Sessile Polyps (ASEP 2020 – Small Group)

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Conflict of Interest Disclosure (past 24 months)

Company	**Relationship**
Pendopharm	Research Support
Boston Scientific	Research Support
BC Cancer	Medical Director, Colon Screening Program

Name: Dr. David Armstrong

Conflict of Interest Disclosure (past 24 months)

Company	Relationship
AbbVie	Research Support, Educational Event
Allergan	Educational Event Sponsorship
Fresenius-Kabi	Educational Event Sponsorship
Janssen	Educational Event Sponsorship
Lupin	Educational Event Sponsorship
Medtronic	Research Support
Olympus Canada	Educational Event Sponsorship
Pendopharm	Advisory, Educational Event Sponsorship
Pentax Medical	Advisory, Educational Event Sponsorship
Pfizer	Consulting, Educational Event Sponsorship
Shire Canada	Advisory, Educational Event Sponsorship, Speaking
Takeda Canada	Educational Event Sponsorship

Name: Dr. David Armstrong

Conflict of Interest Disclosure (past 24 months)

Company	Relationship
Canadian Association of Gastroenterology (CAG)	Past President, Board Member
Canadian Digestive Health Foundation (CDHF)	Board Member
American College of Gastroenterology (ACG)	Past Governor, Ontario
World Gastroenterology Organization (WGO)	Chair, WGO Guidelines Committee
Canadian Partnership Against Cancer (CPAC)	Chair, National Colon Cancer Screening Network (NCCSN)
European Commission (EC)	Member, European Commission Initiative on Colorectal Cancer (ECCIC)
Canadian Standards Association (CSA Group)	Member, Electrosurgery Safety Committee

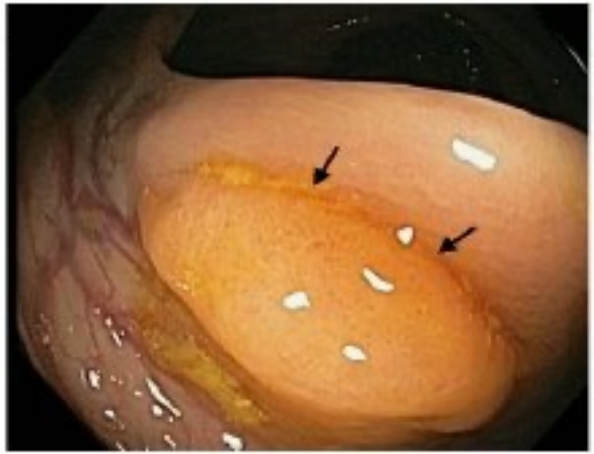
CanMEDS Roles Covered

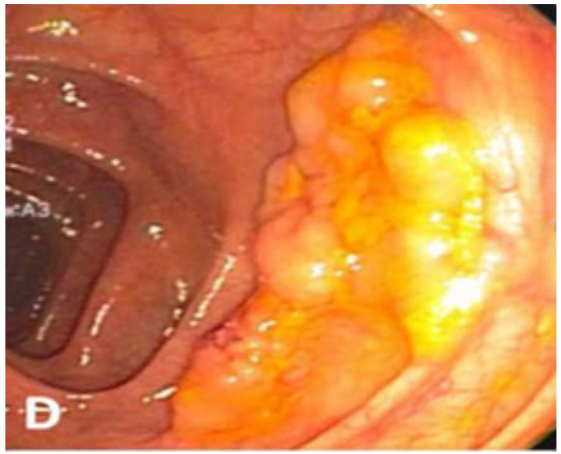
X	**Medical Expert** (as *Medical Experts*, physicians integrate all of the CanMEDS Roles, applying medical knowledge, clinical skills, and professional values in their provision of high-quality and safe patient-centered care. *Medical Expert* is the central physician Role in the CanMEDS Framework and defines the physician's clinical scope of practice.)
	Communicator (as *Communicators*, physicians form relationships with patients and their families that facilitate the gathering and sharing of essential information for effective health care.)
X	**Collaborator** (as *Collaborators*, physicians work effectively with other health care professionals to provide safe, high-quality, patient-centred care.)
X	**Leader** (as *Leaders*, physicians engage with others to contribute to a vision of a high-quality health care system and take responsibility for the delivery of excellent patient care through their activities as clinicians, administrators, scholars, or teachers.)
	Health Advocate (as *Health Advocates*, physicians contribute their expertise and influence as they work with communities or patient populations to improve health. They work with those they serve to determine and understand needs, speak on behalf of others when required, and support the mobilization of resources to effect change.)
X	**Scholar** (as *Scholars*, physicians demonstrate a lifelong commitment to excellence in practice through continuous learning and by teaching others, evaluating evidence, and contributing to scholarship.)
	Professional (as *Professionals,* physicians are committed to the health and well-being of individual patients and society through ethical practice, high personal standards of behaviour, accountability to the profession and society, physician-led regulation, and maintenance of personal health.)

Objectives

After this session, participants will:

- Understand the importance of lesion assessment before removal of a sessile colon polyp
- Appreciate the importance of appropriate patient positioning for the safe removal of a sessile colon polyp
- Be aware of the techniques available to optimize effective removal of a sessile colon polyp
- Be aware of the strategies available to minimize the risk of complications after removal of a sessile colon polyp

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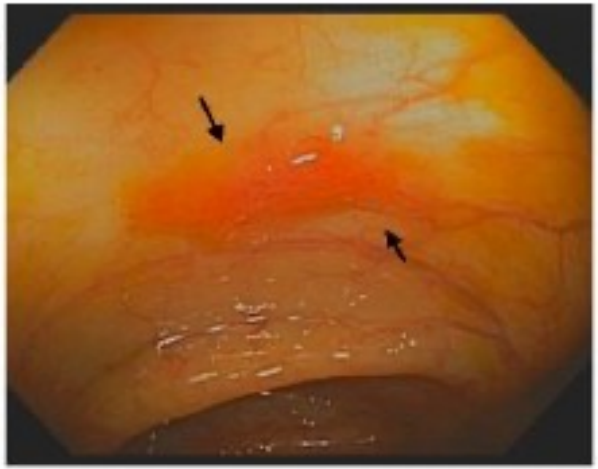
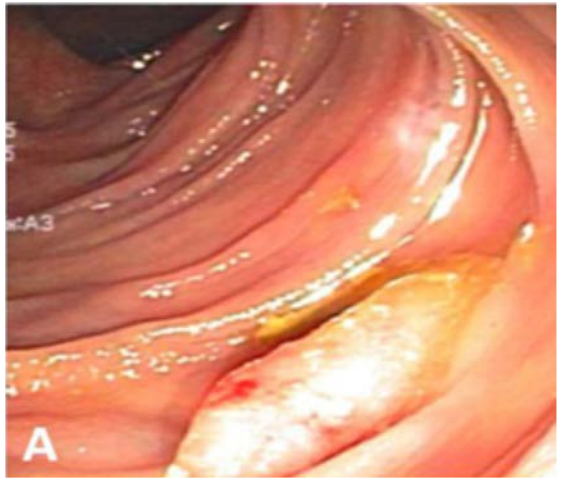
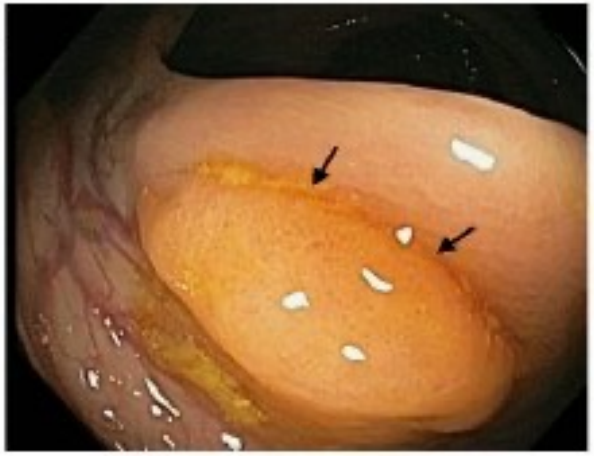
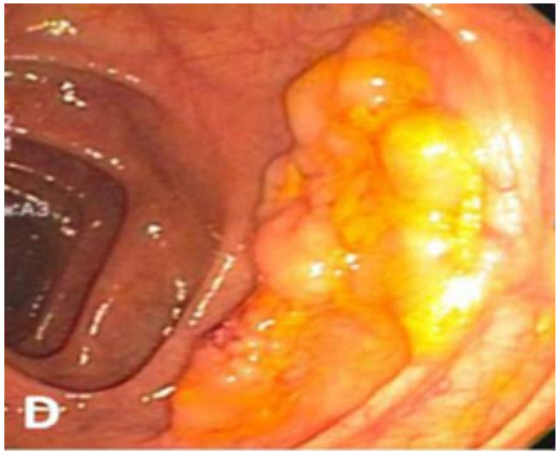



