

A Case of Barrett's Esophagus with Low-Grade Dysplasia Progressing to Esophageal Adenocarcinoma Despite Radiofrequency Ablation and Vigilant Surveillance

David H Kruchko, DO¹; Alan B Shapiro, MD²

Department of Medicine¹, Division of Gastroenterology²

Advocate
Lutheran General Hospital

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Introduction:

- Surveillance of Barrett's Esophagus (BE) depends on degree of dysplasia, which is separated into low-grade dysplasia (LGD) or high-grade dysplasia (HGD).
- For confirmed LGD, radiofrequency ablation (RFA) is the procedure of choice, with over 90% successful eradication at two-year follow up.
- Reports of progression of LGD to esophageal adenocarcinoma (EAC) after RFA treatment is as low as 0.25%.

Case:

- 63-year-old male was found to have long-segment, non-dysplastic, BE; classified as C8-M10 (Image 1).
- EGD #2, demonstrated the same degree of mucosal findings; however, biopsies now revealed LGD (Figure 1).
- EGD #3, the entire area of intestinal metaplasia was treated with RFA.
- EGD #4, BE now measuring C4-M9, requiring the 2nd RFA.
- EGD #5, one significant island of columnar mucosa identified requiring a 3rd round of RFA. Biopsies showed no evidence of BE.
- EGD #6, near complete eradication of BE with intestinal metaplasia, no dysplasia.
- EGD #7, two tiny islands of columnar mucosa with no dysplasia.

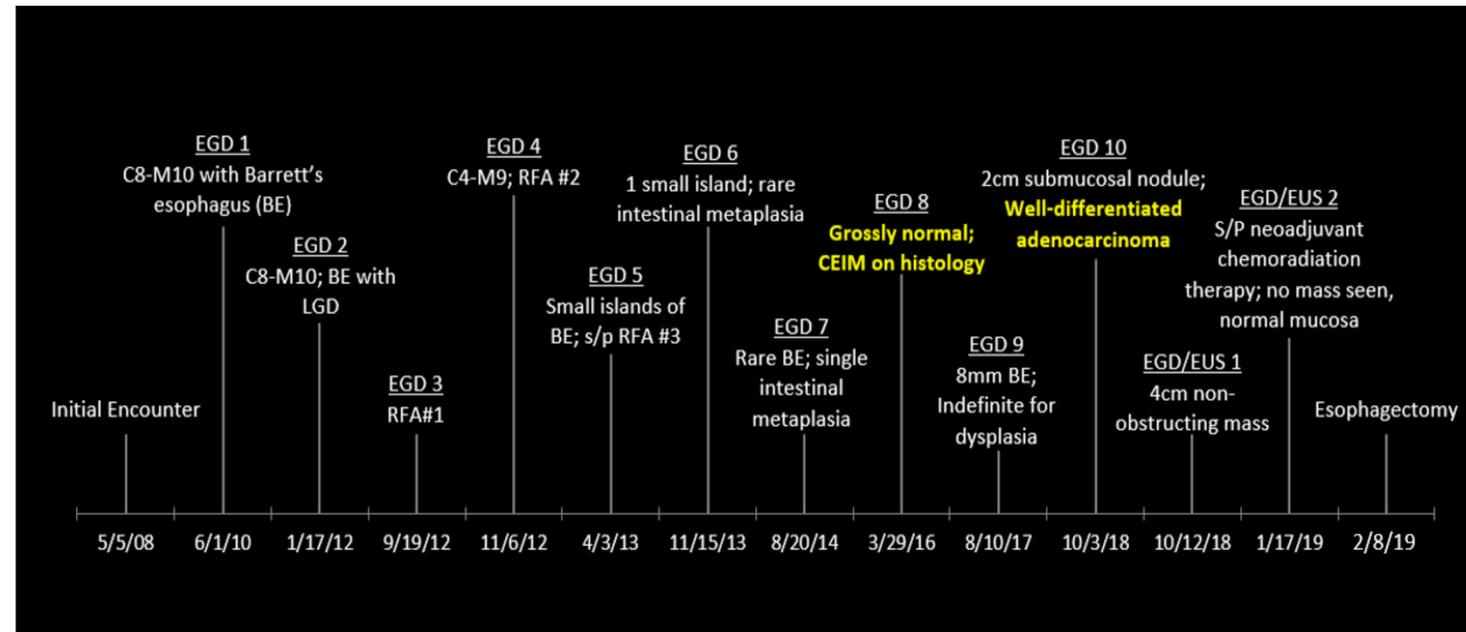


Figure 1. Timeline of events for BE course.

