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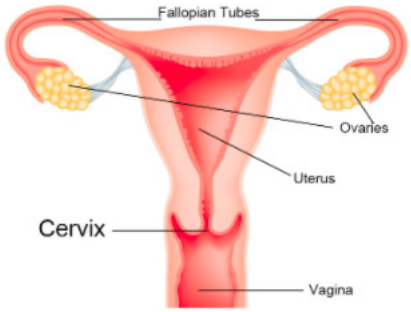
Cervical cancer

The cervix is the lower, narrowing of the uterus that connects the uterus to the vagina. Cervical cancer is a type of cancer that occurs in the cells of the cervix.



In most cases, cervical cancer is caused by a sexually transmitted infection called human papillomavirus (HPV).[1] **Additionally, there are other risk factors for developing cervical cancer:**

- ▷ High number of sexual partners
- ▷ Unprotected sexual activity
- ▷ Chronic illnesses/ having a weakened immune system
- ▷ Smoking or tobacco use
- ▷ Poor health maintenance including lack of routine pap smears/ pelvic exams [2]

Cervical cancer is usually preventable with routine pap smears, HPV screening and the HPV Vaccine. [3] All women should begin having pap smears at age 21. [5]

Early-stage cervical cancer generally produces no signs or symptoms. [4]
Signs and symptoms of more-advanced cervical cancer include:

- ▷ Vaginal bleeding after intercourse, between periods or after menopause
- ▷ Watery, bloody vaginal discharge that may be heavy and have a foul odor
- ▷ Pelvic pain or pain during intercourse [4]

Diagnosis:

1. A pap smear is a test to sample cells on the surface of the cervix and screen for cervical dysplasia. HPV testing can be done at the same time. If your pap smear shows precancerous cells, the physician may perform a colposcopy. [5]
2. A colposcopy is a magnified exam of the cervix to detect abnormal tissue to biopsy. Sometimes an endocervical curettage is done as well and is a sampling of cells from the endocervical canal. The tissue samples are then sent to pathology for diagnosis. [6]

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3. Cone biopsy or LEEP (loop electrosurgical excision procedure) - both are procedures under anesthesia to remove a larger amount of abnormal cervical tissue. The tissue is then sent to pathology for diagnosis. These procedures may be done to remove precancerous cells, diagnose cervical cancer or to treat very early stages of cervical cancer. [6]
4. Imaging tests take pictures inside the body to see if there is a tumor. They can also show if and how far the cancer has spread beyond the cervix. This may include an ultrasound, CT scan, PET scan or MRI. [6]

Treatment options for cervical cancer will be individualized and based on physical exam, pathology results and imaging. Treatment may include:

- In very early stages of cervical cancer a cone biopsy or LEEP (loop electrosurgical excision procedure) are both are procedures under anesthesia to remove a larger amount of abnormal cervical tissue. With this procedure, there is a chance a second procedure may be needed if findings are more extensive. [6]
- In advanced cases, surgery to remove the cervix and/or uterus, chemotherapy, or radiation are all treatment options that alone or in combination may be necessary.

Ways you can reduce your risk of developing cervical cancer:

- Obtain routine health screenings including well women exams and pap smears.
- Get the HPV vaccine – available for all boys and girls aged 9 and 26.
- Practice safe sexual practices by limiting partners and using condoms.
- Don't smoke or stop smoking [7]

References:

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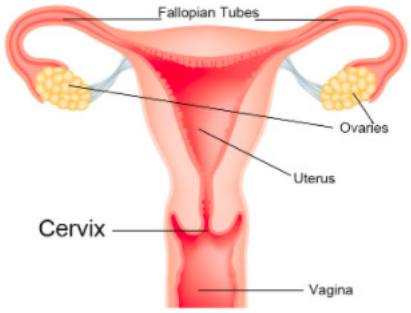
Cervical dysplasia

The cervix is the lower, narrowing of the uterus that connects the uterus to the vagina.



