5.8. Are biopsies from the neosquamous epithelium (NSE) after photodynamic therapy (PDT) and radiofrequency ablation (RFA) for Barrett's esophagus (BE) comparable in depth to those obtained from untreated squamous epithelium (USE), and, are these biopsies sufficiently deep to detect buried glandular mucosa (BGM)?

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Background: PDT and RFA are effective for BE, achieving complete response for IM (CR-IM) in most cases. While BGM after ablation is infrequent, its occurrence is of concern. A further concern is that post-ablation mucosal changes may limit the ability to biopsy deeply enough to detect BGM and that "true" rates of BGM may be higher than reported.

Aim: Determine the histological depth of biopsies from squamous epithelium in 3 cohorts: ablation-naïve (USE), post-PDT (NSE) and post-RFA (NSE), and compare presence of "lamina propria (LP) or deeper" per biopsy for each.

Methods: Ablation-naïve patients had biopsy of USE (BE, GERD, dyspepsia). Post-PDT patients had PDT, achieved CR-IM, biopsy NSE at 12+ mos. Post-RFA patients (AIM trial) had RFA for BE, achieved CR-IM, biopsy NSE at 30 mos. Jumbo or max cap forceps used. Depth graded by a single expert GI pathologist (blinded to cohort) as full epithelium (full EPI), LP, muscularis mucosae (MM), submucosa (SM). "LP or deeper" considered adequate depth to detect BGM, if present.

Results: There were no differences between cohorts for proportion of biopsies containing "LP or deeper": ablation-naïve USE (90%), post-PDT (88%), post-RFA NSE (91%)(p=NS) or proportion of biopsies containing "MM or deeper": ablation-naïve USE (7%), post-PDT NSE (16%), post-RFA NSE (14%)(p=NS). No BGM was noted in any biopsy.

Conclusion: While BGM after ablation for BE is an infrequent finding, its occurrence raises concern. A further concern is the possibility that post-ablation NSE is altered (i.e. fibrosis) and limits the depth of biopsy. This hypothesis, if true, could suggest that BGM occurs more frequently than reported. We evaluated squamous biopsies from control (USE) and post-ablation (NSE) patients. We compared the proportion of biopsies containing "LP or deeper" in each group (adequate depth to detect BGM.) The majority of NSE biopsies after PDT and RFA were "LP or deeper" (88% and 91%, respectively) and there were no biopsy depth differences between NSE and controls (USE). Therefore, the hypothesis that biopsies from post-ablation NSE are different from controls and of inadequate depth to detect for BGM is refuted. The reported rates of BGM after ablative therapy are likely reflective of the true rates of BGM.