Section 5: Colposcopy and treatment

Colposcopy

The aim of diagnostic colposcopy after an abnormal cervical screening test is to assess the nature, severity, and extent of the abnormality. To do so, it is necessary to visualise the cervix and external os and identify the squamocolumnar junction (SCJ), exclude invasive disease, map and type the transformation zone (TZ), identify any visible abnormalities, and target the most abnormal area(s) for biopsy.

Systematic examination of the whole lower genital tract and accurate, concise recording of the findings are required to produce the highest sensitivity and best positive predictive value (PPV) for diagnosing high grade abnormalities. This approach is also essential in determining if treatment is required, and for planning the most appropriate mode, timing, and extent of therapy.

History, examination, and investigation

Best practice is supported by history taking at the time of colposcopy, which should be relevant, concise, and accurately recorded in the participant's clinical record. Please refer to the colposcopy standards for guidance of documentation standards.

Colposcopic examination of the cervix and vagina

The colposcopist should perform a systematic examination of the lower genital tract, including the cervix, vagina, vulva, perineum, and perianal area.

Macroscopic examination

After visual inspection of the vulva, perineum, and perianal skin, the colposcopist should identify the cervix using a bivalve speculum and observe it with the naked eye and then with the colposcope. The vagina can be inspected through the entire length on slow removal of a partially open speculum following colposcopic examination.

Colposcopic examination

The cervix should be examined under low-power magnification before applying acetic acid to:

- Exclude clinically invasive disease
- Note the presence of inflammation, infection, or atrophy.

Dilute acetic acid (3-5%) is applied to the cervix, allowing for identification of the squamocolumnar junction, typing of the TZ and to determine the extent and degree of any abnormality.

When the LBC report predicts a high grade squamous abnormality and no cervical lesion is colposcopically visible, careful colposcopic examination of the vagina should be performed to exclude VAIN, using Lugol's Iodine.

Anus and anal canal

Participants who are diagnosed with cervical dysplasia or who are immune deficient are at increased risk of anal intraepithelial neoplasia (AIN) and anal cancer. Anoscopy, along with its findings and subsequent management, is outside the scope of this document. It is usually practiced by specially trained colposcopists, sexual health physicians, or colorectal surgeons.

RECOMMENDATIONS – COLPOSCOPIC EXAMINATION OF THE CERVIX AND VAGINA	
R5.01 Referral to colposcopy and support	**Practice point** Ask all participants/whānau whether they require assistance or support to attend their colposcopy appointment. Consider transport, cultural support and where appropriate, offer referral to Support to Screening Services.
R5.02 Topical estrogen prior to colposcopy	**Practice point** A short course of vaginal estrogen therapy is recommended in post-menopausal women. It may also be useful for participants with vaginal atrophy associated with progestogen contraception or people using testosterone therapy. The recommended course of vaginal estrogen treatment is nightly for 3 weeks and should be stopped 2 nights prior to the colposcopy appointment. The reason for use of vaginal estrogen should be explained (to reduce discomfort from the speculum and to improve the diagnostic accuracy of colposcopy and any associated cytology and/or biopsy).

R5.03 Use of acetic acid and iodine at colposcopy	**Practice point** Acetic acid should be applied for enough time for aceto-white changes to become apparent, usually 1½ to two minutes. This is especially important when the lesion is low grade as aceto-white areas may take more time to become visible. It is recommended that Lugol's Iodine be used if no obvious lesion is found with the application of acetic acid.
R5.04 Colposcopy and vaginal intraepithelial neoplasia (VAIN)	**Practice point** When the cytology report predicts a squamous abnormality and no cervical lesion is colposcopically visible, careful colposcopic examination of the vagina should be performed to exclude VAIN, using Lugol's Iodine.
R5.05 Performing cytology at colposcopy	**Practice point** It is recommended cytology is performed at colposcopy in the following situations: • The participant has been referred with a vaginal swab HPV test result and no cytology was collected prior to the colposcopy visit • There has been a delay in attending for colposcopy for longer than three months since the referral cytology test was taken • The referral cytology was unsatisfactory • Estrogen treatment has been given prior to colposcopy.
R5.06 Repeat HPV testing at time of colposcopy	**Practice point** It is not necessary to routinely repeat HPV testing at the time of colposcopy following a referral with a HPV detected (any type) result. If participants are referred with HPV not detected and abnormal high grade cytology. A repeat HPV test is recommend at the time of colposcopy.

