Advanced Endoscopy for the IBDologist

Shannon Chang, MD/MBA
Associate Professor of Medicine
Director of Clinical Operations, IBD Center
NYU Langone Health

New York Society for Gastroenterology and Endoscopy
46th Annual New York Course

Crohn's Strictures

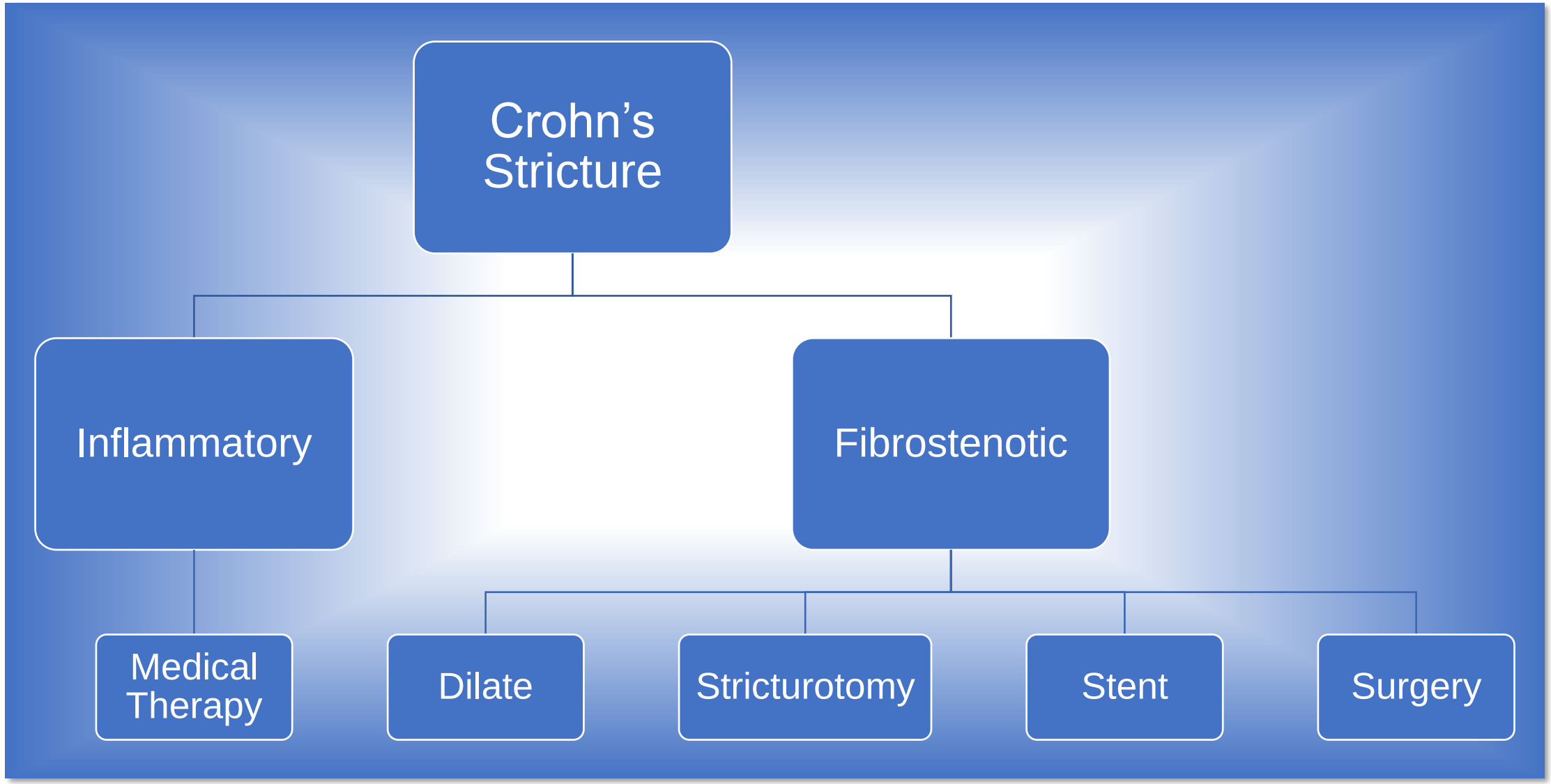
- ~30% will develop strictures within 10 years of diagnosis.
  - Most will be ileocolonic

- Fibrostenotic strictures
  - Primary
  - Postoperative (Anastomotic)

Chandan S et al. IBD 2022.

Chandan S et al. IBD 2022.

