Guidance

1. Introduction and programme policy

Updated 5 February 2020

1. Introduction

1.1 Aim of the NHS Cervical Screening Programme

The aim of the NHS Cervical Screening Programme (NHS CSP) is to reduce the incidence of and mortality from cervical cancer through a systematic, quality-assured population-based screening programme for people aged 24.5 to 64 who have a cervix.

Since its introduction, the screening programme has helped halve the number of cervical cancer cases, and research published in 2004 and 2016 estimates it saves thousands of lives per year in England. In 2018 to 2019 approximately 3.4 million individuals were screened in England.
The programme is continuously monitored to ensure adherence to the consolidated programme standards and other quality indicators.

The Clinical Professional Group for Colposcopy (colposcopy CPG) developed this guidance based on evidence where available or recommended best practice. The colposcopy CPG was established to provide professional clinical advice to the NHS Cervical Screening Programme (NHS CSP). Its members are leading professionals in colposcopy.

1.2 Primary HPV screening

Primary human papillomavirus (HPV) screening has been demonstrated within randomised controlled trials reported in 2009, 2014 and 2019 to be more sensitive than cytology to detect pre-invasive disease of the cervix. Improved sensitivity leads to a reduction in incidence of both adenocarcinomas and squamous carcinomas of the cervix compared to cytology screening alone. The improved sensitivity of high risk HPV (hrHPV) testing and its high negative predictive value also enables longer screening intervals for individuals with normal test results and is the optimum primary

screening test for vaccinated individuals. The lower specificity of hrHPV testing requires a reflex triage test to ensure colposcopy clinics are not over burdened with unnecessary referrals and individuals are not inconvenienced.
A national programme of primary HPV screening with triage by cytology results now operates following the evidence from the English primary implementation pilot report. The new pathways can be found in the flowcharts accompanying this guidance.

1.3 Cytology reporting

Further information regarding laboratory reporting and cytology terminology is available.

1.4 Future developments in cervical screening intervals following the implementation of primary HPV screening

The UK National Screening Committee (NSC) has recommended the extension of the screening intervals from 3 to 5 years for individuals aged 24.5 to 49 who test hrHPV negative as part of their routine screen test.

Once primary HPV screening has been fully implemented and embedded in the programme clinical pathways, IT developments will be progressed to enable this change. This guidance will be updated again once the extended screening intervals are implemented.

2. Screening programme policy

2.1 Routine screening intervals

The NHS CSP sends the first invitation for cervical screening when an individual reaches 24.5 years of age. Individuals are then recalled every 3 years until they turn 50, when the recall interval changes to every 5 years. This is based on evidence from an audit of screening histories in the UK. The intervals can be found in the programme call and recall guidance.

2.2 Individuals referred to colposcopy with an hrHPV positive and cytology negative result, either as a screening sample or as a test of cure sample following treatment for cervical intra-epithelial neoplasia (CIN)

Individuals with an adequate colposcopic examination who are negative on colposcopic opinion or biopsy are discharged to recall. The date for the next recall should be 3 years after their referral screening result. The colposcopy clinic is responsible for notifying the call and recall service with the due date for the next screen.

2.3 Age at starting screening

Individuals are invited for their first screening test at the age of 24.5 years. Individuals under this age who have symptoms, are concerned about their sexual health, or are worried about their risk of developing cervical cancer, should contact their GP or their local genito-urinary medicine (GUM) clinic.

Management algorithms are available for the management of individuals under 25 who have symptoms of cervical cancer.

2.4 Age at finishing screening

Routine screening ends when an individual attends for screening on or after the age of 60 and meets the criteria for automatic ceasing. This is because their next routine test would be due after their 65th birthday. Guidance is available on ceasing and deferring individuals from cervical screening.

Following the move to primary HPV screening, the UK NSC recommends implementation of 2 surveillance tests at 12-month intervals for individuals who are and remain hrHPV positive and cytology negative. People aged 65 and over who have had a previous abnormality, including those with an hrHPV positive result in the absence of abnormal cytology, remain in recall until they have completed follow-up tests. They will not be ceased automatically due to age while they remain eligible for non-routine screening.

2.5 Unscheduled screening

Unscheduled cervical screening does not form part of the cervical screening programme. Provided an individual has undergone screening within the recommended interval (depending on their age), they should not be re-screened.

Individuals with cervical symptoms, including persistent vaginal discharge that cannot be otherwise explained (for example an infection), should be referred in a timely manner for investigation.

2.6 Services offering NHS cervical screening

Cervical screening is mainly accessed via primary care. However it can also be accessed via locally commissioned contraceptive and sexual health services, extended access services, genito-urinary medicine clinics or, in limited circumstances, in colposcopy or gynaecology.

2.7 Screening tests taken outside the NHS screening programme

Non-NHS tests include those taken privately, overseas, by charities or by workplace health services. This may include tests reported by NHS laboratories which are providing reporting services under a private contract. Any test which was not taken or processed as part of a contract for NHS cervical screening services is considered a non-NHS test. Individuals having non-NHS tests remain eligible for NHS cervical screening at the recommended intervals.

2.8 Withdrawal from screening

Ceasing from colposcopy

Colposcopists are now able to cease individuals due to:

- prior radiotherapy to the pelvis
- absence of cervix

Voluntary withdrawal

Individuals may voluntarily withdraw from the cervical screening programme. Further details are in the programme ceasing guidance. Information for people wishing to opt out of NHS screening programmes is available on GOV.UK.

2.9 Summary of standards

Between the ages of 24.5 to 49, individuals are offered cervical screening every 3 years.

Between the ages of 50 and 64, individuals are offered cervical screening every 5 years.

Guidance

2. Management and referral guidelines for colposcopy

Updated 5 February 2020

1. Waiting times

1.1 Cancer waiting times: national policy

Referral times to colposcopy are governed by Improving Outcomes: A strategy for cancer and the 18 week pathway. Screening results that warrant referral to colposcopy and the relevant pathway are given below.

