

given first to reduce tumour size and followed by surgery, or after surgery to treat any residual (remaining) disease. Other than the traditional procedure of oral and intravenous chemotherapy, in some cases the drug may be given intraperitoneally, directly into the abdomen and pelvis through a thin tube.

The typical course of chemotherapy for epithelial ovarian cancer involves six cycles, allowing regular doses, followed by a rest period to allow recovery of normal tissue from the trauma of chemotherapy. A combination of drugs, such as a platinum compound and a taxane are administered in a three to four week cycle to prevent chemo-resistance. With recent advances in supportive care, the side effects are now bearable.

Although epithelial ovarian cancer tends to respond to chemotherapy, the cells may eventually become resistant. Tumour recurrence is sometimes treated with additional cycles or by second line agents including topotecan, anthracyclines, gemcitabine, cyclophosphamide, hexa-methylmelamine, ifosfamide, etoposide and fluorouracil.

Radiation: Radiation therapy uses high energy x-rays to kill cancer cells. These x-rays may be given externally in a procedure that is much like having diagnostic x-ray. It also may be given as an implant of radioactive materials placed near the tumour or as a radioactive fluid placed into the abdominal cavity. Radiotherapy plays a comparatively lesser role in epithelial ovarian cancers but may be effective in germ cell tumours.

FOLLOW-UP CARE

It is important for women with ovarian cancer to take care of themselves. You can help in your own recovery by making healthy choices. Good nutrition always helps. Choose most of your food from plant sources; eat less fat (especially red meats). More fruits, vegetables, whole grains, and high fiber foods are best. During the treatment you may not feel like eating due to the side effects, but these will be reduced if you eat well.

Exercise once you are well and remain active.

After the completion of the treatment you will be called for regular check-ups, which are very important, even if there is no complaint. This is because at times some undetected cancer cells remain in the body. Check-ups detect them and can help treat recurrences.

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For detailed information, consult CPAA brochures on Chemotherapy and Radiation (also available in different local languages).

Write to information@cancer.org.in for a copy.



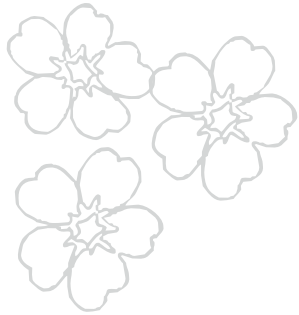
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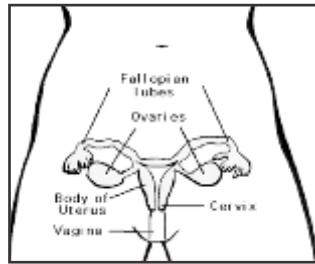
**What you need
to know about
OVARIAN CANCER**



Ovarian cancer begins in the ovaries. The ovaries are the female gonad, a pair of reproductive glands located in the pelvis, one on each side of the uterus in women. The ovaries produce eggs (ova) and the female hormones (estrogen and progesterone).

Epithelial ovarian carcinoma arises from the cells that cover the outer surface of the ovary and accounts

for 85-90% of ovarian cancers. Germ cell tumors develop from the cells that form the ova or eggs. Stromal tumors start from connective tissue cells that hold the ovary together and produce the female hormones, estrogen and progesterone. Benign (non-cancerous) ovarian tumors and cysts are also common in the females in reproductive age group. Diagnosis and subsequent treatment typically consists of close observation (physical examination and imaging tests), followed by medication or surgical removal.



SIGNS AND SYMPTOMS

Early ovarian cancers usually do not cause any symptoms. By the time a woman has symptoms, ovarian cancer may have already spread beyond her ovaries. Nonetheless, prompt attention to symptoms can improve the odds of successful treatment. If you have any of the following symptoms, report them to your health care provider immediately.

- Prolonged swelling of the abdomen due to a mass or ascites (accumulation of fluid)
- Pelvic pressure or abdominal pain
- Digestive problems including gas
- Bloating, feeling full quickly, early satiety
- Loss of appetite, long term stomach pain, or indigestion
- Urinary symptoms (urgency or frequency)
- Unusual vaginal bleeding
- Postmenopausal bleeding, staining or persistent vaginal discharge
- Pain in the legs

METHODS OF DIAGNOSIS

Physical examination: If a pelvic examination or other tests suggest ovarian cancer, a gynecologic oncologist, who is specially trained in treating cancers of the female reproductive system, must be consulted.

Blood tests: Normally a CA-125 tumour marker test is done. A high CA-125 level could indicate ovarian cancer. It is important to keep in mind that a high level of CA-125 can also be due to many other associated, non cancerous conditions in our body.

