



# **Bethesda 2001 New Zealand Modified**

## **Codes, descriptors and assessment of sample adequacy for Cytology Laboratories**

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Ministry of Health  
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## Introduction

The classification system for reporting cervical cytology results has undergone several changes since the publication of the original Papanicolaou system. More recent changes are summarised below:

- **1988:** The Bethesda system was introduced following a workshop held in Bethesda, Maryland. Three principles were fundamental for the new reporting system:
  1. The terminology must communicate clinically relevant information from the laboratory to the patient's health-care provider.
  2. The terminology should be reasonably reproducible across different pathologists and laboratories, and also flexible enough to be adapted in a wide variety of laboratory settings and geographic locations.
  3. The terminology must reflect the most current understanding of cervical neoplasia.<sup>1</sup>
- **1991:** A second workshop was held in Bethesda, in order to address scientific advances and controversial areas
- **2001:** The most recent changes to the Bethesda system were introduced following an international workshop involving more than 400 participants, representing over 40 international organisations. In addition, a website was developed where 1000s of comments were posted relating to the review.

### Major changes include:

- Removal of 'satisfactory but limited' category when describing adequacy of the specimen
- Combining of 'within normal limits' and 'benign cellular changes' into a single category so reactive changes are more clearly described as negative
- 'Atypical glandular cells of undetermined significance' (AGUS) has been removed, to avoid confusion with ASCUS
- Replacement of atypical glandular cells of undetermined significance (AGUS) with 'atypical glandular cells' (AGC) with specification of cell types endocervical, endometrial, or not otherwise specified. Adenocarcinoma in situ (AIS) and endocervical adenocarcinoma are reported separately when identified
- Endometrial cells are now noted if the woman is 40 years of age or older, regardless of the date of the last menstrual period (see below)

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<sup>1</sup> The Bethesda System for Reporting Cervical Cytology: Definitions, Criteria, and Explanatory Notes. Second Edition. 2003

## **Endometrial Cells**

Exfoliated endometrial cells are commonly seen in smears obtained during the proliferative phase of the menstrual cycle. Occasionally cytologically benign appearing endometrial cells in smears of women over the age of 40 years can be associated with the presence of endometrial adenocarcinoma. Currently policies on reporting these endometrial cells varies widely across New Zealand. As an individual woman's risk for endometrial carcinoma, clinical symptoms, menstrual history, hormone therapy and menopausal status are often unknown to the laboratory, **Bethesda 2001 reports the presence of exfoliated endometrial cells in all women 40 year or older**. This will be accompanied by a clinical note such as

"The presence of endometrial cells in a women over 40 years of age can be a normal finding, seen in association with hormone replacement therapy or rarely associated with endometrial pathology including hyperplasia or neoplasia. Please correlate this finding with any symptomatology of uterine pathology, for example abnormal uterine bleeding and refer/investigate accordingly"

## **The Bethesda System (TBS) 2001 (the new codes) (pages 4 - 8)**

The headings codes and descriptors have been agreed as a national standard for reporting by the sector working groups. The heading and descriptor text should not be altered. Laboratories are able to use their own free text comments to convey additional information to smear takers. Free text comments will not be collected by the NCSP-R.

**Bethesda 2001 (NZ Modified) codes for Cytology Laboratories  
Commences 1 July 2005**

<b>Specimen types</b>		<b>Register Codes</b>
<ul style="list-style-type: none"> <li>• Specimen type is mandatory</li> <li>• Only <i>one</i> specimen type is allowed</li> </ul>		
<b>New Code</b>	<b>Descriptor</b>	
CPS	Conventional pap smear	P
LBC	Liquid based cytology	L
COM	Combined (conventional and liquid based)	O

<b>Specimen site</b>	
<ul style="list-style-type: none"> <li>• Specimen site is mandatory</li> </ul>	
<b>Code</b>	<b>Descriptor</b>
T	Vault
R	Cervical
V	Vaginal

