

EVALUATION OF THE LIQUI-PREP™ CYTOLOGY PREPARATION

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“Presented at the American Society of Cytology - Chicago, USA, 2004”

ABSTRACT

Introduction/Purpose:

To compare the rate of detection of squamous intraepithelial lesions by the **Liqui-PREP™** encapsulation system (LGM International, Inc., Fort Lauderdale, FL) to **SurePath™** (TriPath Imaging, Inc., Burlington, NC) and the conventional Pap smear in a population of patients from a defined geographic region in New Hampshire, USA.

Materials and Methods:

For the study, 315 cervical-vaginal cytology specimens collected in **SurePath™** preservative were randomly selected. Initially, 8 ml of the cellular suspensions were processed with the **SurePath™** method. The remainder of the samples (approximately 2 ml) were reconstituted in 10 ml **Liqui-PREP™ Preservative Solution** and processed by the **Liqui-PREP™ System**. Briefly, the samples were mixed and centrifuged through a density cleaning solution. The sizes of the cellular pellets were estimated and encapsulating reagent (**Liqui-PREP™ Cellular Base™**) added. The amount of **Liqui-PREP™ Cellular Base™** was kept proportional to the size of the pellets; thus promoting uniform cellularity. An aliquot of each cellular suspension was transferred to a clean microscope slide, spread into a 17±4 mm circle and dried. After staining the slides were screened by experienced cytologists. **Liqui-PREP™** results were compared to data derived from 41,274 consecutive conventional Pap smears (1999) and 40,735 consecutive **SurePath™** preparations from the same laboratory.

Results:

	%ASCUS+	%LSIL+	%HSIL+	ASCUS/LSIL	% UNSAT
Liqui-PREP	5.08	3.49	0.95	0.63	0.00
SurePath	6.41	3.68	0.74	0.67	0.09
Conv. Pap	3.49	1.83	0.52	0.83	0.32

Conclusions:

In spite of the preliminary nature of the study and the small number of **Liqui-PREP™** slides, these data affirm the superiority of liquid based cytology for the detection of squamous intraepithelial lesions and the utility of **Liqui-PREP™** as a liquid based cytology preparation.