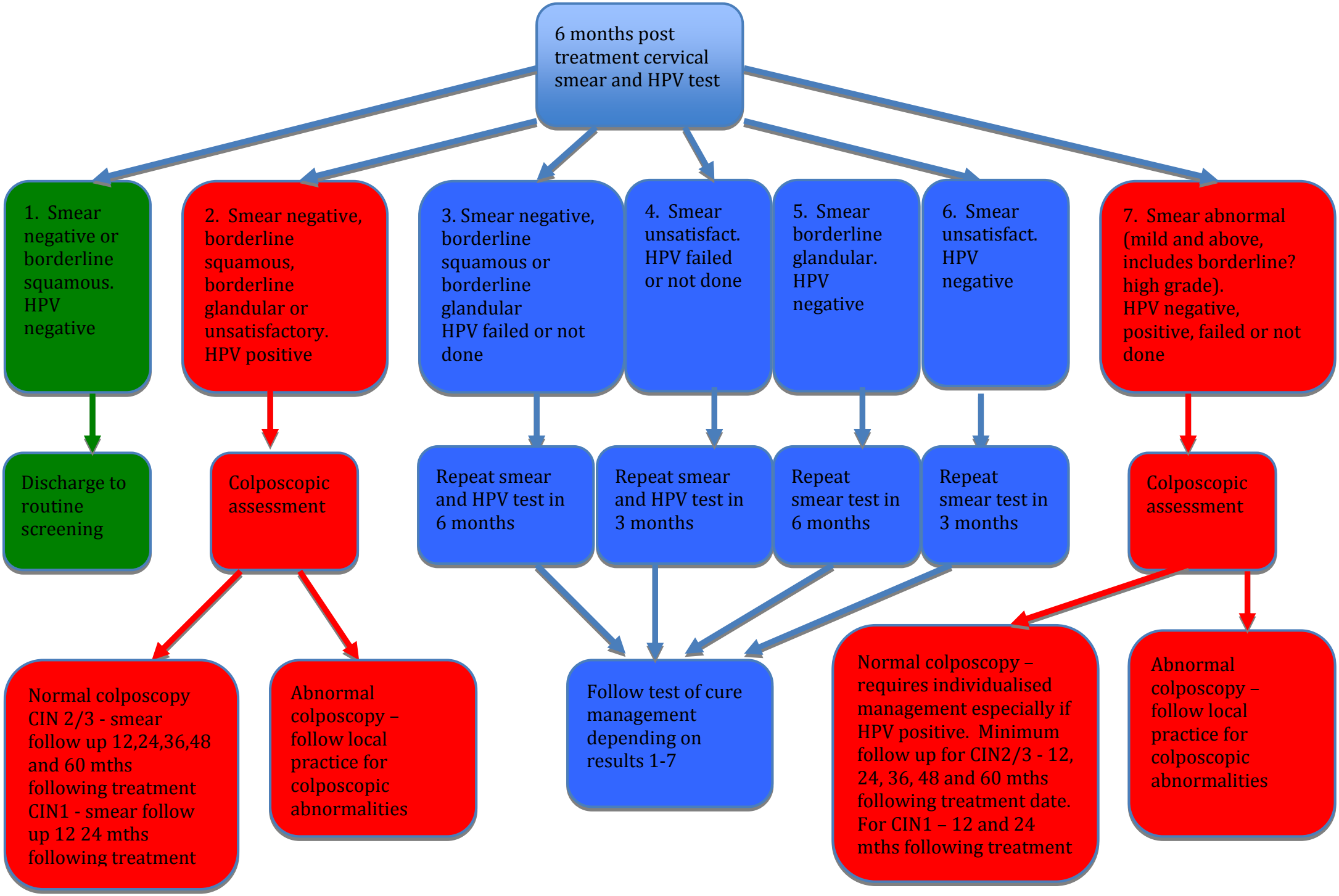
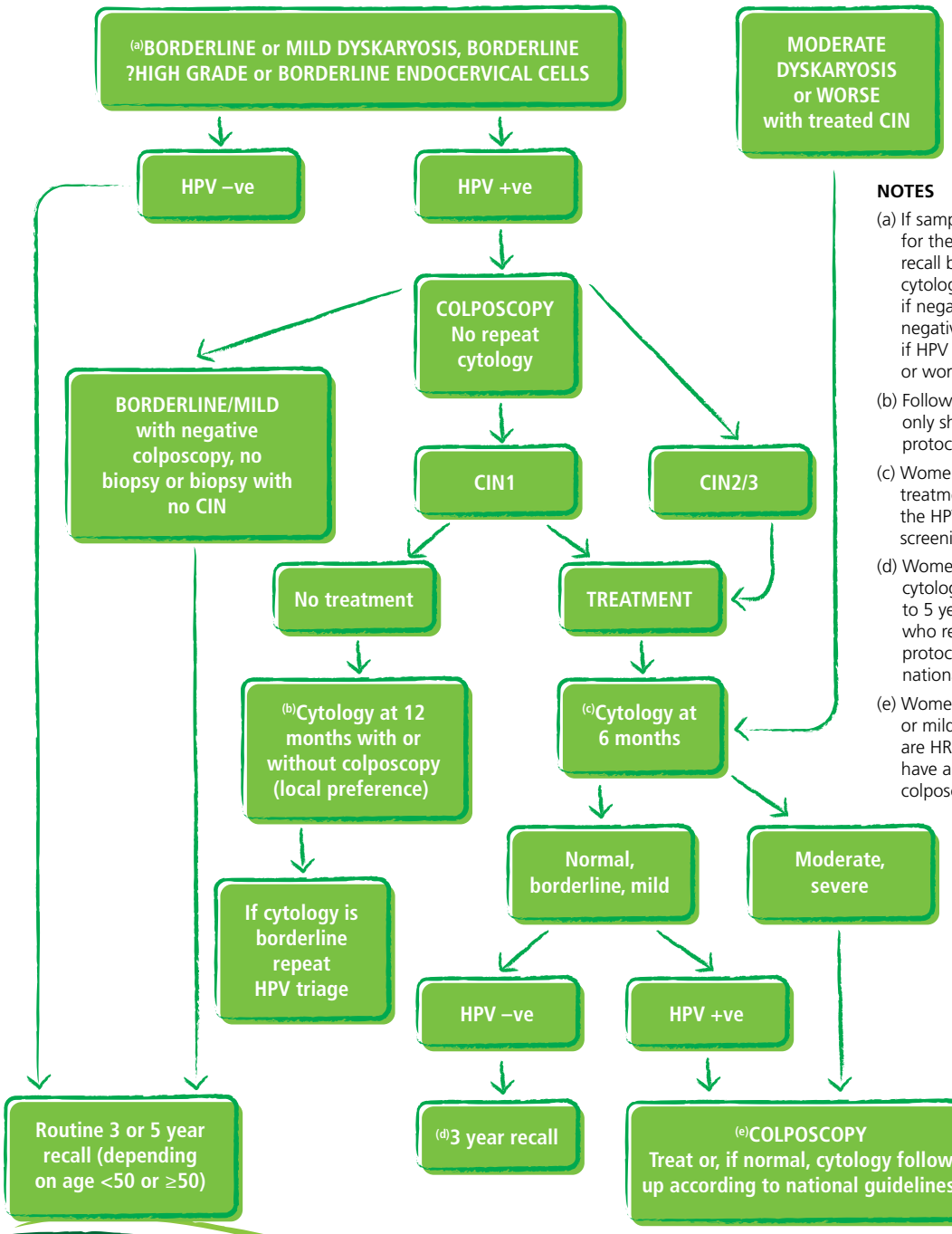
Appendix 1. HPVTest of Cure Management