?invasion, high grade dyskaryosis (moderate and severe), ?glandular neoplasia, borderline changes in endocervical cells must be referred on a 2 week wait pathway. At least 93% of people referred with these results must be offered colposcopy within 2 weeks. Those found not to have cancer on colposcopic examination at the first visit transfer to the 18 week pathway for the remainder of their care.

Low grade dyskaryosis, borderline changes in squamous cells, persistent hrHPV positive cytology negative or persistent inadequate samples are referred in line with the 18 week pathway and programme standards. At least 99% of individuals must be offered a colposcopy appointment within 6 weeks of referral.

The NHS CSP standards are available on GOV.UK.

1.2 Faster diagnosis standard

The new Faster Diagnosis Standard ensures that all patients who are referred for the investigation of suspected cancer find out within 28 days if they do or do not have a cancer diagnosis. The NHS will introduce the standard in April 2020.

2. Standards for the cervical screening programme

2.1 Consolidated cervical screening programme standards

The consolidated cervical screening programme standards are a set of measures that providers must meet to ensure local screening services are safe and effective. The data reported against the standards can feature in reports to support commissioners and health professionals in providing a high-quality programme.

The standards ensure a consistent approach to cervical screening provision. The consolidated standards enable assessment of the screening process and help support continuous improvement. They focus on particular parts of the screening pathway and are meaningful at service provider levels.

There are other standards known as structural standards. Structural standards are not included in the consolidated standards. They describe the structure of the programme and must be fully met. They are a requirement of the screening programme and monitored through the Screening Quality Assurance Service (SQAS) and commissioning.

2.2 Quality indicators

The SQAS collects data to monitor the screening standards referred to above, along with other data to monitor the quality of services at clinic, organisation, regional and national level. SQAS data collection includes important clinical quality indicators outlined in this document. All colposcopy services must be able to provide accurate and validated data, at clinic or individual clinician level, as requested. The quality indicators outlined in this document are suitable for services to include as part of local audit.

3. Cervical screening reports

Colposcopy is a continuation of the screening process, providing further evidence about the nature of observed changes in the cervix. Colposcopists must therefore have access to an individual’s cervical screening test results, including any free text comments, at the time of

the examination. The screening pathway and colposcopy pathway are available in the flowcharts accompanying this guidance.

4. hrHPV tests and results

4.1 hrHPV tests available for use within the cervical screening programme

There are a number of hrHPV tests available in the UK. The cervical screening programme performs a comparative analysis of the CE-marked tests to assess their suitability for use within the programme. Details of hrHPV tests considered appropriate for use in the cervical screening programme are available.

4.2 Inadequate samples

Referral on the basis of consecutive inadequate samples

When the hrHPV test result is unavailable or cytology is inadequate at any screening episode in the pathway, the sample must be repeated in no less than 3 months. Individuals who have inadequate cytology at the 24 month repeat test are an exception and are referred to colposcopy. Individuals who have 2 consecutive HPV unavailable or inadequate cytology results, in any combination, are referred to colposcopy.

Individuals referred following 2 consecutive HPV unavailable or inadequate cytology results

Following a referral due to 2 consecutive screening tests reported as either HPV unavailable or cytology inadequate, individuals who have a normal and adequate colposcopy examination should be followed up in the community at 12 months.

If HPV testing is negative at 12 months, individuals are returned to routine recall. When colposcopy is inadequate, individuals should have a repeat screening test and colposcopy examination in 12 months. If the repeat colposcopy is normal and HPV negative, the individual is discharged to routine recall. If the colposcopy is abnormal, management is as set out in national protocols (see the accompanying screening and colposcopy pathways.

4.3 hrHPV Negative results

Samples that test negative for hrHPV are classified as ‘negative’. Individuals who receive a negative result can be safely returned to routine recall unless on:

- the test of cure (TOC) pathway
- the untreated CIN1 pathway
- follow-up for incompletely excised CGIN/SMILE or cervical cancer
- follow-up for borderline changes in endocervical cells

4.4 hrHPV positive results and negative cytology

Negative cytology

Individuals who are hrHPV positive and receive a negative cytology report as part of routine primary HPV screening should have the HPV test repeated at 12 months. If HPV testing is negative at 12 months, individuals can be safely returned to routine recall. Individuals who remain hrHPV positive, cytology negative at 12 months should have a repeat HPV test in a further 12 months. Individuals who become hrHPV negative at 24 months can be safely returned to routine recall.

As part of the TOC pathway, individuals who are hrHPV positive and receive a negative cytology report should be referred to colposcopy.

Referral on the basis of consecutive hrHPV positive samples as part of primary HPV screening

Individuals who remain hrHPV positive with cytology reported as borderline dyskaryosis or worse at 12 or 24 months should be referred to colposcopy.

Individuals who remain hrHPV positive, cytology negative or inadequate at 24 months should be referred to colposcopy.

Individuals who are hrHPV positive and non-cervical ?glandular neoplasia is detected require referral to gynaecology. Follow-up of the hrHPV result should be managed in the same way as those with hrHPV positive cytology negative results.

4.5 hrHPV positive results and abnormal cytology

All Individuals who are hrHPV positive and have abnormal cytology must be referred to colposcopy.

4.6 Benign endometrial cells in cervical samples

Benign endometrial cells are only reported in samples tested as hrHPV positive from individuals aged 45 or over. Management recommendations made by the programme are based only on the cervical abnormalities.

The significance of cytologically benign endometrial cells in cervical samples varies with the phase of the menstrual cycle, medication, clinical history and age of the individual. However, in a population-based cervical screening programme, some, if not most, of the information listed above is often unavailable. This should be reflected in the clinical management advice provided. For example, if the day of the menstrual cycle is not known and the sample is otherwise negative, it should be reported as negative, with a comment such as ‘Endometrial cells are present but menstrual history not stated. If there is any history of abnormal vaginal bleeding, referral for a gynaecological opinion should be considered.’

