



CDx 3D Computer Scanning



Partner Pathologist Review

# The WATS<sup>3D</sup> PATHOLOGY Partnership Program

**In the diagnosis of Barrett's Esophagus and Dysplasia, WATS<sup>3D</sup> provides you with more.**

A 3D histological reconstruction of dysplastic Barrett's esophagus tissue. The image shows a dense, multi-layered epithelial structure with numerous glandular units. The glands are irregular in shape and size, with some showing significant architectural distortion. The cells lining the glands have enlarged, hyperchromatic nuclei, and the overall tissue architecture is disorganized, characteristic of dysplasia. The color palette is dominated by deep reds and purples, likely representing hematoxylin and eosin staining.

WATS<sup>3D</sup> provides you with more

**More epithelium**

**Enhanced interobserver agreement**

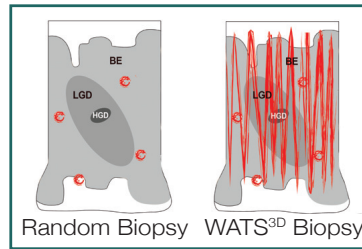
**A more definitive, enface, 3D view of every gland**

3D view of Dysplastic Barrett's

# The wide-area, transepithelial, tissue sample with computer assisted 3D analysis:

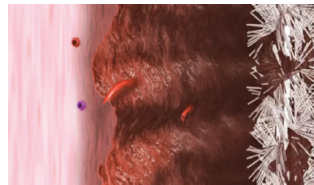
## More tissue area than histology

- Wide area sampled by WATS<sup>3D</sup> helps to find abnormality often missed with random 4-quadrant forceps biopsies



## More tissue depth than cytology

- WATS<sup>3D</sup> samples the complete transepithelial thickness
- This unique sample contains numerous large tissue fragments with extensively preserved three dimensionality
- Provides a true combination of cytology and histology



*“WATS<sup>3D</sup> not only addresses the sampling error inherent in relying on random forceps biopsies, its three-dimensional computer assisted analysis of the tissue sample provides the GI pathologist with diagnostic information that is not typically available using standard tissue based histopathology. We look forward to implementing this advance in gastroenterology and GI pathology to enhance routine care for our own practitioners.”*

— Robert D. Odze, MD, Director of the GI Pathology Division at the Brigham and Women's Hospital and Professor of Pathology at Harvard



# The WATS<sup>3D</sup> Pathology Partnership Program:

As demand for WATS<sup>3D</sup> is growing rapidly, CDx is now identifying and training partner pathologists.

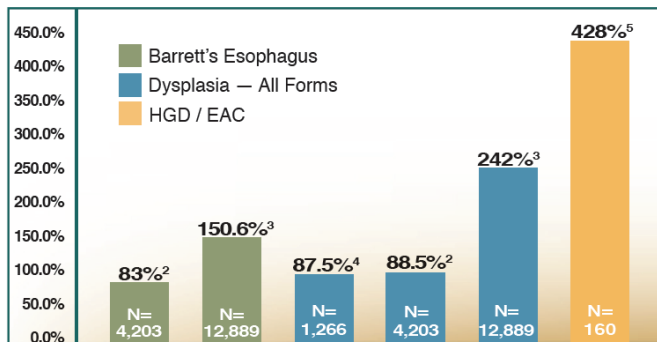
- CDx receives, prepares, and scans the specimen. The resultant 3D computer images and slides are sent by overnight carrier to the partner pathologist.
- Partner pathologist reviews and reports the case
- High resolution display, dedicated digital drive reader/ computer, automated integration to your manual microscope, and all required training are provided by CDx at no charge to the partner pathologist.

CDx bills globally and compensates the partner pathologist on a fixed, per-case basis.



**For more information, call (866) 363-6239 or email [pathpartner@cdxdiagnostics.com](mailto:pathpartner@cdxdiagnostics.com)**

## Increased diagnostic yield with adjunctive use\*\* of WATS<sup>3D</sup>



\*\*WATS as an adjunct to standard forceps biopsy compared with standard forceps biopsy alone

## Higher interobserver agreement

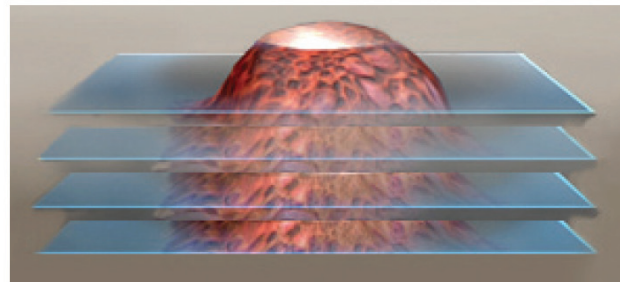
### Kappa values in the diagnosis of BE and dysplasia

WATS <sup>3D</sup>	Standard Histopathology
.86 Overall	
.95 HGD/EAC	.30
.74 IND/LGD	
.88 NDBE	

American Journal of Gastroenterology, September 2015

## A more definitive, *en face*, 3D view of every gland

- The WATS<sup>3D</sup> scanner takes up to 50 separate, three micron images of every focal plane in this complex and thick specimen
- The computer then integrates all of these 2D images to form a single 3D image, capturing the *en face* view of the gland, for neural network analysis and display to the pathologist



<sup>1</sup>Vennalaganti PR, Kanakandi VN, Gross SA, et al.

Inter-observer agreement among pathologists using wide-area transepithelial sampling with computer-assisted analysis in patients with Barrett's esophagus. *Am J Gastroenterol.* 2015;110(9):1257-1260

<sup>2</sup>Gross SA, Smith M, Ali R, Kaul V on behalf of US Collaborative WATS3D Study Group.

Increased detection of Barrett's esophagus and esophageal dysplasia using transepithelial brush biopsy with three dimensional computer-assisted tissue analysis: a prospective multi-site community-based study. *United Eur Gastroenterol J.* 2015;3(5S):A103.

<sup>3</sup>Ikonomi EP, Bhuta R, Iorio N, et al.

Transepithelial brush biopsies with computer-assisted 3-dimensional analysis markedly improve detection of Barrett's esophagus and dysplasia: interim analysis from a prospective multi-center community-based study. *Am J Gastroenterol.* 2015;110(Suppl 1):S728.

<sup>4</sup>Johansen JF, Frakes J, Eisen D, et al.

Computer-assisted analysis of abrasive transepithelial brush biopsies increases the effectiveness of esophageal screening: a multicenter prospective clinical trial by the EndoCDx Collaborative Group. *Dig Dis Sci.* 2011;56(3):767-772.

<sup>5</sup>Vennalaganti PR, Eisen G, Falk GW, et al.

Increased Detection of Barrett's Esophagus-Associated Neoplasia Using Wide Area Transepithelial Sampling in Conjunction with 4-Quadrant Forceps Biopsies: Final Results from a Multi-Center, Prospective, Randomized Trial. *Gastrointestinal Endoscopy.* <http://dx.doi.org/10.1016/j.gie.2017.07.039>



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