A

15 mm SSA/P with mucus cap

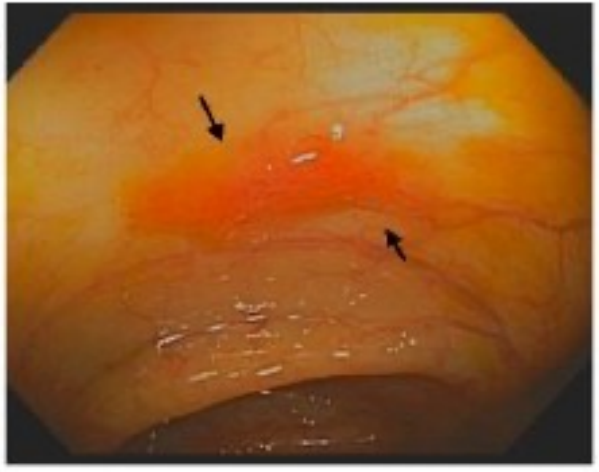


20 mm SSA/P

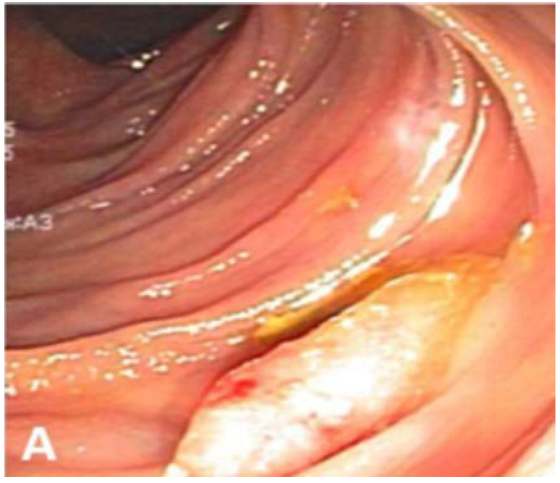


30 mm SSA/P

10 mm SSA/P



4 mm SSA/P

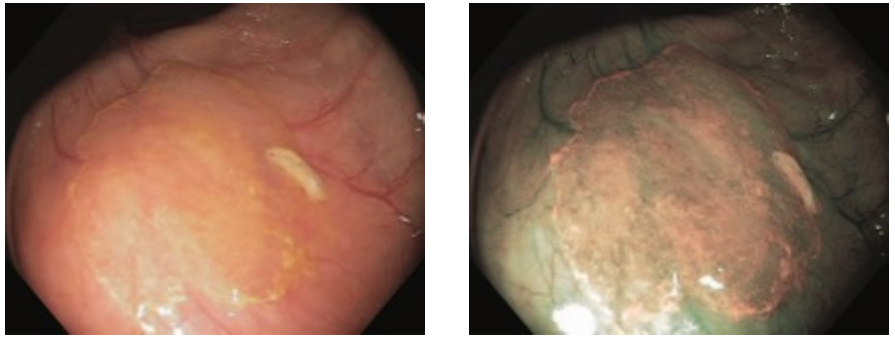


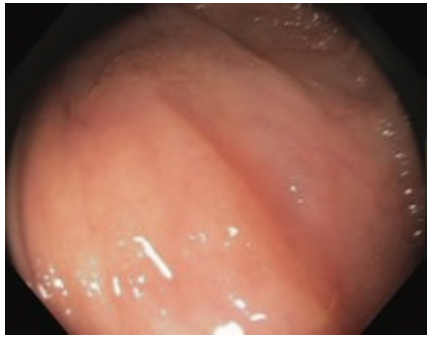
15 mm SSA/P with dysplasia

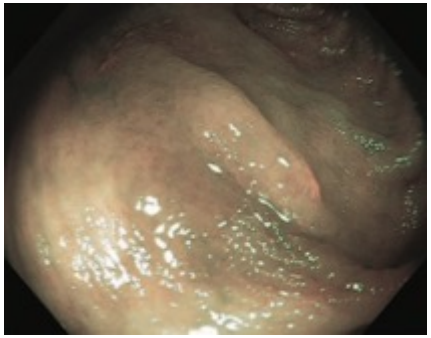
Potential Issues

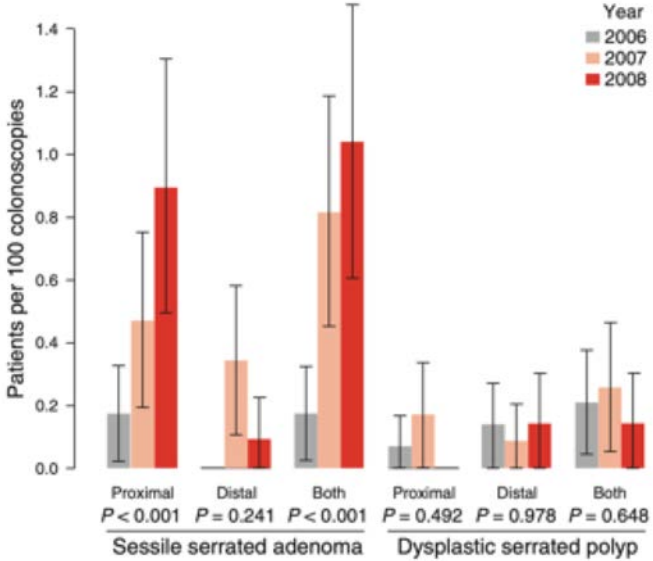
- **Find the Polyp**
- **Risk of Cancer**
- **Incomplete Resection**
- **Complications of Resection**
  - Bleeding
  - Thermal Injury
  - Perforation
- **Retrieval**

Don’t Miss the Proximal SSA!







