

# MY RESULTS

Below is some information to explain the results of your anal Pap test and your biopsies (if you had biopsies performed). An “abnormal” Pap test result means that some of the cells of the anus differ in some way from normal cells. These abnormal changes in the cells are explained in the following sections. There are a variety of ways your anal Pap test results and your biopsy results may differ, e.g. one may be ‘low’ and the other ‘high’. This is best discussed with the study nurse or doctor.

## WHAT DO MY ANAL PAP TEST RESULTS MEAN?

The result will be one of:

<b>Results</b>	<b>What it means</b>	<b>What happens next</b>
Unsatisfactory	This is usually because there are not enough cells in the specimen for the laboratory to confidently make an assessment.	The test will need to be repeated
Normal	No abnormal cells were identified	You will have an anal Pap test and HRA as scheduled at your next study visit.
Possible low-grade squamous intraepithelial lesion (PLSIL)	Changes in cells that may represent a low-grade abnormality, but the changes are not clear enough to justify a “definite” diagnosis of LSIL.	You will have an anal Pap test and HRA as scheduled at your next study visit.
Low-grade squamous intraepithelial lesion (LSIL)	Minor changes consistent with HPV infection. LSIL is thought to have almost no risk of progression to anal cancer.	You will have an anal Pap test and HRA as scheduled at your next study visit.

Possible high-grade squamous intraepithelial lesion (PHSIL)	A high-grade abnormality is suspected but the changes are not clear enough to justify a "definite" diagnosis of HSIL.	You will have an anal Pap test and HRA as scheduled at your next study visit.
High-grade squamous intraepithelial lesion (HSIL)	A high-grade abnormality that is thought to be a result of infection with high risk HPV types, and to be at some risk for progression to anal cancer. The actual risk is uncertain, and will depend upon other risk factors. It is very important that this finding is followed up at your next SPANC visit.	You will have an anal Pap test and HRA as scheduled at your next study visit.

# WHAT DO MY ANAL BIOPSY RESULTS MEAN?

The result will be one of:

Results	What it means	What happens next
Negative for intraepithelial neoplasia	There is no evidence of HPV-related cell changes.	You will have an anal Pap test and HRA as scheduled at your next study visit.
Other	Another abnormality was found, but it was not related to HPV infection.	You will have an anal Pap test and HRA as scheduled at your next study visit.
LSIL	Minor changes which are consistent with HPV infection. LSIL includes anal or peri-anal warts. LSIL is considered to be at very low risk for progression to anal cancer.	You will have an anal Pap test and HRA as scheduled at your next study visit.
HSIL HSIL – AIN2 and HSIL-AIN3*	Abnormal cells are present in the biopsy. HSIL is thought to be a result of infection with high risk HPV types. Most men with HSIL will not go on to have anal cancer. HSIL is a common condition, with 30% or more of gay men in some studies having this condition. Over time, and it could be as long as decades, some HSIL may progress to cancer. The actual risk is uncertain, and will depend upon other risk factors. However, it is believed that between one in a 1000 and one in a 100 men with this abnormality will develop anal cancer each year. That means that over a one year period 99% to 99.9% of men with HSIL will NOT develop anal cancer.	You will have an anal Pap test and HRA as scheduled at your next study visit. It is very important for this finding to be followed up.
Carcinoma	The presence of cancer in the cells of the anus.	The study doctor will refer you for full evaluation and treatment.

\*HSIL – AIN 2 means **moderate** changes in the anal cells (in size/shape/organisation)

HSIL – AIN 3 means **extensive** changes in the anal cells (in size/shape/organisation)

# EXPLANATION OF SOME MEDICAL WORDS

**Adenocarcinoma** – a very rare form of anal cancer (glandular).

**AIN 2** – moderate dysplasia, anal intraepithelial neoplasia type 2 on biopsy. This is a form of HSIL.

**AIN 3** – severe dysplasia, anal intraepithelial neoplasia type 3 on biopsy. This is a form of HSIL.

**ASIL** - Anal Squamous Intraepithelial Lesion is an overall term which includes LSIL and HSIL.

**ASC-H** – same as PHSIL

**ASCUS** – Atypical Squamous Cells of Undetermined Significance. This anal Pap smear results is exactly the same as PLSIL.

**Aceto-white staining** – during HRA, acetic acid dye is applied to identify abnormal areas. When an area turns white following the application of acetic acid it may suggest that there is an abnormality and biopsy may be indicated.

**Anoscopy** – the examination of the anus and skin surrounding the anus. A small tube (proctoscope) is inserted into the anus and special dyes are introduced. The doctor then looks inside to check for abnormalities using a high powered microscope.

**Atypia** – slight changes in the appearance of the cells of the anus.

**Biopsy** – removal of a small piece of the anus for examination. This is sent to the laboratory for diagnosis of anal diseases (if present).

