

What to do with the 20-30 mm Polyp

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Objectives

- 1) Gain insight as to how best to evaluate a 20-30 mm lesion
- 2) Recognize personal limitations and when to consider referring a lesion to an advanced endoscopist
- 3) Understand appropriate post polypectomy surveillance of a 20-30 mm lesion

US MULTI-SOCIETY TASK FORCE

Endoscopic Removal of Colorectal Lesions—Recommendations by the US Multi-Society Task Force on Colorectal Cancer



**Tonya Kaltenbach,¹ Joseph C. Anderson,^{2,3,4} Carol A. Burke,⁵ Jason A. Dominitz,^{6,7} Samir Gupta,^{8,9}
David Lieberman,¹⁰ Douglas J. Robertson,^{2,3} Aasma Shaukat,^{11,12} Sapna Syngal,¹³ Douglas K. Rex¹⁴**

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Be aware of the risks!

Regular colonoscopy with polypectomy

Bleeding

- ▶ Pooled prevalence post-polypectomy bleeding (PPB) rate of 9.8/1000 (95% CI, 7.7–12.1)
- ▶ Time-trend analysis show PPB declined from 6.4 to 1.0/1,000 colonoscopies from 2001 to 2015

Perforation

- ▶ 0.08% (95% CI, 0.06%–0.1%)

EMR of polyps >20 mm

Bleeding

- ▶ Approximately **3-10%** (depending on size and location)
- ▶ Can be decreased in certain situations

Perforation

- ▶ MA of 50 studies that included 6779 colorectal lesions ≥ 20 mm → **1.5%** (95% CI, 1.2%–1.7%)

Overall Approach

Look → All margins, enhanced imaging, lesion classification

- Should I take it off?
- Should I take it off **today**?

Mark the lesion edges

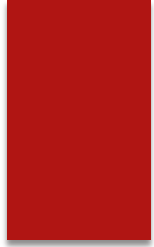
Submucosal injection

Resect → snare selection, systematic approach to piecemeal, don't grab too much, repeat injection if needed

Site management → identify residual polyp, manage complications (bleed/perforation), STSC, prophylactic clips (if indicated)

Tattoo distal to resection (not cecum or rectum)

Retrieve the specimen



Statement 6: Quality of polypectomy

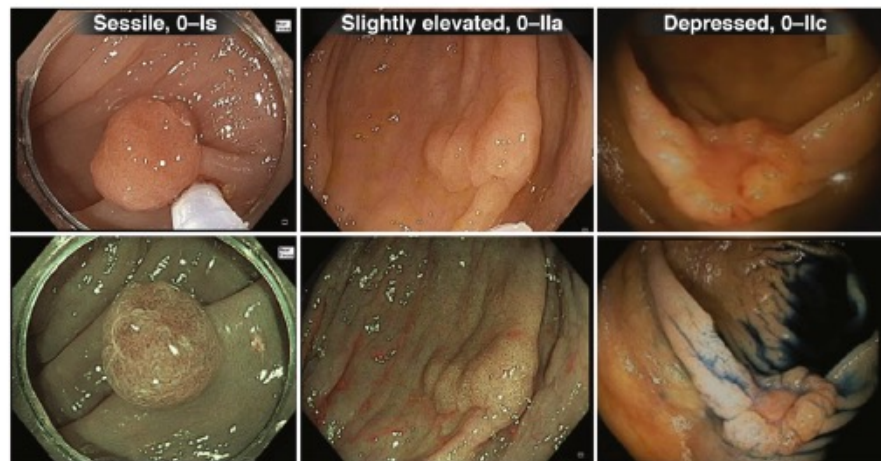
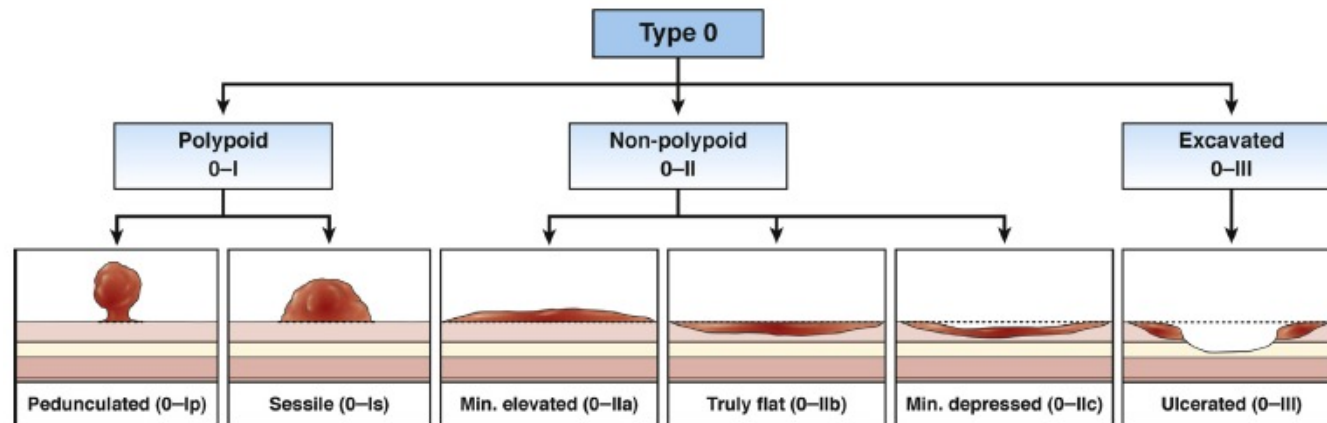
The majority of benign colorectal lesions can be safely and effectively removed using endoscopic techniques. As such, endoscopy should be the first-line management of benign colorectal lesions.