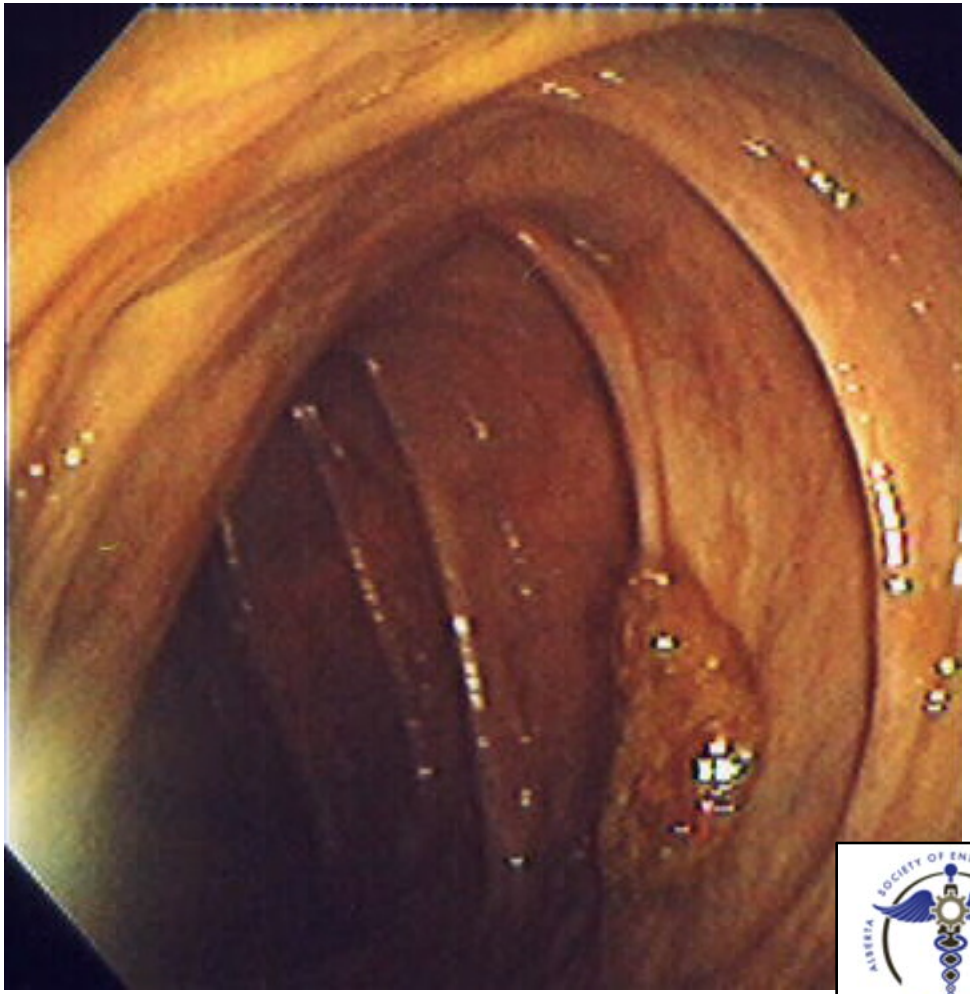


- White Light Endoscopy
  - Cloudy surface
  - Mucus cap
  - Indistinct border (esp. after washing)
- Narrow Band Imaging
  - Dark spots
  - Indistinct border (esp. after washing)

Hetzel JT et al. Am J Gastroenterol 2010;105:2656–64
Rex DK et al. Am J Gastroenterol 2010;105:2665–9

Case 1

- 59-year old man
- Family history of CRC: Mother
- Good general health
- No medications
- No allergies

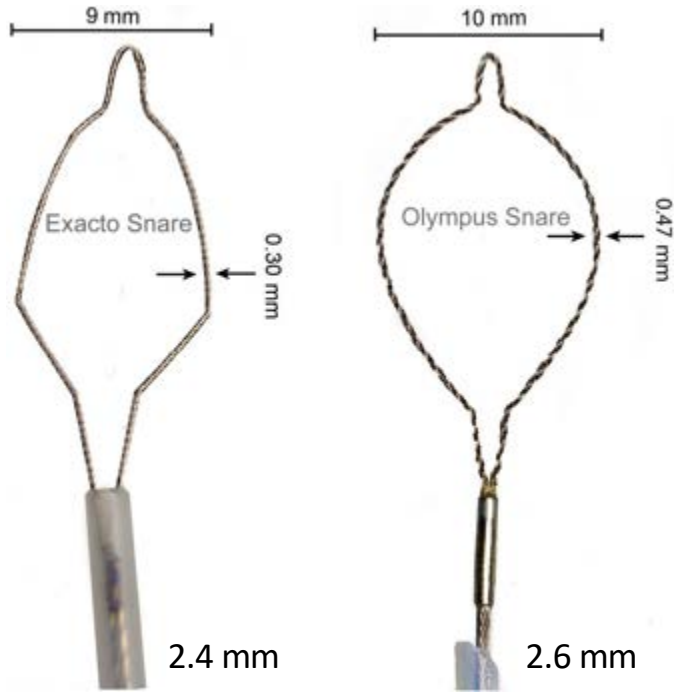


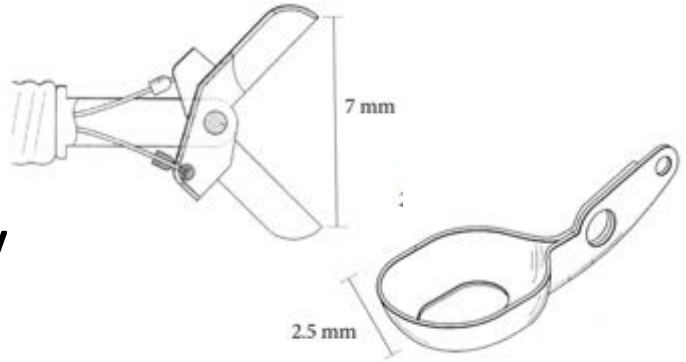
Approach to Polypectomy

1. **Polyp Location and Size**
2. **Polyp Morphology**
3. **Pit Pattern**
4. **Red Flags**
    - Anticoagulation
    - Colon preparation quality
    - When to refer for advanced polypectomy
    - When to refer for surgery

Polyp Location and Size

1. **Location?**
   - Which part of the colon?
   - Is it in the correct position?
2. **Size? – Difficulty / Cancer Risk**
   - 1 – 5 mm Cold snare
   - 6 – 10 mm Cold snare
   - 11 – 20 mm Cold or hot snare
   - > 20 mm EMR, ESD or surgery



