Ovarian cancer

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Ovarian cancer is the sixth most common malignancy in women, behind breast, lung, bowel, uterine cancer and malig nant melanoma. In the UK, over 7000 women are diagnosed with ovarian cancer each year. Over 90% of cancers arise from the surface epithelium of the ovary (whic h has the same embryological origins as the peritoneum); the majority arise sporadically rather than secondary to inheritance. The peak incidence is in the age range 65–69 years. The overall 5-year survival rate is <50% because approximately two-thirds of women present with advanced disease. The common presenting symptoms are: /uni25CF abdominal distension and/or pain; /uni25CF change in appetite; /uni25CF weight gain and increased girth (ascites); /uni25CF urinary obstruction. Over half of all women, however, present initially to a speciality other than gynaecology , with often vague symp toms caused by metastatic disease, e.g. shortness of breath, gastrointestinal disturbance or a change in bow el habit. Con sequently , it is important to include ovarian cancer in the di ff er ential diagnosis of any woman presenting with a recent onset of persistent, non-specific, abdominal symptoms (including those whose abdomen and pelvis appear nor mal on clinical examination). A pelvic mass in conjunction with ascites usually indicates ovarian cancer but may also be indicative of Meigs’ syndr ome (a benign fibroma with ascites and the presence of a pleural e ff usion). Summary box 87.4 addresses the basic tests that can be conducted to diagnose ovarian malignancy . CA-125 is a glycoprotein expressed on tissue derived from coelomic and Müllerian epithelia; the normal cut-o ff value is 35 /uni00A0 U/mL. Elevated levels are found in 50% of patients with stage I disease and >90% of those with advanced disease. It primarily detects epithelial o varian cancers. However, CA-125 is a non-specific marker with raised levels also seen in other cancers, e.g. pancreatic, breast, lung and colon. Levels may Basic tests on suspicion of ovarian malignancy /uni25CF /uni25CF /uni25CF β α α β also be increased during menstruation; in benign conditions such as endometriosis, PID and liver disease; if ascites or other e ff usions are present; and after a recent laparotomy . Combining menopausal status, ultrasound features and CA-125 measurements using the risk of malignancy index (RMI) algorithm (Summary box 87.5) can help guide management and identify those who require an onward referral to a gynaecological oncologist in a cancer centre. - Summary box 87.5 Risk of malignancy index (RMI) /uni25CF There is currently no national screening programme for ovarian cancer in the UK (including for women at high risk of the disease) because no test has been identified to reliably pick up ovarian cancer at an early stage. The UK Collabora - tive Trial of Ovarian Cancer Screening aimed to establish the e ff ect of early detection of the disease by screening on ovarian - cancer mortality . The pr eliminary study recruited over 200 /uni00A0 000 women aged between 50 and 74 years and randomised them - to either a control arm or one of two screening strategies: pri - - mary screening using measurement of serum CA-125 levels followed by TVUS as a second-line test; or TVUS alone. The two scr eening procedures were found to be similar in terms of sensitivity for all primary ovarian and fallopian tube cancers, but specificity was higher with combined screening. Some genetic mutations are known to predispose women to ovarian cancer, e.g. BRCA1 and BRCA2 and the mismatch repair genes associated with Lynch syndrome families. BRCA1 mutations confer

a 39% lifetime risk of ovarian cancer up to the age of 70 years; this is 11–17% for BRCA2 mutations up to the age of 70 years. The mismatch repair genes confer an increased lifetime risk of ovarian cancer of 9–12% in addi - tion to the increased risk of endometrial cancer. Referral to a specialist cancer genetics service is advisable. Women at high risk of ovarian cancer may be o ff ered risk-reducing surgery in the form of prophylactic bilateral salpingo-oophorectomy ,

Ultrasound scan is considered the /f_i rst-line investigation (Table 87.12) A staging CT or MRI is carried out prior to surgery to determine the extent of disease Tumour markers, including HCG, lactate dehydrogenase, alpha-fetoprotein (FP), CA-125, CA-19-9 and carcinoembryonic antigen (CEA), should be measured. Lactate dehydrogenase, FP , inhibin and HCG are particularly recommended in women <40 years old with a suspected complex ovarian mass, to exclude germ cell tumours RMI = U × M × CA-125 U, ultrasound features scoring 1 for each malignant feature (multilocular, solid components, metastases, ascites, bilateral lesions); M, menopausal status with 1 for premenopausal and 3 for postmenopausal; CA-125, CA-125 level in U/mL

cer with some evidence suggesting that an oophorectomy can reduce the risk of breast cancer in these women. Surgical staging of ovarian cancer (Table 87.15) is per formed at laparotomy via a midline incision if disease is sus pected preoperatively by: /uni25CF careful evaluation of all peritoneal surfaces; /uni25CF four washings of the peritoneal cavity: diaphragm, right and left abdomen, pelvis; /uni25CF infracolic omentectomy; /uni25CF selected lymphadenectomy of the pelvic and para-aortic lymph nodes; /uni25CF biopsy and/or resection of suspicious lesions, masses and adhesions; /uni25CF random blind biopsies of normal peritoneal surfaces, including that from the undersurface of the right hemi diaphragm, bladder reflection, cul-de-sac, right and left paracolic recesses and both pelvic side walls; /uni25CF total abdominal hysterectomy and bilateral salpingo oophorectomy; /uni25CF appendicectomy for mucinous tumours; if a routine appendicectomy results in an intraoperative suspicion of a mucinous tumour, the surgeon should take washings and a biopsy from suspicious area(s). The general principle is cytoreductive surgery followed by combination chemotherapy; only a minority of patients with ovarian cancer require a bowel resection during the primary procedure or surgery for recurrent disease. The only excep tion to this rule is a young woman with stage I disease or a borderline tumour who requests a unilateral oophorectomy to conserve her fertility . stimulation with oocyte or embryo cryopreservation has been undertaken in patients with low-grade tumours (grade IA/B) who wish to preserve their fertility; however, the e ff ect of this on - the underlying disease process is not known, with the additional - risk of seeding the cancer during oocyte retrieval. This must, therefore, be carried out with caution and under the guidance of oncological specialists. Ovarian tissue cryopreservation at the time of cytoreductive surgery has also been undertaken, holding the promise for in vitro maturation of oocytes in the future. Autologous transplantation would be contraindicated as it has the risk of cancer recurrence.

TABLE 87.15 Condensed staging of ovarian cancer. Stage I Growth limited to the ovaries Growth involving one or both ovaries with pelvic Stage II extension (uterus, bladder, sigmoid colon, rectum) or primary peritoneal cancer but not including the lymph nodes Tumour involving one or both ovaries with Stage III histologically con /f_i rmed peritoneal implants outside of the pelvis including spread to retroperitoneal lymph nodes (pelvic and/or para-aortic) only Stage IV Growth involving one or both ovaries with distant metastases

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