4.7 Abnormal cervix

Sample takers must make a suspected cancer pathway referral for individuals if, on examination, the appearance of the cervix is consistent with cervical cancer.

5. Individuals with symptoms

5.1 Management of individuals with symptoms

The cervical screening programme is a population-based screening programme, designed to reduce the incidence of, and mortality from,

cervical cancer by detecting disease at an early stage of its development (before symptoms appear). Individuals presenting with symptoms of cervical cancer (for example postcoital bleeding or persistent vaginal discharge that cannot be explained by infection or other causes) are not suitable candidates for screening.

If the common causes of these symptoms have been excluded in general practice (for example infection or contraception usage), the individual must be referred for examination by a gynaecologist experienced in the management of cervical disease (for example a cancer lead gynaecologist). Gynaecologists may refer such individuals on for symptomatic colposcopic examination outside the cervical screening programme if cancer is suspected.

Contact bleeding at the time of cervical sampling may occur, and is not an indication for referral to colposcopy in the absence of other symptoms.

Evidence for the precise predictive value of post-coital bleeding for cervical cancer is poor. The majority of cases of post-coital bleeding are not due to malignant disease, and in younger individuals chlamydial infection or problems with contraception are more likely causes.

Referral guidelines for individuals with symptoms or if the appearance of the cervix is suspicious

An individual must referred to colposcopy and should be seen within 2 weeks of referral (≥93% of cases) if the appearance of the cervix is suspicious or they have symptoms consistent with cervical cancer.

6. Treatment follow-up

6.1 Follow-up after treatment for cervical intraepithelial neoplasia (CIN) and test of cure

Individuals who have been treated for CIN are at increased risk of developing cervical cancer, but research published in 2016 and 2017 indicates they should be returned to community-based follow-up, irrespective of their excision margin status. A cervical sample should be taken 6 months after treatment. Following that sample:

- all individuals who are negative for hrHPV are recalled for a repeat cervical sample in 3 years
- all individuals who are positive for hrHPV must be referred to colposcopy; a reflex cytology sample will be processed to help inform colposcopy

6.2 Follow-up after treatment for cervical glandular intraepithelial neoplasia (CGIN) and test of cure

Individuals who undergo excision for CGIN are at risk of recurrence. If the CGIN has been completely excised at the time of first excision or subsequent re-excision, a test of cure (TOC) sample is taken 6 months after treatment. The location for follow-up TOC (colposcopy or primary care) should be decided at the multidisciplinary team (MDT) meeting. If negative for hrHPV a second TOC sample is taken 12 months later (18 months after treatment). If this is also negative for hrHPV the individual can be discharged or returned to recall in 3 years.

If at 6 or 18 months after treatment the TOC sample is positive for hrHPV, refer the individual to colposcopy. A reflex cytology sample is processed to help inform colposcopy.

If the individual fails TOC at 6 months only because of a positive hrHPV test (no abnormality detected at colposcopic examination), the individual should have a second TOC sample 12 months later. If this sample is negative for hrHPV the individual is discharged to recall in 3 years. Further recall will depend on the result of this test and the age of the individual.

If a positive cytology result is reported in either of the 6 or 18 months TOC samples, the individual must be referred to colposcopy and managed appropriately. If no colposcopic abnormality is present and re-excision is not appropriate, the individual reverts to follow up for 10 years of annual hrHPV testing.

Individuals who have incompletely excised CGIN and have declined re-excision should be followed up in the colposcopy clinic. hrHPV testing should be performed 6 months after treatment. If the result is negative, the test is repeated 6 months later (12 months

after treatment) and then annually for the subsequent 9 years.
All CGIN cases must be discussed at the colposcopy MDT.

Guidance

4. Colposcopic diagnosis, treatment and follow up

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1. Diagnostic standards for colposcopy

1.1 Availability of screening sample results

An individual's screening sample results must be available to the colposcopist before the colposcopic examination begins.

1.2 Repetition of cervical screening sample

Cervical screening sampling should not be repeated at the first colposcopy following a referral for cytological abnormality or high risk human papillomavirus (hrHPV) positive and cytology negative result. Where an initial cytology sample is inadequate, the repeat cytology sample should be taken no less than 3 months after the date of the first sample.

1.3 Colposcopic examination

As indicated in the revised criteria for colposcopic examination from the International Federation of Cervical Pathology and Colposcopy (IFCPC) nomenclature committee in 2011, data recording at the colposcopic examination must include:

- the indication for referral
- the hrHPV result and grade of cytological abnormality
- the presence or absence of a cervix
- whether the examination was adequate or inadequate (for the examination to be adequate the entire cervix and squamo-columnar junction must be seen)
- the presence or absence of vaginal and or endocervical extension
- the colposcopic features of any lesion

- the colposcopic impression of lesion grade
- the type of transformation zone (type 1, 2 or 3)
- the site of any colposcopically directed biopsies

1.4 Invasive disease

Care must be taken not to overlook invasive disease. Excision is recommended (>95%):

- when most of the ectocervix is replaced with high grade abnormality
- when low grade colposcopic change is associated with high grade dyskaryosis (severe) or worse
- when a lesion extends into the endocervical canal, sufficient cervical tissue should be excised to remove the entire endocervical lesion
- where cytology is suggestive of invasive disease or of ?glandular neoplasia

In the situations mentioned above, punch biopsies are not considered to be reliably informative. The colposcopist should be aware of the small risk of inappropriate or inadvertent destruction of invasive or glandular lesions. These are most often encountered in association with high grade cytological or colposcopic change (CIN3). There may be pressing reasons for delaying excision (pregnancy for example). Reasons for not performing a biopsy must always be recorded.