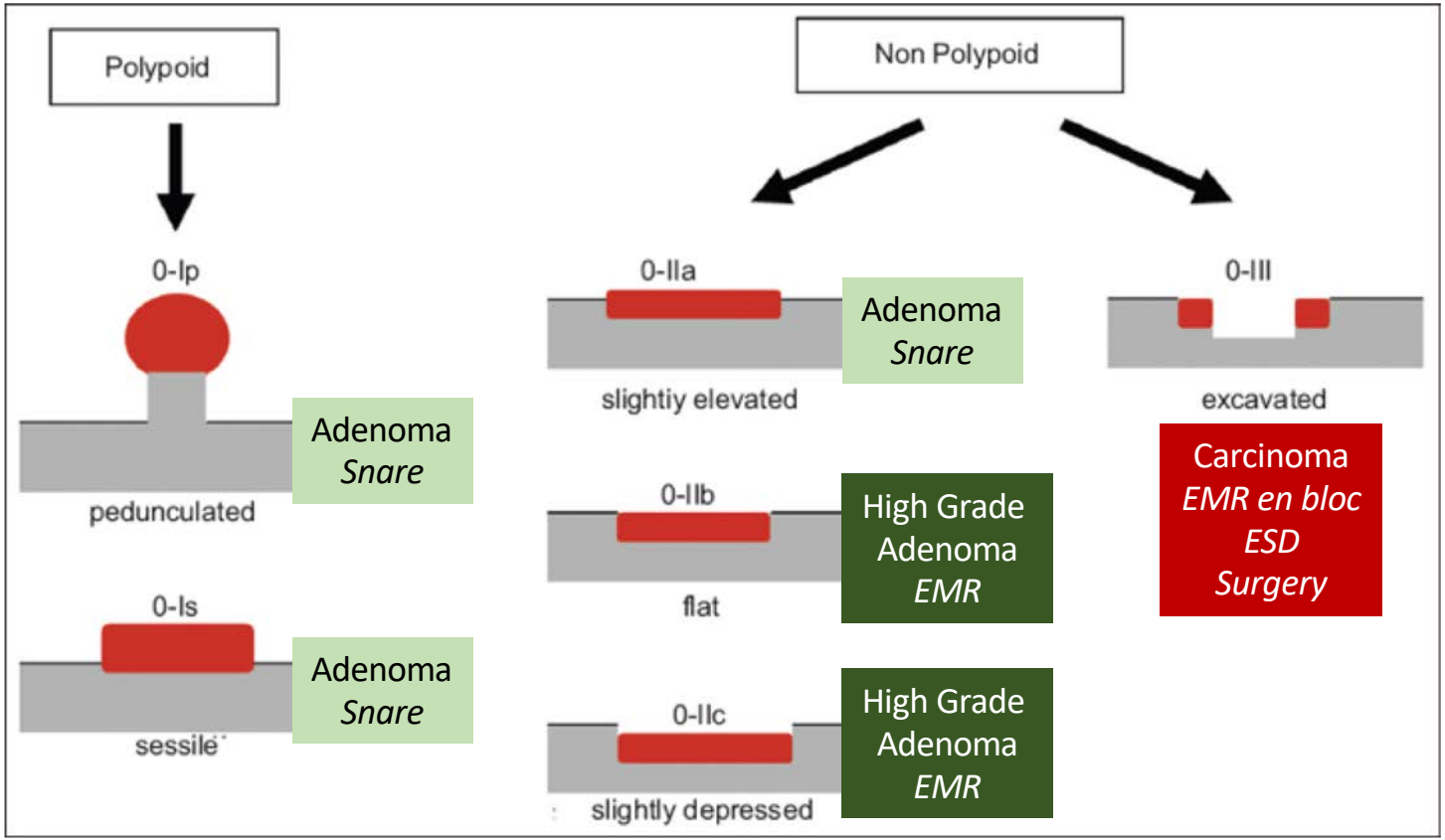


Polyp Size & Cancer Risk

- Increased Size = Increased Invasive Cancer Risk

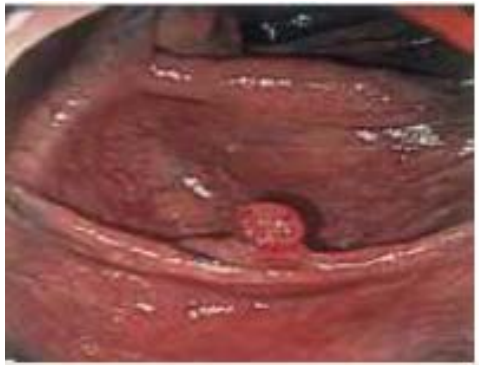
1 – 5 mm	0.0 – 0.1 %
6 – 10 mm	0.0 – 0.4 %
11 – 20 mm	~ 2.5 %
> 20 mm	up to 20 %

Polyp Morphology: Paris Classification



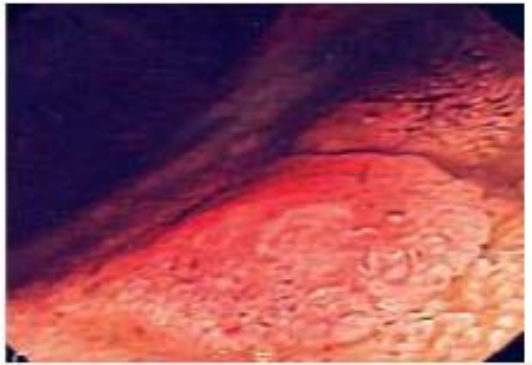
Meier B et al. Ann Gastroenterol 2017;30:592-597

Paris Classification of Polyps

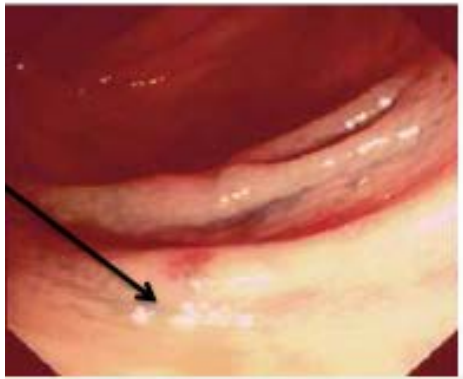


I-p (pedunculated)

I-s (sessile)



II-a (flat elevated)



II-b (flat flat)

IIc (flat depressed)

III (flat ulcerated)

Coe SG et al. Am J Gastroenterol 2013; 108:219–226 - EQUIP Training Slide Set 2

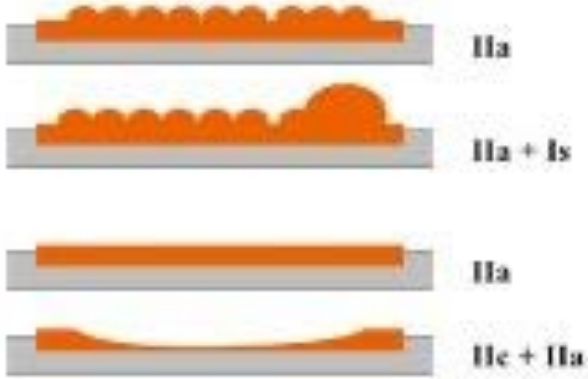
Laterally Spreading Tumours (LST)

Subtypes of LST† lesions: Morphological classification of LST lesions and their correspondence in the Paris-Japanese classification