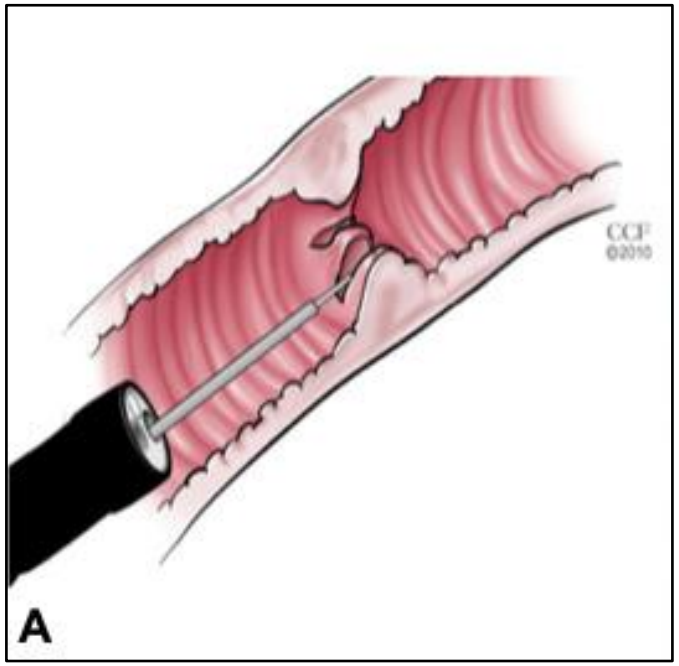
Stricture Management

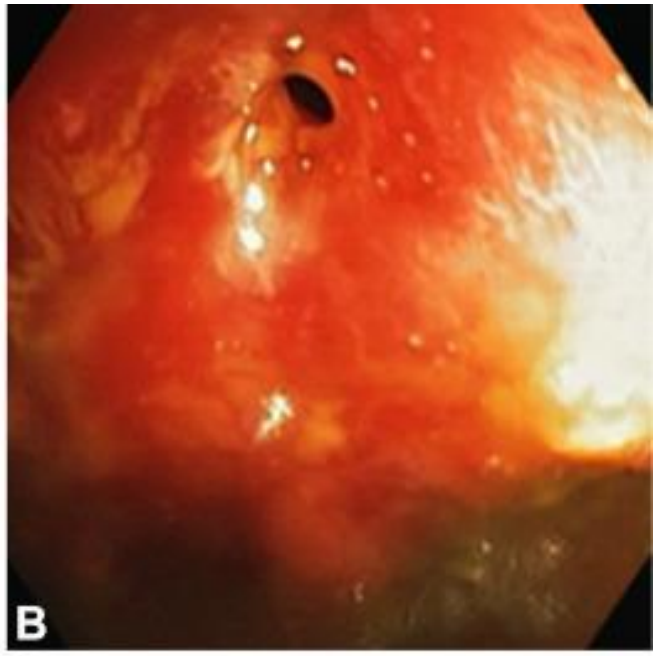


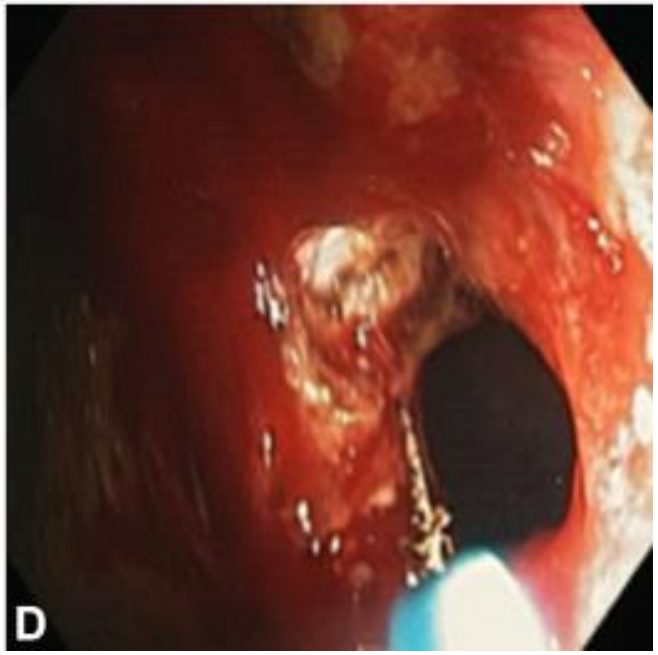
Road Map: Pre-intervention Planning

- Imaging
  - CTE
  - MRE
- Delineate stricture characteristics
  - Number (<5 more amenable to intervention)
  - Severity
  - Type (inflammatory vs fibrotic)
  - Length
  - Associated fistulae or abscesses

