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#### 4.13. Endoscopic endoluminal radiofrequency ablation of Barrett's esophagus: Initial results and lessons learned

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**Background:** Ablating Barrett's epithelium may reduce the risk of developing esophageal adenocarcinoma. This study reports the experience of a single surgeon using an endoscopic endoluminal device that delivers radiofrequency energy (the BARRX device) to ablate Barrett's esophagus.

**Methods:** All patients who underwent ablation of Barrett's epithelium with the BARRX system were reviewed for length of Barrett's metaplasia, presence of high-grade dysplasia, postprocedure complications, completeness of ablation at first follow-up endoscopy, need for additional ablation, completeness of ablation at second follow-up endoscopy, and concomitant performance of a Nissen fundoplication.

**Results:** Sixty-six patients underwent Barrett's ablation. The median length of the Barrett's esophagus was 3 (range, 1-14) cm. Twelve patients (18%) had high-grade dysplasia. There were no immediate procedure-related complications. Four strictures occurred: three in patients with  $\geq 12$ -cm segments of Barrett's and one in a 6-cm segment. Twenty-nine of 49 patients (59%) who had planned 3-month follow-up endoscopy had complete ablation. Five patients had planned two-stage ablation. Twenty patients with incomplete ablation had additional ablation. Twenty-seven patients had planned follow-up endoscopy at  $\geq 1$  year: 25 of 27 (93%) had biopsy-proven normal esophageal mucosa. The median length of Barrett's esophagus in patients with initially incomplete ablation was 6 cm, compared with 2 cm in the initially complete ablation patients. Seven Nissen funduplications were present at the time of ablation, whereas six were performed concomitantly with the ablation without increased difficulty.

**Conclusions:** Complete ablation of Barrett's esophagus with radiofrequency endoluminal ablation is achievable in  $>90\%$  of patients. Patients with longer segments are likely to require additional ablation. Patients with very long segments are at risk for stricture and should be approached cautiously. Performance of a fundoplication is not hindered by concomitant ablation.