

# **Cervical Cytology Management Recommendations Explanatory Guide**

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## Introduction

CervicalCheck – The National Cervical Screening Programme provides free cervical smear tests to eligible women aged between 25 and 60 years. All Programme smear tests are reported using Bethesda terminology.

The purpose of this document is to explain the management recommendations provided by the laboratory, which are dependent on the clinical history of the woman.

## Terminology and Cytological Classification

The original Papanicolaou numerical classification has been reviewed and replaced by systems which use alternative terminology to provide a more meaningful result. Regional variations evolved describing the changes in different ways using different words. While this served to improve communication locally it was difficult to compare the results from different centres and it undermined quality assurance initiatives.

In Britain during the 1980s a new system of cytological classification was introduced as a result of a working party of the British Association of Cytologists in an attempt to improve the quality assurance of cytological diagnosis as well as the standardisation of colposcopy referral practices. This involved the categorisation according to the degree of nuclear abnormality (dyskaryosis).

In the US in 1991 the Bethesda classification was introduced which uses a terminology of squamous intraepithelial epithelial lesions (SIL). These are divided into:

- (i) **Low grade SIL (LSIL)** which includes HPV-associated cellular changes, mild dyskaryosis
- (ii) **High grade SIL (HSIL)** which includes moderate dyskaryosis, severe dyskaryosis, carcinoma in situ
- (iii) **Squamous cell carcinoma**

The rationale for grouping was based on the similarity of these two lesions, which makes them difficult to separate in a consistent and reliable fashion.

Cytological changes in squamous cells which are not normal and do not fulfil the criteria for SIL are classed as atypical squamous cells (ASC). In a review of Bethesda in 2001 this category was subdivided into:

- (i) **ASC-US** 'Atypical Squamous Cells of Undetermined Significance'
- (ii) **ASC-H** 'Atypical Squamous Cells of Undetermined Significance but high grade changes cannot be ruled out'.

The classification of glandular abnormalities was significantly revised in the 2001 Bethesda System, reflecting a reappraisal of the strengths and weaknesses of cytology in assessing these findings.

Glandular cell abnormalities are classified as 'atypical endocervical, endometrial, or glandular cells'.

In the majority of cases, morphological features permit differentiation between atypical endometrial and endocervical cells. The management of patients with glandular abnormalities may vary significantly depending on cell type and justifies making this distinction when possible. The term 'atypical epithelial cells' may be used for cases where a squamous vs glandular origin cannot be determined.

The detection of atypical glandular cells (AGC) is important clinically because the percentage of cases associated with underlying high grade disease is higher than for ASC-US. On follow-up, high grade lesions (either squamous or glandular) may be seen in 10 to 39 per cent of such cases.

'Endocervical adenocarcinoma in situ' is now a separate category. However, there is considerable morphological overlap between Adenocarcinoma in situ (AIS) and well-differentiated invasive endocervical adenocarcinoma; a percentage of cases interpreted as AIS will demonstrate invasion on histological evaluation.

This terminology has proven acceptable to cytologists and clinicians alike and has been rapidly adopted as the standard in many countries.

In Britain the BSCC terminology was reviewed and changes have been made which narrow the gaps between the two systems. These changes have included renewed definition of mild dyskaryosis to include koilocytotic change (similar to LSIL) as well as more recently reclassification of borderline nuclear abnormality to include a category of borderline query high grade (similar to ASC-H). These changes make it easier to make comparisons between countries in Europe while facilitating the rights of each country to adopt the system that suits individual screening programmes.

Historically in Ireland, the BSCC terminology has been the standard used. CervicalCheck – The National Cervical Screening Programme uses the Bethesda classification for the reporting of smear tests. As a result, medical practitioners must become familiar with the Bethesda classification.

Note: the term CIN (cervical intraepithelial neoplasia) is a histological term used to describe changes seen on cervical tissue samples.