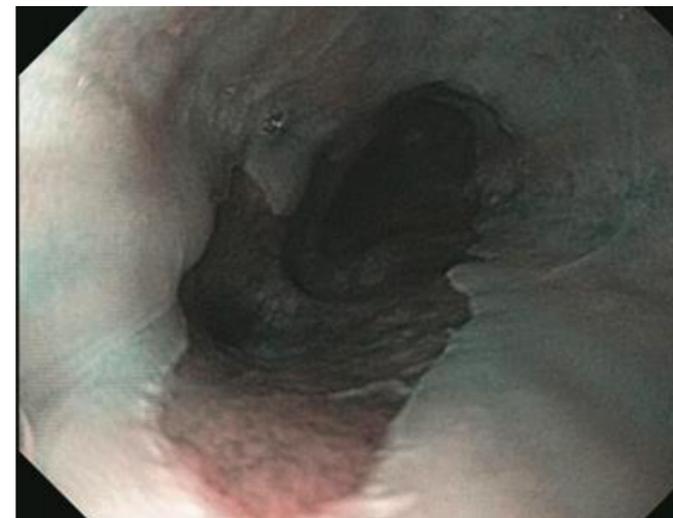


Image 1. Initial EGD demonstrating long-segment BE, classified as C8-M10.

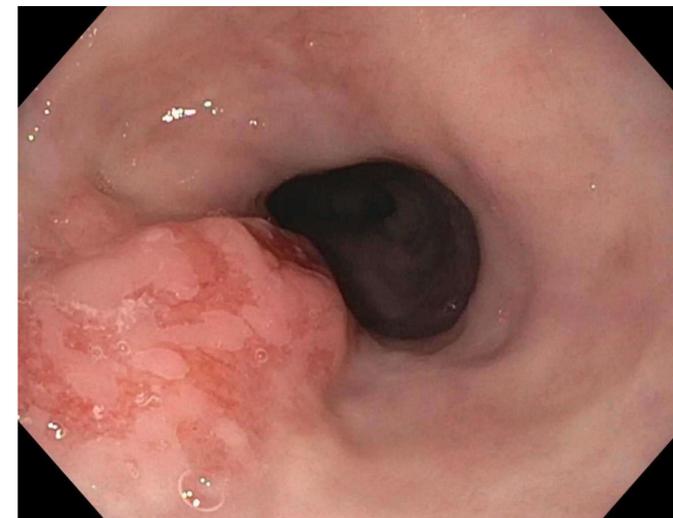


Image 2. Appearance of 2cm nodule in the distal esophagus seen on EGD #10.

Case Continued:

- EGD #8, no evidence of BE and biopsies revealed complete eradication of intestinal metaplasia (CEIM).
- Patient was instructed to follow up for repeat EGD in 6 months, but he returned 1.5 years later for EGD #9.
- EGD #9, a small island of BE with foci indefinite for dysplasia.
- EGD #10, a new 2cm nodule (Image 2).
- Biopsy revealed invasive well-differentiated adenocarcinoma, requiring neoadjuvant chemotherapy with proximal esophageal resection.

Discussion:

- BE with LGD was treated with RFA → CEIM with aggressive endoscopic follow up, but nonetheless had an unlikely progression to EAC requiring esophagectomy.
- A meta-analysis demonstrated recurrence of dysplasia carried a 0.9% risk and development to EAC carried a risk of 0.7% at 1.5 years.
- For patients with baseline LGD, it has been proposed that surveillance intervals be lengthened to 1, 3, and 5 years after CEIM.
- However, our case suggests surveillance guidelines should continue to be aggressive for LGD post RFA, especially in the case of long-segment BE.

References attached in online abstract.