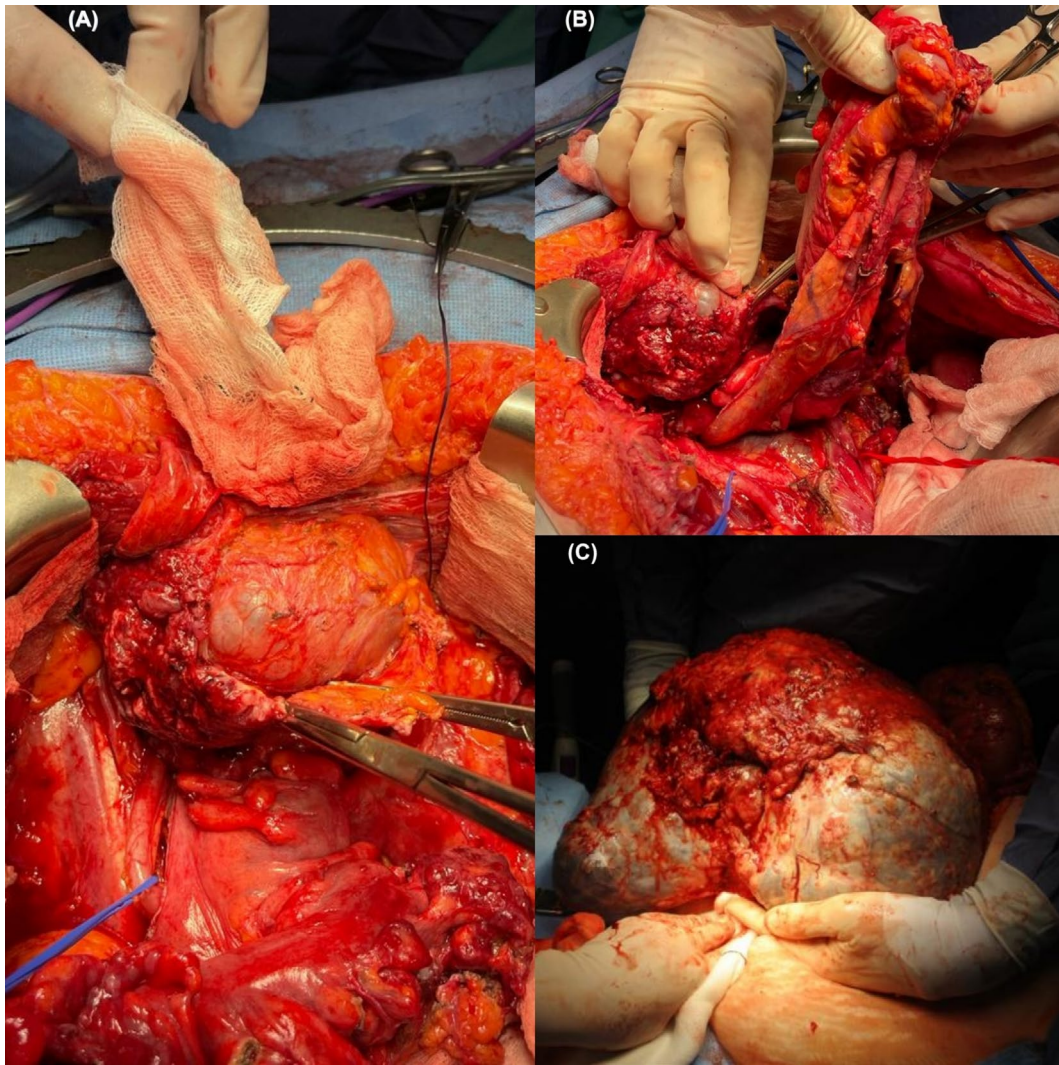


FIGURE 1 | (A) Urinary bladder filled with 300 mL saline and thickened bladder peritoneum during bladder peritonectomy. (B) Rectosigmoid colon and bladder prior to bladder peritonectomy. (C) Large anaplastic left ovarian mass.



FIGURE 2 | Sister Mary Joseph Nodule.

stage IV b. (Figures 3 and 4) The patient was discharged on Day 16 following review by the Medical Oncology team with a plan to receive adjuvant chemotherapy. She presented in the Emergency Department on Day 22 following her procedure with shortness of breath, abdominal discomfort, and general deterioration of her condition. Disease progression with lung metastases was confirmed on the CT scan of the chest, abdomen, and pelvis. The patient was deceased on Day 58 after her surgery.