## Detailed Management Recommendation Table

Result	Recommendation
Unsatisfactory/Inadequate	If this is the first unsatisfactory smear test or there has been no more than two unsatisfactory smear tests in a row – repeat after 3 months
	If this is the third consecutive unsatisfactory smear test – refer to colposcopy
	If this is the first smear test following a treatment for CIN – refer to colposcopy
	If indicated by the cytopathologist - refer to colposcopy <i>(A specialist gynaecological referral is optimal)</i>
	If the woman has had any three smear test results that are not normal in the previous 10 years and has not had a colposcopy – refer to colposcopy
Negative for Intraepithelial Lesion or Malignancy/No Abnormality Detected (NAD) – <b>(woman has either no screening history or negative screening history)</b>	<p><b>Routine recall</b></p> <p>If the woman is between 25 and 44 years – repeat in 3 years</p>
	<p><b>Routine recall</b></p> <p>If the woman is between 45 and 60 years – repeat in 5 years</p> <p>Regardless of age, women must have two negative/ NAD results at 3 yearly intervals before going onto a 5 year screening interval</p>

Result	Recommendation
Negative (NAD) for Intra Intraepithelial Lesion or Malignancy – <b>HIV+ patients/post transplant patients/renal dialysis patients/DES exposed patients</b>	Annual smear tests are required (from age 20)
Negative for Intra Intraepithelial Lesion or Malignancy/No Abnormality Detected (NAD) – <b>follow-up smear tests</b>	Following a result or treatment for ASC-US or LSIL – 3 negative smear tests are required at 6 monthly intervals before returning to routine recall
	Following a result or treatment for HSIL – 2 negative smear tests are required at 6 monthly intervals with annual negative smear tests for the subsequent 9 years before returning to routine recall
	Following treatment at colposcopy for AIS – 2 negative smear tests are required at 6 monthly intervals with annual negative smear tests for the subsequent 9 years before returning to routine recall
Negative for Intra Intraepithelial Lesion or Malignancy/No Abnormality Detected (NAD) – <b>follow-up post hysterectomy</b>	For women on routine recall for at least 10 years prior to hysterectomy and no CIN in the sample at hysterectomy, no vault cytology is required
	For women with less than 10 years routine recall and no CIN at hysterectomy, a sample should be taken from the vault 6 months after surgery and there should be no further cytology follow-up if it is negative (NAD)

Result	Recommendation
	<p>For women with completely excised CIN at hysterectomy, a sample should be taken from the vault at 6, 12 and 18 months after surgery and there should be no further cytology follow-up if all are negative (NAD)</p>
	<p>For women with incomplete or uncertain excision of CIN, follow-up should be conducted as if the cervix were still in situ</p>
<p>ASC-US – Atypical Squamous Cells of Undetermined Significance</p>	<p>If this is the first ASC-US smear test or if there has been no more than 2 consecutive smear tests showing ASC-US – repeat the smear test in 6 months</p>
	<p>If this is the third consecutive ASC-US smear test – refer to colposcopy</p>
	<p>If the woman has had any 3 smear test results that are not normal in the previous 10 years and has not had colposcopy – refer to colposcopy</p>
<p>ASC-US Follow-up</p>	<p>If the woman has had a previous smear test showing LSIL and this result is within the follow-up period – refer to colposcopy</p>
<p>ASC-US Follow-up Post Treatment</p>	<p>If this is the first smear test following a treatment for CIN – refer to colposcopy</p>
<p>LSIL – Low Grade Squamous Intraepithelial Lesion</p>	<p>If this is the first LSIL smear test – repeat the smear test in 6 months</p>

Result	Recommendation
	If this is the second consecutive LSIL smear test – refer to colposcopy
	If the woman has had any 3 smear test results that are not normal in the previous 10 years and has not had colposcopy – refer to colposcopy
LSIL – follow-up	If the woman has had a previous smear test showing ASC-US or LSIL and the woman has not returned to routine recall – refer to colposcopy
LSIL – follow-up post treatment	Refer to colposcopy if the woman has not been returned to routine recall
LSIL – Low Grade Squamous Intraepithelial Lesion – <b>HIV+ patients/post transplant patients/renal dialysis patients/DES exposed patients</b>	Refer to colposcopy
ASC-H Atypical Squamous Cells Cannot Exclude High Grade	Refer to colposcopy
HSIL – High Grade Squamous Intraepithelial Lesion	Refer to colposcopy
Query Squamous Cell Carcinoma	Refer to colposcopy
Suspicious Cervix	Refer to colposcopy (a specialist gynaecological referral is optimal)
AGC – Atypical Glandular Cells (borderline changes in glandular cells)	Refer to colposcopy
Query Glandular Neoplasia	Refer to colposcopy
Broken/Damaged/Expired Vial	Repeat in 3 months

