Questions and Answers About the Pap Test

1. What is a Pap test?

The Pap test (sometimes called a Pap smear) is a way to examine cells collected from the cervix and vagina. This test can show the presence of infection, inflammation, abnormal cells, or cancer.

2. What is a pelvic exam?

In a pelvic exam, the uterus, vagina, ovaries, fallopian tubes, bladder, and rectum are felt to find any abnormality in their shape or size. During a pelvic exam, an instrument called a speculum is used to widen the vagina so that the upper portion of the vagina and the cervix can be seen.

3. Why are a Pap smear and pelvic exam important?

A Pap test and pelvic exam are important parts of a woman's routine health care because they can detect abnormalities that may lead to invasive cancer. These abnormalities can be treated before cancer develops. Most invasive cancers of the cervix can be prevented if women have Pap tests and pelvic exams regularly. Also, as with many types of cancer, cancer of the cervix is more likely to be treated successfully if it is detected early.

4. Who performs a Pap test?

Doctors and other specially trained health care professionals, such as physician assistants, nurse midwives, and nurse practitioners, may perform Pap tests and pelvic exams. These individuals are often called clinicians.

5. How is a Pap test done?

A Pap test is simple, quick, and painless; it can be done in a doctor's office, a clinic, or a hospital. While a woman lies on an exam table, the clinician inserts a speculum into her vagina to open it. To do the test, a sample of cells is taken from in and around the cervix with a wooden scraper or a small cervical brush or broom. The specimen (or

smear) is placed on a glass slide or rinsed in liquid fixative and sent to a laboratory for examination.

6. Who should have Pap tests?

Women who are or have been sexually active, or have reached age 18, should have Pap tests and physical exams regularly. Women may want to discuss with their doctor how often to have the test.

There is no known upper age at which Pap tests cease to be effective. Older women should continue to have regular physical exams, including pelvic exams and Pap tests. Women who have had consistently normal Pap test results may want to ask the doctor how often they need to have a Pap test.

Women who have had a hysterectomy (surgery to remove the uterus, including the cervix) should talk with their doctor about whether to continue to have regular Pap tests. If the hysterectomy was performed for treatment of a precancerous or cancerous condition, the end of the vaginal canal still needs to be sampled for abnormal changes. If the uterus (including the cervix) was removed because of a noncancerous condition such as fibroids, routine Pap tests may not be necessary. However, it is still important for a woman to have regular gynecologic examinations as part of her health care.

7. When should the Pap test be done?

A woman should have this test when she is not menstruating; the best time is between 10 and 20 days after the first day of the menstrual period. For about 2 days before a Pap test, she should avoid douching, or using vaginal medicines or spermicidal foams, creams, or jellies (except as directed by a physician). These may wash away or hide abnormal cells.

8. How are the results of a Pap test reported?

The way of reporting Pap test results has sometimes been confusing. A new reporting method, called the Bethesda System, was developed following a 1988 National Cancer Institute-sponsored workshop. The Bethesda System uses descriptive diagnostic terms rather than class numbers, which were used to report Pap test results in the past. This system of reporting includes an evaluation of specimen adequacy.

9. What do abnormal test results mean?

A physician may simply describe Pap test results to a patient as “abnormal.” Cells on the surface of the cervix sometimes appear abnormal but are not cancerous. It is important to remember that abnormal conditions do not always become cancerous, and some conditions are more of a threat than others. A woman may want to ask her doctor for specific information about her Pap test result and what the result means.

There are several terms that may be used to describe abnormal results.

- **Dysplasia** is a term used to describe abnormal cells. Dysplasia is not cancer, although it may develop into very early cancer of the cervix. In dysplasia, cervical cells undergo a series of changes in their appearance. The cells look abnormal under the microscope, but they do not invade nearby healthy tissue. There are three degrees of dysplasia, classified as mild, moderate, or severe, depending on how abnormal the cells appear under the microscope.

- **Squamous intraepithelial lesion (SIL)** is another term that is used to describe abnormal changes in the cells on the surface of the cervix. The word squamous describes cells which are thin, flat, and lie on the outer surface of the cervix. The word lesion refers to abnormal tissue. An intraepithelial lesion means that the abnormal cells are present only in the surface layers of the cells. A doctor may describe SIL as being low-grade (early changes in the size, shape, and number of cells) or high-grade (a large number of precancerous cells that look very different from normal cells).