**Cells** – microscopic building blocks of living organisms. The body is made up of millions of cells.

**Condyloma** – a form of visible wart which sticks out above the adjacent skin.

**Cytology** – a branch of biology dealing with cells. Cells can be analysed under a microscope to find out what they look like, where they came from, and how they form and function. The “PAP test” relies on cytology.

**Dysplasia** - a general term for the abnormal growth or development of cells or organs.

**Exophytic** – an abnormality which sticks out from the underlying skin. Warts are usually described as exophytic.

**Gardasil** – a vaccine which helps protect against the acquisition of HPV infection. It is of most benefit when given to young people before the onset of sexual activity.

**HSIL** – High-grade Squamous Intraepithelial Lesion, sometimes divided into AIN2 and AIN3. HSIL is not as common as LSIL and in the majority of people HSIL will either stay that way or go away by itself. Over time though, and it could be as long as several decades, some HSIL may progress to cancer. There are no data yet that tell us what makes some HSIL progress or go away and how long it takes. This is one of the main questions that SPANC is seeking to answer.

**Histology** - The science dealing with the microscopic identification of cells and tissue.

**HPV** – human papillomavirus. A group of more than 100 different types of viruses, including over 30 that are sexually transmitted and can infect the ano-genital area. Some of these viruses cause genital and anal warts or anal and cervical cancer. HPV is the main cause of LSIL and HSIL. Many men and women have multiple HPV types at one time. HPV lives only in skin cells (epithelium) and not other kinds of cells, so the only way to get it from another person is through skin-to-skin spread. That usually means contact between ano-genital skin and someone else’s ano-genital skin. Anal HPV infection is most commonly acquired through anal intercourse, but it can also be acquired from other genital areas that are infected. Fingers, toys, etc, can probably lead to anal HPV infection as well. While HPV is very common, most men with HPV will not develop anal cancer. There is no cure or treatment for HPV. It will, in most cases, be cleared up by your immune system. However the effects of the virus, such as warts, can be treated.

**High-risk HPV types** -There are a variety of "high-risk" or oncogenic (cancer-causing) HPV types that infect the anal canal. The most common of these is HPV type 16. Other common types include HPV18, HPV31, HPV33 and HPV35.

**HRA** - high resolution anoscopy is a procedure performed using a small tube (proctoscope) which is inserted into the anus. Special dyes are introduced and the doctor looks inside using a high powered microscope to check for anal abnormalities. It is sometimes

followed by biopsy of these abnormalities.

**Intraepithelial** – within the layer of cells that form the surface or lining of a part of the body.

**Intraepithelial lesions** – These abnormalities are lesions or growths that occur in the surface layer of the skin (the epithelial layer) in the anus and are described in two stages: Low-Grade Squamous Intraepithelial Lesions (LSIL) and High-Grade Squamous Intraepithelial Lesions (HSIL). They are differentiated by size, shape, color, texture, and risk of further progression to cancer. Together they are referred to as Anal Squamous Intraepithelial Lesions (ASIL). Other terms sometimes used include “dysplasia” or “intraepithelial neoplasms”.

**Intraepithelial neoplasia/neoplasms** – see **Intraepithelial lesions**.

**Lesion** – abnormal area.

**LSIL** – Low-grade Squamous Intraepithelial Lesions. Also known as mild dysplasia or AIN1, these changes include anal warts.

**Low-risk HPV types** - HPV types 6 and 11 cause genital warts. Since warts do not usually progress to cancer, HPV 6 and 11 are considered to be "low-risk of cancer" HPV types. They are also called "non-oncogenic" meaning non-cancer-causing.

**Lugol's Iodine** – during HRA, Lugol's iodine dye is applied to identify abnormal areas. When an area fails to take up iodine and remains pale yellow following the application of Lugol's iodine, it may suggest that there is an abnormality and biopsy may be indicated. Healthy tissue usually stains “mahogany brown”.

