DIAMEDICA

Jūsų tiltas į geresnę diagnostiką

VšĮ Vilniaus miesto klinikinei ligoninei
Viešųjų pirkimų skyriui

30-03-2021
Vilnius

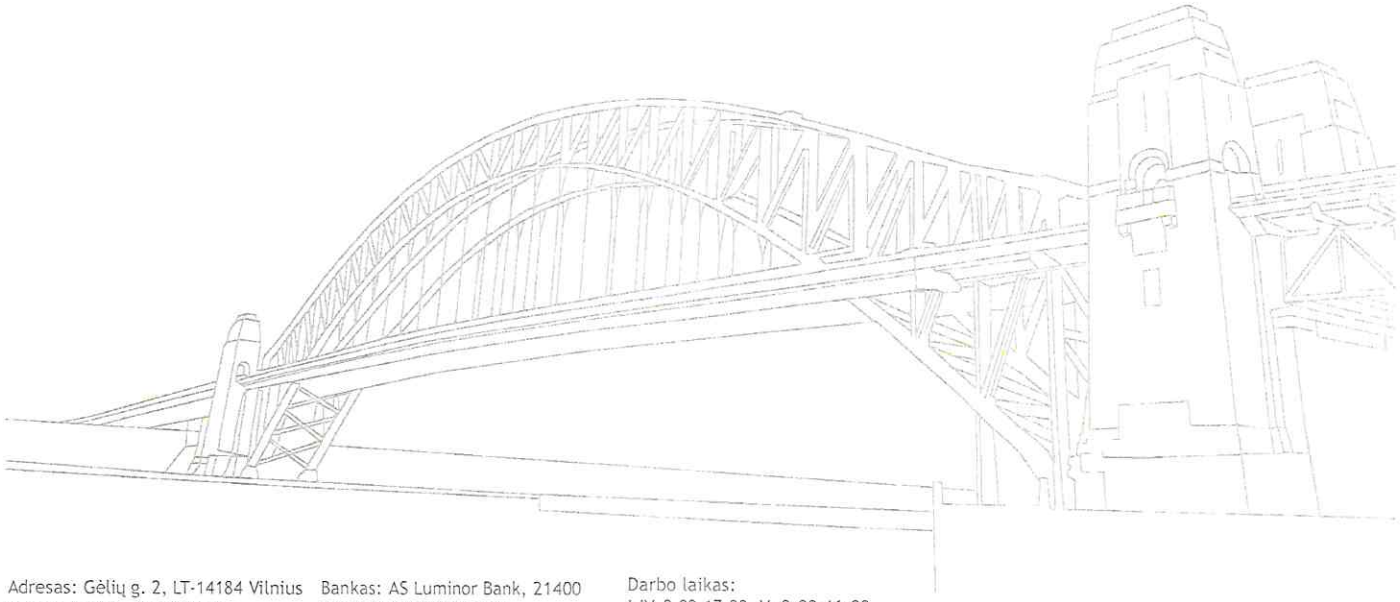
Dėl „sistemos priežiūros sutarties galiojimo laikotarpiu“

PATVIRTINIMAS

UAB Diamedica (Tiekėjas), pateikęs įrangą panaudos būdu, savo sąskaita ją įdiegs, apmokys vartotojus (įskaitant sertifikuotų sistemos taikymo (angl. aplication) specialistų pagalbą), užtikrins jos techninę priežiūrą (įskaitant nuotolinės priežiūros galimybę) pagal gamintojo rekomendacijas ir techninės būklės tikrinimą (vadovaujantis gamintojo rekomendacijomis), galimų gedimų šalinimą/remontą bei kitaip užtikrins nenutrūkstamą įrangos veikimą ir tinkamą funkcionavimą visą panaudos sutarties galiojimo terminą.

Stasys Križanauskas

UAB Diamedica
Generalinis direktorius



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PATVIRTINIMAS

Tiekėjui gavus pranešimą apie įrangos gedimą, į VšĮ Vilniaus miesto klinikinę per 24 val. atvyks reikiamą kvalifikaciją turintis darbuotojas ir visiškai pašalins gedimą, o nesant galimybės pašalinti gedimą per 72 val., tiekėjas sugedusią (netinkamai veikiančią) įrangą laikinai pakeis lygiaverte arba kitokiu būdu sudarys sąlygas kokybiškai ir savalaikiškai atlikti tyrimus.

