

In Teletherapy, the radiation source is a fixed machine placed at a distance like a CT Scan or X-ray.

In certain cases, chemotherapy is used along with Radiation treatment to make it more effective.

With the use of computers, and new age radiotherapy machines such as Three-Dimensional Conformal Radiotherapy (3D CRT), Intensity-Modulated Radiation Therapy (IMRT) and Cyber Knife, it is now possible to focus on the tumour resulting in the least possible side effects to surrounding tissue.

**Surgery** is one of the commonly used modes of cancer treatment, wherein the surgeon removes a localized tumor. In Cervical Cancer, the surgeon removes the cervix, the uterus, parts of the vagina and surrounding tissue along with lymph nodes associated.

**Chemotherapy** is treatment of cancer by giving medicines to kill or arrest fast growing cells in the body. In the case of Cervical cancer, it is usually given along with radiotherapy. It may also be used in cases where the disease is in an advanced stage.

*For detailed information, consult CPAA brochures on Radiation and Chemotherapy (also available in different Local languages). Write to "information@cancer.org.in" for a copy.*

#### Follow-up care

Regular follow-up examinations are essential including clinical examination, a Pap smear test and ultrasound testing as well as other laboratory tests. The doctor will call the patient every 3 months, 6 months, 12 months and then less frequently for several years as chances of recurrence reduce.

#### Cervical Cancer vaccine

Scientists have discovered a vaccine against the HPV virus which is the cause of almost all forms of Cervical cancer. Ideally, females should get the vaccine before they become sexually active and have not yet been exposed to this virus. Routine vaccination is recommended to start from 11 years onwards.

**Acknowledgement** : This brochure was developed with the assistance of Dr. Prashant Nyati -Consultant Gynaecologic Onco- Surgeon-Fortis, Vashi and Jupiter Hospitals.



**Cancer Patients Aid Association**

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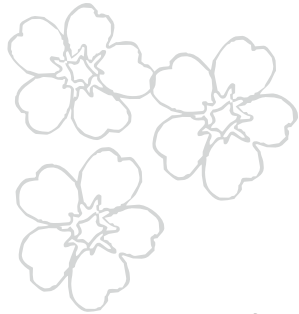


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**Cervical  
Cancer**

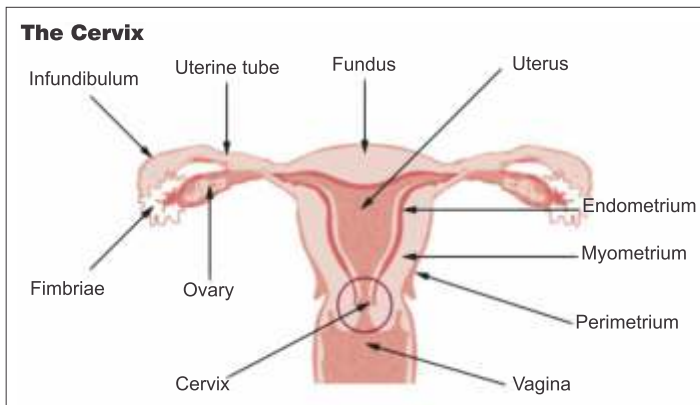


## CANCER OF THE CERVIX

### What is Cervical cancer?

Cancer of the cervix, also called Cervical cancer is the most common cancer amongst women in India, especially in villages. Over 102,000 cases of Cervical cancer are detected every year. The

cervix, the mouth of the uterus, is a canal that opens into the vagina, which leads to the outside of the body. Cancer is an unwanted, purposeless and unchecked growth of any body tissue, with a capability of spreading to other areas. Most Cervical cancers begin in the cells lining the cervix. These cells do not suddenly change into cancer. The normal cell lining of the cervix undergoes changes called dysplasia under the effect of the Human papilloma



virus (HPV virus) to pre-cancerous and then to cancerous cells over a period of decades. These changes can be detected by a simple screening test called the Pap test and treated to prevent the development of cancer.

