

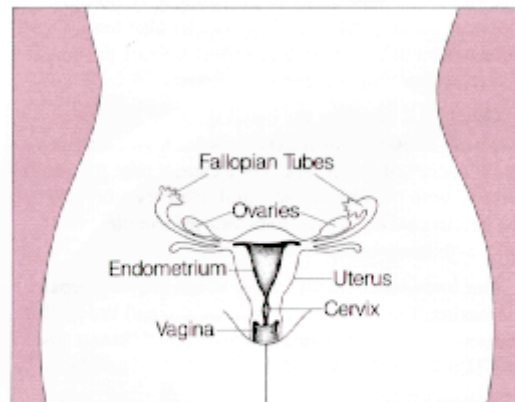
Patient Education

Radiation Medicine

Cervical Cancer: Overview

Overview

This cervix is the lower, narrow end of the uterus, leading from the uterus to the vagina. Cervical cancer is a common gynecologic cancer, typically found on routine PAP smears that can easily detect changes in the shape, size or formation of microscopic cervical cells.



This picture shows the uterus, cervix, and other parts of a woman's reproductive system.

Cervical cancer usually develops slowly over time. Before cancer appears in the cervix, the cells of the cervix go through changes known as dysplasia, in which cells that are not normal begin to appear in the cervical tissue. Later, cancer cells start to grow and spread more deeply into the cervix and to surrounding areas.

Nearly all cases of cervical cancer are caused by HPV (human papillomavirus) infection but not all HPV infections lead to cervical cancer. There are many strains of HPV but only a very few of them are associated with cervical cancer.

Symptoms

Typically there are minimal or no signs or symptoms associated with early stage cervical cancer but see your doctor for the following symptoms:

- Vaginal bleeding or unusual vaginal discharge
- Pelvic pain
- Pain when urinating or during sexual intercourse

Please note: these symptoms may be caused by many other conditions.

Diagnosis

Cervical cancer is diagnosed by a biopsy of abnormal cells. Your doctor may use the following procedures to detect abnormal cells.

- **Pelvic Exam** - An exam of the vagina, cervix, uterus, fallopian tubes, ovaries, and rectum. The doctor or nurse inserts one or two lubricated, gloved fingers of one hand into the vagina and the other hand is placed over the lower abdomen to feel the size, shape, and position of the uterus and ovaries. An instrument, called a speculum, is also inserted into the vagina and the doctor or nurse looks at the vagina and cervix for signs of disease. A Pap test or Pap smear of the cervix is usually done. The doctor or nurse also inserts a lubricated, gloved finger into the rectum to feel for lumps or abnormal areas.
- **Pap smear** - A procedure to collect cells from the surface of the cervix and vagina. A piece of cotton, a brush, or a small wooden stick is used to gently scrape cells from the cervix and vagina. The cells are viewed under a microscope to find out if they are abnormal. (also called a Pap test)
- **Colposcopy** - A procedure to look inside the vagina and cervix for abnormal areas. A thin, lighted tube (colposcope) is inserted through the vagina into the cervix. Tissue samples may be taken for biopsy.
- **Biopsy** - If abnormal cells are found in a Pap smear, the doctor may do a biopsy. A sample of tissue is cut from the cervix and viewed under a microscope. A biopsy that removes only a small amount of tissue is usually done in the doctor's office. A woman may need to go to a hospital for a cervical cone biopsy (removal of a larger, cone-shaped sample of cervical tissue).
- **Endocervical curettage** - A procedure to collect cells or tissue from the cervical canal using a spoon-shaped instrument, called a curette. Tissue samples may be taken for biopsy. This procedure is sometimes done at the same time as a colposcopy.

Staging

After cervical cancer has been diagnosed, tests are done to find out if cancer cells have spread within the cervix or to other parts of the body. This is called staging. The following tests and procedures may be used in the staging process:

- **Chest X-ray** – An x-ray of the organs and bones inside the chest. An x-ray is a type of energy beam that can go through the body and onto film, making a picture of areas inside the body.
- **CT Scan (CAT scan)** - A procedure that makes a series of detailed pictures of areas inside the body, taken from different angles. The pictures are made by a computer linked to an x-ray machine. A dye may be injected into a vein or swallowed to help the organs or tissues show up more clearly.

- **Lymphangiogram** -A procedure used to x-ray the lymph system. A dye is injected into the lymph vessels in the feet. The dye travels upward through the lymph nodes and lymph vessels, and x-rays are taken to see if there are any blockages. This test helps find out whether cancer has spread to the lymph nodes.
- **Ultrasound** - A procedure in which high-energy sound waves (ultrasound) are bounced off internal tissues or organs and make echoes. The echoes form a picture of body tissues called a sonogram.
- **MRI (magnetic resonance imaging)** - A procedure that uses a magnet, radio waves, and a computer to make a series of detailed pictures of areas inside the body.

The results of these tests are viewed together with the results of the original biopsy to determine the cervical cancer stage.

Stage 0 (Carcinoma in Situ) – the cancer is found in the first layer of cells lining the cervix only and has not invaded the deeper tissues of the cervix.

Stage I – the cancer is found in the cervix only. Stage I is divided into stages IA and IB, based on the amount of cancer that is found.

- *Stage IA:* A very small amount of cancer that can only be seen with a microscope is found in the tissues of the cervix. The cancer is not deeper than 5 millimeters (less than ¼ inch) and not wider than 7 millimeters (about ¼ inch).
- *Stage IB:* In stage IB, cancer is still within the cervix and either:
can only be seen with a microscope and is deeper than 5 millimeters (less than ¼ inch) – or-
wider than 7 millimeters (about ¼ inch) – or –
can be seen without a microscope and may be larger than 4 centimeters (about 1 ½ inches)

Stage II – the cancer has spread beyond the cervix but not to the pelvic wall (the tissues that line the part of the body between the hips). Stage II is divided into stages IIA and IIB, based on how far the cancer has spread.

- *Stage IIA:* Cancer has spread beyond the cervix to the upper two thirds of the vagina but not to tissues around the uterus.
- *Stage IIB:* Cancer has spread beyond the cervix to the upper two thirds of the vagina and to the tissues around the uterus.

Stage III – the cancer has spread to the lower third of the vagina and may have spread to the pelvic wall and nearby lymph nodes. Stage III is divided into stages IIIA and IIIB, based on how far the cancer has spread.

- *Stage IIIA:* Cancer has spread to the lower third of the vagina but

not to the pelvic wall.

- Stage IIIB: Cancer has spread to the pelvic wall and/or the tumor has become large enough to block the ureters (the tubes that connect the kidneys to the bladder). This blockage can cause the kidneys to enlarge or stop working. Cancer cells may also have spread to lymph nodes in the pelvis.

Stage IV - cancer has spread to the bladder, rectum, or other parts of the body. Stage IV is divided into stages IVA and IVB, based on where the cancer is found.

- Stage IVA: Cancer has spread to the bladder or rectal wall and may have spread to lymph nodes in the pelvis.
- Stage IVB: Cancer has spread beyond the pelvis and pelvic lymph nodes to other places in the body, such as the abdomen, liver, intestinal tract, or lungs.

Recurrent cervical cancer is cancer that has recurred (come back) after it has been treated. The cancer may come back in the cervix or in other parts of the body.