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## ENDO SKILLS 2023 DISCLOSURE OF COMMERCIAL SUPPORT

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- **This program has received financial support from:**
- **Potential for bias/conflict of interest due to commercial support:**
  - None

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## OBJECTIVES

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- Outline basics of lesion assessment and language
- Review appropriate technique of cold snare excision
- Discuss endoscopic management of advanced sessile lesions

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## PREAMBLE

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- Colon cancer screening is perhaps the most impactful endoscopic intervention performed
- Polyp detection is increasing
  - Improved technology – high definition, optical enhancement, bowel cleanse, etc
  - FIT
- High quality polyp detection and resection is an outcome all endoscopists should strive for

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### US MULTI-SOCIETY TASK FORCE

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



Tonya Kaltenbach,<sup>1</sup> Joseph C. Anderson,<sup>2,3,4</sup> Carol A. Burke,<sup>5</sup> Jason A. Dominitz,<sup>6,7</sup> Samir Gupta,<sup>8,9</sup>  
David Lieberman,<sup>10</sup> Douglas J. Robertson,<sup>2,3</sup> Aasma Shaukat,<sup>11,12</sup> Sapna Syngal,<sup>13</sup> Douglas K. Rex<sup>14</sup>

This article is being published jointly in Gastrointestinal Endoscopy, Gastroenterology, and The American Journal of Gastroenterology.

486 GASTROINTESTINAL ENDOSCOPY Volume 91, No. 3 : 2020

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2020

US MULTI-SOCIETY TASK FORCE

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

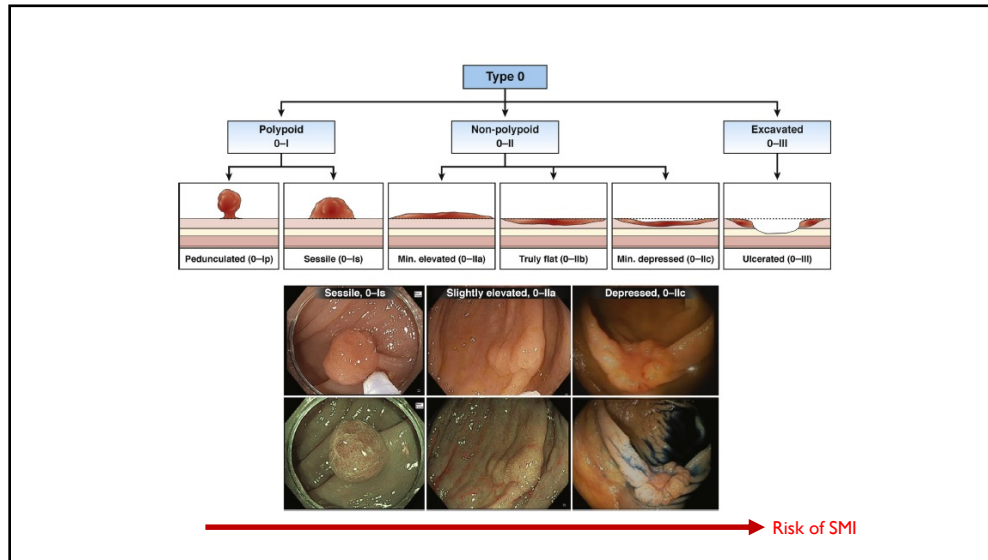
Tonya Kaltenbach,<sup>1</sup> Joseph C. Anderson,<sup>2,3,4</sup> Carol A. Burke,<sup>5</sup> Jason A. Dominitz,<sup>6,7</sup> Samir Gupta,<sup>8,9</sup> David Lieberman,<sup>10</sup> Douglas J. Robertson,<sup>11</sup> Anama Shaukat,<sup>12,13</sup> Sapna Syngal,<sup>14</sup> Douglas K. Rex<sup>14</sup>

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1. Lesion Assessment
2. Lesion Removal
3. Lesion Marking
4. Surveillance post polypectomy
5. Equipment
6. Quality

- Location & Size
- Morphology (Paris)
- Terminology (LSLs)
- Photodocumentation
- Digital enhancement
- Recognition of SM invasion

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I		Round pit (normal pit)	
II		Asteroid pit	
III <sub>s</sub>		Tubular or round pit that is smaller than the normal pit (type I)	
III <sub>L</sub>		Tubular or round pit that is larger than the normal pit (type I)	
IV		Dendritic or gyrus-like pit	
V <sub>i</sub>		Irregular arrangement and sizes of III <sub>s</sub> , III <sub>L</sub> , IV type pit pattern	
V <sub>n</sub>		Loss or decrease of pits with an amorphous structure	