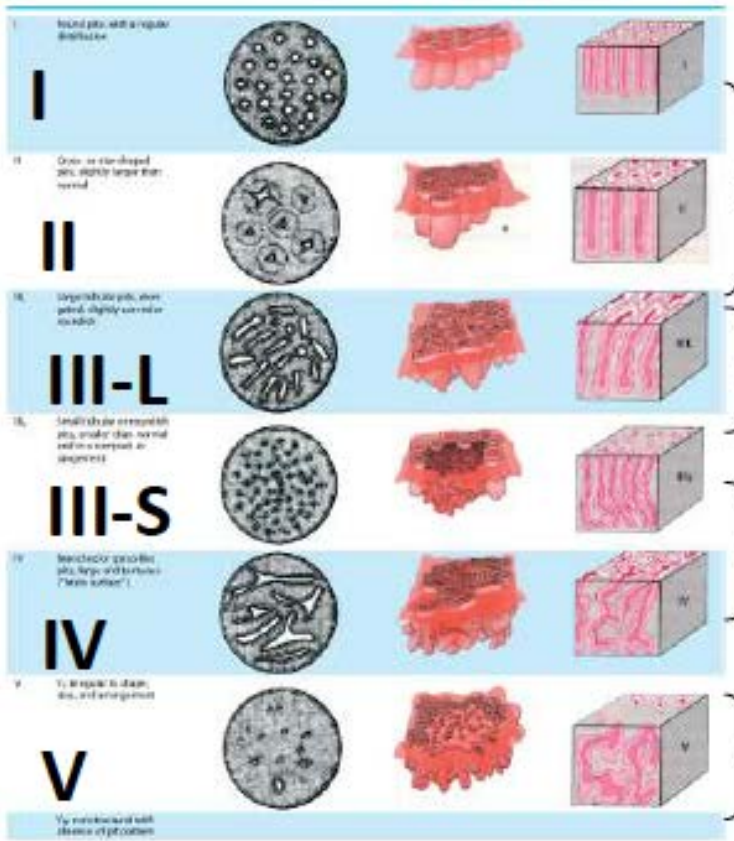
Subtypes of LST	Classification of type 0
LST granular (LST-G)	
Homogenous type	0-IIa
Nodular mixed type	0-IIa, 0-Is + IIa, 0-IIa + Is
LST non-granular (LST-NG)	
Flat elevated	0-IIa
Pseudo-depressed type	0-IIa + IIc, 0-IIc + IIa

† The term 'LST (laterally spreading tumor)' refers to the lateral growth of lesions at least 10 mm in diameter; this is in opposition to traditional polypoid (upward growth) or flat and depressed lesions (downward growth).

Deep sub-mucosal invasion
LST-NG: 14% vs. LST-G: 7% ($p<0.01$)
LST-NG: 30-56% multifocal invasion



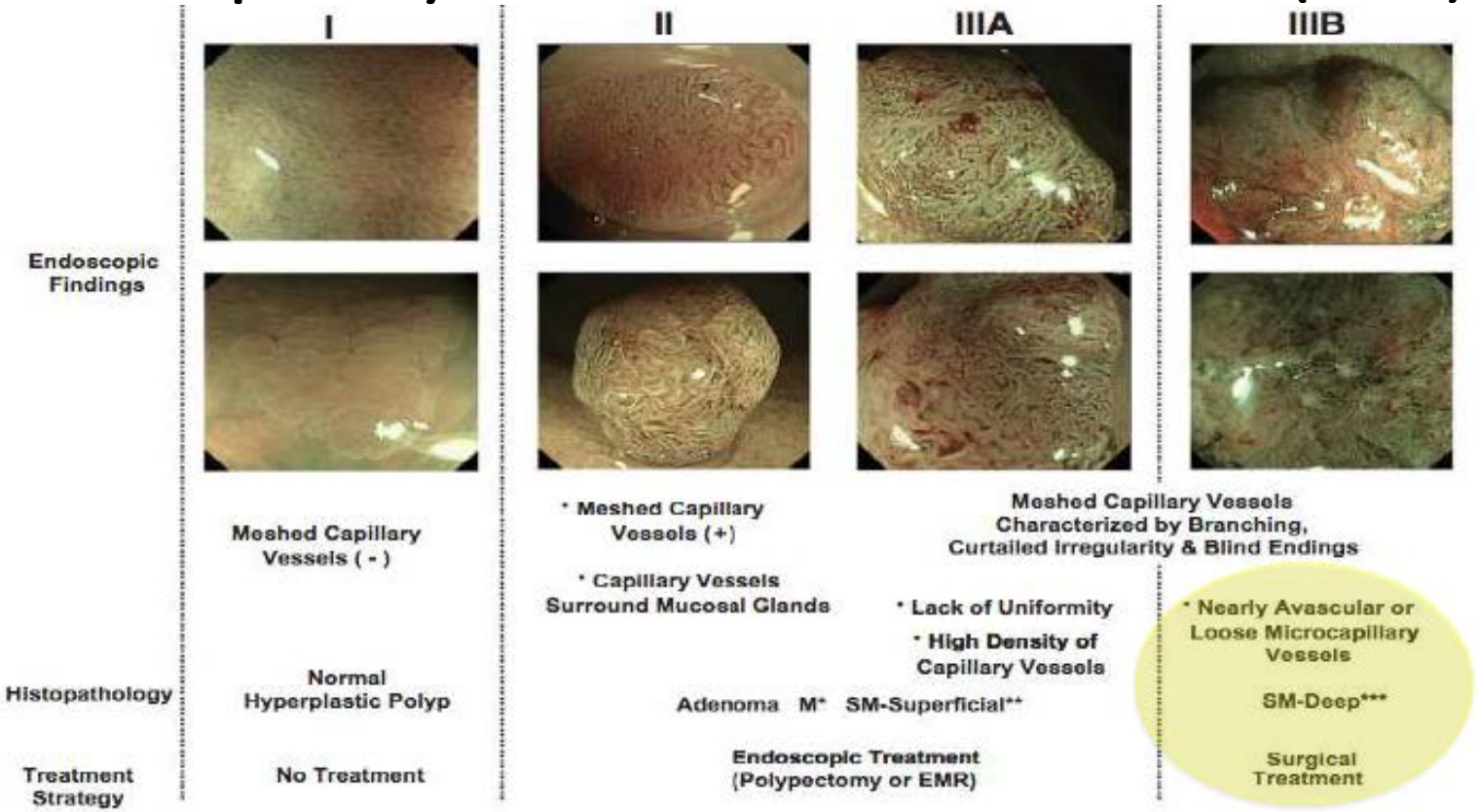
Kudo Pit Pattern Classification



Histology	Management
Hyperplastic	Nothing
Adenoma	Snare polypectomy
High grade adenoma	EMR en bloc Or piecemeal
Carcinoma	EMR en bloc, ESD, or surgery

Coe SG et al. Am J Gastroenterol 2013; 108:219–226 - EQUIP Training Slide Set 2

Sano Capillary Pattern Classification (NBI)



