

Understanding Abnormal Pap Test Results

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What is a Pap test?

The **Pap test**, also called a Pap smear or cervical cytology screening, checks for abnormal changes in the cells of the **cervix** and allows early treatment so that abnormal cells do not become cancer (see the FAQ [The Pap Test](#)).

What causes abnormal Pap test results?

The main cause of abnormal Pap test results is infection with **human papillomavirus (HPV)**. There are many types of HPV. Some types have been linked to cancer of the cervix, **vulva**, and vagina. Other types have been linked to genital warts (see the FAQ [Human Papillomavirus Infection](#)).

What is the difference between the terms dysplasia, cervical intraepithelial neoplasia (CIN), and squamous intraepithelial lesion (SIL)?

All of these terms are used to describe precancer changes in the cervix that occur as a result of HPV infection, but they are used in different situations.

Dysplasia and **cervical intraepithelial neoplasia (CIN)** describe the actual changes that occur in the cervix. Dysplasia and CIN are graded as mild, moderate, or severe. Mild dysplasia (CIN 1) usually goes away on its own. Moderate (CIN 2) and severe (CIN 3) dysplasia indicate more serious changes.

The term **squamous intraepithelial lesion** is used by the Bethesda System for abnormal growth of cells on the surface of the cervix. “Squamous” refers to the type of cells that make up the tissue that covers the cervix.

What is the Bethesda System?

The Bethesda System is a list of terms used by labs to describe Pap test results. With the Bethesda System, your Pap test results will be placed in one of several groups:

- Normal (negative)—There are no signs of cancer or precancer.
- Atypical squamous cells of undetermined significance (ASC-US)—Changes in the cervical cells have been found. The changes are almost always a sign of an HPV infection but may indicate precancer is present. ASC-US is the most common abnormal Pap test result.
- Squamous intra epitheliallesion (SIL)—Abnormal changes are seen in the cells that may be a sign of precancer. SIL can be low grade (LSIL) or high grade (HSIL).
 - LSIL is mild or moderate dysplasia (CIN 1 and CIN 2). It almost always indicates that an HPV infection is present, but it also may indicate mild precancer changes. LSIL is very common and usually goes away on its own without treatment.
 - HSIL is severe dysplasia, either CIN 3 or carcinoma in situ (CIS). This result is most likely to progress to cancer.
- Atypical squamous cells, cannot exclude HSIL (ASC-H) — Changes in the cervical cells have been found. These changes are not clearly HSIL but could be. Further testing is needed.
- Atypical glandular cells (AGC)—Cell changes are seen that suggest precancer of the upper part of the cervix or uterus.
- Cancer—Abnormal cells may have spread deeper into the cervix or to other tissues.

When is further testing for abnormal Pap test results needed?

If you are told that you have an abnormal Pap test result, you may need further testing. The follow-up testing that you receive after an abnormal Pap test result depends on your age and the grade of dysplasia (see the following table). Sometimes, there is more than one option for further testing. You and your health care provider will discuss each option and decide which is best for you.

Table 1. Follow-up Testing for Abnormal Pap Test Results

To use this table, first find your result on the left side of the table. Then, find the block that corresponds to your age or reproductive status on the top row of the table.

		Age or Reproductive Status			
		20 years and younger	21 years and older and premenopausal	Postmenopausal (any age)	Pregnant
Result	ASC-US	Repeat Pap test in 12 months	HPV test or Repeat Pap test in 6 months and 12 months or Colposcopy	HPV test or Repeat Pap test in 6 months and 12 months or Colposcopy	<i>In women 20 years and younger:</i> Repeat Pap test in 12 months <i>In women 21 years and older:</i> HPV test or Colposcopy (without endocervical sampling) or Further testing may be delayed until after birth
	LSIL	Repeat Pap test in 12 months	Colposcopy	HPV test or Repeat Pap test in 6 months and 12 months or Colposcopy	<i>In women 20 years and younger:</i> Repeat Pap test in 12 months <i>In women 21 years and older:</i> Colposcopy (without endocervical sampling) or Further testing may be delayed until after birth
	HSIL	Colposcopy	Colposcopy or LEEP		Colposcopy (without endocervical sampling)
	ASC-H	Colposcopy (but without endocervical sampling in pregnant women)			
	AGC—all subcategories except atypical endometrial cells	Colposcopy with endocervical sampling and HPV testing and endometrial sampling (if older than 35 years or at risk of endometrial neoplasia)			Colposcopy and HPV testing (without endocervical or endometrial sampling)
	AGC—atypical endometrial cells	Endometrial and endocervical sampling followed by colposcopy and HPV testing			Colposcopy and HPV testing (without endocervical or endometrial sampling)