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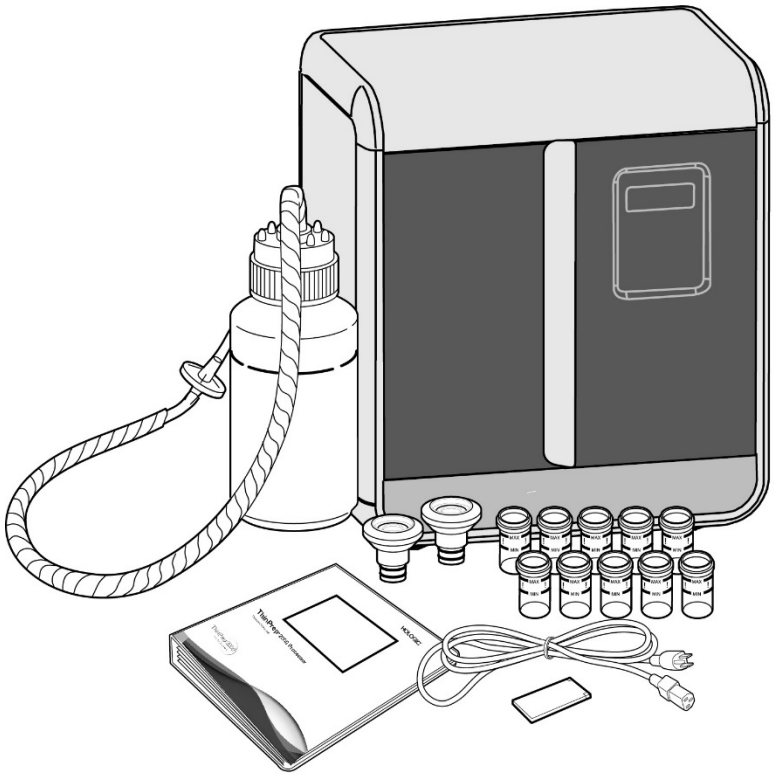
ThinPrep® 2000 System



Instructions For Use

IVD

INTENDED USE

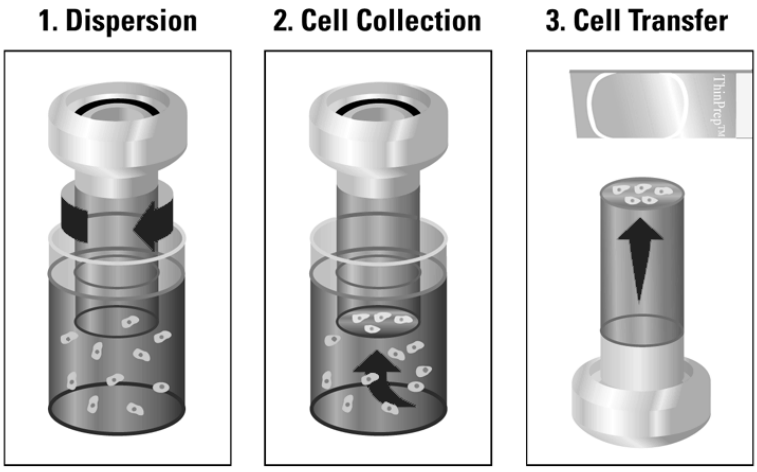
The ThinPrep® 2000 System is intended as a replacement for the conventional method of Pap smear preparation for use in screening for the presence of atypical cells, cervical cancer, or its precursor lesions (Low-grade Squamous Intraepithelial Lesions, High-grade Squamous Intraepithelial Lesions), as well as all other cytologic categories as defined by *The Bethesda System for Reporting Cervical/Vaginal Cytologic Diagnoses*[1].

SUMMARY AND EXPLANATION OF THE SYSTEM

The ThinPrep process begins with the patient's gynecologic sample being collected by the clinician using a cervical sampling device which, rather than being smeared on a microscope slide, is immersed and rinsed in a vial filled with 20 ml of PreservCyt® Solution (PreservCyt). The ThinPrep sample vial is then capped, labeled, and sent to a laboratory equipped with a ThinPrep 2000 Processor.

At the laboratory, the PreservCyt sample vial is placed into a ThinPrep 2000 Processor and a gentle dispersion step breaks up blood, mucus, non-diagnostic debris, and thoroughly mixes the cell sample. The cells are then collected on a ThinPrep Pap Test Filter specifically designed to collect diagnostic cells. The ThinPrep 2000 Processor constantly monitors the rate of flow through the ThinPrep Pap Test Filter during the collection process in order to prevent the cellular presentation from being too scant or too dense. A thin layer of cells is then transferred to a glass slide in a 20 mm-diameter circle, and the slide is automatically deposited into a fixative solution.

The ThinPrep Sample Preparation Process



(1) Dispersion
The ThinPrep Pap Test Filter rotates within the sample vial, creating currents in the fluid that are strong enough to separate debris and disperse mucus, but gentle enough to have no adverse effect on cell appearance.

(2) Cell Collection
A gentle vacuum is created within the ThinPrep Pap Test Filter, which collects cells on the exterior surface of the membrane. Cell collection is controlled by the ThinPrep 2000 Processor's software that monitors the rate of flow through the ThinPrep Pap Test Filter.

(3) Cell Transfer
After the cells are collected on the membrane, the ThinPrep Pap Test Filter is inverted and gently pressed against the ThinPrep Microscope Slide. Natural attraction and slight positive air pressure cause the cells to adhere to the ThinPrep Microscope Slide resulting in an even distribution of cells in a defined circular area.

As with conventional Pap smears, slides prepared with the ThinPrep® 2000 System are examined in the context of the patient's clinical history and information provided by other diagnostic procedures such as colposcopy, biopsy, and human papillomavirus (HPV) testing, to determine patient management.

The PreservCyt® Solution component of the ThinPrep 2000 System is an alternative collection and transport medium for gynecologic specimens tested with the Cervista® HPV HR Test, the Cervista® HPV 16/18 Test, the Roche cobas® HPV Test and the Digene Hybrid Capture™ System HPV DNA. Refer to the respective manufacturer's package inserts for instructions for using PreservCyt Solution for collection, transport, storage, and preparation of specimens for use in those systems.

