



Cervical Screening and Liquid Based Cytology

QUESTIONS AND ANSWERS

What is liquid based cytology?

Liquid based cytology (LBC) is a method of preparing and processing cervical smears.

In New Zealand LBC is now rapidly replacing the conventional (Pap) smear method, however both methods can still be used for a cervical smear test.

The conventional cervical (Pap) smear test:

The smear taker takes a sample of cells from the cervix, smears these cells on to a glass slide and then preserves them. At the laboratory, the cells are stained and looked at under a microscope.

The liquid based cytology test:

The smear taker takes a sample of cells from the cervix and places them into a liquid solution that preserves the cells. The laboratory machine removes excess blood, mucous and inflammatory cells and produces a thin layer of cells on a glass slide. The cells are stained and examined under the microscope in the same way as the conventional smear test.

Are there any benefits of LBC for women?

- LBC offers advantage over conventional smears where a woman has:
 - excessive cervical mucus, discharge or blood
 - recurrent inflammatory smears
 - recurrent 'unsatisfactory' smears that require repeating. LBC leads to significantly fewer unsatisfactory smears (with associated financial costs and anxiety for women).
- LBC has at least as good sensitivity for detecting abnormalities as conventional smears.
- LBC enables testing for high-risk types of human papillomavirus (HPV testing) on the original LBC sample, so there is no need to have a second sample taken (refer to the NCSP *HPV testing fact sheet* www.nsu.govt.nz).

Does LBC have any other advantages?

Yes.

- Ease of use. LBC is more generally preferred by smear takers and laboratory staff who read the smears. There is no need for smear takers to spray/'fix' cells on a glass slide.
- LBC improves the quality of the sample and efficiency of laboratory processing by giving a clearer/cleaner preparation that helps in screening the cells. It also enables 'automated' slide reading. In the UK, the widespread use of LBC has led to shorter turn around times for receipt of smear results.

Does the National Cervical Screening Programme support use of LBC?

Yes. The NCSP recognises the benefits of LBC for women and health professionals. Moving to 100% LBC is part of the strategic direction of the NCSP and the Guidelines for Cervical Screening.

Are other countries using LBC?

LBC has become the method of choice in the US and the UK and is widely used in Australia and other countries.

How long has liquid based cytology been available in New Zealand?

Liquid based cytology was introduced into New Zealand in 1997.

Some laboratories that do testing for the NCSP are now using 100% LBC, others are in the process of moving towards full use of LBC rather than conventional smears.

What does liquid based cytology cost?

From 1 July 2009, in most regions the cost to a woman of having a smear test using LBC will be no more than having a conventional smear. However, there may be some transition time for LBC to be fully rolled out at no additional cost for women.

Are there different types of LBC?

Yes. There are two types of LBC commercial products currently available in New Zealand.

- ThinPrep®
- SurePath™

There is no evidence that either of these two methods of LBC is superior.

What is the difference between SurePath™ and Thin Prep®?

The two liquid based technologies use different solutions in their collection vials, and have different processing machines and methods. The microscopic examination is the same.

ThinPrep®: A sampling device (cytobrush or cervibroom or combo) is used to take a sample of cervical cells. The device is rinsed into a vial of fixative fluid that is then processed in a ThinPrep® machine where it is mixed and filtered to deposit a sample of cells onto a glass slide.

SurePath™: A sampling device is used to take a sample of cervical cells. The head of the device is put into a vial of fixative liquid and it is then processed in a SurePath™ machine to free cells from the sampling device. A sample of the fluid is centrifuged (spun) and the cells then allowed to settle onto a glass slide.

How is taking a liquid based cytology sample different?

Taking a sample of cervical cells for liquid based cytology is the same as taking the sample for analysis using conventional technology. Cervical specimens are collected from the cervix in the usual way, using either a brush or broom or both. Once the cells are sampled from the cervix they are fixed, transported and assessed differently using LBC. The cervical cells are also transferred to transport media in different ways depending whether ThinPrep or SurePath is used.

Further information for smear takers can be found on the ThinPrep® and SurePath™ company websites:

www.bd.com/tripath/physicians/surepath.asp

www.thinprep.com/hcp/specimen_collection.html