- When an endoscopist encounters a suspected benign colorectal lesion that he or she is not confident to remove completely, we recommend referral to an endoscopist experienced in advanced polypectomy for subsequent evaluation and management, in lieu of referral for surgery. (Strong recommendation, low-quality evidence)

Evaluation of polyp

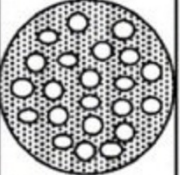
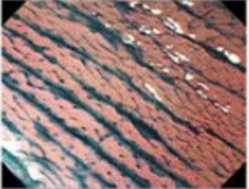


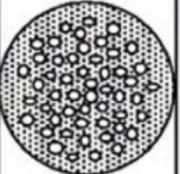



- ▶ Location
- ▶ Size
- ▶ Morphology
- ▶ Pit Pattern







Paris Classification



➔ Risk of SMI

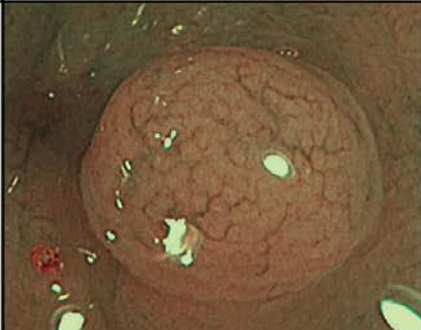
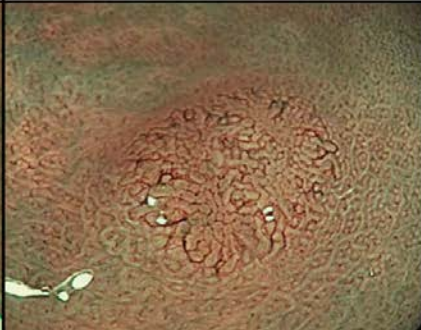
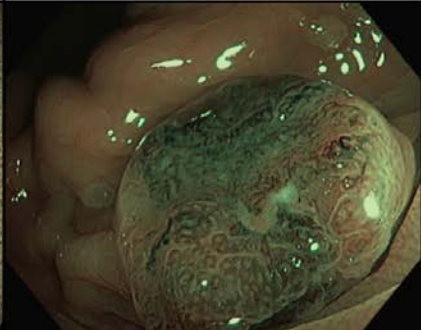
Kudo Classification

Type	Schematic	Endoscopic	Description
I			Round pits.
II			Stellar or papillary pits.
III _s			Small tubular or round pits that are smaller than the normal pit
III _L			Tubular or roundish pits that are larger than the normal pits.