1.5 Accuracy of colposcopic diagnosis

Colposcopy offers an accurate way to diagnose cervical intraepithelial neoplasia (CIN) and to differentiate high grade lesions from low grade abnormalities. The positive predictive value (PPV) of a colposcopic diagnosis is dependent on the prevalence of the disease in the referred population. According to research published in 2015, 2018 and 2019, the highest prevalence is found in individuals referred with a high grade cytology result, the lowest in individuals referred with persistent hrHPV and negative cytology.

PPV is defined as the proportion of individuals with an adequate colposcopic examination and a colposcopic impression (CI) of a high grade lesion who have high grade CIN (including cervical glandular intraepithelial neoplasia (CGIN)) or worse confirmed by histological examination (directed biopsy or tissue excised at first visit (see and treat)).

The PPV should be at least 75% for a CI of a high grade lesion (CIN2 or worse) for individuals referred with high grade cytology, and at least 35% for all other referrals.

1.6 Colposcopically directed punch biopsy

Unless an excisional treatment is planned, biopsy should be carried out when the cytology is high grade, and always when a recognisably atypical transformation zone is present. For cases occurring in pregnancy see chapter 4 (Management of cases relating to pregnancy, contraception, menopause and hysterectomy).

hrHPV positive and negative cytology or low grade cytological abnormality (low grade dyskaryosis or less) and a low grade or negative colposcopic examination do not necessarily require colposcopic biopsy.

Adequacy of biopsies

Of all biopsies taken (directed and excisional) ≥90% should be suitable for histological interpretation.

If colposcopically directed biopsy is reported as inadequate for histological interpretation, it should be repeated if there is a residual colposcopic lesion (≥95%).

2. Treatment of CIN

2.1 Indications for treatment

When deciding on treatment (and especially if destructive methods are being considered), associated cytological and colposcopic findings are as important as the result of directed biopsy. All individuals needing treatment must have had colposcopic assessment, and treatment must take place in properly equipped and staffed clinics. All treatment must be recorded in the colposcopy database and patient notes.

2.2 Surgical techniques

There is no obviously superior conservative surgical technique for treating and eradicating CIN, however research

from 1991 and 2015 suggests that ablative techniques are only suitable when:

- the entire transformation zone is visualised
- there is no evidence of any glandular abnormality, including either ?glandular neoplasia or borderline changes in endocervical cells, on cytology
- there is no suspicion of any invasive disease
- there is no major discrepancy between cytology and histology
- there is no history of post-coital or intermenstrual bleeding
- there is no gland crypt involvement on punch biopsy
- there is no history of previous treatment

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

2.3 Local ablative techniques

All individuals must have an established histological diagnosis within 3 months of having ablative treatment.

2.4 Cryocautery

Cryocautery should only be used for low grade CIN. A double freeze-thaw-freeze technique must be used.

2.5 Excision

Removal of specimen

When excision is used, at least 80% of cases should have the specimen removed as a single sample. Removing the transformation zone in multiple fragments can increase the difficulties encountered in histopathological assessment. Furthermore, if microinvasive disease is present, it may be impossible to allocate a sub-stage or define completeness of excision in fragmented excisional specimens.

Histology report

The histology report should record the dimensions of the specimen and the status of the resection with regard to intraepithelial or invasive

disease. Cervical screening programme guidance for histopathology is available on GOV.UK.

Depth of excision

The goal of excision is to remove all the abnormal epithelium in accordance with the type of transformation zone.

Type I cervical transformation zone
For treating ectocervical lesions, excisional techniques should remove tissue to a depth of more than 7mm in ≥95% of cases, though the aim should be to remove <10mm in individuals of reproductive age

Type II cervical transformation zone
Excisional techniques should remove tissue to a depth of 10 to 15mm in ≥95% of cases, depending on the position of the squamocolumnar junction within the endocervical canal.

Type III cervical transformation zone
Excisional techniques should remove tissue to a depth of 15 to 25 mm in ≥95% of cases, depending on the position of the squamocolumnar junction within the endocervical canal.

For the management of individuals with CGIN, see section 3.2 below.

2.6 ‘See and treat’ policy

Clinics can offer treatment at first visit to colposcopy for a high grade referral.

Treatment at first visit to colposcopy for a referral of hrHPV positive and cytology negative, borderline squamous changes or low grade dyskaryosis should not be offered except where the abnormality is known to be long-standing.

It is inappropriate to adopt ‘see and treat’ if the proportion of specimens that do not show evidence of CIN is high. This is because many individuals would receive unnecessary treatment.

The proportion of individuals treated at the first visit who have evidence of CIN2, CIN3, or CGIN on histology must be ≥90%.

2.7 Treatment following diagnostic biopsy

Individuals with a diagnosis of high grade CIN must receive treatment promptly. The proportion of individuals offered definitive treatment for high grade CIN within 4 weeks of the colposcopy clinic receiving a diagnostic biopsy report should be ≥90%. The proportion of individuals treated within 4 weeks should be monitored and recorded. All individuals having definitive treatment for high grade CIN must be treated within 8 weeks with the exception of those who are pregnant.

2.8 Repeat excision

High grade CIN extending to margins

High grade CIN extending to the lateral or deep margins of excision (or uncertain margin status) results in a higher incidence of recurrence but does not justify routine repeat excision if:

- there is no evidence of glandular abnormality
- there is no evidence of invasive disease
- the individual is under 50 years of age

Individuals over the age of 50

All individuals over the age of 50 years who have CIN3 at the lateral or deep margins and in whom satisfactory screening samples and colposcopy cannot be guaranteed must have a repeat excision performed to try to obtain clear margins.