## Reference list

- (1) Herbert A, Bergeron C, Wiener H, Schenck U, Klinkhamer P, Bulten J et al. European guidelines for quality assurance in cervical cancer screening: recommendations for cervical cytology terminology. *Cytopathology* 2007; 18(4):213-219.
- (2) NHSCSP Document 20: COLPOSCOPY AND PROGRAMME MANAGEMENT  
Guidelines for the NHS Cervical Screening Programme

# Cytology Terminology Translation Table

Office Use	Bethesda Terminology	BSCC Terminology 1986	Office Use	Management Recommendation	Rationale / Recommendation
P1	Unsatisfactory/Inadequate	Unsatisfactory/Inadequate	R6	3 month repeat	Repeat in 3 months
			R7	Refer to colposcopy	3 consecutive unsatisfactory/discretion of pathologist (gynae referral optimal) First smear test following a treatment in colposcopy Any 3 smear test results that are not normal in the previous 10 years
P2	Negative/NAD (No Abnormality Detected)	Negative/NAD	R1	Exit programme	No further screening required
			R2	3/5 year recall	Routine recall
			R3	12 month repeat	Second and subsequent smear tests following a result/treatment for HSIL/AGC/AIS If HIV+ /post organ transplant/DES exposed/renal dialysis
			R4	6 month repeat	Following a result/treatment for ASC-US or LSIL First smear test following a result/treatment for HSIL/AGC/AIS Following hysterectomy & Cervical Intraepithelial Neoplasia (CIN) is completely excised Less than 10 years routine recall and no CIN at hysterectomy If suspicious cervix, a gynaecology referral is optimal
P3	ASC-US (Atypical Squamous Cells of Undetermined Significance)	Borderline Nuclear Abnormalities (BNA) (Squamous)	R7	Refer to colposcopy	Refer to colposcopy
			R4	6 month repeat	First ASC-US or no more than 2 consecutive smear tests showing ASCUS
			R7	Refer to colposcopy	Third consecutive ASC-US smear test Previous LSIL (within 18 months)
					Any 3 smear test results that are not normal in the previous 10 years
					First smear test following a treatment for CIN
P4	ASC-H (cannot exclude High Grade)	BNA-H (cannot exclude High Grade)	R7	Refer to colposcopy	Refer to colposcopy
			R4	6 month repeat	First LSIL smear test
P5	LSIL (Low Grade Squamous Intraepithelial Lesion)	Mild Dyskaryosis	R7	Refer to colposcopy	Second consecutive LSIL smear test If previously attended colposcopy and not yet returned to routine recall If HIV+ /post organ transplant/DES exposed/renal dialysis
					Any 3 smear test results that are not normal in the previous 10 years
P6	HSIL (High Grade)	Moderate Dyskaryosis	R7	Refer to colposcopy	Refer to colposcopy
P7	Query Squamous Cell Carcinoma	Severe Dyskaryosis	R7	Refer to colposcopy	Refer to colposcopy
P8	AGC/AGH (Atypical Glandular Cells/AGH)	Borderline Nuclear Abnormalities (Glandular)	R7	Refer to colposcopy	Refer to colposcopy
P9	Query Glandular Neoplasia /AIS/Adenocarcinoma	Query Glandular Neoplasia /AIS/Adenocarcinoma	R7	Refer to colposcopy	Refer to colposcopy
P10	Broken/Damaged/Expired Vial	Broken or Damaged Vial	R6	3 month repeat	Repeat in 3 months

## Glossary

Atypical Squamous Cells of Undetermined Significance (ASC-US)  
Atypical Squamous Cells, Favour Neoplastic process (ASC-H)  
Atypical Glandular Cells (AGC)

Atypical Glandular Cells, Favour Neoplastic process (AGH)  
Adenocarcinoma In Situ (AIS)  
Borderline Nuclear Abnormalities High Grade (BNA-H)

Low Grade Squamous Intraepithelial Lesion (LSIL)  
High Grade Squamous Intraepithelial Lesion (HSIL)

The National Cancer Screening Service encompasses  
BreastCheck - The National Breast Screening Programme and  
CervicalCheck - The National Cervical Screening Programme