The PreservCyt Solution component of the ThinPrep 2000 System is an alternative collection and transport medium for gynecologic specimens tested with the Hologic APTIMA COMBO 2® CT/NG Assays, the Hologic APTIMA® Trichomonas vaginalis Assay, and the BD ProbeTec™ CT Q^x Amplified DNA Assay. Refer to the respective manufacturer's package inserts for instructions for using PreservCyt Solution for collection, transport, storage, and preparation of specimens for use in those systems.

The PreservCyt Solution component of the ThinPrep 2000 System is also an alternative collection and transport medium for gynecologic specimens tested with the Roche Diagnostics COBAS AMPLICOR™ CT/NG assay. Refer to Hologic's labeling (Document #MAN-02063-001) for instructions for using PreservCyt Solution for collection, transport, storage, and preparation of specimens and to the Roche Diagnostics COBAS AMPLICOR CT/NG package insert for instructions for use of that system.

LIMITATIONS

- Gynecologic samples collected for preparation using the ThinPrep 2000 System should be collected using a broom-type or endocervical brush/plastic spatula combination collection devices.

- Preparation of microscope slides using the ThinPrep 2000 System should be performed only by personnel who have been trained by Hologic or by organizations or individuals designated by Hologic.

- Evaluation of microscope slides produced with the ThinPrep 2000 System should be performed only by cytotechnologists and pathologists who have been trained to evaluate ThinPrep prepared slides by Hologic or by organizations or individuals designated by Hologic.

- Supplies used in the ThinPrep 2000 System are those designed and supplied by Hologic specifically for the ThinPrep 2000 System. These include PreservCyt Solution vials, ThinPrep Pap Test Filters, and ThinPrep Microscope Slides. These supplies are required for proper performance of the system and cannot be substituted. Product performance will be compromised if other supplies are used. After use, supplies should be disposed of in accordance with local, state, and federal regulations.

- A ThinPrep Pap Test Filter must be used only once and cannot be reused.

- The performance of HPV DNA and CT/NG testing on reprocessed sample vials has not been evaluated.

WARNINGS

- For In Vitro Diagnostic Use
- Danger. PreservCyt Solution contains methanol. Toxic if swallowed. Toxic if inhaled. Causes damage to organs. Flammable liquid and vapor. Keep away from heat, sparks, open flames and hot surfaces. Other solutions cannot be substituted for PreservCyt Solution. PreservCyt Solution should be stored and disposed of in accordance with all applicable regulations.
- Do not process a cerebral spinal fluid (CSF) specimen or other sample type that is suspected of possessing prion infectivity (PrPsc) derived from a person with a TSE, such as Creutzfeldt-Jakob disease, on a ThinPrep processor. A TSE-contaminated processor cannot be effectively decontaminated and therefore must be properly disposed of in order to avoid potential harm to users of the processor or service personnel.

PRECAUTIONS

- Specific processing steps must be followed before and during use of the ThinPrep 2000 processor if planning to perform *Chlamydia trachomatis* and *Neisseria gonorrhoeae* testing, using the Roche Diagnostics COBAS AMPLICOR CT/NG test, on the residual specimen after a slide has been prepared using a ThinPrep 2000 processor. Follow the procedures found in Chapter 5B of the ThinPrep 2000 Operator's Manual.

- This equipment generates, uses and can radiate radio frequency energy, and if not installed and used in accordance with the Operator's Manual, may cause interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference, in which case the user will be required to correct the interference at his/her own expense.

- PreservCyt Solution *with* cytologic sample intended for ThinPrep Pap testing must be stored between 15°C (59°F) and 30°C (86°F) and tested within 6 weeks of collection.

- PreservCyt Solution *with* cytologic sample intended for CT/NG testing using the Roche Diagnostics COBAS AMPLICOR CT/NG test must be stored between 4°C (39°F) and 25°C (77°F) and tested within 6 weeks of collection.

- PreservCyt Solution was challenged with a variety of microbial and viral organisms. The following table presents the starting concentrations of viable organisms, and the number of viable organisms found after 15 minutes in the PreservCyt Solution. The log reduction of viable organisms is also presented. As with all laboratory procedures, universal precautions should be followed.

Organism	Initial Concentration	Log Reduction after 15 min.
Candida albicans	5.5×10^5 CFU/mL	>4.7
Aspergillus niger*	4.8×10^5 CFU/mL	2.7
Escherichia coli	2.8×10^5 CFU/mL	>4.4
Staphylococcus aureus	2.3×10^5 CFU/mL	>4.4
Pseudomonas aeruginosa	2.5×10^5 CFU/mL	>4.4
Mycobacterium tuberculosis**	9.4×10^5 CFU/mL	4.9
Rabbitpox virus	6.0×10^6 PFU/mL	5.5***
HIV-1	$1.0 \times 10^{7.5}$ $TCID_{50}$/mL	7.0***

* After 1 hour >4.7 log reduction
** After 1 hour >5.7 log reduction
*** Data is for 5 minutes

PERFORMANCE CHARACTERISTICS: REPORT OF CLINICAL STUDIES

A prospective multi-center clinical study was conducted to evaluate the performance of the ThinPrep 2000 System in direct comparison to the conventional Pap smear. The objective of the ThinPrep clinical study was to demonstrate that gynecologic specimens prepared using the ThinPrep 2000 System were at least as effective as conventional Pap smears for the detection of atypical cells and cervical cancer or its precursor lesions in a variety of patient populations. In addition, an assessment of specimen adequacy was performed.