IV			Branch-like or gyrus-like pits.
V _i			Irregularly arranged pits with type III _s , III _L , IV type pit patterns.
V _{ii}			Non-structural pits.

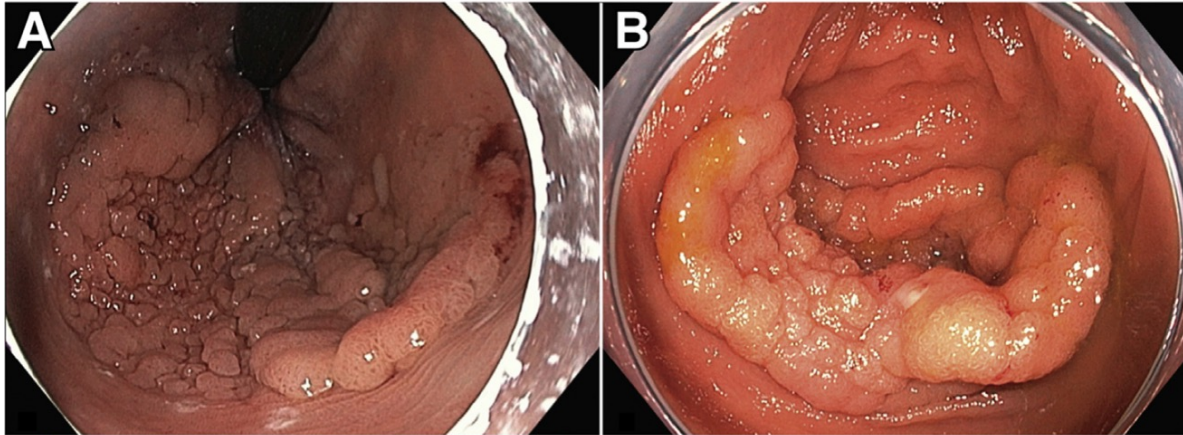
INVASIVE

NICE Classification

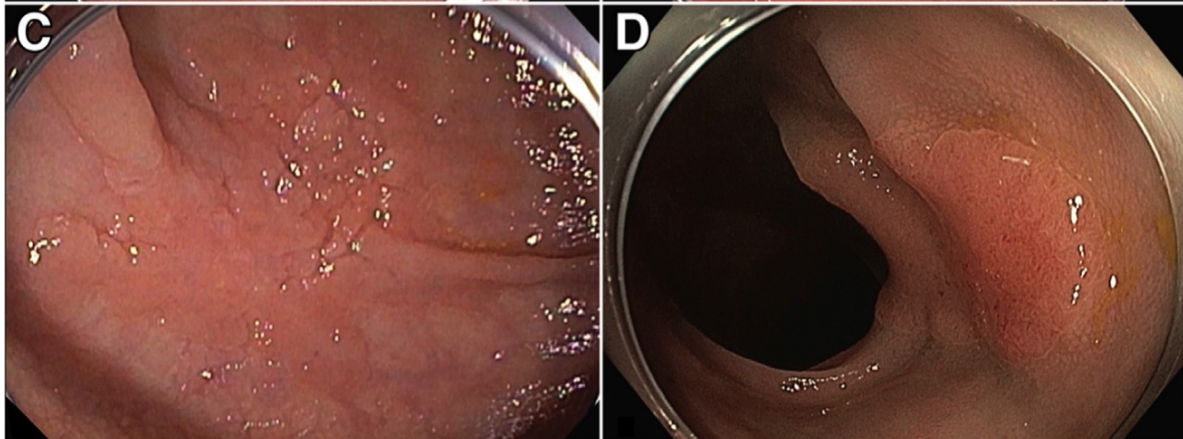
	Type 1	Type 2	Type 3
Color	Same or lighter than background	Browner relative to background (verify color arises from vessels)	Brown to dark brown relative to background; sometimes patchy whiter areas
Vessels	None, or isolated lacy vessels may be present coursing across the lesion	Brown vessels surrounding white structures**	Has area(s) of disrupted or missing vessels
Surface pattern	Dark or white spots of uniform size, or homogeneous absence of pattern	Oval, tubular, or branched white structures** surrounded by brown vessels	Amorphous or absent surface pattern
Most likely pathology	Hyperplastic and sessile serrated lesions***	Adenoma****	Deep submucosal invasive cancer
			

