

## Pathology 2015: Detection of cervical lesions via cytological examination in patients in Erbil city, Kurdistan - -

**Ava Taher Ismail**

*Hawler Medical University, Iraq*

**Background and Objectives:** The cervical cytology examination is the standard screening test for cervical cancer. The objective of this study is to study the incidence of cytological cervical lesions in patients from the city of Erbil, in Kurdistan, Iraq.

**Patients and methods:** This cervical cytology study was carried out on 1763 patients in a private clinic in Erbil, Kurdistan, Iraq. The ages of the women ranged from 17 to 87 years.

### The cervix

The cervix is part of the female reproductive system, which also includes the fallopian tubes, uterus (uterus), ovaries, vagina (genital canal), and vulva (external genitalia). Also called the cervix, the cervix connects the uterus to the vagina. It has an outer surface that opens into the vagina and an inner surface that faces the uterus.

The functions of the cervix include:

- produce moisture to lubricate the vagina, which keeps the vagina healthy
- produce mucus that helps sperm to go up into the fallopian tube to fertilize an egg that has been released from the ovary
- hold a developing baby in the womb during pregnancy
- Enlargement to allow a baby to be born through the vagina.

The cervix is covered with two types of cells:

### Scaly cells:

Flat, tinny cells that concealment the external surface of the portion of the cervix that opens into the vagina (ectocervix). Squamous cell cancer is called squamous cell carcinoma.

### Glandular cells:

Column-shaped cells that protection the innermost superficial of the cervix (cervical canal or endocervix). Cancer of the glandular cells is called adenocarcinoma. The area where squamous cells and glandular cells meet is called the transformation zone. This is where most cervical cancers start.

### Cervical cell changes

Sometimes the scaly cells and glandular cells of the cervix start to change and no longer look normal when examined under a microscope. These early cell changes can be precancerous. This means that there is a lesion (area of abnormal tissue) that is not cancer but that can lead to cancer. Cervical cell changes are often caused by certain types of human papillomavirus (HPV).

There are two main types of changes in cervical cells:

### Abnormal scaly cells:

These are called squamous intraepithelial lesions (SIL), and they can be classified as low grade (LSIL) or high grade (HSIL). SIL was formerly called cervical intraepithelial neoplasia (CIN) and was classified according to the depth of the abnormal cells inside the surface of the cervix. LSIL, previously classified as CIN 1, usually disappears without treatment.

HSIL, previously classified as CIN 2 or CIN 3, are precancerous. This means that even if they don't usually cause symptoms, high-grade abnormalities can develop into early cervical cancer for about 10 to 15 years if they are not detected and treated. HSIL will require treatment (see detection and treatment of precancerous abnormalities).

Only certain women with precancerous changes in the cervix will develop cervical cancer.

**Abnormal gland cells -** These abnormalities always require additional testing, since changes to the gland cells may be more difficult to interpret than changes to the scaly cells. Adenocarcinoma refers to cancerous glandular cells.

These changes in the cervical cells can be found during a routine screening test. For most women, slight changes in the cervical cells will go away on their own without treatment. Moderate to severe cell changes can be treated before they turn into cervical cancer. Your doctor will recommend one of the following options depending on the level of the changes:

- A follow-up test in 6 to 12 months to monitor the cells
- A colposcopy to get an enlarged view of the cervix using an instrument called a colposcope
- A biopsy taken from the cervix during colposcopy.

What is cervical cancer?

Cervical cancer is the evolution of abnormal cells in the coating of the cervix. Cancer most often starts in the area of the cervix called the transformation area, but it can spread to tissue around the cervix, such as the vagina, or to other parts of the body, such as lungs or liver.

What types are there?

There are two main types of cervical cancer, which are named after the cells in which they start:

**Squamous cell carcinoma (SCC)**

The most common type, accounting for approximately 7 in 10 (70%) cases.

**Adenocarcinoma**

A less common type (around 25% of cases) begins in the glandular cells of the cervix. Adenocarcinoma is more difficult to diagnose because it occurs higher in the cervix and abnormal glandular cells are more difficult to recognize.

A small number of cervical cancers have both scaly and glandular cells. These cancers are called adenosquamous carcinomas or mixed carcinomas. Other rarer types of cancer that can occur in the cervix include small cell carcinoma and cervical sarcoma.

How common is it?

About 800 women in Australia are diagnosed with cervical cancer each year. Cervical cancer accounts for about 2 in 100 of all cancers diagnosed in women. It is more common in women over the age of 40, but it can occur at any age. 2, 3 approximately one in 200 women will develop cervical cancer before the age of 75. The incidence of cervical cancer in Australia has dropped significantly since the introduction of a national screening program in the 1990s.

**Results:** Out of the total number of patients (1763), the number of women diagnosed with CIN I, CIN II, CIN III and carcinoma of the cervix was 58 (3.3%), 2 (0.1%), 5 (0.3%) and 4 (0.2%), respectively. Severe cervicitis was detected in 1552 women (88.8%) while mild and moderate cervicitis was found in 47 (2.7%) and 164 (9.3%) patients. The results revealed that the highest percentages of patients with CIN, moderate and severe cervicitis were diagnosed in women 30 to 50 years of age. While all patients with carcinoma of the cervix have been detected in women  $\geq 50$  years of age; more than 96% of CIN and all cases of carcinoma were associated with severe cervicitis.

**Conclusion:** It has been found that most cases of inflammatory cervical lesions and CIN have been observed in women between 30 and 50 years of age. Most patients with CIN and SCC have been shown to be associated with squamous metaplastic cells and severe cervicitis.