Stricturotomy/Electroincision



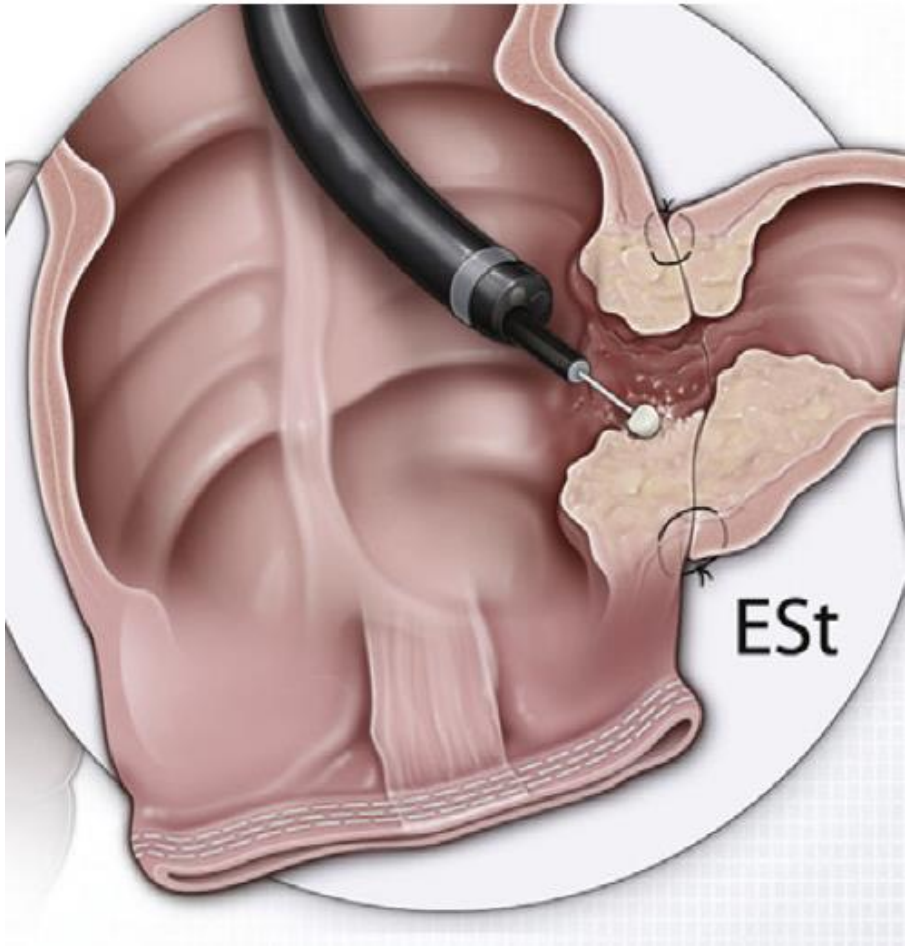




Paine E et al. GIE 2013;819-835.