Laterally spreading lesions- granularity

Granular



Non-Granular



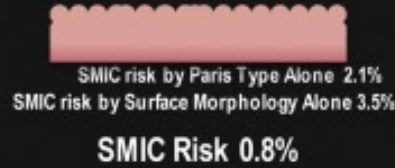
Risk of SMI

Risk of Occult Submucosal Invasive Cancer (SMIC) According to Gross Morphology and Location n = 1712



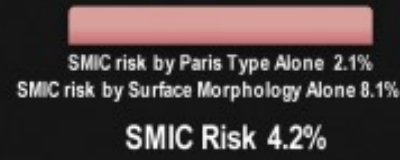
A typical proximally located 0-IIa Granular Lesion.
Overall risk of SMIC 0.7%

0-IIa G



Proximal 0.7% **Very Low Risk**
Distal 1.2% **Low Risk**

0-IIa NG

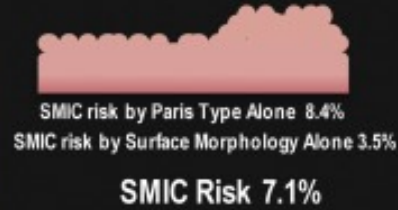


Proximal 3.8%
Distal 6.4%



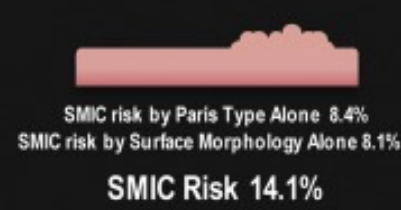
A proximal 0-IIa Non-Granular Lesion.
Overall risk of SMIC 3.8%

0-IIa+Is G



Proximal 4.2%
Distal 10.1%

0-IIa+Is NG

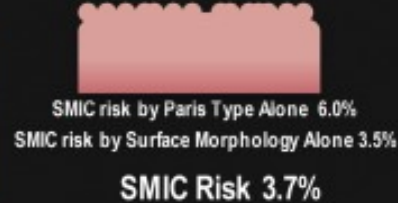


Proximal 12.7% **High Risk**
Distal 15.9% **High Risk**



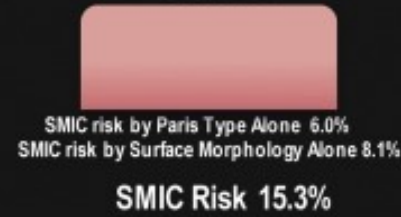
A transverse colon (proximal) 0-IIa+Is Non-Granular Lesion.
Overall risk of SMIC 12.7%

0-Is G

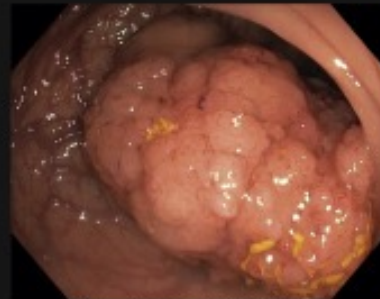


Proximal 2.3% **Low Risk**
Distal 5.7%

0-Is NG



Proximal 12.3% **High Risk**
Distal 21.4% **Very High Risk**



A sigmoid colon (distal) 0-Is Granular Lesion.
Overall risk of SMIC 5.7%



An ascending colon (proximal) 0-Is Non-Granular Lesion.
Overall risk of SMIC 12.3%

Burgess NG et al. Risk Stratification for Covert Invasive Cancer Among Patients Referred for Colonic Endoscopic Mucosal Resection: A Large Multicenter Cohort. *Gastroenterology*. 2017 Sep;153(3):732-742.e1.