NHS Cervical Screening Programme

HPV Triage and Test of Cure Protocol



NOTES

(a) If sample is unreliable/inadequate for the HPV test, refer mild and recall borderline for 6 month repeat cytology. At repeat cytology HPV test if negative/borderline/mild. If HPV negative return to routine recall: if HPV positive, refer. Refer moderate or worse cytology.

(b) Follow up of 12 month cytology only should follow normal NHSCSP protocols.

(c) Women in annual follow up after treatment for CIN are eligible for the HPV test of cure at their next screening test.

(d) Women ≥50 who have normal cytology at 3 years will then return to 5 yearly routine recall. Women who reach 65 must still complete the protocol and otherwise comply with national guidance.

(e) Women referred owing to borderline or mild or normal cytology who are HR-HPV positive and who then have a satisfactory and negative colposcopy can be recalled in 3 years.

See overleaf >>

HPV Triage and Management

Cytology Result (1st Occurrence)	Current Management	HPV Triage Management	
		HPV –ve	HPV +ve
Borderline	Repeat in 6 months	Routine recall	Colposcopy referral
Mild dyskaryosis	Colposcopy referral	Routine recall	Colposcopy referral

Appendix 3 – women who do not attend for smear testing

Minority ethnic groups
Around 80% of UK women are screened for cervical cancer, but the uptake in minority ethnic women is much less, and as low as 50% in some areas[17]. Women from ethnic minorities and deprived sub-groups in the population have shown consistently lower uptake over decades of screening in countries worldwide[18]

Women from black, Asian and minority ethnic groups were less sure of their cervical cancer risk than white women (Populus 2008, cited by the NHS Cervical Screening programme http://www.cancerscreening.nhs.uk/cervical/research-attitudes.html). Migrants tend to have lower attendance, and referral rates to mammography and cervical cancer screening[19] (Grade 1). Also [British] South Asian women were more likely to have incorrect addresses and language or cultural barriers to screening than other women[20].

Low socioeconomic status and lower education level
Low socioeconomic status associated with low uptake of cervical screening in locations associated with high levels of deprivation[17] (Grade 1). Those 'on welfare' are less likely to attend for screening[21]. The most common barriers to cancer screening found in low socioeconomic groups are economic and cultural barriers. (Grade 1)[22]. Participation in courses leading to qualifications increases the probability of having a smear test between 4.3 and 4.4 percentage points[23,24].

Women who have never been sexually active
See NHS Cervical Screening Programme website for details of this
http://www.cancerscreening.nhs.uk/cervical/

Women with disabilities
People with learning disabilities might be regarded as unlikely to be sexually active so might not be offered screening[25,26]. Uptake of screening in this group is as low as 7%. A number of factors contribute to low uptake, including ineligibility based on comprehension and physical disabilities, as well as a general perception that women with LD are sexually inactive and therefore not at risk.[27]

Women with mobility impairments face systemic, architectural, procedural and attitudinal barriers to preventive cancer screening[28].

Lesbian and bisexual women
Prevalence of non-attendance for cervical screening is much higher in lesbian than heterosexual women, linked to a belief that lesbians are less susceptible to cervical cancer, and have less need for screening. Despite sharing most of the same risk factors as heterosexual women, lesbians are much less likely to undergo regular screening[29].

Women with abnormal results
78% of women attended their first colposcopy appointment, 83% attended for treatment, but only 68% attended the follow-up visit after treatment[17]. The vast majority of women invited for colposcopy did eventually attend (Grade 1)[30].

Women with vulval pain [1]
Patient leaflet available at http://www.vulvalpainsociety.org/vps/index.php/downloadable-info/42-smears-without-tears-patient-self-help-guide-for-speculum-examinations

Obese women
Evidence indicates lower rates of breast and cervical cancer screening among obese compared to non-obese women (Grade 1)[31].

Other
An Australian study found that rates of cervical screening were lower amongst women who were older, reliant on welfare, obese, current smokers, reported childhood sexual abuse, and those with anxiety symptoms. Effective targeting of women with readily observable risk-factors (no children, no partner, receiving income support payments, not working, obese, current smoker, anxiety, poor physical health, and low overall health service use) could potentially reduce overall non-participation in screening by 74%[3].

APPENDIX 4

The Cervical Screening Test

Information for women after treatment for cervical intraepithelial neoplasia (CIN) at a colposcopy clinic

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What happens after cervical intraepithelial neoplasia (CIN) treatment?

After treatment for CIN cells of the cervix (the neck of the womb) you will have a test to check that your treatment has been successful. This test will take place about six months after your treatment. It will be carried out at your GP practice, where you usually have your cervical screening test taken or occasionally back at a colposcopy clinic.

This test includes:

- checking the cells from your cervix (the same as a cervical screening test)
- a test for the human papilloma virus (HPV).

Only one sample will be taken. This will be used to check the cells from your cervix and test for HPV.

What is CIN?

CIN is the name for changes found in the cells of the cervix. There are two grades of CIN – high-grade (CIN2 and 3) and low-grade (CIN1). Additionally, there are other types of cervical abnormality.

What is HPV?

HPV is a very common virus which, although usually harmless, can damage cells – including those in the cervix. It is estimated that 8 out of 10 people in Scotland catch HPV at some time in their lives. Many people have HPV without knowing because there are usually no symptoms.