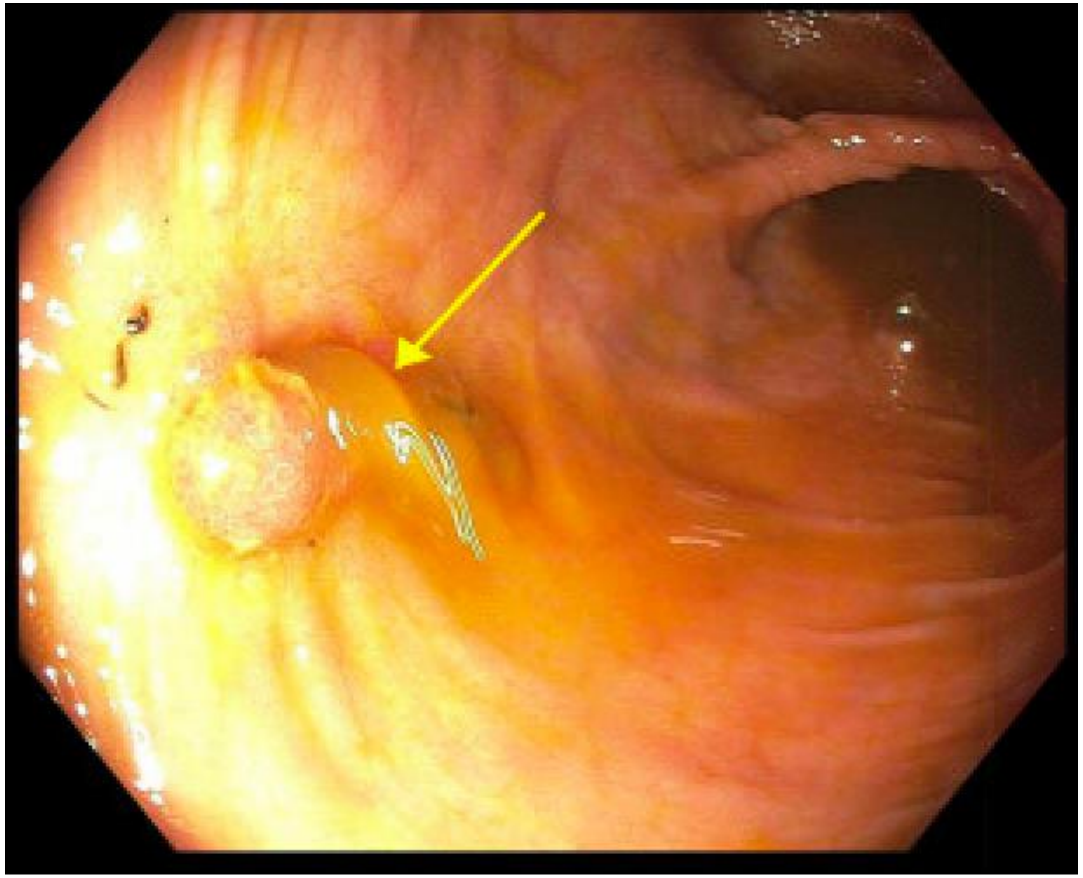
Endoscopic Stricturotomy vs ICR

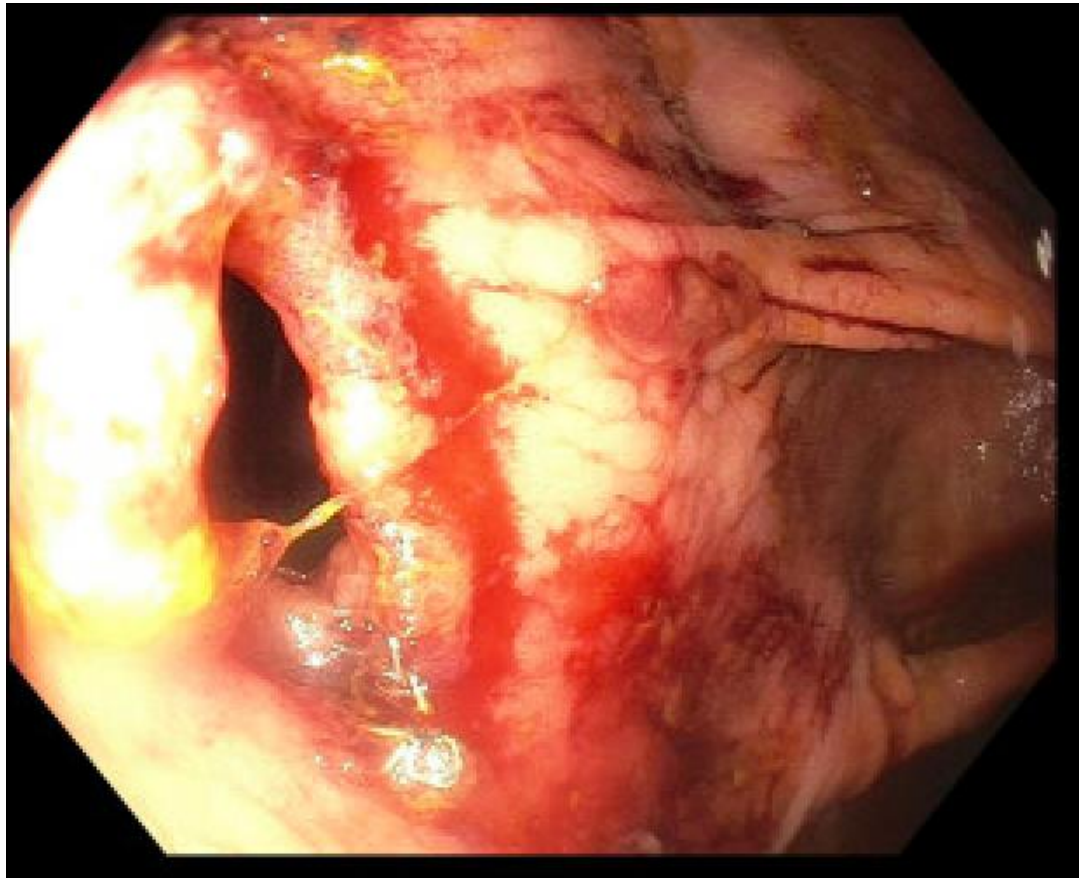
- 35 patients (ESt) vs 147 patients (ICR)
- Similar need for subsequent stricture surgery
- Major AEs: 10% per procedure (ESt) vs 32% (ICR)



Lan N et al. GIE 2019; 259-268..