- **Cervical intraepithelial neoplasia (CIN)** is another term that is sometimes used to describe abnormal cells. Neoplasia means a new abnormal growth of cells. Intraepithelial refers to the surface layers of the cells. The term CIN, along with a number (1 to 3), describes how much of the cervix contains abnormal cells.

- **Carcinoma in situ** describes a pre-invasive cancer that involves only the surface cells and has not spread into deeper tissues.

Cervical cancer, or invasive cervical cancer, occurs when abnormal cells spread deeper into the cervix or to other tissues or organs.

10. How do these terms compare?

- Mild dysplasia may also be classified as low-grade SIL or CIN 1.

- Moderate dysplasia may also be classified as high-grade SIL or CIN 2.

- Severe dysplasia may also be classified as high-grade SIL or CIN 3.

- Carcinoma in situ may also be classified as high-grade SIL or CIN 3.

11. What are atypical squamous cells of undetermined significance (ASCUS)?

Abnormalities that do not fulfill the criteria that define SIL, CIN, or dysplasia are termed atypical squamous cells of undetermined significance (ASCUS). Persistent abnormal smears are often further evaluated by a physician.

12. Is the human papillomavirus associated with the development of cervical cancer?

Human papillomaviruses (HPV) are viruses that can cause warts. Some HPVs are sexually transmitted and cause wart-like growths on the genitals. Scientists have identified more than 70 types of HPV; 30 types infect the cervix, and about 15 types are associated with cervical cancer.

HPV is a major risk factor for cervical cancer. In fact, nearly all cervical cancers show evidence of HPV. However, not all cases of HPV develop into cervical cancer. A woman with HPV may want to discuss any concerns with her doctor.

13. Who is at risk for HPV infection?

HPV infection is more common in younger age groups, particularly in women in their late teens and twenties. Because HPV is spread mainly through sexual contact, risk increases with number of sexual partners. Women who become sexually active at a young age, who have multiple sexual partners, and whose sexual partners have other partners are at increased risk. Nonsexual transmission is also possible. The virus often disappears but may remain detectable for years after infection.

14. Does infection with a cancer-associated type of HPV always lead to a precancerous condition or cancer?

No. Most infections appear to go away on their own without causing any kind of abnormality. However, infection with cancer-associated HPV types may increase the risk that mild abnormalities will progress to more severe abnormalities or cervical cancer. With regular follow-up care by trained clinicians, women with precancerous cervical abnormalities should not develop invasive cervical cancer.

15. What are false positive and false negative results?

Unfortunately, there are occasions when Pap test results are not accurate. Although these errors do not occur very often, they can cause anxiety and can affect a woman's health.

A false positive Pap test occurs when a patient is told she has abnormal cells when the cells are actually normal. A false negative Pap test result occurs when a specimen is called normal, but the woman has a lesion. A variety of factors may contribute to a false negative result. A false negative Pap test may delay the diagnosis and treatment of a precancerous condition. However, regular screening helps to compensate for the false negatives because if abnormal cells are missed at one time, chances are good that the cells will be detected next time.

The Food and Drug Administration has recently approved two computerized systems for rescreening of samples to detect abnormal cells from a Pap test. These systems are

beginning to be used in laboratories across the country. Rescreening may also be done manually. It is important for a woman to discuss the results of her Pap test with her physician and to inquire about the quality control measures that are taken in the laboratory in which the tissue sample is evaluated.

16. What if Pap test results are abnormal?

If the Pap test shows an ambiguous or minor abnormality, the physician may repeat the test to ensure accuracy. If the Pap test shows a significant abnormality, the physician may then perform a colposcopy using an instrument much like a microscope (called a colposcope) to examine the vagina and the cervix. The colposcope does not enter the body. A Schiller test may also be performed. For this test, the doctor coats the cervix with an iodine solution. Healthy cells turn brown and abnormal cells turn white or yellow. Both of these procedures can be done in the doctor's office.

The doctor may also remove a small amount of cervical tissue for examination by a pathologist. This procedure is called a biopsy and is the only sure way to know whether the abnormal cells indicate cancer.

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Sources of National Cancer Institute Information

Cancer Information Service
Toll-free: 1–800–4–CANCER (1–800–422–6237)
TTY (for deaf and hard of hearing callers): 1–800–332–8615

NCI Online
Internet
Use http://www.cancer.gov to reach NCI's Web site.

CancerMail Service
To obtain a contents list, send e-mail to cancermail@icicc.nci.nih.gov with the word "help" in the body of the message.

CancerFax® fax on demand service
Dial 301–402–5874 and listen to recorded instructions.

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