



QUALITY UPDATE

A monthly publication providing information and updates to CompuNet Clients.

Mission: Improve the Health of Our Community through Excellence in Medical Laboratory Services

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Exposure to a Bloodborne Pathogen

By Barb Keehn – Safety Manager

*I*t is recommended that all offices have an exposure follow up process in place before it is needed. The information below provides the resources to develop a protocol.

What should you do?

If you are stuck by a needle or other sharp or get blood or other potentially infectious materials in your eyes, nose, mouth, or on broken skin, immediately flood the exposed area with water and clean any wound with soap and water or a skin disinfectant if available. Report this immediately to your employer and seek immediate medical attention.

What standard applies?

The OSHA Bloodborne Pathogen Standard (www.osha.gov) applies to any facility where there is the possibility of “occupational exposure”.

- **Section 1910.1030(f)(3)** of the OSHA Bloodborne Pathogen standard defines the required “Post Exposure Evaluation and follow up”
- A flyer outlining “Information for employers” can be printed from <http://www.cdc.gov/niosh/docs/2009-111/>

What are the current recommendations for testing and prophylaxis?

- Guidelines for post-exposure follow-up can be viewed at the following links:

[Updated U.S. Public Health Service Guidelines for the Management of Occupational Exposures to HIV and Recommendations for Post-Exposure Prophylaxis.](#) (9/2005)

[Public Health Service Guidelines on the Management of Exposure to HBV, HCV, & HIV with PEP Recommendations.](#) (6/2001)

Is HIV consent required for ‘source’ patient testing?

This is defined in the Ohio Revised code. Requirements relating to human immunodeficiency virus testing can be viewed at (<http://codes.ohio.gov/oac/3701-3-11>).

The above resources should provide the information to develop a plan before an incident occurs. If there are further questions contact: Barb Keehn, CompuNet Safety Manager at (937) 297-8303 or barb.a.keehn@questdiagnostics.com.

ThinPrep Imaging System® at CompuNet Clinical Laboratories

By: Amanda Clark, CT (ASCP)

The ThinPrep Imaging system is a dual review screening method where a ThinPrep Pap Test slide is reviewed once on the Imager and again by an experienced cytotechnologist. The Imager uses algorithms based on DNA content to examine every cell and cell cluster on a pap smear. After assessment of every cell, those with the largest and darkest nuclei are marked for cytotechnologist review. The Imaged ThinPrep Pap Test slide is next placed in the Review Scope. Using GPS-like technology, it then shows the predetermined areas of interest to the highly skilled cytotechnologist for their interpretation. If any abnormalities are detected by the cytotechnologist then the entire slide is reviewed and any additional abnormal cells are marked for further pathologist review.

One study listed on the ThinPrep web site experienced a 42% increase in HSIL disease detection and reduced false negatives by 50%¹. Additionally, increased productivity is cited by other studies that were conducted during clinical trials². June 15th, 2007 CompuNet went live with the ThinPrep Imaging System. We were anxious to see how this new gold standard of pap screening would affect our clients, your patient population, considering a pre-existing excellent quality of pap screening at CompuNet.

We reviewed rate of disease detection in each diagnostic category (Graph 1) as well as available biopsy correlations (Charts 1 & 2) in each of those categories for a period of 6 months prior to Imaging (Jan-Jun 2007) and 6 months after Imaging installation and training - including a 6 month learning curve for all processing and screening staff (Jan-Jun 2008). We evaluated 36,632 pap smears using historical manual screening from the pre-Imaging period, and 39,214 pap smears from the 6 month post-Imaging period. Results from our review can be seen in the graphs and charts provided.

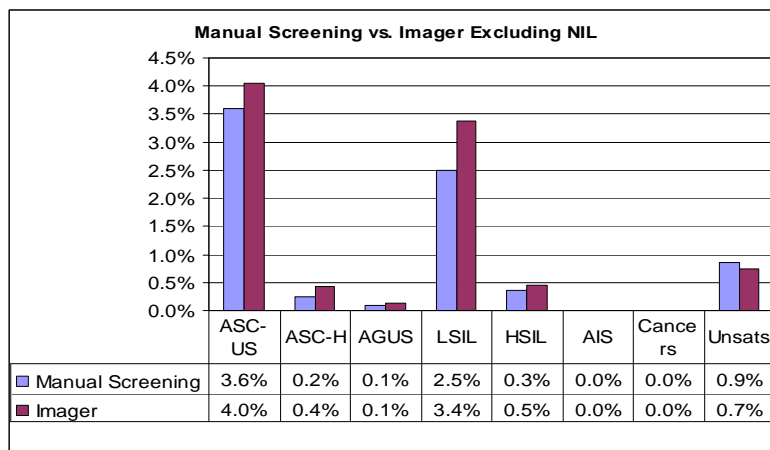
While we were not conducting a formal peer reviewed scientific study within our lab, but reviewing raw data based on two separate patient populations, we can conclude that there has been a slight increase in HSIL detection on pap screening, not excluding extenuating factors such as sampling errors and change in patient population status. Additionally, our false negative rate has declined from 7% to 4% and our productivity has increased by 22%. Overall, our rate of disease detection has increased, albeit slightly using the dual review method provided by the Imager. After reviewing the data we feel the Imaging technology is a useful tool when applied in conjunction with our experienced cytotechnologist staff. In conclusion, CompuNet is continuously dedicated to contributing to high quality patient care by offering best in class service through new technology like the ThinPrep Imaging System.