Biopsy

Colposcopically directed biopsies should be taken from the most abnormal areas of the cervix. Evidence indicates that taking more than one colposcopically directed biopsy improves the detection of high grade disease particularly when there are changes affecting more than one quadrant of the cervix. [1 2] Participants with a normal colposcopic appearances do not require a biopsy.

The aim of colposcopic assessment during pregnancy is to exclude invasive cancer. If there is suspicion of or evidence if invasive cancer a biopsy should be performed. Biopsies are not routinely required in pregnancy.

If a colposcopically directed biopsy is reported as inadequate for histological interpretation, it should be repeated if there is clinical concern of a colposcopic high grade lesion.

RECOMMENDATIONS – BIOPSY	
R5.07 Biopsy of low grade lesions	**Practice point** If there is a colposcopic impression of a low grade lesion it is usual practice to confirm the diagnosis by histologic biopsy.
R5.08 Biopsy of high grade lesions	**Practice point** A biopsy should be performed when there is colposcopic evidence of a high grade lesion.

Treatment

Participants should understand the indication for their treatment. Information about the procedure and potential complications should be explained and written consent obtained.

Most treatments can be completed under local anaesthetic as an outpatient procedure. Excisional treatment modalities are associated with obstetric complications and neonatal morbidity. The aim of treatment is to remove the smallest amount of cervical tissue necessary to completely excise disease in a single treatment.[3-5]

RECOMMENDATIONS – DECISION TO TREAT	
R5.09 Colposcopy prior to treatment	**Practice point** A colposcopy examination should always be performed prior to treatment.
R5.10 Histological confirmation before treatment	**Consensus-based recommendation** Treatment should be reserved for participants with histologically confirmed HSIL (CIN2/3) or AIS, except for participants requiring diagnostic excisional biopsy.
R5.11 Biopsy before ablative treatment	**Consensus-based recommendation** Participants must have a cervical biopsy before any ablative treatment.

R5.12 Referral to a more experienced colposcopist	**Practice point** In some clinical situations, the colposcopist should consider referral to a more experienced colposcopist, including for: • Suspected or histologically confirmed invasive disease • Adenocarcinoma in situ • Abnormalities in pregnancy • Participants with multifocal lower genital tract disease.

Treatment modalities

Treatment is achieved by complete excision of the abnormal TZ, by electrosurgery such as LLETZ or cold knife cone biopsy. LLETZ is the most commonly used treatment in Aotearoa New Zealand. Disposable loops are available in a wide variety of profiles and sizes. The loop size should be determined at the time of the treatment colposcopy to meet the width of the TZ and the planned type of excision. The treatment modality chosen by the clinician is dependent on the ability to adequately excise the cervical abnormality.

Excision

The amount of cervical tissue to be excised should be determined by the:

- Type of TZ
- Size and extent of the lesion
- Known or suspected final histology

The IFCPC 2011 nomenclature defines excision type in relationship to the type of TZ. The TZ type is classified according to the size, site and visibility of the transformation zone.[6] The IFCPC does not specify depth of excision but recommends any excision needs take into consideration the TZ type to ensure adequate excision. The National Health Service, England (NHS) Cervical Screening Programme[7] have developed the following recommendations regarding depth of excision and are widely accepted internationally:

Type 1 TZ

Excisional techniques should remove tissue to a depth/length of between 7 and 10mm in women of reproductive age.

