

What is a pathologist?

Pathologists are medical doctors who specialize in laboratory study of tissue and body fluids. A pathologist also oversees all laboratory testing. Pathologists play a vital role on a patient's primary health care team. The patient's primary care physicians consult with pathologists to interpret test results leading to accurate diagnosis and effective treatment of disease processes.

Laboratory medicine is essential to preventive medicine by helping to verify diagnoses, detect diseases early (often before symptoms arise) and to monitor treatment. Thus, pathologists contribute to healthier and more productive lives of their patients.

All tissues removed at biopsy or surgery are examined under the microscope by pathologists in order to detect cancer and other disease processes.

With the help of cytotechnologists, pathologists examine cell samples from specimens such as Pap tests, body fluids and fine needle aspiration biopsies to detect abnormal cells that may indicate cancer.

What is a biopsy?

A biopsy is the surgical removal of body tissue for evaluation with a microscope. Biopsies may be performed on organs to determine the nature of disease or on tumors to diagnose cancer.

What is an Aspiration biopsy?

A tissue sample is collected using a needle and syringe. A small tissue sample is retrieved within the needle for microscopic evaluation by the pathologist.

What is a Pap Test?

The Pap test is a screening test primarily used to detect abnormal cells that may be precursors to cervical cancer. The Pap smear is named for Dr. George Papanicolaou. Since introduced in the 1940's, the conventional Pap smear reduced mortality in the U.S. from cervical cancer by approximately 70%.

A sample of cells is collected by gently scraping the uterine cervix. The specimen is sent to the laboratory for microscopic evaluation, allowing cytotechnologists and pathologists to detect pre-cancerous changes that can be treated before the disease (cancer) actually develops.

What is the difference between conventional Pap smear and Liquid Base Pap test?

For conventional Pap smear testing, the cell sample removed from the cervix is placed on a glass slide. A fixative is applied to the slide. The slide is sent to the laboratory for processing and evaluation.

For liquid base testing the cell sample removed from the cervix is placed in a vial of liquid. The vial is sent to the laboratory for processing and evaluation. The liquid base collection technique promotes better preservation of the cell sample. The slide preparation technology from liquid base specimens decreases variables, such as drying artifact, obscuring blood or inflammatory cells, that can hinder accurate microscopic evaluation of the cells. The liquid base collection procedure also provides material for additional testing for infectious organisms or HPV testing if indicated.

Who should have a Pap test?

Cervical cancer screening should begin within 3 years after initiation of sexual intercourse, but no later than age 21. A patient's health care provider will determine the frequency of Pap testing recommended based on the patient's history and risk factors.

Risk Factors for Cervical Cancer:

- Multiple sexual partners
- Intercourse at an early age
- Smoking
- Compromised immune system
- Sexual partners who are infected with HPV, have had multiple sexual partners, and/or have had a sexual partner with cervical cancer.

What is HPV?

The human papillomavirus (HPV) is a common virus that has in some situations been linked with pre-cancerous changes and cancer of the cervix. There are more than 100 types of HPV of which approximately 30 affect the genital area. These 30 are divided into two groups, low-risk and high-risk.

Low-risk types of HPV do not usually cause serious problems. Low-risk types of HPV can sometimes cause genital warts or minor cell changes on the cervix, but have not been linked to cervical cancer development.

High-risk types of HPV have been linked to more serious abnormalities of the cervix, dysplasia or CIN (cervical intraepithelial neoplasia) that may gradually develop into cancer if not treated.

Usually the body's immune system fights off the HPV virus before it causes serious problems. Research has shown that in most women (90 percent), cervical HPV infection becomes undetectable within two years. However, persistent infection with "high-risk" types of HPV is the main risk factor for cervical cancer for the small proportion of women with persistent infection.

Who should be tested for HPV?

Testing for high-risk types of HPV has proven helpful for the triage of cervical Pap tests read as ASC-US (atypical squamous cells of undetermined significance) by identifying those patients at higher risk for more serious abnormalities.

FDA has approved HPV DNA testing for high-risk HPV types as a screening test in women without symptoms or abnormal Pap tests. If used, the combination of Pap test and HPV screening is recommended for women aged 30 years and older because transient HPV infections are common in women under 30 years of age. A positive test in younger patients can lead to unnecessary additional evaluations and treatment.