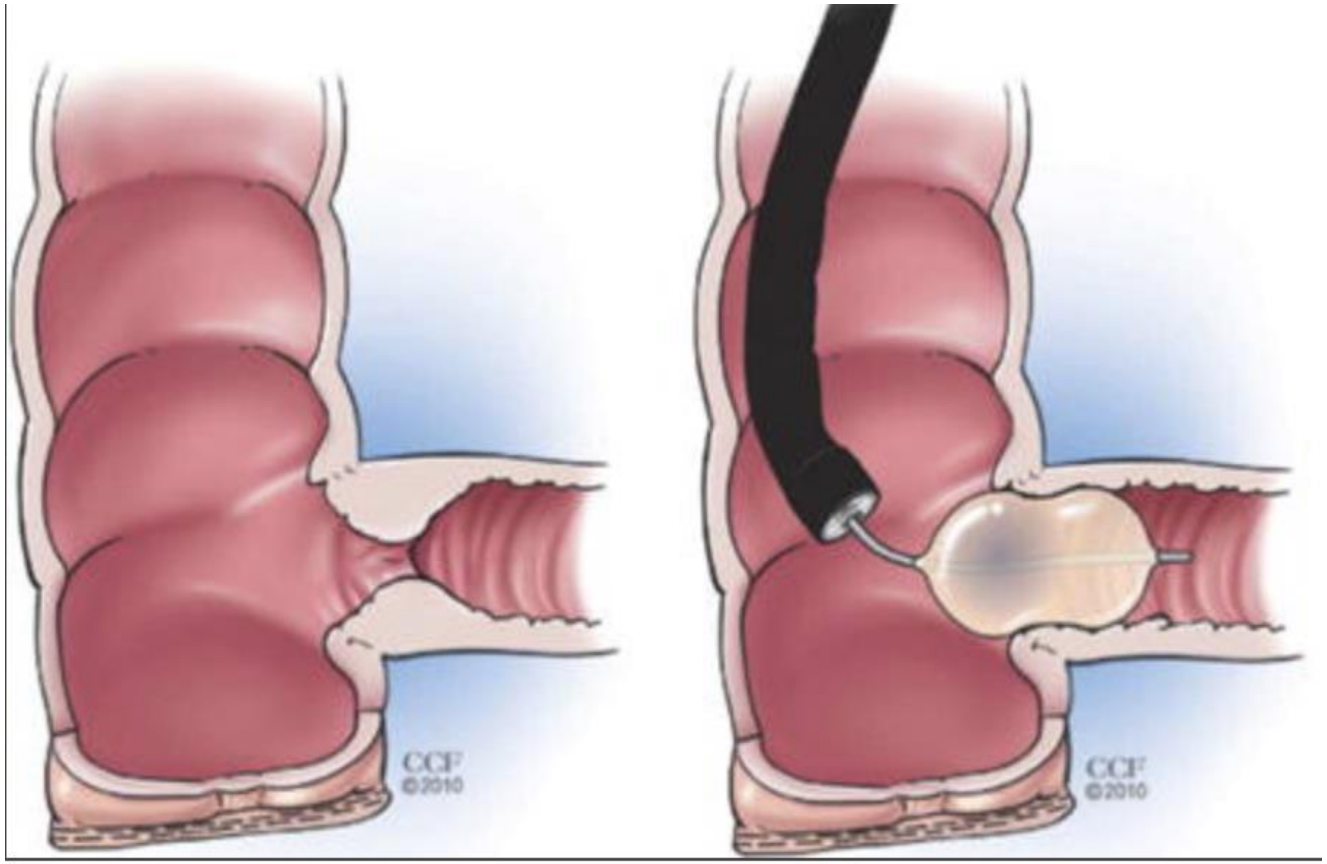
Endoscopic Balloon Dilation





Endoscopic Balloon Dilation

- For native or anastomotic strictures
- ≤ 5 cm in length
- No associated fistula, abscess, mass
- Nonangulated



Rieder F et al. Gut 2013;62(7):1072-1084. Shen B et al. Lancet Gastro Hepatol 2020;5(4):393-405.