The initial clinical study protocol was a blinded, split sample, matched pair study, for which a conventional Pap smear was prepared first, and the remainder of the sample (the portion that normally would have been discarded) was immersed and rinsed into a vial of PreservCyt Solution. At the laboratory, the PreservCyt sample vial was placed into a ThinPrep 2000 Processor and a slide was then prepared from the patient's sample. ThinPrep and conventional Pap smear slides were examined and diagnosed independently. Reporting forms containing patient history as well as a checklist of all possible categories of The Bethesda System were used to record the results of the screening. A single independent pathologist reviewed all discrepant and positive slides from all sites in a blinded fashion to provide a further objective review of the results.

LABORATORY AND PATIENT CHARACTERISTICS

Cytology laboratories at three screening centers (designated as S1, S2, and S3) and three hospital centers (designated as H1, H2, and H3) participated in the clinical study. The screening centers in the study serve patient populations (screening populations) with rates of abnormality (Low-grade Squamous Intraepithelial Lesion [LSIL] and more severe lesions) similar to the United States average of less than 5%.[2] The hospital centers in the study serve a high risk referral patient population (hospital populations) characterized by high rates (>10%) of cervical abnormality. Data on race demographics was obtained

for 70% of the patients that participated in the study. The study population consisted of the following race groups: Caucasian (41.2%), Asian (2.3%), Hispanic (9.7%), African American (15.2%), Native American (1.0%) and other groups (0.6%).

Table 1 describes the laboratories and the patient populations.

Table 1: Site Characteristics

	Laboratory Characteristics			Clinical Study Demographics			
Site	**Type of Patient Population**	**Laboratory Volume - Smears per Year**	**Cases**	**Patient Age Range**	**Post-Meno-pausal**	**Previous Abnormal Pap Smear**	**Convent. Prevalence LSIL+**
S1	Screening	300,000	1,386	18.0 - 84.0	10.6%	8.8%	2.3%
S2	Screening	100,000	1,668	18.0 - 60.6	0.3%	10.7%	2.9%
S3	Screening	96,000	1,093	18.0 - 48.8	0.0%	7.1%	3.8%
H1	Hospital	35,000	1,046	18.1 - 89.1	8.1%	40.4%	9.9%
H2	Hospital	40,000	1,049	18.1 - 84.4	2.1%	18.2%	12.9%
H3	Hospital	37,000	981	18.2 - 78.8	11.1%	38.2%	24.2%

CLINICAL STUDY RESULTS

The diagnostic categories of The Bethesda System were used as the basis of the comparison between conventional and ThinPrep® findings from the clinical study. The diagnostic classification data and statistical analyses for all clinical sites are presented in Tables 2 through 11. Cases with incorrect paperwork, patient's age less than 18 years, cytologically unsatisfactory slides, or patients with a hysterectomy were excluded from this analysis. Few cases of cervical cancer (0.02%[3]) were represented in the clinical study, as is typical in the United States patient population.

Table 2: Diagnostic Classification Table, All Categories

		Conventional							
		NEG	**ASCUS**	**AGUS**	**LSIL**	**HSIL**	**SQ CA**	**GL CA**	**TOTAL**
ThinPrep	**NEG**	5224	295	3	60	11	0	0	5593
	ASCUS	318	125	2	45	7	0	0	497
	AGUS	**13**	**2**	**3**	**0**	**1**	**0**	**1**	**20**
	LSIL	**114**	**84**	**0**	**227**	**44**	**0**	**0**	**469**
	HSIL	**11**	**15**	**0**	**35**	**104**	**2**	**0**	**167**
	SQ CA	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**1**
	GL CA	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
	TOTAL	**5680**	**521**	**8**	**367**	**167**	**3**	**1**	**6747**

Abbreviations for Diagnoses*: **NEG** = Normal or negative, **ASCUS** = Atypical Squamous Cells of Undetermined Significance, **AGUS** = Atypical Glandular Cells of Undetermined Significance, **LSIL** = Low-grade Squamous Intraepithelial Lesion, **HSIL** = High-grade Squamous Intraepithelial Lesion, **SQ CA** = Squamous Cell Carcinoma, **GL CA** = Glandular Cell Adenocarcinoma*

Table 3: Three Category Diagnostic Classification Table

		Conventional			
		NEG	ASCUS/AGUS+	LSIL+	TOTAL
ThinPrep	NEG	5224	298	71	5593
	ASCUS/ AGUS+	331	132	54	1154
	LSIL+	125	99	413	637
	TOTAL	5680	529	538	6747

Table 4: Two Category Diagnostic Classification Table, LSIL and More Severe Diagnoses

		Conventional		
		NEG/ASCUS/ AGUS+	LSIL+	TOTAL
ThinPrep	NEG/ASCUS/ AGUS+	5985	125	6110
	LSIL+	224	413	637
	TOTAL	6209	538	6747

Table 5: Two Category Diagnostic Classification Table, ASCUS/AGUS and More Severe Diagnoses

		NEG	ASCUS/AGUS+	TOTAL
ThinPrep	NEG	5224	369	5593
	ASCUS/ AGUS+	456	698	1154
	TOTAL	5680	1067	6747

The diagnostic data analysis from the sites is summarized in Table 6 and 7. When the p-value is significant ($p < 0.05$), the method favored is indicated in the tables.