Type 2 TZ

Excisional techniques should remove tissue to depth/length of 10mm to 15mm, depending on the position of the squamocolumnar junction within the endocervical canal.

Type 3 TZ

Excisional techniques should remove tissue to a depth/length of 15mm to 25mm. This treatment type should be used for participants with:

- Suspected invasive disease
- Proven or suspected glandular disease
- A type 3 TZ with proven or suspected high grade disease.

The specimen should be removed in one piece. Specimens in two or more pieces may create difficulties in histological assessment, particularly in the interpretation of margins, completeness of excision, and the evaluation of invasive disease. This practice is particularly important if the participant's cytology result is of Atypical Glandular Cells (AGC) or AIS, or where AIS is histologically confirmed.

In participants who have a very large ectocervical TZ, it may be necessary to remove the TZ in two pieces. It is important that the endocervical and stromal margins are suitable for pathological interpretation, that the specimens are accurately oriented and labelled, and that the whole lesion is removed. Note: The planned depth of excision should be recorded.

Ablative treatment

Ablative treatment is not routinely used in Aotearoa New Zealand but may be considered provided the following criteria are met:

- The lesion and TZ are completely visible
- A targeted biopsy has confirmed the diagnosis; and was taken within 3 months
- There is no major discrepancy between cytology and histology
- There is no evidence of an invasive cancer on cytology, colposcopic assessment or biopsy
- There is no evidence of a glandular lesion on cytology, biopsy or colposcopy

- There is no history of previous treatment

Only in exceptional circumstances should ablative treatment be considered for individuals over 50 years of age.

RECOMMENDATIONS – TREATMENT	
R5.13 Colposcopy at time of treatment	**Practice point** Excisional treatments should be performed under colposcopic vision, except for cold knife cone biopsy.
R5.14 Excision specimen quality and pathology	**Consensus-based recommendation** Excisional therapy should aim to remove the entire transformation zone: • With a predetermined length of cervical tissue (type 1, 2 or 3 excision) • In one piece, with minimal distortion or artefact to the final histological specimen. This last factor is critical for the management of suspected or histologically confirmed AIS.
R5.15 Loop excisional biopsy technique	**Practice point** Optimal practice is to make a single pass of the loop, side to side or posterior to anterior, to produce a specimen in one piece.
R5.16 Loop 'top-hat' excisions should be avoided	**Practice point** The 'top-hat' excision technique using a wire loop, in which a second piece of endocervical tissue is removed after the first excision, is more difficult to interpret histologically.
R5.17 Excision specimen quality and pathology, and very large ectocervical lesion	**Practice point** A very large ectocervical lesion may have to be removed in two pieces so that the entire lesion is removed. In this case, it is still important that the endocervical and stromal margins are suitable for pathological interpretation and that the specimens are accurately oriented and labelled.

See and treat

Most participants do not need to consider this option. It is recommended that participants should have an adequate colposcopic assessment and a colposcopically directed biopsy at the first visit. This will provide histological confirmation of the colposcopic impression and inform the need for definitive treatment that is usually performed later.

In some circumstances it may be appropriate to take a 'see and treat' approach. A participant may be suitable for see and treat if all of the following apply:

- They have been fully informed and are already prepared for possible treatment
- Their cytology and colposcopic appearance are concordant and hsil
- The lesion and TZ are completely visible
- A return visit after diagnostic biopsy may not be possible or may cause hardship for the participant
- Ideally it should be reserved for participants who have completed their family.
- There is an excisional specimen available for histological examination (ie, ablative therapy is not appropriate).
- There is no suspicion of invasion.
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RECOMMENDATION – SEE AND TREAT: HPV detected any type and negative, ASC-US or LSIL cytology	
R5.18 Do not treat at first visit with a negative, ASC-US or LSIL cytology report	**Practice point** Participants who have an HPV detected result and negative, ASC-US or LSIL cytology result should not be treated at the first visit.

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