There are over 100 different types of HPV. Usually your body's immune system fights off HPV infections naturally, but some types of HPV can be harder to get rid of. Around 15 HPV types can damage the cells in the cervix and cause changes that can develop into CIN. CIN is detected by cervical screening and colposcopy and may require treatment. If left untreated, CIN can develop into cancer over many years.

How do people get HPV?

You can be exposed to HPV by being sexually intimate with another person who has the virus, as HPV is mainly spread by skin-to-skin contact during sexual activity.

5,000
LIVES SAVED

Cervical screening saves around 5,000 lives every year in the UK

8 OUT OF 10

Cervical screening prevents 8 out of 10 cancers from developing

Why am I being tested for HPV following treatment for CIN?

Until recently, women treated for CIN had a cervical screening test every year, for five years, following treatment. After this they returned to routine three yearly screening. The HPV test is important because we now know that women who have a test six months after treatment that shows normal cervical cells and no HPV (HPV negative) can safely return to routine three yearly screening. This means that women can return to routine screening more than four years earlier than before.

My letter says that I have no changes.

If HPV is not found six months after treatment and there are no changes in the cells in your cervix, you will return to routine three yearly screening. This means that your previous CIN treatment has been successful.

My letter says that there were not enough cells.

Your cervical screening test result may show that there were not enough cells in the sample for the laboratory to examine. This is not unusual and you will be invited back for a repeat test.

My letter says that I have changes.

If HPV is found six months after treatment and there are changes in the cells in your cervix, you will be invited back to the colposcopy clinic. Please note that although 1 in 5 women will be invited back to the colposcopy clinic, only a few will need another treatment. It can take longer than six months for your immune system to clear HPV after treatment.

Where can I find out more about HPV?

If you would like more information about HPV testing or anything else mentioned in this leaflet, you can talk to your practice nurse or staff at the colposcopy clinic. There is also information about cervical screening and HPV on the NHS inform website at **www.nhsinform.co.uk** and the British Society for Colposcopy and Cervical Pathology website at **www.BSCCP.org.uk**

This publication is available online at www.healthscotland.com or telephone 0131 536 5500.

Chinese

您也可以登录 **www.healthscotland.com** 浏览本刊物，或拨打电话到 **0131 536 5500** 查询。

Polish

Ta publikacja jest dostępna online na stronie **www.healthscotland.com** lub pod numerem telefonu **0131 536 5500**, gdzie można także zgłaszać wszelkie zapytania.

Urdu

یہ اشاعت آن لائن **www.healthscotland.com** پر دستیاب ہے
یا کسی سوالات کے لیے **0131 536 5500** پر ٹیلی فون کریں۔

This resource is available in Urdu, Chinese and Polish, and in an Easy Read format. NHS Health Scotland is happy to consider requests for other languages and formats. Please contact **0131 536 5500** or email nhs.healthscotland-alternativeformats@nhs.net

Want to know more?
Talk to your nurse or doctor, visit **www.nhsinform.co.uk** or phone the NHS inform helpline **0800 22 44 88** (textphone 18001 0800 22 44 88; the helpline also provides an interpreting service)

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Appendix 5. Information for Colposcopists, about HPV Test of Cure

This information leaflet is intended to help with the management of women after treatment for CIN following the introduction of HPV testing as part of Test of Cure.

It may be useful for GPs too, so that patients throughout the country are getting the same message.

Currently in Scotland women who have had treatment for CIN are followed up with annual cervical screening tests (cytology only). Following an early implementation study in six Health Boards, Test of Cure will be implemented throughout Scotland from the 30th April 2012. This means that women treated from the 31st October will be included in Test of Cure and informed of the change in pathway. It is known that women who have no cytological abnormalities and are HPV negative six months post treatment of CIN can be returned to routine three yearly screening. After treatment women will be followed up in primary care and will have a cervical screening test (cytology) and HPV test for high risk types performed from the cervical sample.

Results.
When cytology is negative or BNA, and the HPV test is negative, the woman is discharged to routine three yearly screening. Those with negative, unsatisfactory or abnormal cytology and HPV positive test will be referred back to colposcopy.

Management
Information about Test of Cure and HPV testing should be given to women at time of treatment; a national patient information leaflet will be circulated to all colposcopy clinics with the intention of allaying confusion/anxieties. This should be provided to women either at the time of the visit or the time of results.