Table 6: Results by Site, LSIL and More Severe Lesions

Site	Cases	ThinPrep LSIL+	Convent. LSIL+	Increased Detection*	p-Value	Method Favored
S1	1,336	46	31	48%	0.027	ThinPrep
S2	1,563	78	45	73%	<0.001	ThipPrep
S3	1,058	67	40	68%	<0.001	ThinPrep
H1	971	125	96	30%	<0.001	ThinPrep
H2	1,010	111	130	(15%)	0.135	Neither
H3	809	210	196	7%	0.374	Neither

**Increased detection = ThinPrep® LSIL+ - Conventional LSIL+ x 100%*
Conventional LSIL+

For LSIL and more severe lesions, the diagnostic comparison statistically favored the ThinPrep® method at four sites and was statistically equivalent at two sites.

Table 7: Results by Site, ASCUS/AGUS and More Severe Lesions

Site	Cases	ThinPrep ASCUS+	Convent. ASCUS+	Increased Detection*	p-Value	Method Favored
S1	1,336	117	93	26%	0.067	Neither
S2	1,563	124	80	55%	<0.001	ThinPrep
S3	1,058	123	81	52%	<0.001	ThinPrep
H1	971	204	173	18%	0.007	ThinPrep
H2	1,010	259	282	(8%)	0.360	Neither
H3	809	327	359	(9%)	0.102	Neither

**Increased detection = ThinPrep ASCUS+ - Conventional ASCUS+ x 100%*
Conventional ASCUS+

For ASCUS/AGUS and more severe lesions, the diagnostic comparison statistically favored the ThinPrep method at three sites and was statistically equivalent at three sites.

One pathologist served as an independent reviewer for the six clinical sites, receiving both slides from cases where the two methods were either abnormal or discrepant. Since a true reference cannot be determined in such studies and therefore true sensitivity cannot be calculated, the use of an expert cytologic review provides an alternative to histologic confirmation by biopsy or human papillomavirus (HPV) testing as a means for determining the reference diagnosis.

The reference diagnosis was the more severe diagnosis from either of the ThinPrep or conventional Pap slides as determined by the independent pathologist. The number of slides diagnosed as abnormal at each site, compared to the reference diagnosis of the independent pathologist, provides the proportion of LSIL or more severe lesions (Table 8) and the proportion of ASCUS/AGUS or more severe lesions (Table 9). The statistical analysis allows a comparison of the two methods and a determination of which method is favored when using the independent pathologist for expert cytologic review as the adjudicator of the final diagnosis.

Table 8: Independent Pathologist Results by Site, LSIL and More Severe Lesions

Site	Cases Positive by Independent Pathologist	ThinPrep Positive	Conventional Positive	p-Value	Method Favored
S1	50	33	25	0.170	Neither
S2	65	48	33	0.042	ThinPrep
S3	77	54	33	<0.001	ThinPrep
H1	116	102	81	<0.001	ThinPrep
H2	115	86	90	0.876	Neither
H3	126	120	112	0.170	Neither

For LSIL and more severe lesions, the diagnostic comparison statistically favored the ThinPrep method at three sites and was statistically equivalent at three sites.

Table 9: Independent Pathologist Results by Site, ASCUS/AGUS and More Severe Lesions

Site	Cases Positive by Independent Pathologist	ThinPrep® Positive	Conventional Positive	p-Value	Method Favored
S1	92	72	68	0.900	Neither
S2	101	85	59	0.005	ThinPrep
S3	109	95	65	<0.001	ThinPrep
H1	170	155	143	0.237	Neither
H2	171	143	154	0.330	Neither
H3	204	190	191	1.000	Neither

For ASCUS/AGUS and more severe lesions, the diagnostic comparison statistically favored the ThinPrep method at two sites and was statistically equivalent at four sites.

Table 10 below shows the summary for all sites of the descriptive diagnosis for all Bethesda System categories.