CARE Study- Incomplete resection

346 polyps- 10.1% incomplete resection rate (IRR)

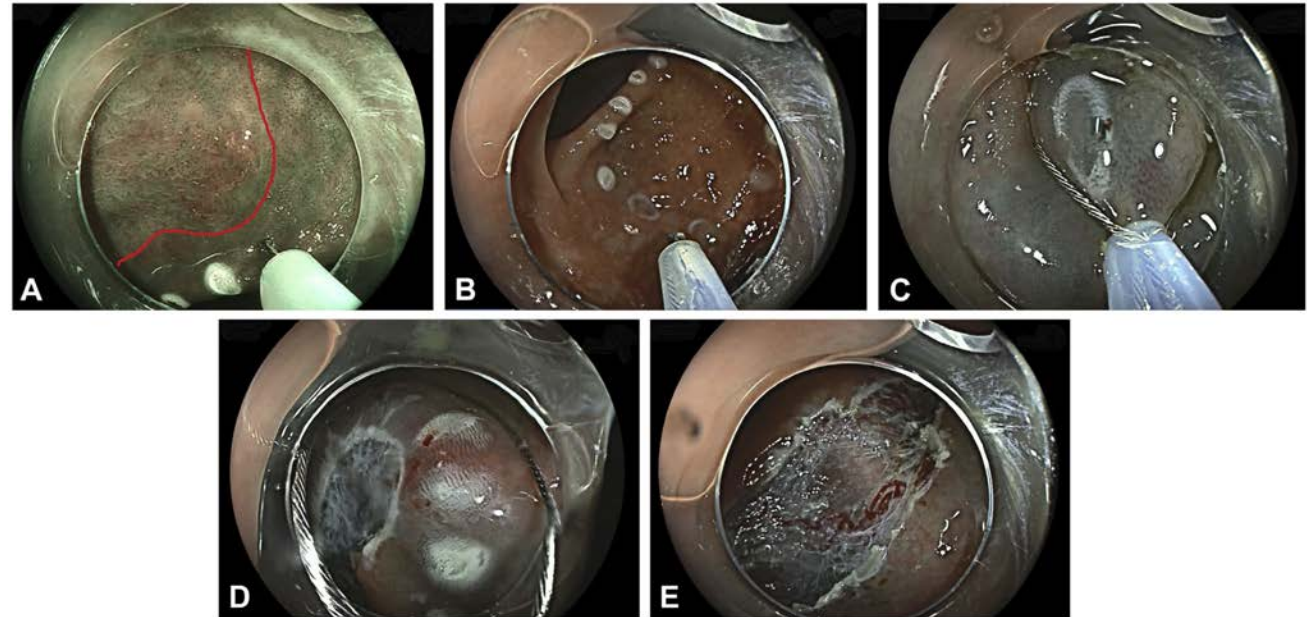
- ▶ Large (10-20 mm) **17.3%** vs. small (5-9 mm) **6.8%**
- ▶ SSA/P **31.0%** vs conventional adenoma **7.2%**
- ▶ If large (10-20 mm) AND SSA/P → **47.6% IRR!**
- ▶ **The larger the polyp, the higher the IRR**

Consider referral to advanced endoscopist

- ▶ Appendiceal orifice → Difficult to lift!
 - ▶ Ideally want to see all margins of polyp to ensure removal
 - ▶ Lesions encompassing >50% circumference of AO predict incomplete removal
 - ▶ Several options – EMR, ESD, underwater-EMR
- ▶ IC valve involvement
 - ▶ Higher rates of recurrence post EMR (OR 3.4)
- ▶ Anorectal junction
 - ▶ Unique sensory and lymphovascular anatomy
 - ▶ Consider local anesthetic and peri-procedural antibiotics
- ▶ Difficult position → distal ascending, behind large folds
- ▶ **Anything you are not comfortable with!**

Marking the Edges

- ▶ Small cautery marks just outside the edge of the polyp, small margin of normal tissue
- ▶ Single-center historical control study of EMR cases
 - ▶ Polyps with marked edges → less recurrence at 6 months compared to historical controls (8% vs. 29%, $p < 0.001$)



Yang D *et al.* Margin marking before colorectal endoscopic mucosal resection and its impact on neoplasia recurrence (with video). *Gastrointest Endosc.* 2022 May;95(5):956-965. doi: 10.1016/j.gie.2021.11.023.