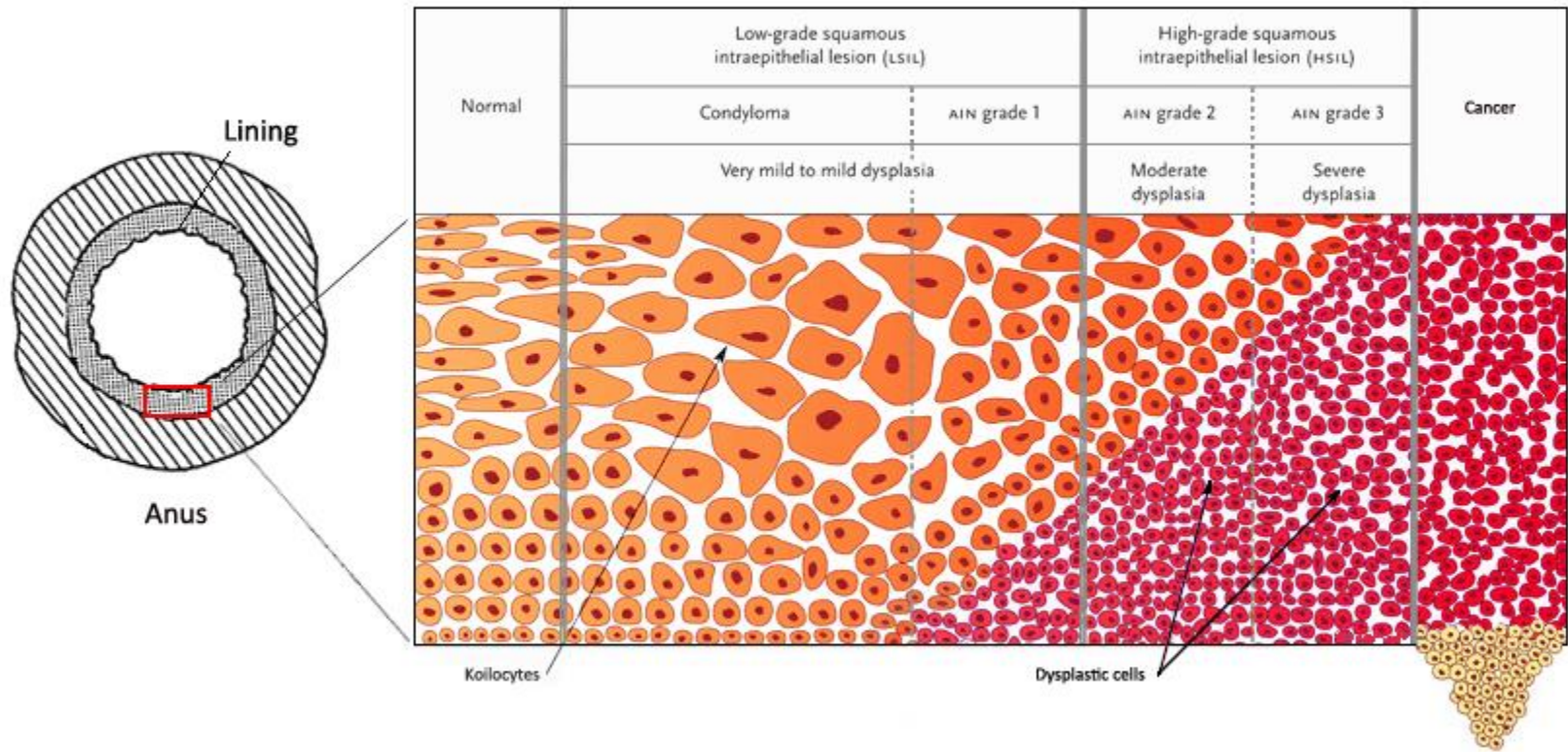
**Pap test** – this is a sample taken from the anus with a swab to see if abnormal cells are present.

**Perianal** – around the opening of the anus.

**Proctoscope** – an instrument inserted into the anus to allow inspection of the anal canal.

**Screening** – when a test is done on people without symptoms who are at risk of developing a certain disease. Screening tests predict the likelihood of someone having or developing a particular disease. The anal Pap test is being investigated as a screening procedure to look for changes that might lead to anal cancer.

**Squamous cells** – flat cells that look like scales or plates through a microscope. They make up the tissue that covers or lines the anus.



# LINKS

STIRC: [www.sydney.edu.au/medicine/stirc/specialist-services/ain/cancer.php](http://www.sydney.edu.au/medicine/stirc/specialist-services/ain/cancer.php)

UCSF ANAL CANCER info: <http://id.medicine.ucsf.edu/analcancerinfo/>

## TREATMENT OF HSIL

At present there is a lack of evidence to show that any treatment:

- 1) effectively resolves lesions, or
- 2) reduces the incidence of anal cancer.

In addition, there is not much data on the best method of treatment high-grade anal lesions, and there are a limited number of doctors with the necessary expertise to treat people with anal dysplasia.

Some doctors believe that high-grade anal lesions should be treated to prevent the progression of these lesions to cancer. A reason for this is that although most of these anal lesions won't progress to cancer, there is currently no way to determine which high-grade anal lesions are more likely to progress to become cancer. There are a number of different methods used to treat high-grade anal lesions, including surgery, infra-red coagulation, laser-based therapies and topical creams.

The risk factors for progression to invasive cancer are not known, and most individuals with high-grade anal lesions may undergo unnecessary treatment. There are potential side effects associated with high-grade anal lesion treatments. Other problems include the development of newly detected lesions in areas other than those under active treatment. The recurrence rate for treated lesions may also be high. This is why we are not currently offering specific treatment as part of the SPANC study. More research is needed to determine whether recurrent disease has the same risk of progression to anal cancer. Further information from large trials of different treatments is needed to show the effectiveness of treating high-grade anal lesions rather than carefully monitoring them with regular examination and HRA. One of the goals of the SPANC study is to determine who needs treatment and who does not need treatment.

**(References:** Palefsky et al Current Opinion Onc 2009, UCSF anal cancer information website, Macaya et al Cochrane Database of Systematic Reviews 2012)