2.9 Local excision of microinvasive squamous cancer FIGO stage Ia1

Microinvasive squamous cancer International Federation of Gynaecology and Obstetrics (FIGO) stage Ia1 can be managed by local excisional techniques if:

- the deep and lateral excision margins are free of both CIN and invasive disease (re-excision is not required when only the ectocervical margin is involved with CIN)
- the gynaecological cancer centre pathologist and multidisciplinary team (MDT) have reviewed the histology

If the invasive lesion is excised but CIN extends only to the deep and lateral excision margin, then a repeat excision should be performed to

confirm complete excision of the CIN and to exclude further invasive disease.

2.10 Anaesthesia

Treatment should be performed with adequate pain control and should include pre-treatment counselling. Treatment should be offered with local analgesia. Where this is inappropriate, general anaesthesia should be offered. Reasons for treating under general anaesthesia should be recorded in the colposcopy record. The proportion of individuals managed as out-patients with local anaesthesia should be at least 85%, with an achievable target of 90%.

3. Management of glandular abnormalities

3.1 Cervical glandular intraepithelial abnormalities

Cervical screening with hrHPV can predict the presence of cervical glandular intraepithelial abnormalities.

3.2 Reporting of glandular abnormalities on cytology

Written reports

Report samples as ?glandular neoplasia of endocervical type if they show cytological features suggestive of cervical glandular intraepithelial neoplasia (CGIN) or endocervical adenocarcinoma.

Borderline changes in endocervical cell samples

Individuals who have a positive primary hrHPV test and subsequently have a borderline endocervical screening result should be referred to colposcopy and have appropriate assessment. At least 93% of referrals should be seen within 2 weeks.

Individuals referred with borderline changes in endocervical cells with a negative colposcopic examination should not be given a 3 year

recall but considered at MDT. They are likely to be followed up at 6 months with screening or in the colposcopy clinic. They will only be discharged to 3 year recall if the cytology is downgraded to negative at MDT.

?Glandular neoplasia of endocervical type

Refer patients to gynaecology for further investigation. At least 93% of should be seen within 2 weeks of referral.

?Glandular neoplasia (non-cervical)

Refer patients to gynaecology for further investigation. At least 93% of should be seen within 2 weeks of referral.

The role of colposcopically directed or punch biopsy in the management of ?glandular neoplasia and borderline changes in endocervical cells samples

Punch biopsy in the management of ?glandular neoplasia and borderline changes in endocervical cell samples is not appropriate. Investigate and diagnose CGIN/stratified mucin producing intraepithelial lesion of the cervix (SMILE) through colposcopy and histopathological assessment of an excisional biopsy (including the endocervical canal) in order to distinguish between CGIN and invasive adenocarcinoma.

Endometrial biopsy

Endometrial sampling is indicated in individuals referred to colposcopy with ?glandular neoplasia or not otherwise specified (NOS).

Endocervical curettage in the assessment of ?glandular neoplasia of endocervical type

There is no clear role for endocervical curettage in the assessment of ?glandular neoplasia of endocervical type therefore the programme does not recommend this.

3.3 Clinical management of cervical glandular intraepithelial neoplasia

Management of cytology reported as ?glandular neoplasia of endocervical type (CGIN)

For individuals with suspected CGIN or early invasive adenocarcinoma, the extent of the cervical excision should be tailored to each case. In younger individuals and or individuals who wish to conserve their fertility who have a colposcopically visible squamocolumnar junction (SCJ), a cylindrically-shaped cervical excisional biopsy including the whole transformation zone (TZ) and at least 10mm of endocervix above the SCJ is appropriate.

In older individuals (age 50 or over), or where the SCJ is not visible at colposcopy, a cylindrical biopsy should be taken that includes all of the visible TZ and 20mm to 25mm of the endocervical canal.

All cases of CGIN must be discussed at the colposcopy MDT meeting.

Management of confirmed CGIN

CGIN often occurs in young individuals. Excisional treatment is recommended for those wishing to retain fertility. Individuals can be managed conservatively if, following excisional treatment, the margins of the excisional specimen are negative and invasion is excluded. They should be counselled that the expected programme of management appears safe as long as follow up tests and appointments are attended.

Management of incompletely excised CGIN

If the margins of an initial excision are not free from CGIN, a further attempt at excision should be offered in order to confidently exclude invasion and obtain negative margins. For individuals who decline a repeat excision or if a repeat excision is not possible, primary hrHPV testing should be performed 6 months after treatment. If negative, it should be repeated 6 months later (12 months after treatment), and then annually for the subsequent 9 years.

The colposcopy MDT should help to guide any further management.

Follow up of treated CGIN

Individuals who undergo excision for CGIN are at risk of recurrence. If the CGIN has been completely excised at the time of first excision or

subsequent re-excision, a test of cure (TOC) sample should be taken 6 months after treatment. If negative for hrHPV a second TOC sample is taken 12 months later (18 months after treatment or the subsequent re-excision). If this is also negative for hrHPV the individual can be recalled for screening in 3 years. These samples can be performed in the community.

If at 6 or 18 months after treatment the test is positive for hrHPV the individual should be referred to colposcopy. A reflex cytology sample is processed to help inform colposcopy.

If an individual fails TOC at 6 months only because of a positive hrHPV test, cytology is negative or inadequate and no abnormality is detected at colposcopic examination, they should have a second TOC sample 12 months later. If this sample is hrHPV negative the individual can be discharged to recall in 3 years. Further recall will depend on the result of this test and the age of individual.

If a positive hrHPV test with abnormal cytology is reported in either of the 6 or 18 month TOC samples, the individual must be referred to colposcopy for management. If no colposcopic abnormality is present and re-excision is not appropriate, the individual should revert to 10 years of follow up with annual hrHPV testing.

3.4 Stratified mucin producing intraepithelial lesion of the cervix (SMILE)

SMILE is a histological entity usually found in conjunction with CIN and CGIN, but it can occur in the absence of these. The cytological appearance of SMILE is poorly understood. Individuals with SMILE should be managed according to guidance for CGIN.

