

## High-grade Squamous lesions: HSIL and SCC

### Introduction

Identifying high-grade squamous lesions is the primary aim of cervical screening. A cytology report correctly predicting the presence of a high-grade squamous intraepithelial lesion (HSIL) allows identification and treatment of the lesion at colposcopy before invasion has occurred. Women who have invasive squamous cell carcinoma (SCC) identified cytologically are often detected at an earlier stage of disease than if investigation occurred after symptoms, with the potential to reduce both morbidity and mortality.

Assessing HSIL cytologically in clear-cut cases is relatively straight-forward. HSIL however occurs with a wide range of appearances both with respect to individual cells and in the ways that these present in a cytology sample. The assessment of SCC in cervical cytology is often difficult because the lesions are frequently inflamed, bleeding and ulcerated which compromises the quality of the cytologic material.

### Study recommendations

1. Read the following sections in ***The Bethesda Book for Reporting Cervical Cytology 2<sup>nd</sup> Edition*** (Ed: Diane Solomon and Ritu Nayyar).
  - Introduction to Squamous Epithelial Cell Abnormalities Pages 89-90
  - High-Grade Squamous Intraepithelial lesion (HSIL) Pages 98-114
  - Squamous Cell Carcinoma Pages 114-119
2. Read the **Cytological Morphology Notes on HSIL and SCC** provided by the NCPTS. These are notes for registrars at all levels of seniority and experience.
3. Access on-line (free) educational websites:
  - i. **Bethesda Web Atlas.**

Some of the images are conventional smears (as well as LBC), but are still useful to view.  
Google: *NCI Bethesda System Web Atlas*

    - Click on *Atlas Chapter*
    - Scroll down to HSIL and SCC under *No 5. Epithelial abnormalities*
    - Look through the *HSIL* images (40 images), *SCC* (10 images) and *Squamous Epithelial Abnormalities not specified in The Bethesda System* (15 images).
  - ii. **Eurocytology Atlas**  
[www.eurocytology.eu](http://www.eurocytology.eu)
    - Click on *English*
    - Click on *Training Package 1* (top menu strip)
    - Scroll down to Module 8 and click on *Course Content* (below photo)
    - Click on *CIN* and *SCC* to access notes and images
  - iii. International Academy of Cytology (IAC) educational resources  
[www.cytology-iac.org](http://www.cytology-iac.org)
    - Click on *Educational resources*
    - Click on *Virtual Slide Library*

- View cases 55,56 and 60 (ThinPrep)

4. **SurePath images** are available at the BD Surepath™ Training Centre (commercial company) website. To register, sign in and access training documentation, visit

[www.bd.com/anz/training/surepath/Logon.asp](http://www.bd.com/anz/training/surepath/Logon.asp) Once you have accessed the site,

- Click on *BD SurePath™ Web Atlas - Gynaecological Specimens*
- Scroll down to *High Grade SIL and Cancer*. Click to see the images.

5. **ThinPrep images** are available on the Hologic (commercial company) website. There is written information as well as images in the Study section of the website.

[www.cytologystuff.com](http://www.cytologystuff.com)

- Click on *Study*, then on *Study now*
- Scroll down to Section Four C: HSIL and to Section Four D: SCC

## Other references

### Books

1. The Art and Science of Cytopathology. Volume 1: Exfoliative Cytology. Richard M. DeMay 2<sup>nd</sup> Edition (2011) ASCP Press.
2. College of American Pathologists Practical Guide to Gynecologic Cytopathology. Morphology, Management and Molecular Methods. Ed; David Wilbur, Michael Henry 2008

### Journal references

1. Selvaggi S. Cytological Features of High-Grade Squamous Intraepithelial Lesions Involving Endocervical Glands on ThinPrep Cytology. *Diagn Cytopathol* 2002; **26**: 181–85.
2. Drijkoningen M, Meertens B, Lauweryns J. High Grade Squamous Intraepithelial Lesion (CIN 3) with Extension into the Endocervical Clefts. *Acta Cytol* 1996; **40**: 889–94.
3. Renshaw A *et al*. Hyperchromatic Crowded Groups in Cervical Cytology: Differing Appearances and Interpretations in Conventional and ThinPrep Preparations. *Arch Pathol Lab Med* 2006; **130**: 332–6.
4. Mount S, Harman M *et al*. False Positive Diagnosis in Conventional and Liquid-Based Cervical Specimens. *Acta Cytol* 2004; **48**: 363–71.
5. Qingzhu W, Jianghuan L *et al*. Morphological Features of Cell Blocks Prepared from Residual LiquiPREP Samples can Distinguish Between High Grade Squamous Intraepithelial Lesions and Squamous cell Carcinoma. *Acta Cytol* 2011; **55**: 245–50.