Table 10: Summary of Descriptive Diagnosis

Descriptive Diagnosis *Number of Patients: 6747*	**ThinPrep**		**Conventional**	
	N	**%**	**N**	**%**
Benign Cellular Changes:	**1592**	**23.6**	**1591**	**23.6**
Infection:				
Trichomonas Vaginalis	136	2.0	185	2.7
Candida spp.	406	6.0	259	3.8
Coccobacilli	690	10.2	608	9.0
Actinomyces spp.	2	0.0	3	0.0
Herpes	3	0.0	8	0.1
Other	155	2.3	285	4.2
Reactive Cellular Changes Associated with:				
Inflammation	353	5.2	385	5.7
Atrophic Vaginitis	32	0.5	48	0.7
Radiation	2	0.0	1	0.0
Other	25	0.4	37	0.5
Epithelial Cell Abnormalities:	**1159**	**17.2**	**1077**	**16.0**
Squamous Cell:				
ASCUS	501	7.4	521	7.7
favor reactive	128	1.9	131	1.9
favor neoplastic	161	2.4	140	2.1
undetermined	213	3.2	250	3.7
LSIL	469	7.0	367	5.4
HSIL	167	2.5	167	2.5
Carcinoma	1	0.0	3	0.0
Glandular Cell:				
Benign Endometrial cells in Postmenopausal Women	7	0.1	10	0.1
Atypical Glandular Cells (AGUS)	21	0.3	9	0.1
favor reactive	9	0.1	4	0.1
favor neoplastic	0	0.0	3	0.0
undetermined	12	0.2	2	0.0
Endocervical Adenocarcinoma	0	0.0	1	0.0

Note: Some patients had more than one diagnostic subcategory.

Table 11 shows the rates of detection for infection, reactive changes, and the total benign cellular changes for both the ThinPrep® and conventional methods at all sites.

Table 11: Benign Cellular Changes Results

		ThinPrep		**Conventional**	
		N	**%**	**N**	**%**
Benign Cellular Changes	**Infection**	1392	20.6	1348	20.0
	Reactive Changes	412	6.1	471	7.0
	Total*	1592	23.6	1591	23.6

** Total includes some patients that may have had both an infection and reactive cellular change.*

Tables 12, 13, and 14 show the specimen adequacy results for the ThinPrep method and conventional smear method for all of the study sites. Of the 7,360 total patients enrolled, 7,223 are included in this analysis. Cases with patient's age less than 18 years or patients with a hysterectomy were excluded from this analysis.

Two additional clinical studies were conducted to evaluate specimen adequacy results when samples were deposited directly into the PreservCyt® vial, without first making a conventional Pap smear. This specimen collection technique is the intended use for the ThinPrep 2000 System. Tables 15 and 16 present the split sample and direct to vial results.

Table 12: Summary of Specimen Adequacy Results

Specimen Adequacy *Number of Patients: 7223*	**ThinPrep**		**Conventional**	
	N	**%**	**N**	**%**
Satisfactory	**5656**	**78.3**	**5101**	**70.6**
Satisfactory for Evaluation but Limited by:	**1431**	**19.8**	**2008**	**27.8**
Air-Drying Artifact	1	0.0	136	1.9
Thick Smear	9	0.1	65	0.9
Endocervical Component Absent	1140	15.8	681	9.4
Scant Squamous Epithelial Component	150	2.1	47	0.7
Obscuring Blood	55	0.8	339	4.7
Obscuring Inflammation	141	2.0	1008	14.0
No Clinical History	12	0.2	6	0.1
Cytolysis	19	0.3	119	1.6
Other	10	0.1	26	0.4
Unsatisfactory for Evaluation:	**136**	**1.9**	**114**	**1.6**
Air-Drying Artifact	0	0.0	13	0.2
Thick Smear	0	0.0	7	0.1
Endocervical Component Absent	25	0.3	11	0.2
Scant Squamous Epithelial Component	106	1.5	47	0.7
Obscuring Blood	23	0.3	58	0.8
Obscuring Inflammation	5	0.1	41	0.6
No Clinical History	0	0.0	0	0.0
Cytolysis	0	0.0	4	0.1
Other	31	0.4	9	0.1

Note: Some patients had more than one subcategory.

Table 13: Specimen Adequacy Results

		Conventional			
		SAT	**SBLB**	**UNSAT**	**TOTAL**
ThinPrep	**SAT**	4316	1302	38	5656
	SBLB	722	665	44	1431
	UNSAT	63	41	32	136
	TOTAL	5101	2008	114	7223

SAT=Satisfactory, SBLB=Satisfactory But Limited By, UNSAT=Unsatisfactory

Table 14: Specimen Adequacy Results by Site

Site	Cases	Thin Prep SAT Cases	Con-vent. SAT Cases	Thin Prep SBLB Cases	Con-vent. SBLB Cases	Thin Prep UNSAT Cases	Con-vent. UNSAT Cases
S1	1,386	1092	1178	265	204	29	4
S2	1,668	1530	1477	130	178	8	13
S3	1,093	896	650	183	432	14	11
H1	1,046	760	660	266	375	20	11
H2	1,049	709	712	323	330	17	7
H3	981	669	424	264	489	48	68
All Sites	7,223	5656	5101	1431	2008	136	114

The Satisfactory But Limited By (SBLB) category can be broken down into many subcategories, one of which is the absence of Endocervical Component. Table 15 shows the Satisfactory But Limited By category "No ECC's" for ThinPrep® and conventional slides.

Table 15: Specimen Adequacy Results by Site, SBLB Rates for no Endocervical Component.

SBLB Due to No ECC's

Site	Cases	ThinPrep SBLB-no ECC's	ThinPrep SBLB-no ECC's (%)	Conventional SBLB-no ECC's	Conventional SBLB-no ECC's (%)
S1	1,386	237	17.1%	162	11.7%
S2	1,668	104	6.2%	73	4.4%
S3	1,093	145	13.3%	84	7.7%
H1	1,046	229	21.9%	115	11.0%
H2	1,049	305	29.1%	150	14.3%
H3	981	120	12.2%	97	9.9%
All Sites	7,223	1140	15.8%	681	9.4%

For the results of the clinical study involving a split-sample protocol, there was a 6.4 percent difference between conventional and ThinPrep methods in detecting endocervical component. This is similar to previous studies using a split sample methodology.