3.5 Hysterectomy for cervical glandular neoplasia

Simple hysterectomy may be considered if:

- fertility is not required
- there are positive margins after an adequate excisional procedure

- treatment by excision is followed by further high grade cytological abnormality
- the patient is unwilling to undergo conservative management
- adequate screening follow up has not been possible, for example because of cervical stenosis
- the patient has other clinical indications for the procedure
- invasive disease has been confidently excluded

4. Follow up of individuals attending for colposcopy with CIN and early stage cervical cancer

4.1 Treated individuals

All individuals remain at risk following treatment and must be followed up 6 months after treatment according to screening guidance as given below. Treated individuals are between 2 and 5 times more likely than the general population to experience cervical cancer. Much of this increased risk may result from poor compliance with long term follow up. Patient compliance with follow up must be encouraged.

The proportion of histological treatment failures should not exceed 5% within 12 months of treatment.

4.2 Duration and frequency of follow up after treatment for CIN under the HPV test of cure protocol

Individuals who have been treated for CIN1, CIN2, or CIN3 should be invited 6 months after treatment for a test of cure repeat cervical sample in the community. The date for the next recall should be 6 months after their treatment. The colposcopy clinic is responsible for notifying the call and recall service with the due date for the next screen.

Patient compliance with follow up must be encouraged. The nature and timing of follow up depends on their screening result, that is:

- individuals with a sample that has been reported as hrHPV negative should be recalled in 3 years, whatever their age; where the 3 year test is negative, individuals can return to routine recall
- individuals with a sample that has been reported as positive for hrHPV should be referred to colposcopy; reflex cytology is performed as it helps to inform colposcopic examination
- individuals whose hrHPV result is unavailable should have repeat testing at 3 months
- individuals who reach the age of 65 must continue to be invited for follow up tests and or be referred for further investigations as necessary until they have completed all follow up protocols and satisfy the requirements for being ceased from the programme

4.3 Cervical sampling equipment for follow up testing

The Cervex brush is approved for use in the cervical screening programme. Sample takers may take an additional endocervical sample using an endocervical brush in limited circumstances, as described in Guidance for the training of cervical sample takers.

4.4 Management for individuals following treatment for early stage cervical cancer

The treatment of early invasive cervical cancer lies outside the responsibility of the NHS Cervical Screening Programme (NHS CSP). However the guidance below is provided for the sake of completeness and details the programme follow up recall requirements.

Follow up of stage Ia1

If conservative treatment for cervical cancer has been performed, leaving a residual cervix, follow up is recommended.
A TOC primary hrHPV sample should be taken 6 and 12 months after treatment, followed by annual sampling for the next 9 years before returning to routine recall (if still within the screening age range). The cervical screening programme continues to provide recall arrangements.

Follow up of stage Ia2/Ib1

If conservative management for Ia2/Ib1 disease was by simple or radical trachelectomy, follow up is determined by the management policy of the gynaecological oncologist.

If the individual has undergone total hysterectomy for early stage cervical cancer, follow up will be in accordance with local cancer network guidelines. The individual is ceased from the cervical screening programme. Individuals who receive pelvic radiotherapy either as primary or adjuvant treatment are also followed up according to local cancer network guidelines and ceased from cervical screening.

4.5 Follow up after simple hysterectomy

Vault sampling is not part of the routine screening programme. Individuals who have had a hysterectomy with CIN present are potentially at risk of developing vaginal intraepithelial neoplasia (VaIN) and invasive vaginal disease. There is no clear evidence that colposcopy increases the detection of disease on follow up. Responsibility for implementing follow up policies rests with the treating gynaecologist and will be informed by the local lead colposcopist.

The recommended follow up is that:

- for individuals on routine recall and with no CIN in their hysterectomy specimen, no further vaginal vault sample is required
- individuals who undergo hysterectomy and have completely excised CIN should have vaginal vault sample at 6 months following their hysterectomy; if they have a negative HPV result they can be discharged
- individuals who undergo hysterectomy and have completely excised CIN, and are hrHPV positive cytology negative at 6 months, should be referred to colposcopy; if there is no evidence of VaIN at colposcopy the individual can be discharged
- for individuals who undergo hysterectomy and have incompletely excised CIN (or uncertain excision), primary HPV screening follow up should be
    - CIN 1: vault sample at 6, 12 and 24 months

    - CIN 2/3: vault samples at 6 and 12 months followed by 9 annual vault samples
    - follow up for incompletely excised CIN continues to 65 years or until 10 years after surgery (whichever is later)
- any gynaecologist discharging a patient who requires further vault samples should ensure that the GP receives clear written guidance for follow up
- the clinician in charge (gynaecologist or GP) is responsible for failsafe mechanisms for this small group of individuals
- individuals who undergo subtotal hysterectomy still have their cervix in situ, and so must remain within the cervical screening programme

In addition, individuals who have radical trachelectomy as part of conservative management of cervical cancer should remain under the care and guidance of their treating gynaecologist or gynaecological oncologist. Follow up is recommended with colposcopy and hrHPV testing. Owing to the limited information on outcome however, all cases should be subject to local audit. These individuals are under the individual care of a gynaecologist and are no longer within the cervical screening programme. Therefore local commissioning arrangements need to be put in place.

4.6 Follow up of untreated individuals

Individuals referred with high grade dyskaryosis (moderate or severe)
Individuals referred with high grade dyskaryosis (moderate or severe) on their test result are at significant risk of CIN 2 or 3, even if colposcopy was normal. Biopsy should be undertaken in ≥95% of individuals with high grade dyskaryosis (moderate or severe) on their test result. If there is no CIN or low grade CIN on the biopsy these cases should be discussed at the MDT. If no treatment is carried out, close surveillance with colposcopy and cervical samples every 6 months is advised. If at follow up there is persistent high grade cytology, or CIN2 or CIN3 is present on biopsy, excisional treatment is recommended (≥90%). Conservative management of CIN2 is described below.

