

ENDOMETRIAL CANCER

Endometrial cancer is a type of cancer that begins in the uterus. The uterus is the hollow, pear-shaped pelvic organ in women where fetal development occurs.

Endometrial cancer begins in the layer of cells that form the lining (endometrium) of the uterus. Endometrial cancer is sometimes called uterine cancer. Other types of cancer can form in the uterus, including uterine sarcoma, but they are much less common than endometrial cancer.

According to GLOBOCAN 2012 data, uterine cancers are the 5th most common cancers in the females, with an estimated number of new cases per year being 3,20,000 (4.8% of all cancers in women). In India alone, there are 12,000 new cases being diagnosed every year with an incidence rate of 2.3%.

This cancer predominantly affects post-menopausal women with an average age at diagnosis being 60 years. Only 25% of the endometrial cancers are diagnosed in pre-menopausal women and 5% in women less than 40 years old. However, the number of younger women with endometrial cancer is increasing day by day.

Risk factors for endometrial cancer

A risk factor is anything that changes your chance of developing a disease. The factors which increase the risk of developing endometrial cancer include –

- Age – Risk increases with increasing age
- Hormone factors – A shift in the balance of two hormones i.e., estrogen and progesterone, towards more estrogen increases the risk of developing endometrial cancer
- Estrogen therapy when used alone, to reduce the menopausal symptoms like hot flushes etc
- More number of menstrual cycles during a woman's lifetime - Early menarche (before 12 years of age) and late menopause
- Infertility or Never having children
- Obesity – In comparison with women who have a healthy weight, endometrial cancer is twice as common in overweight women, and more than thrice as common in obese women

- High fat diet
- Diabetes – 4 times more common in diabetic women
- Tamoxifen – The risk is less than 1% per year. Women taking tamoxifen must balance this risk against its value in treating and preventing breast cancer
- Ovarian tumors like granulosa-theca cell tumors, which produce estrogen
- Personal history of PCOS, endometrial hyperplasia, breast cancer and ovarian cancer
- Family history of endometrial cancer or colon cancer (Hereditary non-polyposis colon cancer)
- Prior RT for pelvic cancer

Although the above factors increase the risk of endometrial cancer, they do not always cause the disease. Many women with one or more risk factors never develop endometrial cancer while some women with endometrial cancer do not have any known risk factors.

Talk with your doctor if you have any concerns about your risk of developing endometrial cancer

The factors which are protective for endometrial cancer include-

- Combined Oral contraceptive pill and Intra-uterine device– which includes Progesterone
- Smoking
- Exercise
- Pregnancies

Symptoms of endometrial cancer

Consult your doctor if you have any or all of the following symptoms –

- Post-menopausal bleeding in a post-menopausal women
- Unusual or abnormal vaginal bleeding

- Difficult or painful urination
- Pain during intercourse
- Pain or mass in the pelvic area

Diagnosis of endometrial carcinoma

Diagnosis includes history, physical examination and any of the tests described below.

- History
- Physical examination
- Internal pelvic examination - Done to feel for any lumps or changes in the shape of the uterus
- Pap test (also called Pap smear) -Involves microscopic examination of cells collected from the cervix to detect malignancy or infection or inflammation. However, because cancer of the endometrium begins inside the uterus, problems may not be detected using a Pap test. Therefore, an endometrial sampling for histopathological examination will be advised in most cases
- Endometrial sampling – Gold standard for diagnosing endometrial cancer. It can be done by endometrial biopsy, dilatation and curettage with or without hysteroscopy.

Endometrial biopsy – It is the most commonly performed test for endometrial cancer and is very accurate in postmenopausal women. It can be done as an out-patient procedure. The discomfort is similar to menstrual cramps and can be reduced by taking a NSAIDS such as ibuprofen before the procedure.

Dilation and curettage (D&C) - If the endometrial biopsy sample does not provide enough tissue, or if the biopsy suggests cancer but the results are uncertain, a D&C must be done. This may be done with or without a hysteroscopy.

Hysteroscopy – This technique involves insertion of a tiny telescope (about 1/6 inch in diameter) into the uterus through the cervix. This enables the doctor to visualize and biopsy anything abnormal, such as a cancer or a

polyp. This is usually done with the patient awake, using a local anaesthesia (numbing medicine).

The sample collected will be examined by an expert pathologist. Endometrial cancers are classified pathologically into endometrioid adenocarcinoma, papillary serous adenocarcinoma, clear cell carcinoma, mucinous carcinoma, squamous cell carcinoma, transitional cell carcinoma, mixed cell type carcinoma and undifferentiated carcinoma etc.

