

# High-Risk HPV Testing

Roche cobas® 4800 HPV assay with specific HPV 16 & 18 typing

# Earlier disease detection

There is now overwhelming scientific evidence that human papillomavirus (HPV) infection is the major factor in the development of cervical cancer and its precursor lesions. There are, however, many different genotypes of HPV and only some of these have been shown to be associated with the development of high-grade cervical lesions. HPV 16 and 18 are associated with about 70% of cervical cancers and are the types targeted by the HPV vaccine.

As part of our comprehensive cervical screening service, Clinpath Laboratories is able to provide specific molecular detection of the most important high-risk HPV genotypes.

The Roche cobas® 4800 HPV assay is able to detect 14 HPV genotypes shown to be most strongly associated with cervical disease. HPV 16 and HPV 18 are reported individually, while the remaining 12 are reported as a group.

## HPV & Cervical Disease

- Extensive scientific studies over many years have established a strong association between cervical disease and HPV infection.
- HPV infection is a sexually transmitted disease that is very common.
- Overseas studies have shown that HPV is present, at some stage, in many sexually active women. Prevalence has been estimated at 65% in women under 30.
- Not all women who have HPV infection develop cervical disease.
- HPV is an essential factor in the development of cervical cancer; however, other factors must also be present for cervical cancer to develop.
- Most Low- and High-Grade Squamous Intraepithelial Lesions are associated with HPV infection.
- Low-Grade Squamous Intraepithelial Lesions (LSIL) are associated with productive viral infections and most (but not all) will resolve spontaneously.
- High-Grade Squamous Intraepithelial Lesions (HSIL) are associated with viral infections where the viral particles are integrated into the host DNA. Many of these will also spontaneously resolve but there are no tests currently available which indicate which of these lesions are likely to regress, and which are likely to persist and enlarge.

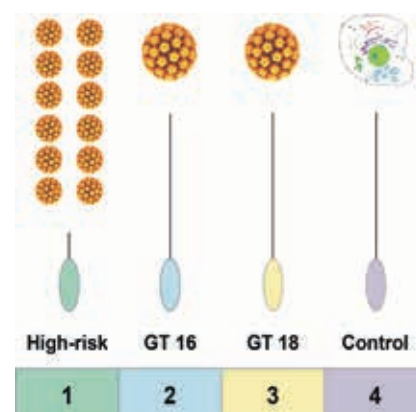
## What is the basis of the test?

The Roche cobas® 4800 HPV test is a polymerase chain reaction (PCR) assay. It targets 14 high-risk HPV genotypes and produces a result consisting of 3 components.

HPV 16:	detected or not detected
HPV 18:	detected or not detected
hrHPV: (other)	detected or not detected (panel result) Indicates presence of one or more of high-risk HPV types 31, 33, 35, 39, 45, 51, 52, 56, 58, 59, 66, 68

## Advantages of the Roche cobas® 4800 HPV assay:

- It has been clinically validated in more than 46,000 women and referenced against histologically confirmed HSIL – the ATHENA study<sup>(i)</sup>
- Equivalent performance to the Digene Hybrid Capture 2 assay has been established for the detection of CIN2/ CIN3 lesions or higher.
- The assay includes an internal control (beta-globin) for sample adequacy. Therefore a negative result which is due to sample inadequacy can be readily identified.
- **The same ThinPrep® liquid based sample can be used for cervical cytology, HPV, chlamydia, gonorrhoea and trichomonas testing.**
- Automation of sample preparation and analysis allows for more frequent test runs in the laboratory and improved turnaround time of results.



