

## UNDERSTANDING ABNORMAL PAP SMEAR RESULTS

Most women go to their gynecologist or primary care provider for a well woman exam. In past articles I have listed what this exam should include but women do not correctly equate this visit with “The Pap Smear”. Now it has come to my attention that great confusion exists about what abnormal results mean and, indeed, what is the treatment? First a quick anatomy lesson: the cervix is the opening of the uterus at the top of the vagina. It is covered by a thin layer of cells that are constantly being replaced. If these cells become damaged they grow differently and need to be removed to prevent cancer. These abnormal changes are what a pap smear hopes to detect. The changes are called dysplasia and are graded mild, moderate, or severe. It is also called cervical intraepithelial neoplasia (CIN). Mild usually goes away on its own but moderate and severe require treatment to prevent cancerous change. The pap smear has reduced cases of cervical cancer in the United States dramatically.

The human papilloma virus infection is the main cause of abnormal pap test results. There are many types but types 16,18 have been linked to cervical changes and types 6 and 11 to genital warts. This virus (HPV) is sexually transmitted and very common. Most of the time it goes away very quickly but in a small number of women will go on to develop CIN. The longer one has HPV, the more likely to develop CIN and smoking doubles the risk of severe changes. However, it usually takes many years for precancerous changes to cause cervical cancer.

So, now, about the confusion when interpreting abnormal results. Most labs use the “Bethesda System” to describe results and the term SQUAMOUS INTRAEPITHELIAL NEOPLASM to describe precancer results. These results are placed into one of several groups:

Normal: no signs of cancer or precancer

Atypical Squamous Cells of Undetermined Significance (ASCUS): changes have been found and are almost due to HPV infection but may indicate precancer is present.

Squamous Intraepithelial Lesion (SIL): changes that might be precancerous. There are two grades, either low (LSIL) or high (HSIL). LSIL is very common and usually goes away without treatment but HSIL indicates more serious changes and carcinoma in situ (CIS) is a severe form of HSIL and likely to progress to cancer.

It must be remembered that these are superficial changes of a very thin layer of cells. An analogy would compare the cervix to a chocolate layer cake and these changes would be confined to the icing only. When the changes penetrate the icing to the cake, this is frank cancer.

Further Testing: If a woman is told that the pap is abnormal she might need further testing depending on age and grade of dysplasia as discussed above. Sometimes there is more than one option and the provider will discuss with the woman. A repeat pap smear might be done a few months later to see if the changes have gone away on their own. This is usually done every six months until returned normal.

As a pap smear merely scrapes superficial cells off the cervix, when abnormal, a COLPOSCOPY which is a visualization of the cervix with a microscope enables the provider to see what the naked eye cannot and

to detect the abnormality that might look white, raised, have a mosaic pattern of cells or abnormal blood vessels. This area can then be safely and painlessly biopsied at the same time. A small sample is usually taken from the cervical canal with a small brush in the event that there are abnormal cells that cannot be seen.

Based on the results of the colposcopic directed biopsy treatment can be planned. CIN 1 usually goes away by itself and in women under 20 is monitored with repeat pap tests. If CIN is present for greater than two years or is HGSIL it can be treated with LEEP (loop electrosurgical excision procedure) done in office with local anesthesia that removes the abnormal area; CONE BIOPSY done under general anesthesia in the operating room; FREEZING which kills the abnormal cells which then shed and healthy ones grow back, and LASER where light destroys the tissue.

Risks such as bleeding might occur and might affect future pregnancy. In addition, follow up testing after treatment will include repeat pap tests as a test of cure. It must be noted that pap smears and treatment of abnormal results have resulted in limiting cervical cancer deaths and in making it a very rare disease.