Lifting the polyp

Lifting agent

- Saline+dye (methylene blue, indigo carmine) vs **long-acting solution**
- +/- epinephrine (1:20,000 or 1:100,000)

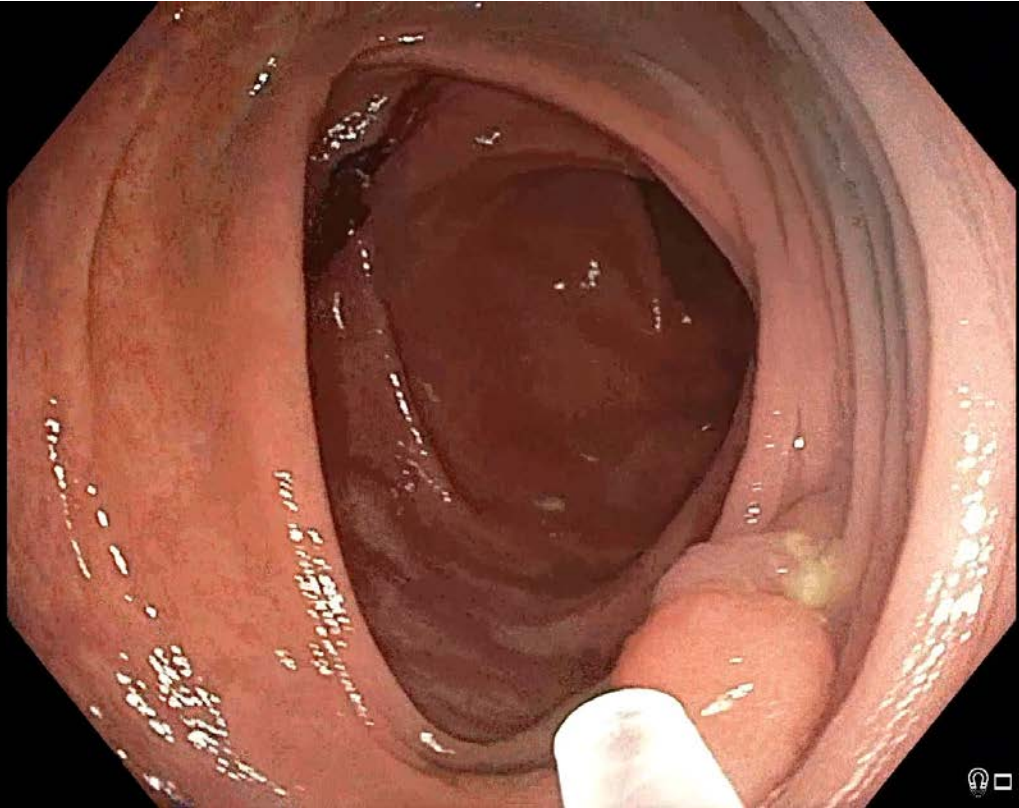
Where to start

- Dynamic lifting is key!
- Proximal (upstream) side of polyp to lift **towards** scope of view

Communication

- Needle in/out
- Inject
- Verbal feedback from assistant (echo needle order, call out each cc during injection/amount of resistance)

Injection technique



- ▶ Use small syringe (easier to push for viscous solutions)
- ▶ Prime the needle
- ▶ Angle the needle 30-45 degrees
- ▶ Start injecting just before contacting mucosa
- ▶ Depth of needle- While injecting, advance the need just until SM dissection begins then stop
- ▶ Constant reassessment of lift/depth/angle as bleb rises
- ▶ How much?
 - ▶ Just until the cushion passes polyp edge→ too much makes the edges of flat polyps hard to grasp
- ▶ Multiple injections for EMR