Sister Mary Joseph nodule represents a rare clinical sign of advanced genitourinary and gastrointestinal malignancies. Its incidence rate has been reported to be 1%–3% in patients with abdominopelvic disease [1, 2]. The route of spread to the umbilicus remains unclear, with direct peritoneal spread representing the most prevailing theory. Differential diagnosis can be challenging, including primary umbilical tumor, cutaneous endometriosis, umbilical hernia, keloid, granuloma, pyoderma gangrenosum, or even omphalith [2, 3]. Detection of the umbilical nodule on clinical examination should prompt urgent referral for further investigation, as it signifies a poor prognosis.

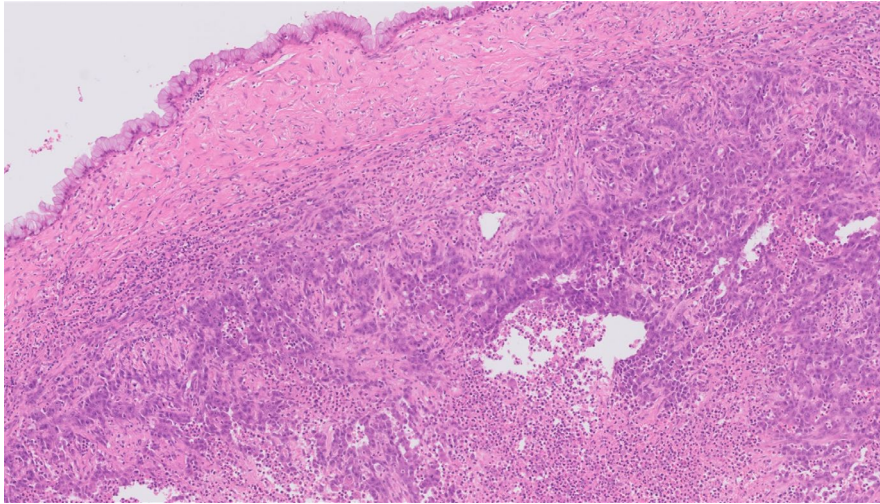


FIGURE 3 | Anaplastic carcinoma of the ovary; Histopathology image of a section from the ovarian mass which also includes part of the mucinous borderline tumor (top left), as anaplastic carcinoma arises as a mural nodule in association with mucinous borderline tumors.

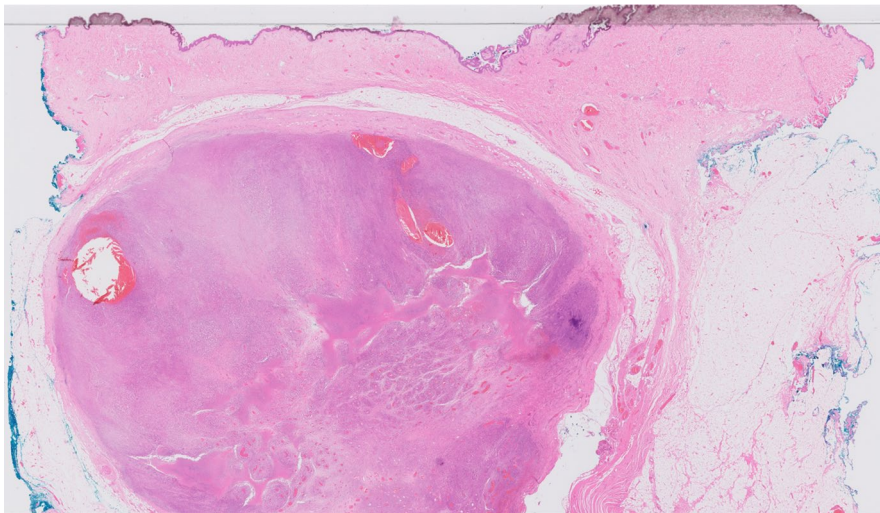


FIGURE 4 | Umbilical nodule; Histopathology image of a section from the umbilicus showing a nodule of anaplastic carcinoma within the subcutaneous tissue with the skin surface/epidermis at the top.

Author Contributions

Christina Pappa: data curation, investigation, project administration, resources, visualization, writing – original draft, writing – review and editing. **Stephen Damato:** investigation, resources, writing – review and editing. **Hooman Soleymani Majd:** conceptualization, methodology, project administration, resources, supervision, validation, visualization, writing – review and editing.

Consent

Written informed consent has been obtained for the publication of this clinical image.

Conflicts of Interest

The authors declare no conflicts of interest.

Data Availability Statement

The authors have nothing to report.

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