2007 Biopsy Correlation Results using Historical Manual Screening										
PAP DIAGNOSIS			BIOPSY DIAGNOSIS							
Diagnosis	# PAP DX	BX AVAILABLE	NEG		LGSIL		HGSIL		CANCER	
ASC-H	90	45	19	42.22%	10	22.22%	16	35.56%	0	0.00%
ASC-US	1322	324	182	56.17%	100	30.86%	42	12.96%	0	0.00%
HGSIL	128	71	9	12.68%	10	14.08%	50	70.42%	2	2.82%
LGSIL	918	379	147	38.79%	182	48.02%	50	13.19%	0	0.00%
NEG	33825	52	39	75.00%	11	21.15%	2	3.85%	0	0.00%

2008 Biopsy Correlation Results using ThinPrep Imaging Dual Review												
PAP DIAGNOSIS			BIOPSY DIAGNOSIS									
Diagnosis	# PAP DX	BX AVAILABLE	NEG		LGSIL		HGSIL		CANCER		OTHER	
ADENOCA	1	1	0	0.00%	0	0.00%	0	0.00%	1	100.00%	0	0.00%
ASC-H	164	80	34	42.50%	12	15.00%	32	40.00%	0	0.00%	2	2.50%
ASC-US	1588	330	169	51.21%	117	35.45%	42	12.73%	1	0.30%	1	0.30%
HGSIL	179	107	20	18.69%	20	18.69%	65	60.75%	1	0.93%	1	0.93%
LGSIL	1324	484	236	48.76%	194	40.08%	51	10.54%	1	0.21%	2	0.41%
NEG	35621	30	21	70.00%	5	16.67%	2	6.67%	2	6.67%	0	0.00%

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ThinPrep Imaging System® at CompuNet Clinical Labs *continued...*



If you have any questions, feel free to contact: Amanda Clark, Cytology Manager or Katrina St.Clair, Cytology at 937-297-8224.

References

1. Miller FS, Nagel LE, Kenny-Moynihan MB. Implementation of the ThinPrep Imaging System in a high volume metropolitan laboratory. *Diag Cytopath.* 2007;35:213-7.
2. The Imager clinical trial results showed a statistically significant increase in ASCUS+ sensitivity of 6.4% [95% CI: 2.6-10.0], a statistically significant increase in HSIL+ specificity of 0.2% [95% CI: 0.06-0.4], and a reduction in false negative fraction of 39% (based on ASCUS+ sensitivity). The unsatisfactory rate was not evaluated for statistical significance, but a decrease was observed.
3. <http://www.thinprep.com/hcp/index.html>

Finding the Latest and Greatest!

*By: Sandy Frommeyer, MT (ASCP)
Chemistry Team Leader*

In July, a select group of managers from CompuNet attended the American Association of Clinical Chemistry Annual Meeting held in Chicago, Illinois. This conference is held every year, and it gives us an opportunity to keep up with the latest trends and advances that are happening in our profession. We can meet with colleagues from across the United States and also internationally. We get to learn about changes in healthcare, and hear from world renowned speakers through educational sessions and workshops.

The highlight of the week is the Clinical Lab Expo. This Expo is the largest clinical lab expo in the world, with greater than 650 exhibitors occupying more than 1800 booths. Our goal for this Expo is to seek out new and better instrumentation to keep CompuNet on the cutting edge of technology, and to find state-of-the-art instrumentation to help us maintain our reputation as being a leader in the field.

The Expo provides us the chance to see the newest science and technology that is available and what will be coming available in the near future. We are committed to find the best instrumentation that works for our facilities and will provide the quality that our customers expect. This also gives us the opportunity to network with others who work with different instrumentation and to find out what works best for them and why it works, or doesn't. Attending these meetings are vital to keeping us abreast of the continuing changes that are occurring in the healthcare realm and to know about the latest trends and advances that will be dispersed to the medical community in the near future.

Each year we are looking at what can help us bring up new testing or upgrade instrumentation to give us more flexibility, better results, and quicker turn around times. We do all this with our clients and customers in mind, because we care about the results we are releasing as they could be our own, or our mothers, our fathers, or other family members.

If you have any questions regarding any of our clinical chemistry testing, please feel free to contact Sandy Frommeyer at 937-297-8536 or Mark Shearer at 937-297-8236.

Correction to the Helicobacter pylori Stool Antigen assay handout

Helicobacter pylori is a cause of peptic ulcers. CompuNet has provided a handout about the Helicobacter pylori Stool Antigen assay to a number of clients. An error was noted on this brochure. The brochure incorrectly stated that it was not necessary for patients to discontinue medications (i.e. PPI's, bismuth preparations, or antimicrobials) prior to collection of the sample. Continued use of these medications prior to testing may result in a false-negative result on the H. pylori Stool Antigen assay. Please contact Ike Northern, Microbiology/Serology Manager at (937) 297-8334 with questions about this correction.

Join CompuNet in the JDRF and American Heart Association Walks

American Heart Association "Learn and Live" Heart Walk

Date: September 26, 2009
Location: Eastwood MetroPark in Dayton, Ohio
Length of Walk: 5K

JDRF "Walk to Cure"

Date: October 3, 2009
Location: Island MetroPark in Dayton, Ohio
Length of Walk: 5K

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