DIRECT-TO-VIAL ENDOCERVICAL COMPONENT (ECC) STUDIES

For the intended use of the ThinPrep® 2000 System, the cervical sampling device will be rinsed directly into a PreservCyt® vial, rather than splitting the cellular sample. It was expected that this would result in an increase in the pick-up of endocervical cells and metaplastic cells. To verify this hypothesis, two studies were performed using the direct-to-vial method and are summarized in Table 16. Overall, no difference was found between ThinPrep and conventional methods in these two studies.

Table 16: Summary of Direct-to-vial Endocervical Component (ECC) Studies

Study	Number of Evaluable Patients	SBLB due to No Endocervical Component	Comparable Conventional Pap Smear Percentage
Direct-to-Vial Feasibility	**299**	**9.36%**	**9.43%[1]**
Direct-to-Vial Clinical Study	**484**	**4.96%**	**4.38%[2]**

1. Direct-to-Vial Feasibility study compared to overall clinical investigation conventional Pap smear SBLB-No Endocervical Component rate.
2. Direct-to-Vial Clinical study compared to site S2 clinical investigation conventional Pap smear SBLB-No Endocervical Component rate.

DIRECT-TO-VIAL HSIL+ STUDY

Following initial FDA approval of the ThinPrep System, Hologic conducted a multi-site direct-to-vial clinical study to evaluate the ThinPrep 2000 System versus conventional Pap smear for the detection of High Grade Squamous Intraepithelial and more severe lesions (HSIL+). Two types of patient groups were enrolled in the trial from ten (10) leading academic hospitals in major metropolitan areas throughout the United States. From each site, one group consisted of patients representative of a routine Pap test screening population and the other group made up of patients representative of a referral population enrolled at the time of colposcopic examination. The ThinPrep specimens were collected prospectively and compared against a historical control cohort. The historical cohort consisted of data collected from the same clinics and clinicians (if available) used to collect the ThinPrep specimens. These data were collected sequentially from patients seen immediately prior to the initiation of the study.

The results from this study showed a detection rate of 511 / 20,917 for the conventional Pap smear versus 399 / 10,226 for the ThinPrep slides. For these clinical sites and these study populations, this indicates a 59.7% increase in detection of HSIL+ lesions for the ThinPrep specimens. These results are summarized in Table 17.

Table 17: Summary of Direct-to-Vial HSIL+ Study

Site	Total CP (n)	HSIL+	Percent (%)	Total TP (n)	HSIL+	Percent (%)	Percent Change (%)
S1	2,439	51	2.1	1,218	26	2.1	+2.1
S2	2,075	44	2.1	1,001	57	5.7	+168.5
S3	2,034	7	0.3	1,016	16	1.6	+357.6
S4	2,043	14	0.7	1,000	19	1.9	+177.3
S5	2,040	166	8.1	1,004	98	9.8	+20.0
S6	2,011	37	1.8	1,004	39	3.9	+111.1
S7	2,221	58	2.6	1,000	45	4.5	+72.3
S8	2,039	61	3.0	983	44	4.5	+49.6
S9	2,000	4	0.2	1,000	5	0.5	+150.0
S10	2,015	69	3.4	1,000	50	5.0	+46.0
Total	20,917	511	2.4	10,226	399	3.9	59.7($p<0.001$)

*Percent Change (%) = ((TP HSIL+/TP Total)/(CP HSIL+/CP Total)-1) *100*

GLANDULAR DISEASE DETECTION – PUBLISHED STUDIES

The detection of endocervical glandular lesions is an essential function of the Pap test. However, abnormal glandular cells in the Pap sample may also originate from the endometrium or from extrauterine sites. The Pap test is not intended to be a screening test for such lesions.

When suspected glandular abnormalities are identified, their accurate classification as true glandular versus squamous lesions is important for proper evaluation and subsequent treatment (*e.g.* choice of excisional biopsy method versus conservative follow-up). Multiple peer-reviewed publications[4-9] report on the improved ability of the ThinPrep 2000 System to detect glandular disease versus the conventional Pap smear. Although these studies do not consistently address sensitivity of different Pap testing methods in detecting specific types of glandular disease, the reported results are consistent with more frequent biopsy confirmation of abnormal glandular findings by the ThinPrep Pap Test compared to conventional cytology.

Thus, the finding of a glandular abnormality on a ThinPrep Pap Test slide merits increased attention for definitive evaluation of potential endocervical or endometrial pathology.

CONCLUSIONS

The ThinPrep® 2000 System is as effective as the conventional Pap smear in a variety of patient populations and may be used as a replacement for the conventional Pap smear method for the detection of atypical cells, cervical cancer, or its precursor lesions, as well as all other cytologic categories as defined by The Bethesda System.

The ThinPrep 2000 System is significantly more effective than the conventional Pap smear for the detection of Low-grade Squamous Intraepithelial (LSIL) and more severe lesions in a variety of patient populations.