Cervical dysplasia describes abnormal cells found on the surface of the cervix.
▷ Dysplasia is not cancer but is a precancerous change that can develop into cancer.
HPV (Human papillomavirus) is the most common sexually transmitted infection and the most common cause of cervical dysplasia and cervical cancer. [1]

Risk Factors:
▷ High number of sexual partners
▷ Unprotected sexual activity
▷ Chronic illnesses/ having a weakened immune system
▷ Smoking or tobacco use
▷ Poor health maintenance including lack of routine pap smears/ pelvic exams [2]

Many patients with cervical dysplasia have no symptoms at all. [3]
This is why close monitoring with pap smears is very important to identify cervical dysplasia before it develops into cervical cancer. All women should begin having pap smears at age 21. [4]

A pap smear is a test to sample cells on the surface of the cervix and screen for cervical dysplasia. HPV testing can be done at the same time. [4]
Pap smears may result as: Negative(normal), Atypical, Low grade or High grade, in addition to being HPV positive or HPV negative. Certain strains of HPV are more likely to develop into cervical cancer. [5]

Although a pap smear can identify cervical dysplasia, further tests are often required. If you have had an abnormal pap, a treatment / monitoring plan will be individualized and determined by your physician. The goal is to prevent the progression into cervical cancer.

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Next steps:

▷ Repeated and more frequent pap smears.

▷ Colposcopy: a magnified exam of the cervix to detect abnormal tissue to biopsy. Sometimes an endocervical curettage is done as well and is a sampling of cells from the endocervical canal. The tissue samples are then sent to pathology for diagnosis. [6]

The pathology may result as: CIN 1, CIN 2, CIN 3 or cervical cancer.
CIN stands for cervical intraepithelial neoplasia and is a precancerous change, with CIN 2 and CIN 3 having a higher chance of developing into cancer. [4]

Treatment options for more advanced cervical dysplasia will be aimed at removing the abnormal tissue, to prevent development into cancer.

These include:

▷ Cone biopsy or LEEP (loop electrosurgical excision procedure) – a procedure under anesthesia to remove a larger amount of abnormal cervical tissue. [6]

▷ C02 laser – uses high intensity energy from a light beam to destroy abnormal areas of the cervix. In more advanced cases, further surgical intervention may be necessary. [7]

Ways you can reduce your risk of developing cervical dysplasia:

▷ Obtain routine health screenings including well women exams and pap smears.

▷ Get the HPV vaccine – available for all boys and girls aged 9 and 26.

▷ Don't smoke.

▷ Practice safe sexual practices by limiting partners and using condoms. [8]

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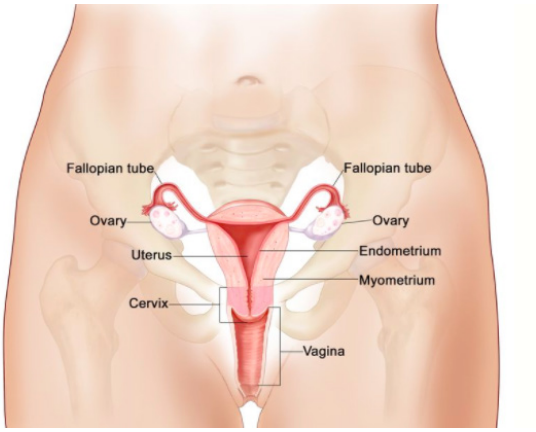
Endometrial cancer

When cancer forms in the lining of the uterus, it is referred to as endometrial cancer. [1]



Risk factors:

- Obesity
- Age >50
- Periods started at a very early age
- Periods stopped at an older age
- Taking estrogen alone (without progesterone) while you still have a uterus, is an increased risk
    - Combination (estrogen and progesterone) ex: for treatment of menopausal symptoms does not increase your risk of endometrial cancer
- Never have given birth
- Family history of endometrial, breast, ovarian or colon cancer
- Taking tamoxifen for breast cancer [1]

Signs and symptoms:

- Vaginal bleeding, spotting or abnormal discharge in a post-menopausal woman
- Abnormal vaginal bleeding or discharge in a pre-menopausal woman
- Change in bowel or bladder habits
- Abdominal or pelvic pain
- Abdominal bloating
- Feeling full sooner when eating [2]

Many with endometrial cancer will not have any of these symptoms. Some may only report light spotting. This is an important sign and needs to be discussed with your physician.