### What are the risk factors for Cervical cancer?

Researchers have identified certain risk factors that increase the chance that cells in the cervix will become abnormal or cancerous. Initiation of sexual intercourse before age 18, having multiple sexual partners or having a partner who has multiple sexual partners, early age of marriage, first pregnancy at an early age, four or more number of pregnancies and women with poor personal hygiene, tobacco usage in any form and suppressed immunity can increase the risk of Cervical cancer.

Women exposed to multiple sexual partners themselves or through their partner are at elevated risk of transmission of HPV virus which is believed to be the major cause of Cervical cancer.

### What are the symptoms of Cervical cancer?

At early stages, Cervical cancer does not show major warning signs and hence goes undetected unless the individual undergoes a Pap smear test. At advanced stage, some of the symptoms are:

- Bleeding or spotting after sexual intercourse
- Bleeding in between menses
- Excessive white discharge (leucorrhea) with foul smell
- Bleeding after menopause

### How can Cervical cancer be diagnosed?

If any of the above symptoms are seen, consult a gynaecologist immediately. After taking a detailed history, the gynaecologist performs an internal examination using a speculum to examine the cervix and vagina for infection, abnormal tissue, ulcer or growth. A Pap smear test will be done and depending on results, further investigations will be recommended including CT Scan, MRI, PET Scan

### Pap Smear

The Pap Smear test is very simple, cheap and painless test which can be performed in the doctor's consulting room to detect precancerous changes. It can be done during a routine pervaginal internal examination with the help of a speculum to hold the wall of the vagina open. The cells from the cervix are scraped and smeared on a glass slide and sent to a cytologist for microscopic evaluation. It is important that all sexually active women have an initial Pap smear test and repeat it every three years if there is no problem found. Any suspicious result should be investigated and treated immediately.

### Colposcopy

Colposcopy is a widely used method to check the cervix for abnormal areas and also if the Pap smear shows abnormal cells and there is no gross visible lesion on the cervix. Colposcopy is a microscopic biopsy of suspicious tissue. A cone-shaped or cylindrical wedge is excised from the cervix in a process called Conization. It can be

performed with a scalpel, laser or electrosurgical loop. The latter is called the loop electrosurgical excision procedure (LEEP). These procedures help the doctor to determine the type and depth of lesion and are also used as treatment of a pre cancerous lesion if the entire abnormal area can be removed.

### Early detection

If all women have routine pelvic exams and Pap tests regularly, most pre cancerous conditions could be detected and treated as early as three years before cancer develops. Abnormal Pap smear test does not necessarily mean the patient is suffering from cancer, but may indicate a pre cancerous stage. Appropriate treatment at this time can prevent the future development of cancer. In such a case, close follow up must be done. A Pap smear should be done every three years if the first one is normal. An abnormal test should be repeated immediately after appropriate treatment. This strategy ensures that any invasive cancer that does occur would likely be found at an early, curable stage.

### How is Cervical cancer treated?

Treatment depends on a number of factors such as age, location and size of the tumor, the stage of the disease and the general health of the patient. Staging is a careful attempt to find out whether the cancer has spread and, if so, where. Many different treatments and combination of treatments are used to treat cancer of the cervix. The three common modes of cancer treatment are radiation therapy, surgery and chemotherapy.

**Radiation** therapy involves subjecting the cancer-bearing region to ionizing radiation which damages or destroys the cancer cells and prevents them from growing and multiplying. Normally the treatment is divided over a period of one month, during which fixed doses of radiation are delivered each day. Radiation affects both normal as well as abnormal tissues while ensuring sustained tumor destruction. Usually most of the radiation treatment is given as an outpatient procedure. Radiotherapy treatment in itself is painless just like an X-ray, and may take anything from a few seconds to several minutes. Cervical cancer can be treated by the following radiation modalities-

In Brachytherapy, radiation is given directly in the organ with the help of needles and wires.