FAQs

What is Human Papilloma Virus (HPV)?
HPV is a very common virus which, although usually harmless, can damage cells including those in the cervix. There are around 100 different types of HPV and around 15 HPV types can damage the cells in the cervix. Usually the body's immune system fights off HPV infections naturally. However, some types of HPV are harder to get rid of and some (most notably types 16 and 18) have been confirmed as agents causing cervical cancer. It is these types that are being tested for. Unlike types 6 and 11 (which cause genital warts) these types do not produce visible symptoms. Almost all cervical cancers contain HPV DNA.

The virus replicates within the epithelium or mucosa of the cervix and sheds in exfoliated cells which can be detected in cytology samples.

Why test for HPV?
HPV testing is designed to allow women to return to routine three yearly screening after just six months. The current follow up of treated women involves annual cytology screening for five years before they return to routine recall. The HPV test of cure can avoid the need for this by helping to assess the risk of residual disease in women. Women who have normal cytology and HPV negative six months after treatment can safely return to routine three yearly screening.

How is the test done?
HPV testing is performed on the sample taken for the cytology test. The material left after the cytology slides have been prepared is used to test for HPV.

How is HPV acquired?
It is generally accepted that cervical HPV infection is acquired through sexual contact. The epidemiology of cervical cancer has for many years indicated increased risk in women with multiple partners and early onset of sexual activity. This suggests that a sexually transmitted agent is involved in cervical carcinogenesis.

It is common for women to state that their current partner has been their only sexual partner, and for their partner to say the same. Theoretically, if two virgins form a faithful sexual relationship there

should be no opportunity to acquire HPV. Yet we know that some women in relationships of this type do test HPV positive. HPV infections can persist for many years and it is not possible to be sure when the infection occurred or what its true source is. Certainly the HPV types most often associated with cervical cancer are usually symptomless in both partners.

This can be a difficult area, but a gentle explanation of the facts as we understand them usually suffices. If a woman who has had only one sexual partner acquires cervical HPV do not be tempted to suggest that this indicates infidelity.

How long does HPV infection last?
HPV infection of the cervix usually occurs earlier in the sexual lives of women. We know this because HPV positive rates are about 50% in women around the age of 20. In most women the infection clears, usually within a year, and protective antibodies may develop to prevent future infection by the same HPV type. However, this does not always happen and it is not uncommon to acquire new HPV infections of a different type. In some women (probably 20–30%) the infection persists and may do so for years. The longer the infection persists the greater the risk of subsequent abnormality.

How should the HPV result influence my colposcopy?
Currently only women who present with a mild dyskaryosis smear (and worse) following treatment are referred back to colposcopy. However with Test of Cure another group of women will attend. Those in the HPV positive groups with a negative/ unsatisfactory/BNA result will be referred and are required to be seen in colposcopy clinic within 8 weeks. The HPV test is useful for this group as it identifies those who have had successful treatment of CIN but have not cleared the virus.

In the majority of patients the colposcopy is satisfactory and normal and the patients can be discharged back to primary care to follow the standard follow up for five years. The patient should be reassured that there is no ongoing abnormality. Women can remain anxious that they have a HPV positive result – it is important to reassure the women, given the normal colposcopy findings, and to encourage them to attend for their follow up cervical screening tests. The presence of HPV does not mean they will go on to develop an abnormality.

In the event of an abnormal colposcopy then usual protocols apply with regards surveillance or further treatment determined by colposcopic findings and histology results.

Women who have abnormal cytology of mild dyskaryosis or worse, including borderline glandular and glandular abnormalities at six months following treatment suggests residual CIN could be present and persistence of the virus. For those in this group referral is as per national protocols and management is then determined by colposcopic findings and histology results.

How can high-risk HPV cause cancer?
HPV contains several genes that can disturb the mechanisms regulating normal cell division, which then becomes uncontrolled. It is thought that HPV alone may not be sufficient to cause cancer and that other factors, such as smoking, may play a part.

Can HPV infection be treated?
At present there is no effective treatment for HPV infection but, as stated, the immune system clears most infections.

Can HPV infection be prevented?
Research suggests that the two vaccines developed by international pharmaceutical companies are very effective at preventing infection with the two virus types most commonly linked with cervical cancer. But these types are responsible for only around 70% of cases. A national HPV immunisation programme is currently under way to routinely vaccinate girls aged 12–13 years. The vaccine will not protect against HPV infections picked up before being immunised, or against HPV infections caused by the other high risk types. So although the vaccine offers good protection, it is still important for women to attend for regular cervical screening tests.