Specimen quality with the ThinPrep 2000 System is significantly improved over that of conventional Pap smear preparation in a variety of patient populations.

MATERIALS REQUIRED

MATERIALS PROVIDED

The ThinPrep 2000 System consists of the following components:

- ThinPrep Processor Instrument (Model TP 2000)
- PreservCyt® Solution vial
- ThinPrep Pap Test Filter for Gynecologic Applications
- Program Memory Card for Gynecologic Applications
- Waste bottle assembly - includes bottle, bottle cap, tubing set, fittings, waste filter
- 2 filter Caps
- 2 spare filter seal O-rings
- Power cord
- ThinPrep Microscope slides

Additional items supplied:

- ThinPrep 2000 Operator's Manual
- 10 fixative vials

MATERIALS REQUIRED BUT NOT PROVIDED

- Slide staining system and reagents
- Standard laboratory fixative
- Coverslips and mounting media
- 20 ml PreservCyt® Solution vial
- ThinPrep® Pap Test Filter for Gynecologic Applications
- Cervical collection device

STORAGE

- Store PreservCyt Solution between 15°C (59°F) and 30°C (86°F). Do not use beyond the expiration date printed on the container.
- Store PreservCyt Solution with cytologic sample intended for ThinPrep Pap testing between 15°C (59°F) and 30°C (86°F) for up to 6 weeks.
- Store PreservCyt Solution with cytologic sample intended for CT/NG testing using the Roche Diagnostics COBAS AMPLICOR CT/NG test between 4°C (39°F) and 25°C (77°F) for up to 6 weeks.

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TECHNICAL SERVICE AND PRODUCT INFORMATION

For technical service and assistance related to use of the ThinPrep 2000 System, contact Hologic:

Telephone: 1-800-442-9892
Fax: 1-508-229-2795

For international or toll-free blocked calls, please contact 1-508-263-2900.
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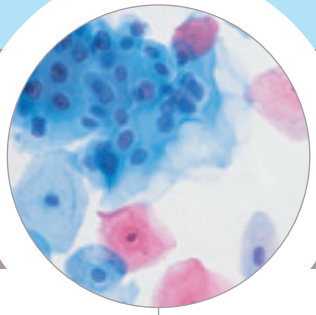
ThinPrep® Like no other.

ThinPrep 2000 Processor

ThinPrep® System



REPRESENTATIVE THIN LAYER OF CELLULAR MATERIAL IS REDUCED OF OBSCURING ELEMENTS

A semi-automated sample preparation instrument to prepare GYN and NON GYN cytology specimens

The ThinPrep 2000 Processor will include an Accessory Kit containing:

- Waste Bottle
- Filter Caps
- Operator's Manual
- Power Cord
- Dispenser Pump
- Program Memory Card
- Miscellaneous maintenance items

	ThinPrep® Processor	*Waste Bottle*
Dimensions	*width: 18"/46cm height: 19.5"/50cm depth: 15"/38cm*	*width: 6"/15cm height: 17"/43cm depth: 6"/15cm*
Weight	*41lbs / 19kg (approx)*	-
Clearance	*front: 0"/0cm rear: 3"/8cm side (ea): 3"/8cm top: 0"/0cm*	*front: 0"/0cm rear: 3"/8cm side (ea): 3"/8cm top: 0"/0cm*
Operating Temperature	*15-32°C / 59-90°F*	-
Operating Humidity	*20%-90% RH non-condensing*	-
Electrical	*100/120 VAC at 2 amps*	-
Voltage	*220/240 VAC at 1 amp*	-
Frequency	*47-63 Hz*	-
Power	*Maximum 200 watts*	-

HOLOGIC™
The Women's Health Company

ThinPrep® Like no other.

The ThinPrep 2000 Processor utilises mechanical, pneumatic and fluidic principles for **cell dispersion, collection** and **transfer.**

- **Dispersion:** A rotary drive mechanism gently disperses samples
- **Collection:** A pneumatic / fluid system, controlled by a microprocessor, monitors cell collection
- **Transfer:** Computer controlled positioning and positive air pressure facilitate transfer of cells to the ThinPrep Microscope slide

Each ThinPrep 2000 Processor slide preparation processing sequence is optimised for the biological characteristics of the various cytologic specimens.

1

1 Dispersion:

- The TransCyt Filter rotates within the sample vial
- Currents are created in the fluid that are
  - strong enough to separate debris and disperse mucus
  - gentle enough to have no adverse effect on cell appearance

2

2 Cell Collection:

- A gentle vacuum is created within the TransCyt Filter
- Cells are collected on the exterior surface of the membrane
- Cell collection is controlled by the ThinPrep 2000 Processor software that monitors the rate of flow through the TransCyt Filter

3

3 Cell Transfer:

- Following Cell collection on the membrane, the TransCyt Filter is inverted then gently pressed against the ThinPrep Microscope slide
- Natural attraction with computer controlled mechanical positioning and positive air pressure causes the cells to adhere to the ThinPrep Microscope slide resulting in an even distribution of cells in a defined circular area

HOLOGIC™
The Women's Health Company

For full product details and purchasing enquiries please contact:

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