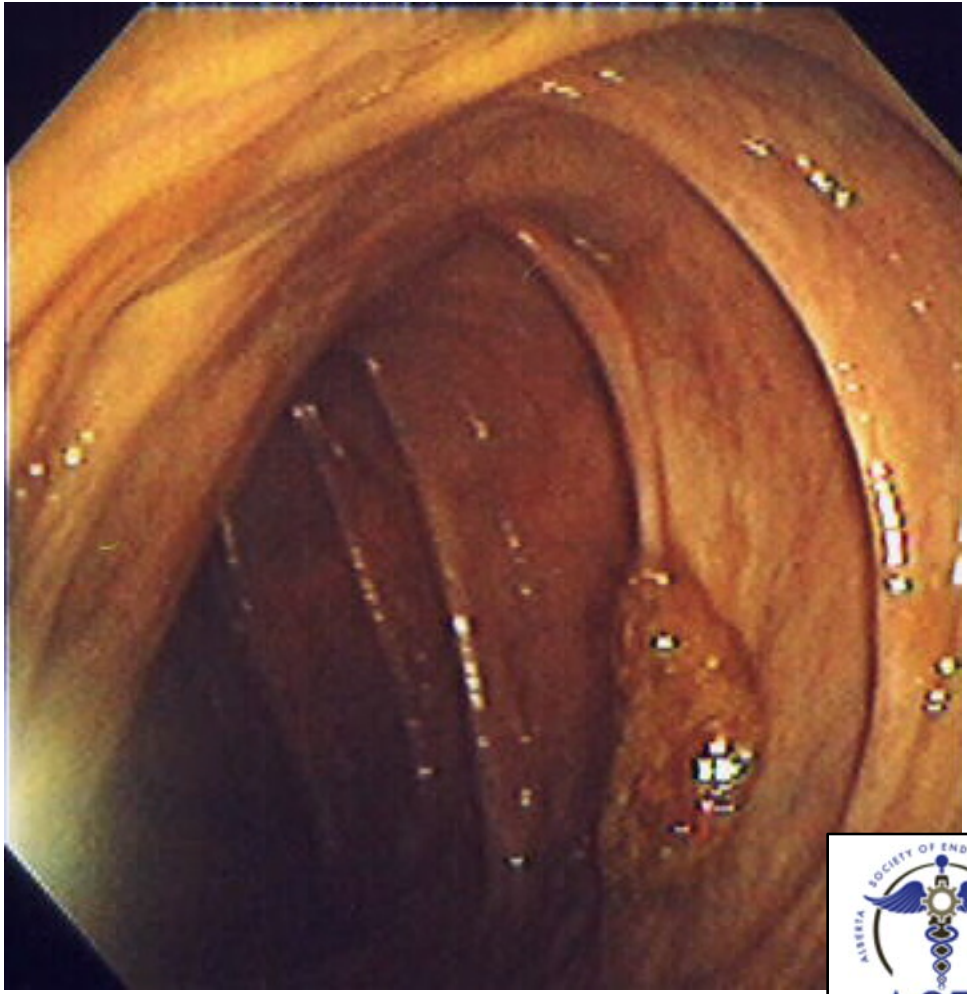
Uraoka T et al. Dig Endosc 2011;23(S1):112-115

Recognition of Potential Malignancy

- Abnormal irregular small blood vessels & pit patterns
- Kudo Pit pattern
- Paris Classification – especially IIa + IIc
- Non-granular surface (LST-NG)
- Ulceration
- Induration
- Stiffening of colonic wall (no change on insufflation / aspiration)
- Non-lifting sign

Case 1

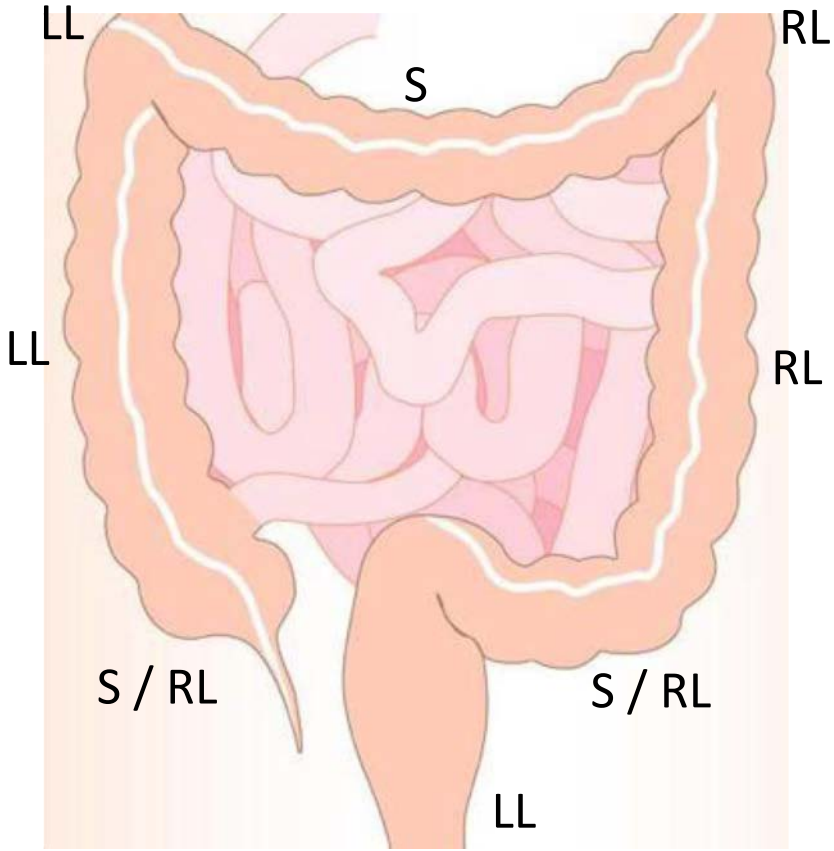
- 59-year old man
- Family history of CRC: Mother
- Good general health
- No medications
- No allergies
- ***Position / Location?***
- ***Description?***
- ***What would you do?***
- ***What tools?***



Case 2

- 71-year old woman
- Constipation
- No family history
- Good general health
- DH: ASA EC 81 mg OD
  Clopidogrel 75 mg OD (held)
- Splenic flexure polyp seen on entry
- ***Position / Location?***
- ***Description?***
- ***What would you do?***
- ***What tools?***

