Vennalaganti PR, Naag Kanakadandi V, 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;110:1257-60.

OBJECTIVES: The histopathological diagnosis of Barrett's esophagus (BE)-associated dysplasia has poor inter-observer agreement. The wide-area transepithelial sampling (WATS) procedure uses a minimally invasive brush biopsy technique for acquiring wide-area sampling of BE tissue followed by computer-assisted analysis. In this study, our aim was to assess inter-observer agreement among pathologists in the diagnosis of Barrett's-associated dysplasia using the WATS computer-assisted analysis technique.

METHODS: WATS slides with varying degrees of BE dysplasia were randomly selected and distributed to four pathologists. Each pathologist graded the slides as nondysplastic, low-grade dysplasia (LGD), or high-grade dysplasia/esophageal adenocarcinoma (HGD/EAC) and completed a standardized case report form (CRF) for each slide.

RESULTS: In all, 149 BE slides were evaluated in a blinded manner by 4 pathologists. The slides included the following: no dysplasia (n=109), LGD, and HGD/EAC (n=40). The overall mean kappa value for all 3 diagnoses for the 4 observers was calculated at 0.86 (95% confidence interval (CI) 0.75-0.97). The kappa values (95% CI) for HGD/EAC, IND/LGD, and no dysplasia were 0.95 (0.88-0.99), 0.74 (0.61-0.85), and 0.88 (0.81-0.94), respectively.

CONCLUSIONS: The diagnosis of BE and associated dysplasia using the WATS technique has very high inter-observer agreement. This appears to be significantly higher as compared with previously published data using standard histopathology.