<b>Adequacy</b>				
<ul style="list-style-type: none"> <li>• Adequacy code is mandatory</li> <li>• Either <i>one</i> S code <b>or</b> a <i>maximum of two</i> U codes are allowed</li> <li>• Only O1-O5 interpretation codes are allowed with U codes</li> </ul>				
Old code		New TBS2001 Full New Descriptor code	Default Recall	Default Letter Category
A1	→	S1 The specimen is satisfactory for evaluation (optional free text)	3 years	503
A2G	→	S2 The specimen is satisfactory for evaluation (optional free text). No endocervical/transformation zone component present	3 years	503
A3A	→	UA The specimen is unsatisfactory for evaluation because of insufficient squamous cells	3 months	9003
A3B	→	UB The specimen is unsatisfactory for evaluation because of poor fixation/preservation	3 months	9003
A3C	→	UC The specimen is unsatisfactory for evaluation because foreign material obscures the cells	3 months	9003
A3D	→	UD The specimen is unsatisfactory for evaluation because inflammation obscures the cells	3 months	9003
A3E	→	UE The specimen is unsatisfactory for evaluation because blood obscures the cells	3 months	9003
A3F	→	UF The specimen is unsatisfactory for evaluation because of cytolysis/autolysis	3 months	9003
A3I	→	UG The specimen is unsatisfactory for evaluation because ... (free text)	3 months	9003

Deriving General "G" codes	
Interpretation	Derived General "G" codes
Unsatisfactory	No G code
Negative – no "I" code - infection - reactive	G1 G1 + "O" code G1 + "OT" code
Abnormal - except AC5	G2
Abnormal AC5	G3
"O" codes may be used with "U" codes = no "G" code "O" and "OT" codes may be used with abnormal codes = "G2" or "G3"	

**General** (previously "category")

- General code is mandatory (except when unsatisfactory)
- Only *one* General code is allowed
- G codes will be accompanied by either S1 or S2 code
- Abnormal interpretation codes must be accompanied by either G2 or G3
- G1 does not require an interpretation code but may be associated with O1-O5 codes and OT1-OT3 codes

Old Code		New TBS2001 code	Full New Descriptor	Grade	Default Letter Category
B1	→	G1	Negative for intraepithelial lesion or malignancy	N	503 with no other interpretation
B2A2	→	G2	Epithelial cell abnormality: See interpretation/result	ABN	Refer interpretation
	New	G3	Other: See interpretation/result	ABN	Refer interpretation

**Interpretation** (previously "diagnosis")

- A maximum of *five* interpretation codes are allowed
- G2 code is mandatory with any of the following: ASL,ASH,LS,HS1,HS2,SC,AG1-AG5,AC1-AC4
- G3 code is mandatory with AC5
- Only O1-O5 codes are allowed with an unsatisfactory (UA-UG) report
- OT2 may be accompanied with a qualifying clause for smear takers (\*see below)
- A combination of LS and ASH may be used to replace the old code C3A2B7

Old code		TBS2001 code	Full New Descriptor	Grade	Default Recall	Default Letter Category
C1C1	→	O1	There are organisms consistent with Trichomonas vaginalis	N	3 years	4003
C1A1	→	O2	There are fungal organisms morphologically consistent with Candida species	N	3 years	4003
C1B1	→	O3	There is a shift in microbiological flora suggestive of bacterial vaginosis	N	3 years	4003
C1B2	→	O4	There are bacteria morphologically consistent with Actinomyces species	N	3 years	4003
C1D2	→	O5	There are cellular changes consistent with Herpes simplex virus	N	3 years	4003

Old code		TBS2001 code	Full New Descriptor	Grade	Default Recall	Default Letter Category
C2A1 (C2A1A) C2B1A (C2B1B) C2B2 (C2B2A) C2B4	→	OT1	There are reactive cellular changes present (optional free text)	N	3 years	4253
C3B1 C3B1A C3B1B C3B1C	→	OT2	There are endometrial cells present in a woman over the age of 40 years	N	3 years	503
C2A4 (C2A4A)	→	OT3	There are atrophic cellular changes present	N	3 Years	4253
C3A1 C3A1A C3A1B C3A1C C3A1D C3A1F	→	ASL	There are atypical squamous cells of undetermined significance (ASC-US) present	LG	6 months	6003
C3A1E	→	ASH	There are atypical squamous cells present. A high grade squamous intraepithelial lesion cannot be excluded (ASC-H)	HG	3 months	8003
C3A2A C3A2A1 C3A2A2 C3A2A3	→	LS	There are abnormal squamous cells consistent with a low grade squamous intraepithelial lesion (LSIL; CIN1/HPV)	LG	6 months	6003
C3A2B C3A2B1 C3A2B2 C3A2B3 C3A2B4 C3A2B5 C3A2B6	→	HS1	There are abnormal squamous cells consistent with a high grade squamous intraepithelial lesion (HSIL). The features are consistent with CINII or CINIII	HG	3 months	8003
	New	HS2	There are abnormal squamous cells consistent with a high grade squamous intraepithelial lesion (HSIL) with features suspicious for invasion	HG	3 months	8503

