

Short Communication on Cytopathology

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INTRODUCTION

Cytopathology (also known as cytology), is a branch of pathology that studies and diagnoses diseases on the cellular level. Cytopathology is the study of normal and abnormal exfoliated cells in tissue fluid. Cytopathology is generally used on samples of free cells or tissue fragments, in contrast to histopathology, which studies whole tissues.

Cytopathology is commonly used to investigate diseases involving a wide range of body sites, often to aid in the diagnosis of cancer but also in the diagnosis of some infectious diseases and other inflammatory conditions.

Types of cytology tests used to look for cancer

Cytology plays an important part of diagnosing some types of cancer. Compared with tissue biopsy, a cytology specimen usually:

- Is easier to get
- Causes less discomfort to the patient
- Is less likely to result in serious complications
- Costs less

The disadvantage is that, in some cases, a tissue biopsy result is more accurate, but in many cases the cytology fluid may be just as accurate.

Cytology tests may be used for diagnosis or for screening:

- A diagnostic test is only used for people who have signs, symptoms, or some other reason to suspect that they might have a particular disease (like cancer). A diagnostic test finds out if a disease is present and, if so, it precisely and accurately classifies the disease.
- A screening test is used to find people who might have a certain disease even before they develop symptoms. A screening test is expected to find nearly all people who are likely to have the disease, but a screening test doesn't always prove that the disease is present.

Often, a diagnostic test is used if a screening test result is positive (that is, if something is found on the screening test). Some cytology tests, such as the Pap test, are mainly used for screening, while others can accurately identify cancers (see "Scrape or brush cytology" below). When cytology results show cancer, often a biopsy is also done to be sure before treatment is started.

Fine needle aspiration

Fine needle aspiration (FNA) is sometimes considered a cytology test and is sometimes considered a biopsy.

Cytology tests on body fluids

Fluids taken from cavities (spaces) in the body can be tested to see if cancer cells are present. Some of the body cavity fluids tested in this way include:

- Urine
- Sputum (phlegm)
- Spinal fluid, also known as cerebrospinal fluid or CSF (from the space surrounding the brain and spinal cord)
- Pleural fluid (from the space around the lungs)
- Pericardial fluid (from the sac that surrounds the heart)
- Ascitic fluid, also called ascites or peritoneal fluid (from the space in the belly)

Scrape or brush cytology

Another cytology technique is to gently scrape or brush some cells from the organ or tissue being tested. The best-known cytology test that samples cells this way is the Pap test. A small spatula and/or brush is used to remove cells from the cervix (the lower part of the uterus or womb) for a Pap test. Other areas that can be brushed or scraped include the esophagus (swallowing tube), stomach, bronchi (breathing tubes that lead to the lungs), and mouth.

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