(i) Stoler M, et al. *Am J Clin Pathol* 2011; 135: 468-475

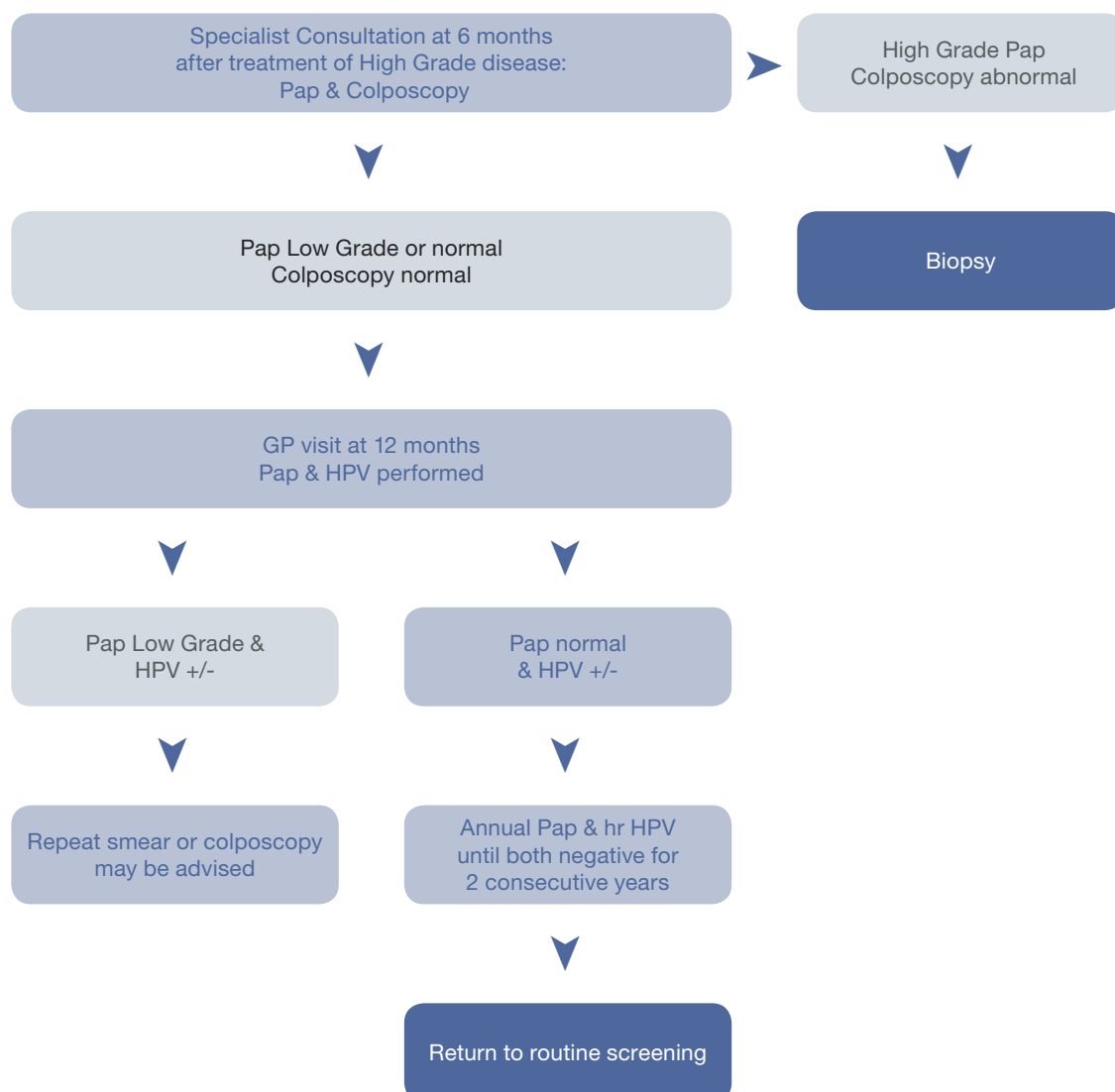
# Improved patient management

## When is it indicated?

### Follow-up after treatment of High-Grade Squamous Intraepithelial Lesions (HSIL)

- The NHMRC “Guidelines for the Management of Asymptomatic Women with Screen-Detected Abnormalities” recommends high-risk HPV testing as a “test-of-cure” for women who have been treated for HSIL. Once a patient has tested negative by both cytology and HPV testing on two consecutive occasions, one year apart, she can return to routine screening, rather than needing annual smears for the rest of her life.
- HPV tests performed for this clinical indication attract a Medicare rebate. To ensure correct billing it is important to note this history on the request form.
- HPV tests are **not** currently recommended for “test-of-cure” follow-up of in situ glandular disease (adenocarcinoma-in-situ, AIS)

## High-Risk HPV DNA for “Test-of-Cure” after treatment of HSIL (CIN 2, CIN 3)



# Further Indications & Test Collection

## Other indications

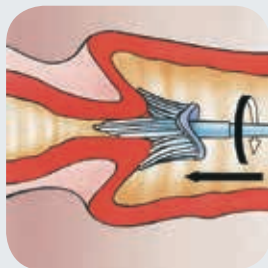
HPV testing may be of benefit in other clinical circumstances.

- HPV testing may be of particular significance in older women. In this group, the prevalence of HPV is lower than in younger women and is likely to represent persistent disease, which is known to increase the risk of significant cervical neoplasia.
- In women less than 30 years of age, HPV testing outside the "test-of-cure" protocol has limited value.

- HPV testing can aid clinical decision making when there is a discrepancy between cytology, colposcopy and/or histology results, by identifying women who are at higher risk of developing cervical cancers. A negative HPV test combined with a normal colposcopy have a negative predictive value of 99%.
- **Please note, however, that HPV testing used outside the "test-of-cure" protocol described in the chart on the previous page, does not currently attract a Medicare rebate and will therefore be privately billed.**

## How is the Roche cobas® 4800 HPV test collected?

Samples for HPV testing should be collected using a cervical cytology sampler (not a swab) vigorously rinsed into a ThinPrep® vial.



*The HPV test can be collected at the same time as a cervical cytology sample or as a separate follow-up specimen.*

- **Co-collection with the conventional Pap smear**  
The conventional Pap smear is performed first.  
The sampling device is then rinsed vigorously in a ThinPrep® vial.
- **Co-collection with the conventional Pap smear and the ThinPrep® test**  
The conventional Pap smear is performed and the sampling device is then rinsed vigorously in the ThinPrep® vial. The HPV test can be performed from the material remaining in the vial after the ThinPrep® test has been completed. **There is no need to take a separate sample for the HPV test.**
- **As a separate stand-alone specimen**  
The HPV test is collected with a cervical cytology sampler which is rinsed vigorously in a ThinPrep® vial.  
**Please clearly indicate if the vial is for HPV testing only.**

Chlamydia, gonorrhoea and trichomonas testing can also be performed from a sample collected into a ThinPrep® vial as described above. The ThinPrep® vials are kept in the laboratory for four weeks. If indicated, HPV &/or chlamydia/gonorrhoea testing can be requested at any time during this period. The tests will not be affected by the delay.

To order ThinPrep® vials please phone the Stores Department on 8366 2000