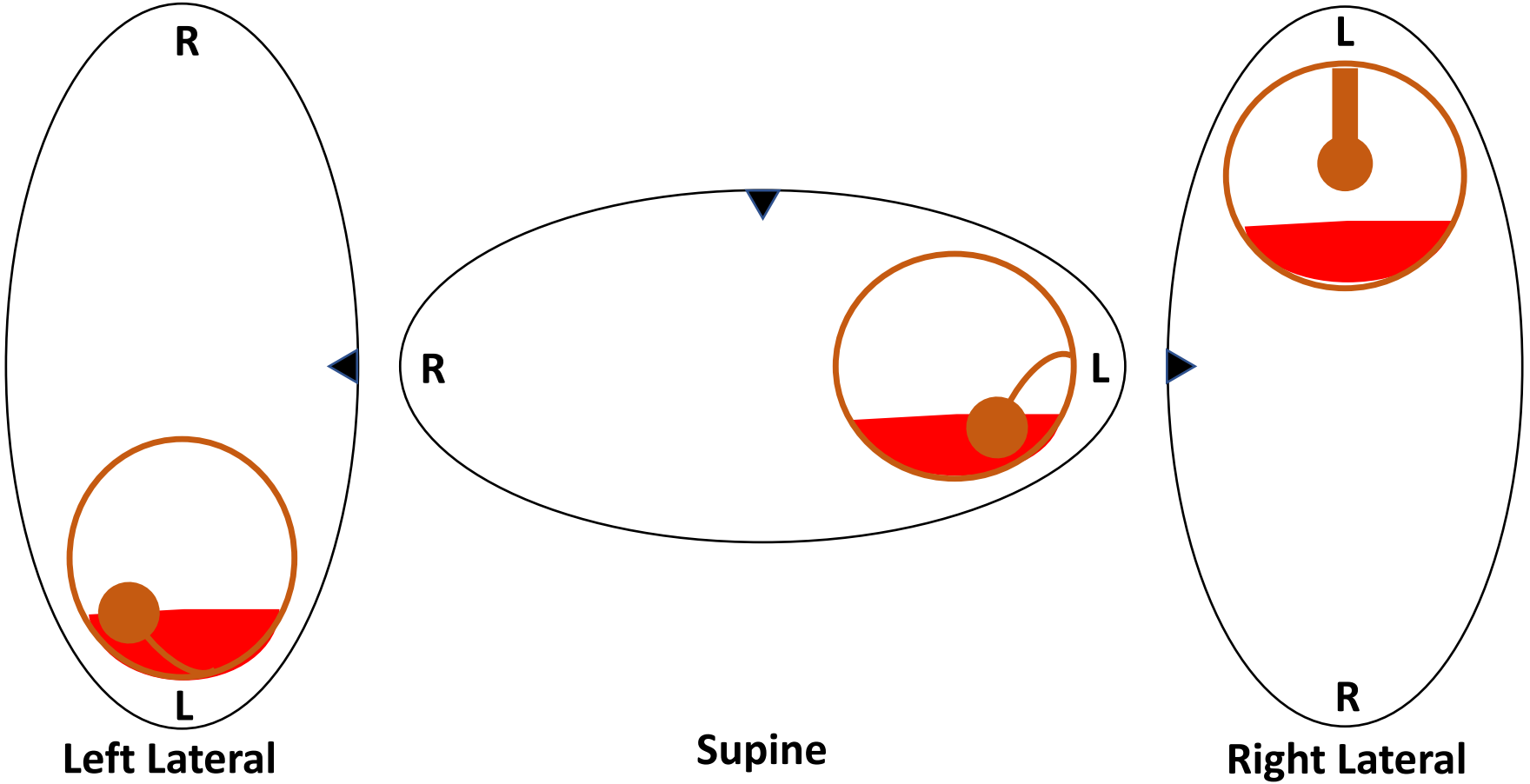
Polyp Visualization & Dynamic Position Change



- Easy with <u>light</u> sedation
- Reasons to change position
  - Advance scope
  - Visualise colon on withdrawal
  - Position polyp & fluid
- Optimal positions
  - S – Supine
  - LL – Left Lateral
  - P – Prone
  - RL – Right Lateral

S. Thomas-Gibson UEGW 2012

Patient Position



Left Lateral

Supine

Right Lateral

Scope Handling to Maximize Tip Control

You Can’t Torque if Your Scope is Looped!

Polypectomy: ‘Way In’ or ‘Way Out’

On the Way In

- Scope handling may be compromised
- Could increase the risk of perforation
- Theoretical risk of malignant seeding
  (PEG literature)

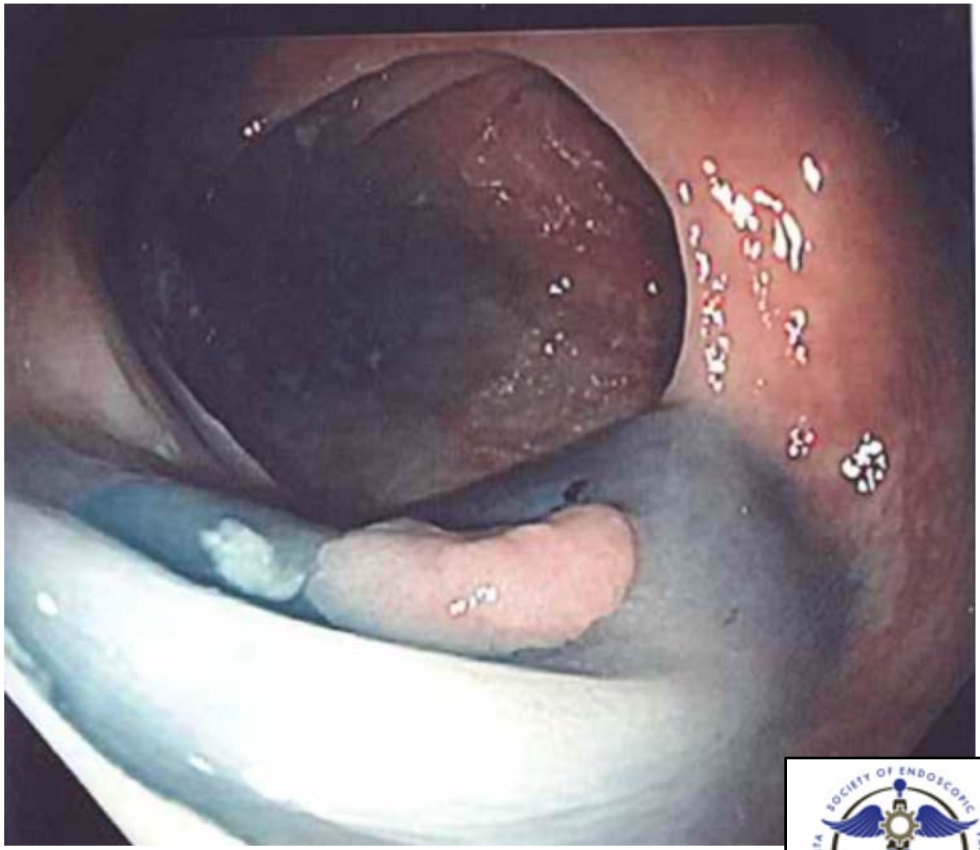
On the Way Out

- Difficulty finding the polyp

Case 2

- 71-year old woman
- Constipation
- No family history
- Good general health
- DH: ASA EC 81 mg OD
  Clopidogrel 75 mg OD (held)
- Splenic flexure polyp on entry

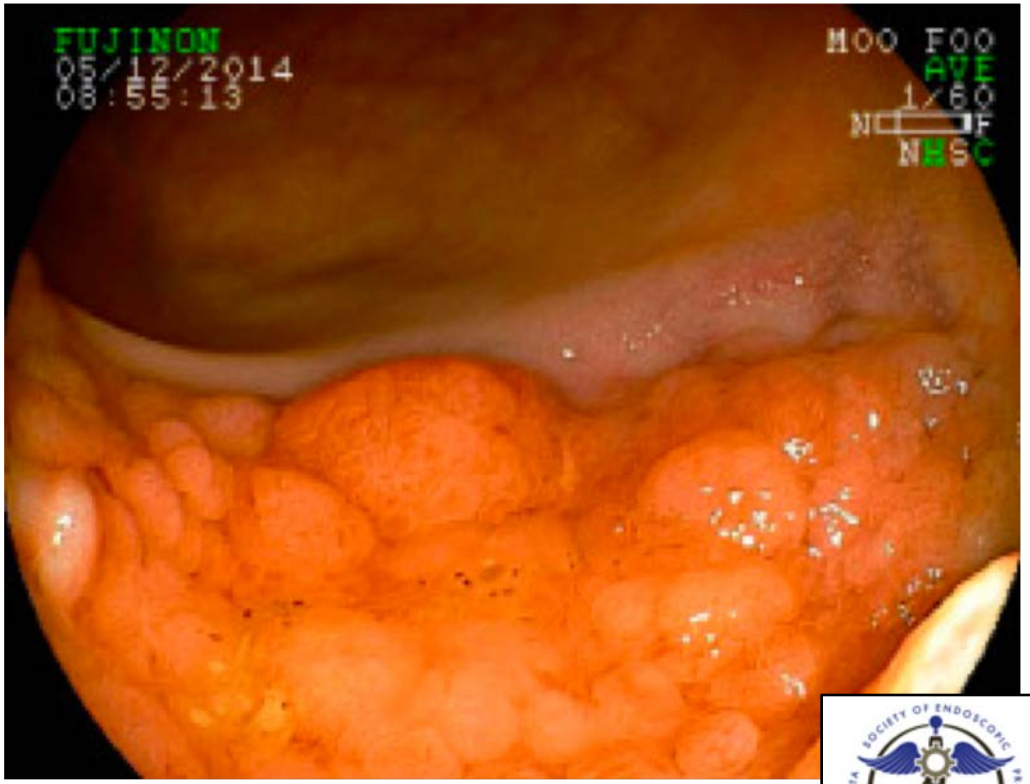
- ***Good injection?***
- ***Would you inject?***
- ***Remove?***
- ***Method?***