Resection

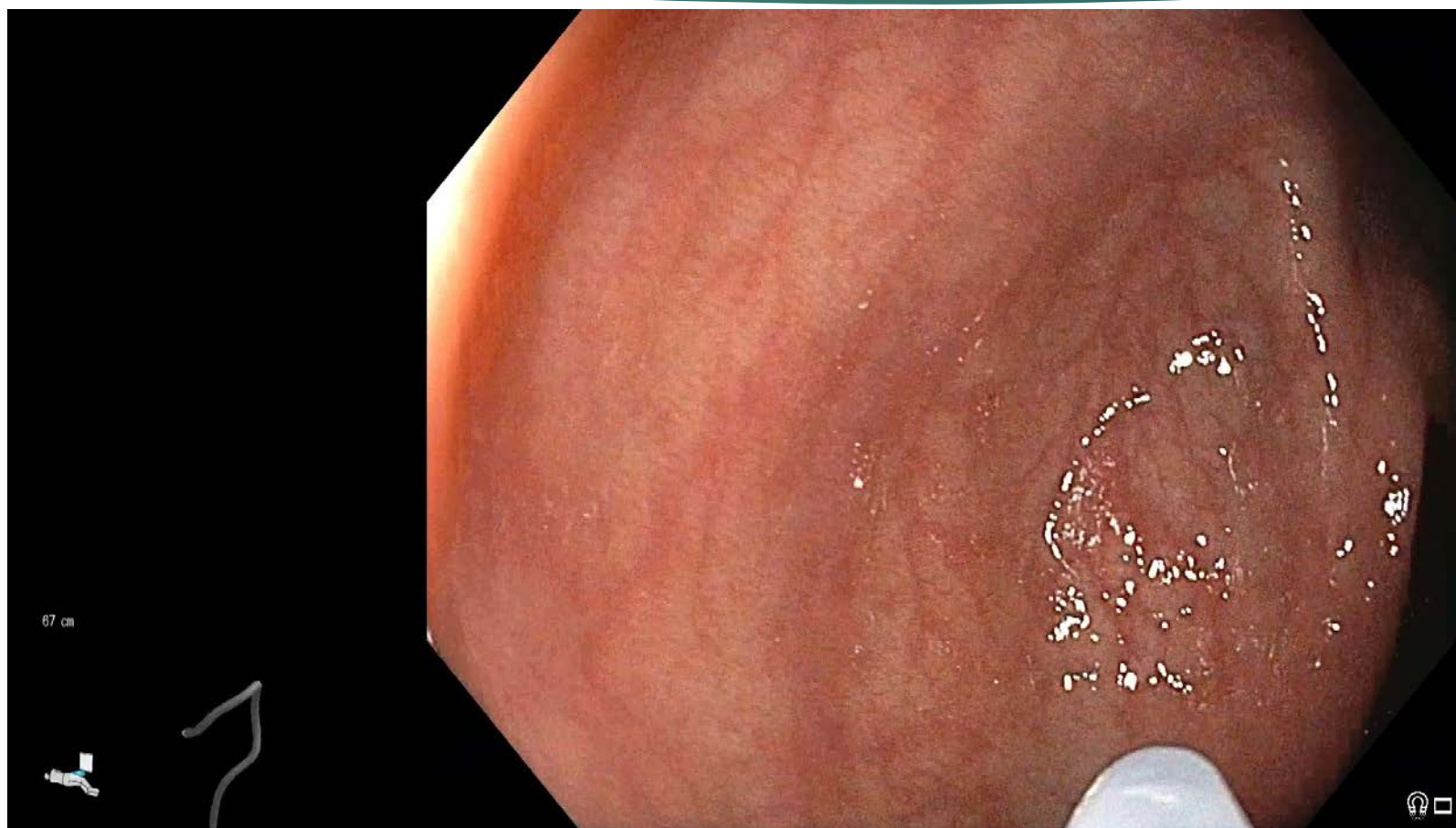
Snare selection

- Stiff braided snare for flat polyps
- Not too big (risk of grabbing MP, ↑risk of perforation)