Comparison of Endoscopic Dilation vs Surgery for Anastomotic Stricture in Patients With Crohn's Disease Following Ileocolonic Resection

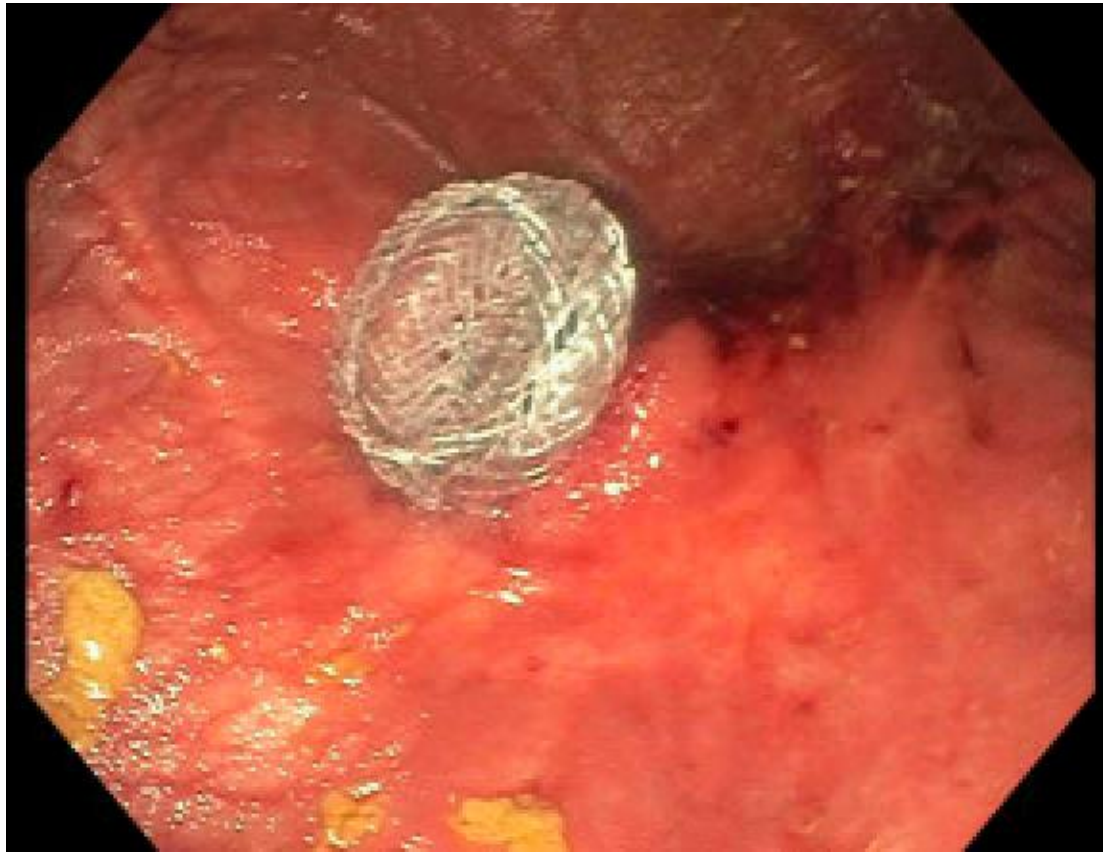
Lei Lian,[*,‡,§] Luca Stocchi,[‡] Feza H. Remzi,[‡] and Bo Shen[*]

- Retrospective study of ileocolic anastomotic strictures (n=307)

- Average surgery delayed by EBD = 6.45 years.