Individuals referred with high grade dyskaryosis on their test result who have a colposcopically low grade lesion, whose colposcopy is adequate and who are not treated, should have multiple biopsies (≥90%). If CIN 1 or less is confirmed, colposcopic and cervical sample follow up at 6 months is advised. If the repeat sample is negative for hrHPV they should have repeat testing at 36 months.

Cases with unexplained high grade dyskaryosis should be discussed at MDT meetings.

Individuals referred with low grade cytology

Individuals referred with low grade dyskaryosis or less and who have an adequate and normal colposcopic examination are at low risk of developing cervical cancer. These individuals are returned to community-based 3 year recall.

Individuals referred with a result of low grade dyskaryosis or less and who have a colposcopically low grade CIN1 or biopsy proven CIN1 should have a further screen at 12 months in the community.

Colposcopic biopsy at initial assessment is not essential to confirm or exclude low grade CIN.

4.7 Conservative management of CIN2

Individuals can be offered conservative management of CIN2 if:

- the colposcopic examination is adequate and has excluded CIN3 and an invasive lesion
- a CIN2 lesion occupies no more than 2 quadrants of the cervix
- CIN2 has been diagnosed on histology and reviewed at MDT to exclude an undercall or overcall
- they agree to regular 6 monthly follow up colposcopic examinations including repeat cervical sampling and repeat biopsy (if indicated by the presence of a more severe lesion (CIN3) on colposcopic examination)
- they understand the time period for resolution of CIN2 can be at least 24 months (as described in research published in 1993, 2017 and 2018

Treatment must be offered if the CIN2 has not resolved within 24 months.

All cases must be discussed by the MDT to ratify a decision for conservative management. Outcomes should be subject to regular local audit.

Guidance

5. Management of cases relating to pregnancy, menopause, contraception and hysterectomy

Updated 5 February 2020

1. Pregnant individuals

Cervical screening during pregnancy

If an individual has been called for routine screening and they are pregnant, the test should be deferred. An individual referred with an abnormal screening test should have colposcopy in late first or early second trimester unless there is a clinical contraindication.

If a previous colposcopy was abnormal and in the interim the individual becomes pregnant, then the colposcopy should not be delayed.

If a pregnant individual requires colposcopy or a screening sample after treatment (or follow up of untreated cervical intraepithelial neoplasia grade 1 (CIN1)), their assessment may be delayed until after delivery.

The colposcopist may wish to perform colposcopy only at a follow up appointment scheduled during pregnancy. If a repeat screening sample is due, and the individual has missed or defaulted their appointment prior to pregnancy, a screening sample or colposcopy during pregnancy can be considered.

Colposcopy during pregnancy

An individual who meets the criteria for colposcopy should be examined in the colposcopy clinic even if they are pregnant.

The primary aim of colposcopic examination of a pregnant individual is to exclude invasive disease and to defer biopsy or treatment until the individual has delivered.
Individuals seen in early pregnancy may require a further assessment in the late second trimester at the clinician's discretion. If excision for diagnostic purposes is clinically indicated it is feasible and acceptable to individuals. This is usually reserved for individuals with colposcopic high grade disease and concerns about cancer. If an individual declines treatment in early pregnancy they should be seen for postpartum colposcopy.

Colposcopy follow up after pregnancy

Clear follow up arrangements should be made for postpartum assessment of individuals whom have been referred with an abnormal screening test or suspicious looking cervix who have had an abnormal colposcopy.

Colposcopic evaluation of the pregnant individual

Colposcopic evaluation of a pregnant individual requires a high degree of experience.

If CIN1 or less is suspected, the individual should be managed as per the screening algorithm (see the accompanying screening and colposcopy pathways.
If CIN2 or CIN3 is suspected, repeat colposcopy at the end of the second trimester. If the pregnancy has already advanced beyond that point, repeat 3 months following delivery.
If invasive disease is suspected clinically or colposcopically, a biopsy adequate to make the diagnosis is essential. Studies published in 2013 and 2017 showed that that excisional treatments are safe in pregnancy in the first and second trimester.

All excisions are associated with a risk of haemorrhage and such biopsies should be taken only where appropriate facilities to deal with haemorrhage are available. Punch biopsy suggesting CIN only cannot reliably exclude invasion.

2. Use of contraceptives

2.1 Individuals with abnormal cervical screening results

Individuals with abnormal cervical screening results should not be advised to change from the oral contraceptive pill (OCP) if it is a successful method of contraception for them. An abnormal result should not influence the choice of contraception.

2.2 Individuals with an intra-uterine system (IUS)

Give individuals with an IUS clear information on the clinic's management policy about whether their IUS will be removed or not. They will need to know if they have to use alternative methods of contraception and if they have to schedule their treatment to coincide with the first half of their menstrual cycle. It is not necessary to remove an IUS to perform local treatment.

There is no evidence an IUS has any effect on hrHPV persistence or progression. If there is a need to remove the IUS, inform the individual prior to treatment and give appropriate advice about the need for additional contraception.

2.3 Use of condoms

Condom use may promote hrHPV clearance and CIN1 regression in conservative management, but this depends on their consistent use for at least 3 months.

3. Menopause and use of hormone replacement therapy (HRT)

3.1 Postmenopausal individuals

The incidence of hrHPV positivity and abnormal cytology is low in postmenopausal individuals with previous normal results. The use of systemic HRT is not known to alter the risk of cervical disease.

Colposcopic examination and adequacy can be improved by the use of topical HRT.

3.2 Postmenopausal bleeding

In an adequately screened individual, postmenopausal bleeding is not an indication to take a cervical screening sample. The investigation of abnormal bleeding after the menopause must include direct visual inspection of the cervix. A cervical sample is not an appropriate test for investigating postmenopausal bleeding.

All unexplained bleeding should be referred to a gynaecologist.