Endometrioid carcinoma is the most common endometrial cancer seen in 75% of the cases. Serous and clear cell histologies though less common are very aggressive tumors.

Apart from the type of cancer, the pathologist also provide us the grade of the cancer. Grading is given as I, II or III, with grade III having an aggressive behaviour than grade I tumors.

- Imaging tests for endometrial cancer – Includes
 - Transvaginal ultrasonography
 - Chest X ray
 - CT Scan
 - MRI scan
 - PET-CT scan etc
- Other tests include – Routine haematological tests, CA-125, proctoscopy, cystoscopy etc

Staging of endometrial cancer

This is the process of analysing all the information obtained and assessing the extent of spread of the tumor, with higher stage indicating more distant spread.

Staging is the most important factor in choosing a treatment plan. Endometrial cancer is staged based on examination of tissue removed during surgery i.e., Surgical staging. Though various imaging modalities help us to identify the extent of spread, it is surgery which confirms the extent of spread in endometrial cancer.

The staging system looks at how far the cancer has spread i.e.,

- Local spread to cervix and other parts of uterus and pelvis
- Regional spread to nearby lymphnodes or
- Distant spread i.e., metastases to distant inguinal lymphnodes, omentum or other organs like lung, liver, bone and brain

Latest FIGO staging, which is a surgical staging is the system most commonly utilized for staging this cancer.

- Stage I – Tumor is confined to the body of the uterus
- Stage II – Tumor extends to the cervix but not beyond the uterus
- Stage III – Tumor extends to the serosa, adnexa, vagina, parametria or to pelvic and para-aortic lymph nodes
- Stage IV – Tumor extends to bladder, bowel or to distant areas beyond the pelvis

According to the data published in AJCC Staging manual, stage wise 5 year survival rates are – Approximately 75 to 90% for stage I ; 70% for stage II; 45 to 60% for stage III; and 15% for Stage IV.

Treatment for endometrial cancer

If you are diagnosed with endometrial cancer, our doctors will discuss with you the best possible treatment options. The treatment options considered depend on several factors like your overall health and medical history, stage and type of cancer, your opinion or preference etc.

Surgery

Surgery is the main treatment for uterine cancer. This can be minimally invasive laparoscopic or robotic surgery or an open procedure. Usually it includes –

- Total or radical Hysterectomy (surgical removal of uterus)
- Bilateral Salpingo-oophorectomy (removal of both ovaries and fallopian tubes)
- Biopsy of the omentum or any other suspicious lesions over the peritoneal, diaphragmatic or serosal surfaces
- Pelvic lymphnodal dissection and/or para-aortic sampling
- Pelvic washings

In advanced stages, just tumordebulking or cytoreductive surgery may be justified.

Radiation therapy

Radiation therapy is most often given as an adjuvant therapy following surgery or as palliative therapy. Radiation to the primary area can be given by external beam RT i.e., Teletherapy or by Vaginal brachytherapy.

External beam radiotherapy involves radiation beams aimed at the affected area from outside the body and covers whole of the pelvis. Vaginal brachytherapy involves placing the radiation source directly in the affected area i.e., vagina. This can be given alone in early stage I disease or as a boost following EBRT and covers vaginal vault or central pelvis.

Radiotherapy in endometrial cancer significantly reduces the rate of relapse in the pelvis.

New radiation therapy techniques and remarkable skills allow our doctors to target the area more precisely, delivering maximum amount of radiation to the target with minimum damage to the healthy cells.

Our hospital provides the most advanced radiation techniques like Intensity modulated radiotherapy (IMRT), Image guided radiotherapy (IGRT), Volumetric modulated arc therapy (VMAT) etc. These advanced techniques allow the radiation oncologist to tailor the treatment to specific shape of tumor and thereby reduce the bowel and bladder toxicities.

Chemotherapy

Chemotherapy in endometrial cancer can be given as an adjuvant therapy or as palliative therapy. Adjuvant chemotherapy has been found to increase survival in stage III and IV.

Drugs used in the treatment of endometrial cancer include – paclitaxel, carboplatin, doxorubicin, cisplatin etc.

Our hospital offers the most advanced and uptodate chemotherapy options for endometrial cancer.

Hormonal therapy

The cancer cells are tested for the presence or absence of certain hormonal receptors like estrogen and progesterone receptors. In tumors which show the presence of receptors, hormonal therapy like progestins, tamoxifen, aromatase inhibitors etc may be beneficial.

Monitoring/ Follow up

After initial therapy, patients are followed up regularly once in every three months for the first 2 years or more frequently if required and every 6 months for the next three years.

Monitoring may be done by pelvic examinations, regular serum tumor marker level estimation (CA-125), periodic MRI or CT scans when indicated

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