If endometrial cancer is suspected, the tests and procedures used to diagnose endometrial cancer include the following:

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Diagnosis:

1. Imaging to visualize the uterus and other pelvic structures to assess for abnormalities. They can also show if and how far the cancer has spread beyond the uterus. This may include an ultrasound, CT scan, PET scan or MRI
2. Endometrial biopsy – Endometrial cancer begins inside the uterus and does not show up on a pap smear. For this reason, an endometrial biopsy is done by passing a thin, flexible tube through the cervix into the uterus. The biopsy is then sent to pathology. Sometimes this biopsy is not possible or results in insufficient sampling, in which further testing is needed.
3. Hysteroscopy - A procedure to look inside the uterus for abnormalities.
4. D&C – (dilation and curettage) usually done in addition to a hysteroscopy, is a procedure done under anesthesia to remove a larger amount of tissue from the inner lining of the uterus.[3]

Treatment options for endometrial cancer will be individualized and based on physical exam, pathology results and imaging. Treatment may include:

- Surgery, being a hysterectomy to remove the uterus and cervix. Surgical options and any further procedures necessary will be discussed with your physician.
- Chemotherapy or radiation, either separately or in combination.

Ways you can reduce your risk of developing endometrial cancer

- Obtain routine health screenings including well women exams.
- Discuss any suggestive signs and symptoms of endometrial cancer with your physician
- Discuss hormone therapy with your physician as age, family history and personal history will determine the safest options for you
- Maintain a healthy diet
- Be aware if cancer runs in your family as certain types of cancer can be genetic. If you have a family history of cancer, discuss with your physician if genetic testing would be beneficial for you.[4]

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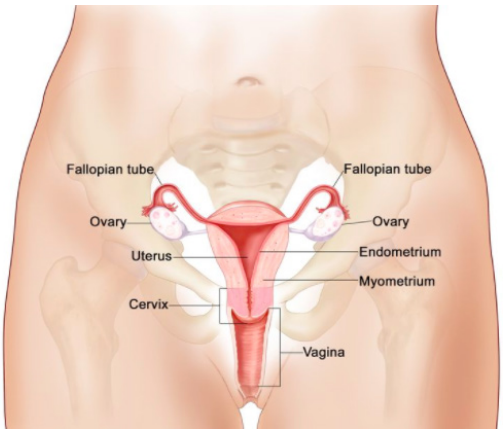
Ovarian cancer

Ovarian cancer is a malignant (cancerous) growth that begins in the ovaries. The ovaries are a pair of organs that produce hormones and eggs for sexual reproduction. [1]



Risk factors:

- Age >50 [2]
- Periods started at a very early age [2]
- Periods stopped at an older age [2]
- Family history of ovarian, breast or colon cancer [3]
- Pregnancy >35 years old, never becoming pregnant [3]
- Obesity [3]

Signs and symptoms:

- Feeling bloated
- Indigestion/ heartburn
- Pain or pressure in the abdomen or pelvis
- Feeling full faster (early satiety) or trouble eating
- Feeling the need to urinate often or urgently
- Abnormal pelvic exam findings [1]

Patients with ovarian cancer may not have any symptoms until it has grown very large or has spread.

Many conditions could be the cause of these signs and symptoms. If ovarian cancer is suspected, there are further tests and procedures used to confirm the diagnosis. [1]

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Diagnosis:

1. Blood tests to check tumor markers for signs of ovarian cancer. One most commonly used is called a CA125.
2. Imaging to visualize the ovaries and other pelvic structures to assess for abnormalities. They can also show if and how far the cancer has spread. This may include an ultrasound, CT scan, PET scan or MRI.
3. Tissue pathology is the most confirmatory test and is usually sent for testing during surgery to remove the cancer. Occasionally, a biopsy may be done before treatment if the cancer has spread too much to be removed by initial surgery. [1]

Treatment options for ovarian cancer will be individualized and based on physical exam, pathology results and imaging. Treatment may include:

- Surgery to remove the cancerous ovary/ovaries. Surgical options and the procedures necessary will be discussed with your physician.
- Chemotherapy or radiation, either separately or in combination. [4]

Ways you can reduce your risk of developing ovarian cancer:

- Obtain routine health screenings including well women exams.
- Discuss any suggestive signs and symptoms of ovarian cancer with your physician
- Birth control pills lower the risk of ovarian cancer
- Maintain a healthy diet
- Full term pregnancies reduce the risk of ovarian cancer along with breastfeeding.
- Be aware if cancer runs in your family as certain types of cancer can be genetic. If you have a family history of cancer, discuss with your physician if genetic testing would be beneficial for you. [5]

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