Abbreviations: ASC-US, atypical squamous cells of undetermined significance; LSIL, low-grade squamous intraepithelial lesion; HSIL, high-grade squamous intraepithelial lesion; ASC-H, atypical squamous cells, cannot exclude HSIL; AGC, atypical glandular cells; HPV, human papillomavirus; LEEP, loop electrosurgical excision procedure

What is colposcopy?

Colposcopy lets your doctor look at the cervix in more detail through a magnifying device. It can detect problems of the cervix that cannot be seen with the eye alone (see [the FAQ Colposcopy](#)).

What is endocervical sampling?

In this test, a small brush or other instrument is used to take a tissue sample from the cervical canal.

What is endometrial sampling?

In this test, a sample of the endometrium (the lining of the uterus) is collected for study. Some women with an AGC result need to have this follow-up test.

What procedures are used to treat CIN?

Several techniques are used to treat CIN. The treatment you receive depends on your age and the type of Pap test result:

- **Loop electrosurgical excision procedure (LEEP)**—A thin wire loop that carries an electric current is used to remove abnormal areas of the cervix. LEEP usually is performed in the doctor's office with **local anesthesia**. The areas that are removed are sent to a lab to be studied.
- **Cone biopsy**—A cone-shaped wedge of the cervix is removed for study. This procedure may be done in an operating room with **general anesthesia** or in a surgical center with other types of anesthesia. You should be able to go home the same day.
- **Freezing**—Also called cryotherapy, this technique freezes abnormal tissue, which later sheds.
- **Laser treatment**—In laser treatment, a beam of light destroys abnormal tissue. You also need follow-up testing after treatment, which may involve repeat Pap tests in 6 months and 12 months or an HPV test.

You also need follow-up testing after treatment, which may involve repeat Pap tests in 6 months and 12 months or an HPV test. You should also get regular Pap tests after the follow-up is done.

Glossary

Biopsy: Removal of a small piece of tissue that is then examined under a microscope in a laboratory.

Cervical Intraepithelial Neoplasia (CIN): Another term for dysplasia; a noncancerous condition that occurs when normal cells on the surface of the cervix are replaced by a layer of abnormal cells. CIN is graded as 1 (mild dysplasia), 2 (moderate dysplasia), or 3 (severe dysplasia or carcinoma in situ).

Cervix: The opening of the uterus at the top of the vagina.

Colposcopy: Viewing of the cervix, vulva, or vagina with magnification using an instrument called a colposcope.

Dysplasia: A noncancerous condition that occurs when normal cells are replaced by a layer of abnormal cells.

General Anesthesia: The use of drugs that produce a sleep-like state to prevent pain during surgery.

Human Papillomavirus (HPV): The name for a group of related viruses, some of which are linked to cervical changes and cervical cancer.

Local Anesthesia: The use of drugs that prevent pain in a part of the body.

Loop Electrosurgical Excision Procedure (LEEP): The removal of abnormal tissue (of the

cervix, vagina, or vulva) using a thin wire loop and electric energy.

Pap Test: A test in which cells are taken from the cervix and vagina and examined under a microscope.

Squamous Intraepithelial Lesion (SIL): The term used in Pap test results for abnormal growth of cells on the surface of the cervix.

Vulva: The external female genital area.

If you have further questions, contact your obstetrician–gynecologist.

Designed as an aid to patients, this document sets forth current information and opinions related to women's health. The information does not dictate an exclusive course of treatment or procedure to be followed and should not be construed as excluding other acceptable methods of practice. Variations, taking into account the needs of the individual patient, resources, and limitations unique to institution or type of practice, may be appropriate.