Computed tomography: The CT scan is an imaging method in which an x-ray beam rotates around the body, taking images at various angles. The images are then put together by a computer to show a detailed three dimensional view of the inside of the body. Details are often highlighted by injection of a special dye, called contrast medium, before the x-rays are taken.

Magnetic Resonance Imaging: The MRI scan uses magnetic fields and a computer to produce detailed pictures of the inside of the body and body parts. It does not use x-rays.

Transvaginal ultrasonography or Ultrasound: USG uses sound waves to create an image on a video screen. Sound waves are released from a small probe placed in the woman's vagina or on the surface of her abdomen. Because ovarian tumors and normal ovarian tissue reflect sound waves differently, this test is useful in determining whether a mass is solid or a fluid-filled cyst. In low resource settings, USG alone can be used to detect ovarian tumours.

Color-flow Doppler: Assesses blood flow to the ovaries, which usually increases in ovarian cancer.

Positron Emission Tomography: PET scans, like CT scans use high power x-rays. With the help of special dyes that target metabolically hyperactive cells in the body, it can be used to detect cancer. The test is expensive and not cost effective.

Biopsy: The only way to determine for certain if a growth in the pelvic region is cancer, involves a biopsy (removing a sample of tissue) for examination under microscope. The treating doctor may suggest surgery to remove tissue and/or fluid from the pelvis and abdomen, or a sample of tissue may be collected with the help of thin biopsy needle, guided by CT scan or ultrasound. This test provides a definitive diagnosis, when chemotherapy is the treatment modality and primary surgery is not possible.

Tissue sampling: In patients with ascites (collection of fluid inside the abdomen), samples of fluid can also be used to diagnose the cancer. Depending on the extent of disease, the biopsy may be a laparotomy (surgery through an abdominal incision) or laparoscopy (surgery done through a lighted tube inserted into the pelvis through a very small incision). The goal is to obtain tissue samples for diagnosis and staging, or to remove all deposits of cancer larger than 1 cm. Another diagnostic method is to obtain small samples of the cancer using a thin biopsy needle guided by CT scan or USG.

OVARIAN CANCER STAGING

To plan the best treatment, the doctor needs to know the stage of the tumor or the extent to which the tumor has invaded nearby tissues, whether the cancer has spread, and if so, to what parts of the body.

Stage I: (A, B, C) : Cancer is still contained within the ovary (or ovaries). The cells may be found in the surface of the ovaries or in fluid collected from the abdomen.

Stage II: (A, B, C) : Cancer cells have spread from one or both ovaries to other tissues in the pelvis such as the uterus or the fallopian tubes or both, bladder, the sigmoid colon or the rectum. Cancer cells may be found in fluid collected from the abdomen.

Stage III: (A, B, C) : Cancer cells have spread beyond the pelvis to the lining of the abdomen or to the regional lymph nodes; deposits of cancer larger than 2 cm across, are seen in the upper abdomen.

Stage IV: Cancer cells have spread to tissues outside the abdomen and pelvis and distant metastasis (spread of the cancer to the inside of liver, the lungs, or to other organs outside the peritoneal cavity) has occurred. Finding ovarian cancer cells in pleural fluid (from the cavity which surrounds the lungs) is also evidence of stage 4 cancer.

Recurrent ovarian cancer: This means that the disease has recurred (come back) after completion of treatment.

TREATMENT OPTIONS

The main treatments for ovarian cancer are surgery, chemotherapy and very rarely, radiation therapy. In some cases two or even all three of these treatments will be recommended.

Surgery: Surgery is the preferred treatment and is frequently necessary to obtain a tissue specimen for diagnosis and staging. Staging laparotomy is done to learn the extent of involvement of abdominal organs. The type of surgery depends upon how widespread the cancer is when diagnosed, as well as the stage and grade of cancer. The surgeon may remove one or both ovaries (unilateral or bilateral oophorectomy), the fallopian tubes (salpingectomy) and uterus (hysterectomy). For early stage ovarian tumours, conservative surgery may be planned, including unilateral or partial excision of involved ovary, especially for young women who wish to preserve fertility and plan to have children at a later stage. Standard surgical staging for ovarian cancer includes removal of bilateral ovaries, fallopian tubes, uterus, omentum, pelvic and paraaortic lymph nodes and if needed spleen, appendix and part of the intestine if inseparable from the tumour.

Surgery alone may be sufficient only in very early stage low grade tumours. For patients with advanced disease a combination of surgical reduction with chemotherapy regimen may be preferred. Borderline tumours, even if they have spread outside the ovary, are managed with surgery alone as chemotherapy is not very effective.

Chemotherapy: Chemotherapy is especially useful for cancer that has spread beyond the ovaries or for high grade tumours, although with highly variable protocols. Chemotherapy may be