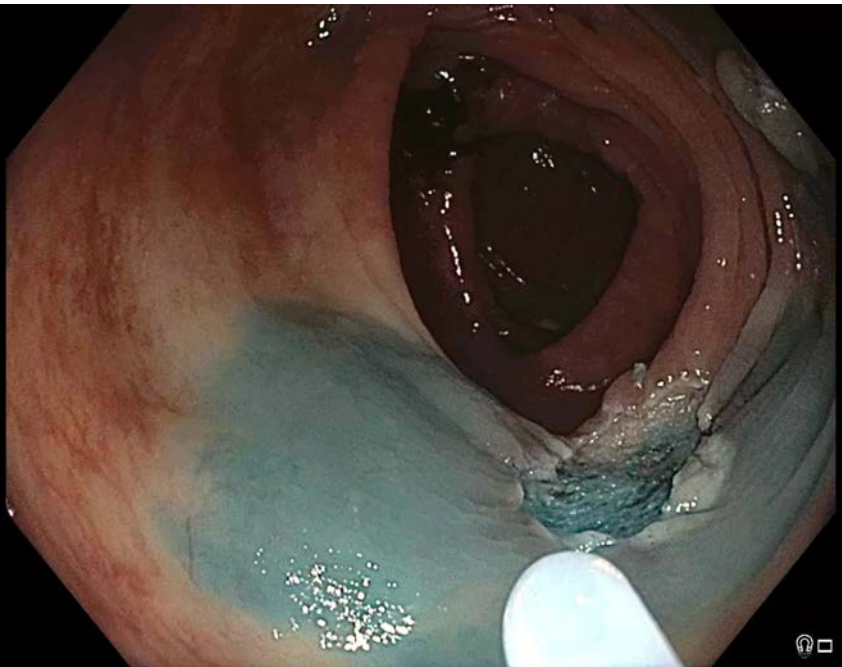
Generator setting

- Pure Coagulation: ↓immediate bleeding, ↑delayed bleeding
 - May not cut easily through thick amount of tissue
- Pure Cut: ↑immediate bleeding, ↓delayed bleeding
- Blended current hybrid of cut/coag settings → Mixture of risks/ benefits of each
 - Endocut Q on Erbe

Resection Technique



Ablation of the edges



- Snare tip soft coagulation → Snare tip treatment using Erbe SOFT COAG setting until a few millimeters of normal tissue at the margin turns white
- Klein *et al.* RCT of 390 LSTs >20 mm
 - STSC or no treatment
 - At first follow-up, recurrence rate in treatment group 5.2% vs. 21% in control group
 - Lesions 40 mm or larger had recurrence rates of 3.3% and 36.4%, respectively

Prophylactic clip closure to reduce bleeding?

- ▶ Bishay *et al.* meta-analysis of effect of clipping to prevent DPPB
 - ▶ 11 RCTs, 9 observational studies
 - ▶ No benefit to prophylactic clipping of polyps <20mm
 - ▶ Prophylactic clipping reduces DPPB in polyps>20 mm, especially for lesions in the proximal colon

Tattoo placement

- ▶ If polyp in cecum or rectum, skip this step
- ▶ **DO NOT** lift the polyp with tattoo suspension
- ▶ Place the tattoo at 2–3 separate sites located 3–5 cm distal to the lesion (anal side)
 - ▶ If end up going to surgery, don't know which wall the surgeon will see laparoscopically
- ▶ Make bleb with saline, then inject about 0.5-1 cc of tattoo suspension
 - ▶ Avoid injection through the wall (focal peritonitis)

Surveillance

- ▶ First check at 6 months
- ▶ Careful inspection +/- biopsy of EMR scar
 - ▶ If recurrence → resect/ablate, repeat surveillance in 6 months
 - ▶ If no recurrence → Next follow up at 1 year then 3 year intervals

Final remarks

- ▶ Optical assessment of polyps 20-30 mm is key
- ▶ Proper EMR takes time
- ▶ Don't start if you can't finish
- ▶ Be prepared to deal with complications
- ▶ Don't refer endoscopically resectable lesions for surgery!



Thank you! Questions?