

Kaul V, Gross S, Corbett SC, Infantolino A, Tofani C: High Clinical Impact of Wide Area Transepithelial Sampling (WATS) Positive - Forceps Biopsy Negative Diagnoses of Barrett's Esophagus and Associated Dysplasia: A Retrospective Cohort Study of 423 Patients: 114 American Journal of Gastroenterology: 2019;114: S252.

INTRODUCTION: Wide Area Transepithelial Sampling with 3-Dimensional Computer-Assisted Analysis (WATS) when used adjunctively to forceps biopsies (FB) has been demonstrated in multiple prospective studies to significantly increase detection of Barrett's esophagus (BE) and associated neoplasia in patients undergoing either BE screening or surveillance. The clinical impact of WATS positive-FB negative diagnoses has never been evaluated. The aim of this IRB-approved clinical utility study was to determine changes in patient management when BE and/or dysplasia was detected by WATS but not by FB.

METHODS: Between 2013-2018, we identified 423 consecutive patients from WATS clinical registries who had a WATS positive diagnosis of BE or dysplasia and a negative FB result; 317 patients were diagnosed with BE, 90 with low grade dysplasia (LGD) and 16 with high grade dysplasia (HGD) by WATS only. Physicians subsequently completed an extensive survey to determine if the positive WATS diagnosis resulted in a change in patient management such as enrolment in a surveillance program, endoscopic ablation/antireflux surgery, initiating proton pump inhibitors (PPIs) or increasing the patient's dose of PPI.

RESULTS: The clinical impact of WATS positive-FB negative diagnoses for patients with BE, LGD or HGD is summarized in Table 1. WATS had a direct impact on the clinical management of 97.8% of the 317 BE patients including enrolment in a surveillance program (96.2%), ablation/antireflux surgery (3.7%), or starting or increasing the dose of PPIs (60.2%). WATS impacted the management of 94.4% and 93.7% of LGD and HGD patients respectively. For instance, 30% and 50% respectively had ablation, 73.3% and 68.8% had increased frequency of or new enrollment in surveillance, and 56.7% and 62.5% had PPIs prescribed or the dose increased. Seven of 8 HGD patients not ablated were lost to follow up. One of 8 HGD patients not ablated developed invasive adenocarcinoma also identified with WATS upon follow-up endoscopy.

DISCUSSION: The results of this study demonstrate that physicians have a high degree of confidence in WATS diagnoses even when the concurrent FB is negative. This is evidenced by the fact that physicians changed their patient management in 96.9% of all cases, often significantly with invasive treatments such as ablation, EMR, and even antireflux surgery in a small %age of patients. As an adjunct to FB, WATS has high clinical utility and adds value to the management of patients with BE and associated dysplasia.