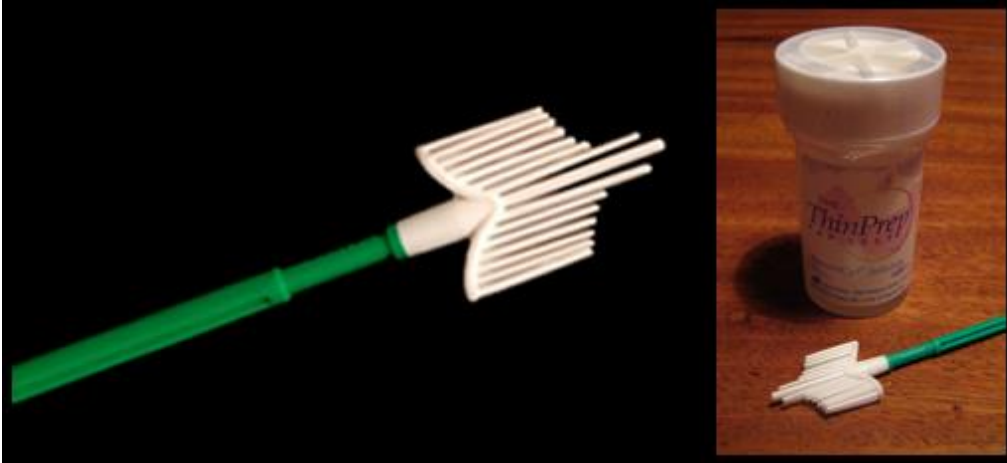




The Royal College of Pathologists

Pathology: the science behind the cure

## Object 42: LBC Brush



### What is it?

Liquid based cytology (LBC) is a technique used to prepare samples of cervical cells for examination in the cytopathology lab. The LBC sample is taken using a specially designed plastic brush, which replaced the wooden spatula previously used. LBC samples are examined as part of the National Health Service Cervical Screening Programme (NHSCSP). The test is offered to women between the ages of 25 and 65.

### History

The cervical smear was first described by Dr Georgios Papanicolaou, a Greek cytopathologist working in New York in the early twentieth century. The stain used was named after him (the Pap stain) and the cervical smear is often referred to as the 'Pap test'. Until 2008 cervical smears were taken with a specially designed wooden spatula. Cells were scraped from the surface on the cervix and smeared onto a glass slide, hence the name 'smear'. In 2008 a new technique, liquid based cytology (LBC) was introduced and the wooden spatula was replaced with a plastic brush. The name 'smear' has stuck – although cells are no longer smeared onto the slide.

### Pathology

After the cervical cells have been sampled using the LBC brush, the head of the brush is broken off and transported to the cytology lab in a bottle of preservative. In the lab the fluid is spun to remove contaminants and a representative sample of the remaining cells from the cervix is deposited on a microscope slide. The sample is stained and examined by cytoscreeners (scientists) and cytopathologists (doctors), looking for precancerous changes. If abnormalities are seen the patient is referred for colposcopic examination of the cervix and biopsies may be taken to identify or treat the changes identified.

### Find out more

You can learn more about all aspects of cervical screening on the [NHSCSP website](#).