

Adnexal Masses and Cancer Risk

Adnexal masses occur in females of all ages, with a vast array of aetiologies. The most concerning possibility is malignancy, so assessment aims to determine this risk and offer the best treatment. The highest risk is in the postmenopausal woman where the risk of malignancy is 29-35%. The risk is also relatively high in the pre-pubescent woman. Other risk factors are: a complex or solid appearance on imaging; known genetic predisposition; mass in a woman with a non-gynaecologic cancer; palpable nodularity; and associated ascites.



Differential diagnosis

This list is long and includes ovarian cysts (e.g. physiologic, polycystic ovarian syndrome and pregnancy related), inflammatory masses (e.g. PID abscess), benign neoplasms (cystadenoma, endometrioma and dermoid), and a variety of malignant neoplasms (e.g. germ cell tumours, sex cord stromal tumours, epithelial ovarian carcinoma, metastases from endometrium, breast and gut, tubal or broad ligament cancer).

Diagnostic difficulties

The problem with malignancy is that symptoms are vague and non-specific. They can include abdominal bloating, bowel irregularity, nausea, vomiting, diarrhoea and constipation. It is their persistence that requires investigation.

There is no current accurate screening test for ovarian carcinoma (but some promising breakthroughs in proteomics and other fields).

Important points within the history include a family history of breast, ovarian or colorectal malignancy and other risk factors for ovarian malignancy, which include nulliparity, history of infertility and endometriosis.

The nature and timing of pain may aid in diagnosis. Pain in premenopausal women at time of ovulation suggests a functional cyst, after intercourse suggests ruptured cyst and associated with dysmenorrhoea or dyspareunia may indicate endometriosis. Hormone

producing tumours may give rise to symptoms such as hirsutism, breast symptoms, vaginal bleeding and precocious puberty.

Investigations

Bimanual examination helps evaluate a mass, remembering that the normal postmenopausal ovary is not palpable. Nodularity and uterosacral ligament tenderness may indicate endometriosis in premenopausal women. Irregular nodular or fixed masses are suspicious of malignancy (especially postmenopausal women), as is ascites.

Transvaginal ultrasound is the imaging of choice, especially in experienced hands. The simple cyst or thin-walled cyst is less concerning. Endometriomas may have low level internal echoes and have thicker walls. Dermoids may have varying densities due to the presence of bone, fat and other tissue. More

Key Cancer Risk Points

First line investigations are ultrasound +/- CA 125.

RMI is a guide, not absolute.

Be concerned if:

- Nodular mass
- Ascites
- RMI >200
- Family history of breast or ovarian carcinoma
- Woman has non-gynaecologic cancer

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concerning features on ultrasound include thick-walled cysts, septae (multiple), nodularity of the cyst wall, solid areas and excrescences or papillae. Vascularity or Doppler flow provides additional information. CT is very good at identifying disease outside of the pelvis. MRI imaging may be appropriate in selected cases.

Needle aspiration of cysts should be avoided – aspirates are usually not diagnostic, cyst recurrence is high and the procedure may potentially upstage a malignancy.

Serum CA125 is the most common tumour marker, with two different reference ranges currently in use (<21 and <35), for which sensitivity ranges over 50-90% and specificity 25-90%. CA125 is elevated by many benign conditions (benign cysts, fibroids, endometriosis, PID), it also fluctuates with menses, and it is normal in 50% of women with early stage ovarian carcinoma.

The Risk of Malignancy Index (RMI) can be used for risk assessment (see inset).

The bhCG should always be checked. Other markers to be considered are Ca15-3, Ca 19.9 and CEA. If non-epithelial tumours are suspected then AFP, LDH and Inhibin measurements can be considered although these are not part of the standard work-up. ■



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SUSPECTED
OVARIAN CANCER**

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To download the guide, visit
ovariancancerprogram.org.au

RMI Score = Menopausal status (pre = 1; post = 3) x ultrasound features (simple = 1; complex = 3) x absolute CA125 level

RMI >200 (when CA125 NR <35) or >120 (when CA125 NR <21) suggests malignancy with a sensitivity of 85% and specificity of 97%. The RMI score will detect 85% of ovarian cancers with only 3% of cases false positives.