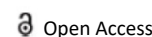




OPINION ARTICLE



## Note on Cytopathology and Its Uses

Tetsuo Kido\*

Department of Histology, University of Murcia, Murcia, Spain

### Description

To make a diagnosis, cytology (also known as cytopathology) entails studying cells from bodily tissues or fluids. A pathologist examines the cells in the tissue sample under a microscope for distinguishing traits or abnormalities. Cytopathology is a branch of pathology that studies and diagnoses illnesses at the cellular level. In contrast to histopathology, which examines entire tissues, cytopathology examines samples of free cells or tissue fragments. Exfoliative cytology and intervention cytology are the two primary types, or branches, of cytology.

Cytology tests can be used to examine practically any part of your body. Gynecologic cytology, urinary cytology, breast cytology, and thyroid cytology are all examples of cytology tests.

- Cytology of lymph nodes
- Cytology of the lungs
- Cytology of the eye
- Cytology of the ear

Exfoliative cytology is a type of cytology in which the cells examined by a pathologist are either “shed” naturally by your body or manually scraped or brushed (exfoliated) from the surface of your tissue. Exfoliative cytology, which involves manual tissue brushing or scraping, includes the following procedures:

#### Samples from the gynaecological system

The most well-known type of exfoliative cytology is a Pap smear, which involves brushing cells from your cervix with a swab.

**Samples from the lining of your gastrointestinal tract (stomach and intestines):** During an endoscopic procedure, your healthcare practitioner can brush off cells from the lining of your gastrointestinal tract (stom-

#### ARTICLE HISTORY

Received: 01-Jun-2022, Manuscript No. EJMJIH-22-63448;  
Editor assigned: 03-Jun-2022, PreQC No. EJMJIH-22-63448 (PQ);  
Reviewed: 17-Jun-2022, QC No. EJMJIH-22-63448;  
Revised: 22-Jun-2022, Manuscript No. EJMJIH-22-63448 (R);  
Published: 30-Jun-2022

ach and intestines) for cytology testing.

Cells from your skin or mucous membranes, such as the inside of your nose or mouth, can be scraped off for cytology testing by your healthcare professional. Exfoliative cytology is a type of cytology that involves collecting tissues or fluids that your body sheds naturally.

**Respiratory samples:** For a respiratory cytology test, your provider can collect fluids such as spit and mucus (also known as phlegm or sputum) that you cough up.

**Urinary samples:** For a cytology test, your provider can take a urine (pee) sample from you.

**Samples of discharge or secretion:** If you have an abnormal body discharge, such as from your eye, vaginal canal, or nipple, your healthcare professional may take a sample for a cytology test.

#### Uses of cytology

Cytology is most typically used by healthcare providers and pathologists to diagnose or screen for cancer. A diagnostic test is only used on a person if they show signs or symptoms that suggest they may be suffering from a sickness or infection. A cytology test, for example, determines whether aberrant cells are present. If this is the case, the test correctly diagnoses the condition. A healthcare provider utilises screening tests to determine whether a person is at risk for an illness, such as cancer, even before symptoms appear. A Pap smear is a common form of cytology screening test.

- Diagnosing infectious illnesses is another application for cytology examinations.
- To identify inflammatory diseases.
- To investigate thyroid lesions.
- To detect diseases that affect specific bodily cavities, such as the area between two thin membranes that line and enclose your lungs (pleural cavity).

Depending on the cytology test, a variety of healthcare practitioners may be able to obtain a sample of cells. A gynaecologist, for example, might extract a sample from your cervix for a Pap smear cytology test. The sample is subsequently sent to a laboratory for examination by the healthcare provider. A pathologist or cytopathologist examines the cells in the tissue sample under a microscope to obtain a diagnosis, if one is needed. It is cost effective, rapid, simple, and accurate to use the science of cytopathology, whether exfoliative or FNA. The previous gold standard of “must have tissue to make an accurate diag-

nosis” is fast changing, thanks to recent developments in technical aspects and the appearance of cell block technique in cytopathology. Pathologists and clinicians must work together in a team environment that emphasises effective communication skills. To reduce the incidence of the problems highlighted, complete information about the patient should be given to the pathologist. Encouragement of clinical pathologic correlation conferences and tumour boards is extremely beneficial in establishing a consistent vocabulary and process for the diagnostic use of cytology materials.