Tanaka, et al, *Gastrointest Endosc* 2006;64:604-13

~0%

**Risk of SMI**

~56%

9

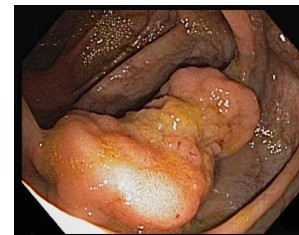
## AT ENDOSCOPY: POLYPECTOMY REPORTING REQUIREMENTS

1. Location
2. Size
3. Border
4. Shape/Morphology (Paris classification)
5. Surface /Vascular Pattern
6. Method of removal (en bloc/piecemeal, cold/hot)
7. Retrieval (Y/N)

Long View

Short View

Close Up View



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**2020**

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SUPPLEMENTARY MATERIAL accompanies this paper at <http://links.lww.com/AGIB415>, <http://links.lww.com/AGIB416>, <http://links.lww.com/AGIB420>, <http://links.lww.com/AGIB421>, <http://links.lww.com/AGIB431>, <http://links.lww.com/AGIB432>, <http://links.lww.com/AGIB433>, <http://links.lww.com/AGIB434>, <http://links.lww.com/AGIB435>, <http://links.lww.com/AGIB436>, <http://links.lww.com/AGIB437>, <http://links.lww.com/AGIB438>, <http://links.lww.com/AGIB439>, <http://links.lww.com/AGIB440>, <http://links.lww.com/AGIB441>, <http://links.lww.com/AGIB442>, <http://links.lww.com/AGIB443>

Am J Gastroenterol 2020;115:36 <https://doi.org/10.14308/ajg.2020.115.036>

1. Lesion Assessment
2. Lesion Removal
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graph TD
    A[Non-pedunculated] --> B[Endoscopic imaging to predict pathology]
    B --> C["Diminutive  
(size ≤ 5 mm)"]
    B --> D["Small  
(size 6–9 mm)"]
    C --> E[Cold snare polypectomy]
    D --> F["Cold snare polypectomy  
to achieve en bloc resection"]
    
```

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**NOT TO BE TAKEN FOR GRANTED**

- Cold snare resection used (should be) in >95% of polyps
- Technique enhances complete resection
- Has been shown to have low residual adenoma post resection for polyps <10mm
  - Prospective study, n = 126 lesions, all less than 10mm
  - Post resection colonoscopy biopsy of scar
  - Residual adenoma rate 0.98%

Maruoka D et al. Endoscopy 2018

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**2020**

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Am J Gastroenterol 2020;115:38. <https://doi.org/10.14308/ajg.2020.115.038>

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    graph TD
      A[Non-invasive lesion] --> B[Intermediate size (10-19 mm)]
      A --> C[Large size (≥ 20 mm)]
      B --> B1[Cold or hot snare polypectomy with or without submucosal injection]
      B --> B2[EMR for non-polypoid or suspected serrated lesions]
      C --> C1[Endoscopic mucosal resection]
      C --> C2[Resect all grossly visible tissue in a single session]
      C --> C3[Use viscous injection solution]
      C --> C4[Adjuvant thermal ablation of post-EMR margin]
      C --> C5[For lesions in right colon, prophylactic closure when feasible]
    
```

**Figure 5.** Algorithm for the management of colorectal lesions.

## SUBMUCOSAL INJECTION

## Normal Saline Compounding

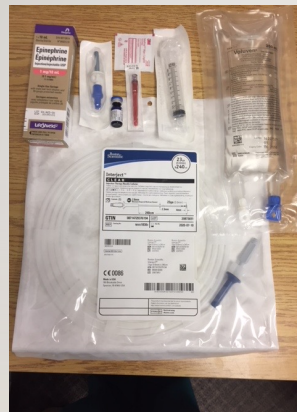
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## VOLUVEN COMPOUNDING

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### Contents:

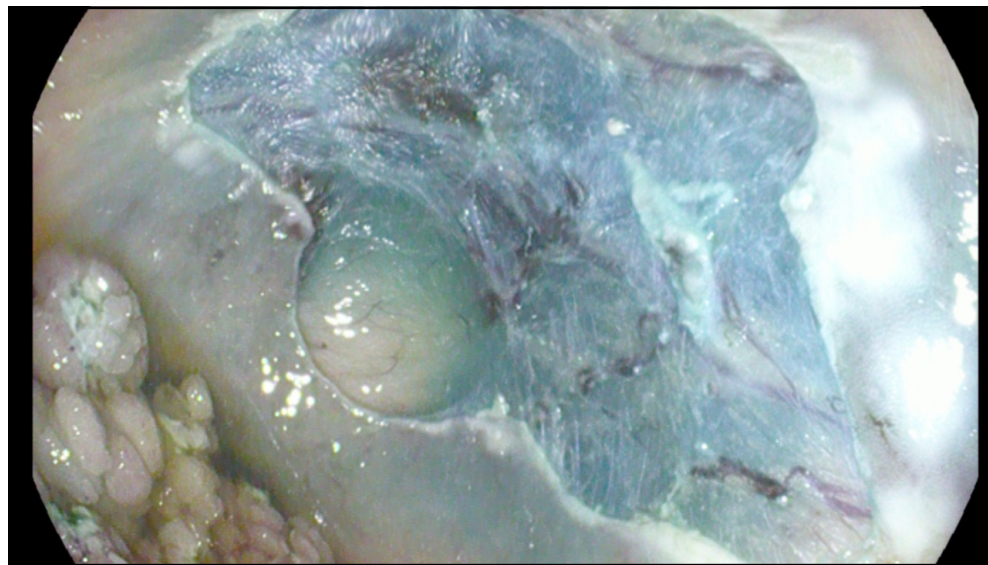
- 500 ml bag Voluven
- Methylene Blue 1 ml vial x2
- Blunt Filter needle
- Blunt Non-filtered needle
- ICU medical bag spike
- 10 cc luer-lock syringes
- Epi pre-loaded syringe 1:10,000 concentration
- Syringe tip caps

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## UNIQUE LOCATIONS THAT WARRANT PAUSE

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- Appendiceal orifice
  - Often 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
- Ileocecal 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

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## ENDOSCOPIC MUCOSAL RESECTION

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- Not reserved for therapeutic endoscopists or complex advanced lesions
- Useful tool for all endoscopists
- Appropriate technique can assist resection of common lesions and improve complete resection

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## IMPORTANCE OF CLIPPING

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- Meta-analysis (Forbes et al. GIE)
- - clipping defect reduces bleeding and is cost effective for lesions in the right colon (>20mm)
- - no effect on perforation risk reduction
- 

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## RECURRENCE POST RESECTION

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## RECURRENT POLYP

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- In the best of hands, recurrence of adenoma post EMR is 2-5%
- Risks for recurrence are many – size, location, technique, intraprocedural bleeding
- Careful inspection of resection site at appropriate interval is imperative

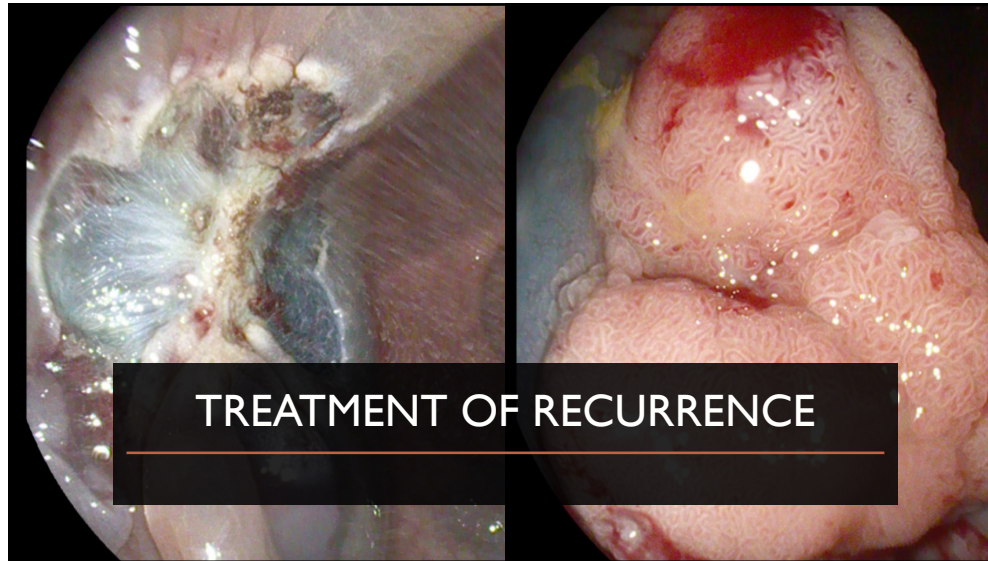
23

## MANAGEMENT OF RECURRENT POLYP

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- A labour of love and commitment
  - Often requires multiple follow up colonoscopies
  - First intervention is the most important
- Goal is to excise *all visible* polyp followed by ablation of region
- CAST – Cold Avulsion with adjuvant Snare Tip soft coagulation
  - Caveat – removal is not always cold!

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### TAKE HOME POINTS

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- Careful examination of polyp helps predict pathology and strategize removal
- The majority of sessile polyp removal involves cold snare
- Endoscopic mucosal resection of moderate sized lesions is achievable by most
- Recurrence is common and endoscopically manageable

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