Lian et al. CGH 2017;15:1226-1231

Stents for Strictures

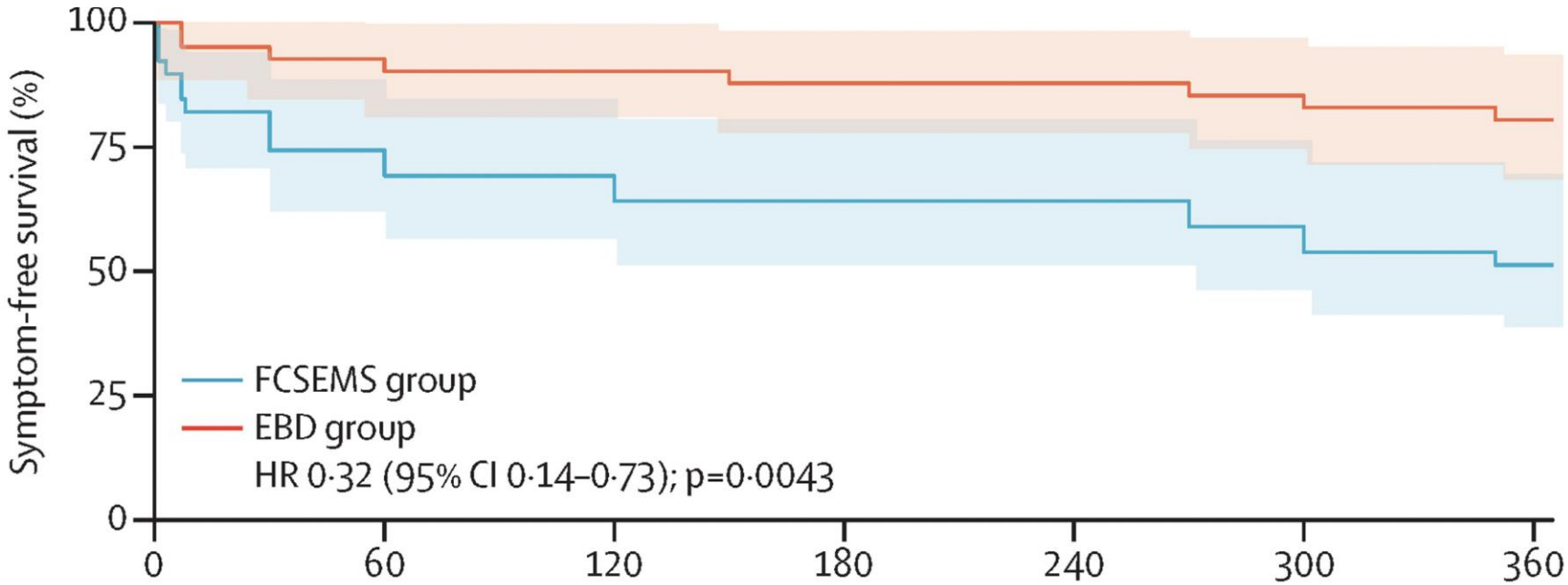


Stent: Meta Analysis

- Anastomotic (75%) > Native (25%)
- Technical success rate: 93%
- Clinical success rate: 61%
- Repeat stent: 10%
- Perforation: 2.7%
- Distal stent migration: 37%
  - Mostly fully covered, self-expandable metal stents