4. Hysterectomy

4.1 Individuals undergoing a hysterectomy for reasons other than cervical cancer

All patients in the cervical screening age range undergoing a hysterectomy for gynaecological reasons other than a diagnosis of cervical cancer should have a negative test result within the routine recall screening interval. Otherwise, a cervical sample should be taken as part of their preoperative investigations.

4.2 Individuals being considered for hysterectomy

All patients being considered for hysterectomy who have an abnormal test result or symptoms attributable to cervical cancer should have diagnostic colposcopy and an appropriate biopsy.

4.3 Hysterectomy as treatment for histologically proven CIN

Hysterectomy is a recognised treatment for histologically proven CIN if there are co-existing conditions appropriately treated by hysterectomy.

4.4 Hysterectomy as treatment for persistent abnormal endocervical cytology

Hysterectomy is an acceptable form of treatment in cases where abnormal endocervical cytology persists despite a prior excisional biopsy of adequate size. This is provided that all measures to exclude occult invasion have been applied.

4.5 Mapping vaginal abnormalities

Patients with CIN should have any abnormality on the vagina mapped by colposcopy or Lugol's iodine at the time of surgery to ensure that any coexisting VaIN is recognised and excised at the time of the hysterectomy.

4.6 Correlation of histology with cytology

The histology of the resected uterus should be correlated with prior cervical cytology as part of the quality assurance process.

4.7 Follow up after hysterectomy

After hysterectomy, follow up is advised as outlined in chapter 3.

Guidance

6. Screening and management of immunosuppressed individuals

Updated 5 February 2020

1. Definition of immunosuppression

This chapter includes guidance for the management of individuals on immune suppressing medication, transplant recipients of any organ, and all other forms of immunosuppression.

2. Management of immunosuppressed individuals

2.1 Individuals with renal failure requiring dialysis

All individuals eligible for screening but who have renal failure requiring dialysis (or any other disease with a high chance of needing organ transplantation) must have a cervical screening sample at or shortly after diagnosis if they are not already up to date with screening. Individuals with an abnormal result should be referred to colposcopy in accordance with the current pathway.

All individuals eligible for screening who are about to undergo organ transplantation should have had a cervical screening sample performed within the previous year. Co-existing cervical intraepithelial neoplasia (CIN) should be managed according to the information given in chapter 3.

2.2 Individuals taking maintenance immunosuppression medication post-transplantation

Individuals taking maintenance immunosuppression medication after transplantation who have no history of CIN should have cervical screening in accordance with the national guidelines for the general population. Any abnormal screening result should be managed as per the current pathway.

There should be effective education of both organ transplant recipients and their carers about the need to participate in the cervical screening programme, with the production of leaflets and other educational materials specifically for this group. A variety of immunosuppressant drugs increase the risk of contracting hrHPV (for example, drugs used following organ transplantation, or for treatment of autoimmune or neurological disorders). However they have no impact on the rate of progression through hrHPV and CIN to cervical cancer, which takes many years. The increased risk of contracting hrHPV however means it is important that people taking immunosuppression medication engage with cervical screening when invited.

2.3 Individuals with multifocal disease

The screening and management of an immunosuppressed individual is a complex area of assessment and management. This is especially true for those with multifocal disease. These individuals must be

managed in a centre with demonstrable skill and expertise, and sufficient access to patient numbers to maintain that expertise.

There must be a compromise between the increased risk of CIN and the additional psychological and physical trauma of assessment and treatment, with due consideration paid to the co-morbidity of the underlying disease process. These patients should be assessed by symptom enquiry, cervical screening sample (within the context of the cervical screening programme), colposcopy, vulvoscopy, and biopsy where indicated at least every 6 months.

Consideration should also be given to performing high resolution anoscopy if there are available resources. Anal screening is still being evaluated, but anal cytology is available in specialist settings.

2.4 Other individuals who are immunosuppressed

There is no indication for increased surveillance for individuals receiving:

- cytotoxic chemotherapy for non-genital cancers
- ioestrogen antagonists such as tamoxifen
- alemtuzumab
- cytotoxic drugs for rheumatological disorders or biologic agents for other disorders

These individuals should have cervical screening according to the national guidelines for the general population. If there is an indication for increased surveillance relating to the prescribing of long term biologic agents, local protocols should be developed as this indication for more intensive screening is outside cervical screening programme standard practice.

2.5 Individuals who have been exposed to diethylstilbestrol (DES)

Daughters of individuals exposed to DES are at increased risk of clear cell cancer of the cervix and vagina but not other forms of cervical cancer. There is estimated to be no more than 1 case per year in

England and Wales. Routine call and recall is appropriate. Local arrangements should be made for the follow up of individuals who are DES daughters and have the stigmata of DES exposure. This is usually via annual colposcopy. Requesting cytology even if individuals are hrHPV negative requires local service agreements. Management of any abnormal cytology is outside the programme. Granddaughters of those exposed to DES are not at any increased risk of cervical or vaginal cancer.

2.6 Individuals who are human immunodeficiency virus (HIV) positive

All individuals newly diagnosed with HIV should have cervical surveillance performed by, or in conjunction with, the medical team managing the HIV infection. Annual screening should be performed with an initial colposcopy if resources permit. Subsequent colposcopy for any screening abnormality should follow national guidelines. The age range screened should be the same as for HIV negative individuals.

Despite the higher cervical treatment failure rate, high grade CIN should be managed according to national guidelines. Lesions less severe than CIN2 should generally not be treated as these are likely to represent persistent hrHPV infection of the cervix which responds poorly to treatment and may clear spontaneously. Regular cytological surveillance will detect progression.

Research published in 2005, 2012 and 2013 advises close co-operation between colposcopists and medical teams managing individuals with HIV to ensure that individuals are not over treated if there is a possibility of enhancing immunocompetence (for example by raising CD4 counts following compliance with antiretroviral therapy).

Individuals who are HIV positive can cease cervical screening at age 65 if they fulfil the other general criteria for ceasing.