Old code		TBS2001 code	Full New Descriptor	Grade	Default Recall	Default Letter Category
C3A3	→	SC	There are abnormal squamous cells showing changes consistent with squamous cell carcinoma	HG	3 months	8503
C3B2B C3B2B1	→	AG1	There are atypical endocervical cells present	LG	6 months	6003
C3B2A C3B2A1	→	AG2	There are atypical endometrial cells present	HG	3 months	8003
C3B2 C3B2C C3B2E	→	AG3	There are atypical glandular cells present	LG	6 months	6003
C3B2B2	→	AG4	There are atypical endocervical cells favouring a neoplastic process	HG	3 months	8003
C3B2D	→	AG5	There are atypical glandular cells favouring a neoplastic process	HG	3 months	8003
C3B3D C3B3E C3B3F	→	AIS	There are abnormal endocervical cells consistent with adenocarcinoma in-situ (AIS)	HG	3 months	8003
C3B3A	→	AC1	There are abnormal glandular cells consistent with endocervical adenocarcinoma	HG	3 months	8503
C3B3B	→	AC2	There are abnormal glandular cells consistent with endometrial adenocarcinoma	HG	3 months	8503
C3B3C	→	AC3	There are abnormal glandular cells consistent with extrauterine adenocarcinoma	HG	3 months	8503
C3B3	→	AC4	There are abnormal glandular cells consistent with adenocarcinoma	HG	3 months	8503
C3C C4	→	AC5	There are abnormal cells consistent with a malignant neoplasm	HG	3 months	8503

\*Suggested clinical qualifying clause that may accompany OT2 (endometrial cells in women over 40 years):

*"The presence of endometrial cells in a woman over the age of 40 years can be a normal finding, or seen in association with hormone replacement therapy, or rarely, associated with endometrial pathology including hyperplasia or neoplasia. Please correlate this finding with any symptomatology of uterine pathology, for example abnormal uterine bleeding and refer/investigate accordingly."*

<b>Recommendations - repeats, follow up, management</b>					
<ul style="list-style-type: none"> <li>• Recommendation code is mandatory</li> <li>• There is no change to the policy of determining recommendation codes</li> <li>• R12 (oestrogen treatment) must be accompanied by interpretation code OT3 (atrophic changes)</li> <li>• R10 is used with HS2,SC,AC1-AC5</li> <li>• R14 is a new code and may be used with any report except HS2,SC,AC1-AC5 and when there is a clinical suspicion of invasive cancer indicated on the requisition form</li> </ul>					
Old code		TBS2001 code	New Full Descriptor	Default Recall	Default Letter Category
B2B0	→	R1	The next smear should be taken at the usual screening interval	3 years	503
B2B1	→	R2	Please repeat the smear within 3 months	3 months	
B2B4	→	R3	Please repeat the smear within 3 months of the end of pregnancy	1 year	
B2B5	→	R4	Please repeat the smear in 3 months	3 months	
B2B6	→	R5	Please repeat the smear in 6 months	6 months	
B2B7	→	R6	Please repeat the smear in 12 months	1 year	
B2B7A	→	R7	Because a previous smear showed atypical squamous cells or low grade changes, please repeat the smear in 12 months	1 year	
B2B7H	→	R8	Annual smears are indicated because of previous high grade abnormality	1 year	
B2B8 B2B8A	→	R9	Referral for specialist assessment is indicated	3 months	
B2B8B	→	R10	Urgent referral for specialist assessment is indicated	3 months	
B2B8D	→	R11	Further assessment is recommended	3 months	
B2B9	→	R12	Please repeat the smear shortly after a course of oestrogen treatment	6 months	0
B2B8C B2B13	→	R13	Under specialist care	3 months	0
	New	R14	In view of the abnormal clinical history provided, urgent referral for assessment is recommended regardless of cytological findings	3 months	8703 (new)

**Notes:**

1. ASH, AG2, AG4, AG5 are treated as high grade and should be accompanied by referral code R9.
2. Women who have three negative results over a 2.5 year period following a low grade smear (ASL, LS, AG1, AG3) with or without treatment will return to 3 yearly screening (R1).
3. Women who have a LG smear three or more years after a prior LG smear may be regarded as a new event with a 6 month repeat (R5).
4. Satisfactory smears (S1, S2) with a negative G1 result and previous normal history and no suspicious clinical symptoms have normal screening interval (R1). Exceptions are if first smear (known to register), or no smear for at least 5 years, then 12 months repeat (R6).