Chandan S, Kochar G et al. Inflamm Bowel Dis. 2022 Jul

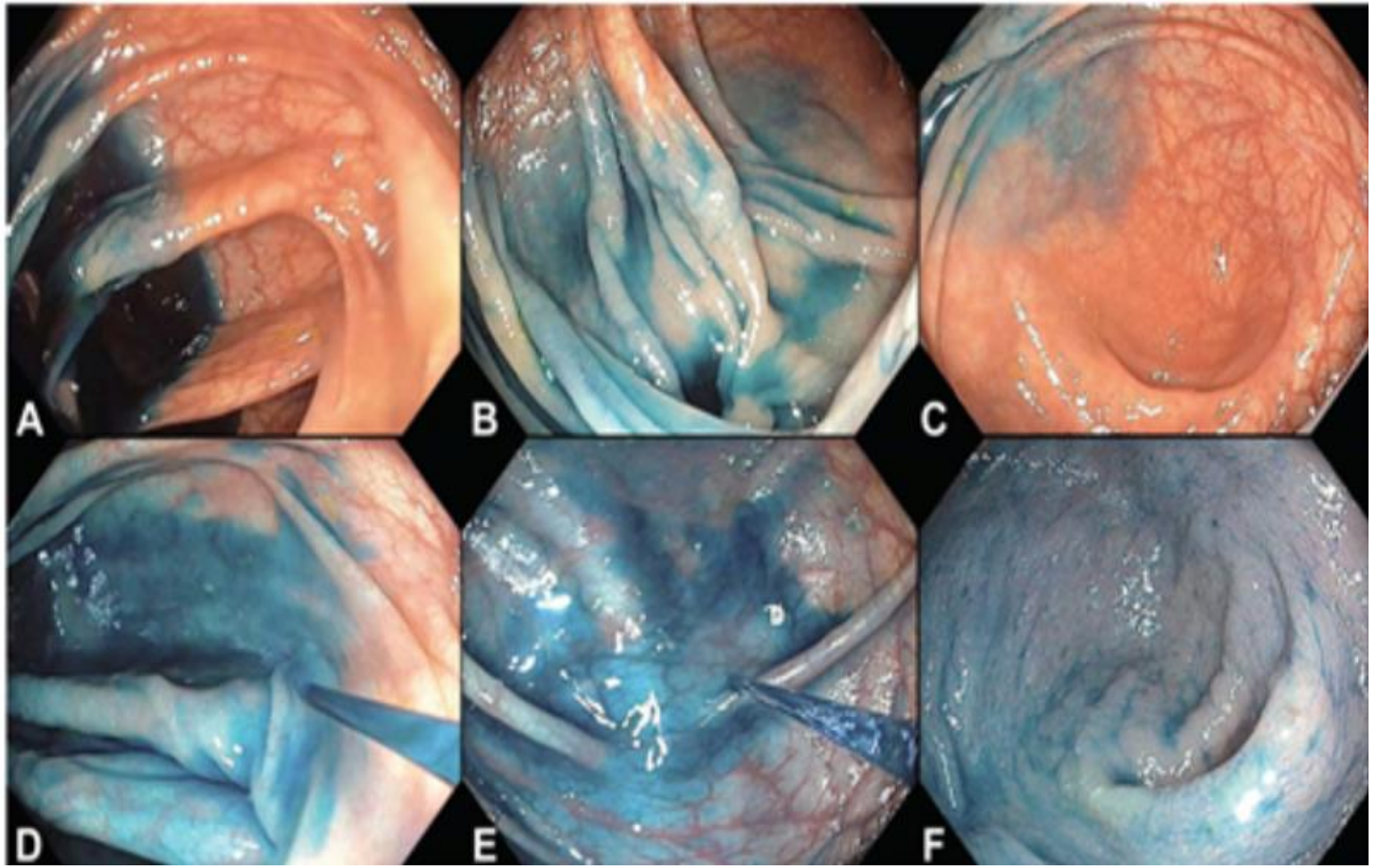
ProtDilat RCT



Number at risk (number censored)							
FCSEMS group	39 (0)	29 (10)	27 (2)	25 (2)	25 (0)	23 (2)	20 (3)
EBD group	41 (0)	38 (3)	37 (1)	36 (1)	36 (0)	35 (1)	33 (2)

Loras C et al. Lancet Gastroenterol Hepatol. 2022 Apr;7(4):332-34

Chromoendoscopy



Kaltenbach et al. GIE 2017;86:962-71.

Colorectal Cancer in UC

- Risk of CRC in UC = 4.7/1000 patient years
- Risk of CRC in UC is decreasing over the past 4 decades

Cumulative risk of CRC in UC:

10 years	**1%**
20 years	**2%**
>20 years	**5%**

Lutgens et al. Inflamm Bowel Dis. 2013 Mar-Apr;19(4):789-99. ACG 2019 UC guidelines

Visible Dysplasia

Chromoendoscopy: How To

Lesion detection	Pan chromo-endoscopy	Water jet channel using auxillary foot pump or biopsy channel using spray catheter	Indigo carmine (0.8%, 5ml ampule): 2 ampules + 250ml water (0.03%) Methylene blue (1%,10ml ampule): 1 ampule + 240ml water (0.04%)		

SCENIC Guidelines 2021

- High definition colonoscopy recommended for dysplasia surveillance
- WLE, chromoendoscopy (dye and virtual), and NBI all acceptable when using HD colonoscope.
- Random biopsy with high risk patients

High Risk

- The following should have HD-WLE and chromoendoscopy:
  - PSC
  - Previous neoplasia
  - Active inflammation
  - Tubular colon

Rabinowitz et al. GIE 2022;95(1):30-37.

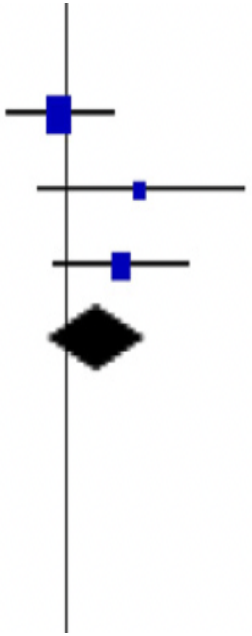
Chromoendoscopy

Chromoendoscopy vs high definition white light endoscopy

Iacucci 2017	22	90	23	90	36.2%	0.96 [0.58 - 1.59]
Mohammed 2015	11	53	5	50	11.0%	2.08 [0.78 - 5.55]
Park 2016	21	102	13	108	24.4%	1.71 [0.91 - 3.23]
Subtotal (95% CI)		**245**		**248**	**71.6%**	**1.36 [0.84 - 2.18]**
Total events	54		41			

Heterogeneity: $Tau^2 = 0.06$; $Chi^2 = 3.02$, df = 2 (P = .22); $I^2 = 34\%$

Test for overall effect: Z = 1. 26 (P = .21)



Feuerstein et al. GIE 2019;90(2):186-195.

Top 3 Things to Optimize Quality in IBD:

- #1 Imaging before endoscopic intervention
- #2 Endoscopic balloon dilations > stents
- #3 High definition endoscopes with or without chromoendoscopy for dysplasia detection

Thank You!

Shannon.chang@nyulangone.org
@shannonchangmd