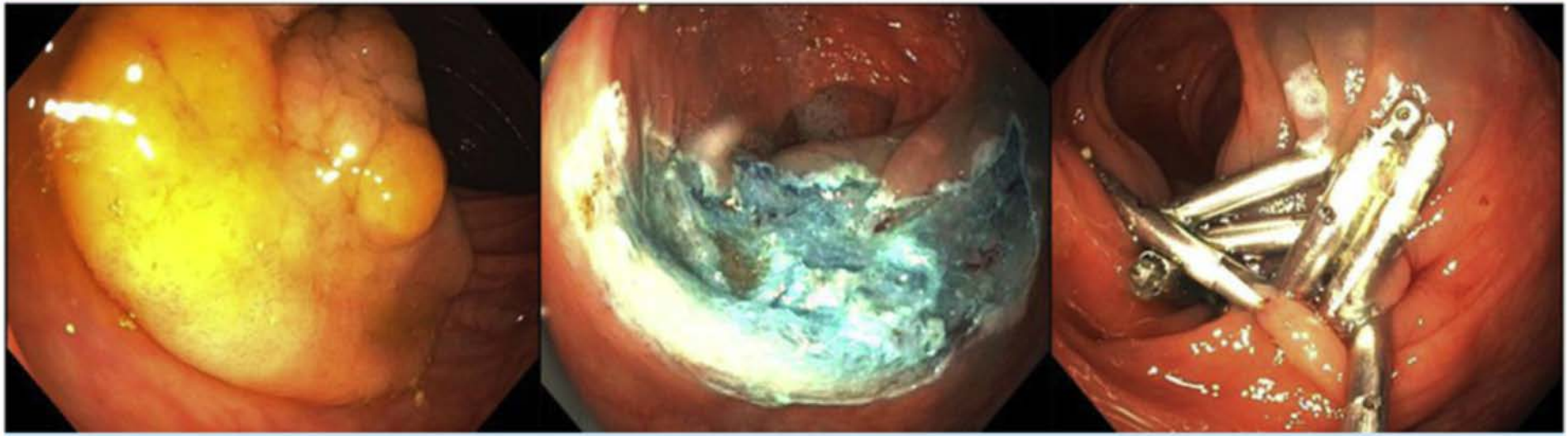
Case 3

- 65-year old man
- Positive FIT
- No family history
- Good general health
- No medications or allergies
- Descending colon polyp

- ***Description / Classification***
- ***Size?***
- ***How to visualize?***
- ***Biopsy?***
- ***Inject?***
- ***Resect on this endoscopy?***



Clip Closure For Bleeding Prevention



Post-procedure bleeding occurs in 5-10% after endoscopic mucosal resection (EMR) of large colorectal polyps.

Clip or No Clip?

- Prophylactic clipping for all polyps ≥ 1 cm does not decrease risk of post-polypectomy bleeding
- Prophylactic clipping for all non-pedunculated polyps ≥ 2 cm in the proximal colon decreases risk of post-polypectomy bleeding

Case 4

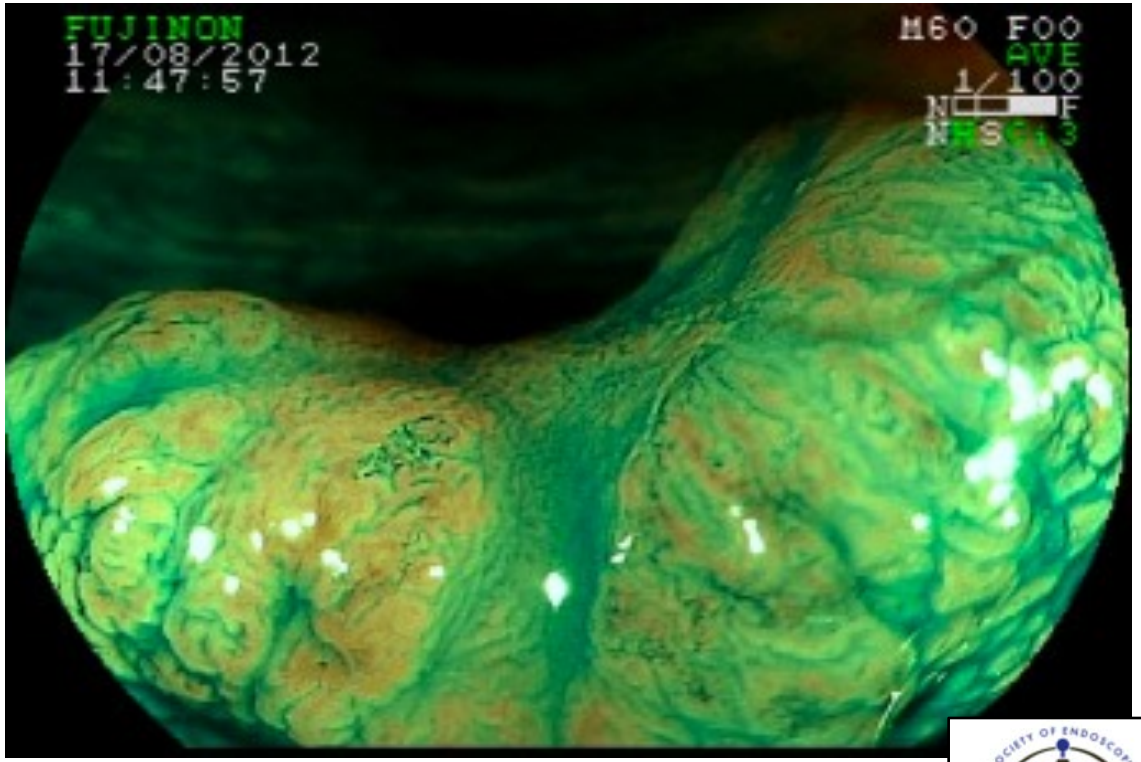
- 69-year old woman
- Rectal bleeding
- Good general health
- No medications or allergies
- Rectosigmoid tumour

- ***Description / Classification***
- ***Size?***
- ***How to visualize?***
- ***Biopsy?***
- ***Inject?***
- ***Resect on this endoscopy?***

Case 4

- 69-year old woman
- Rectal bleeding
- Good general health
- No medications or allergies
- Rectosigmoid tumour

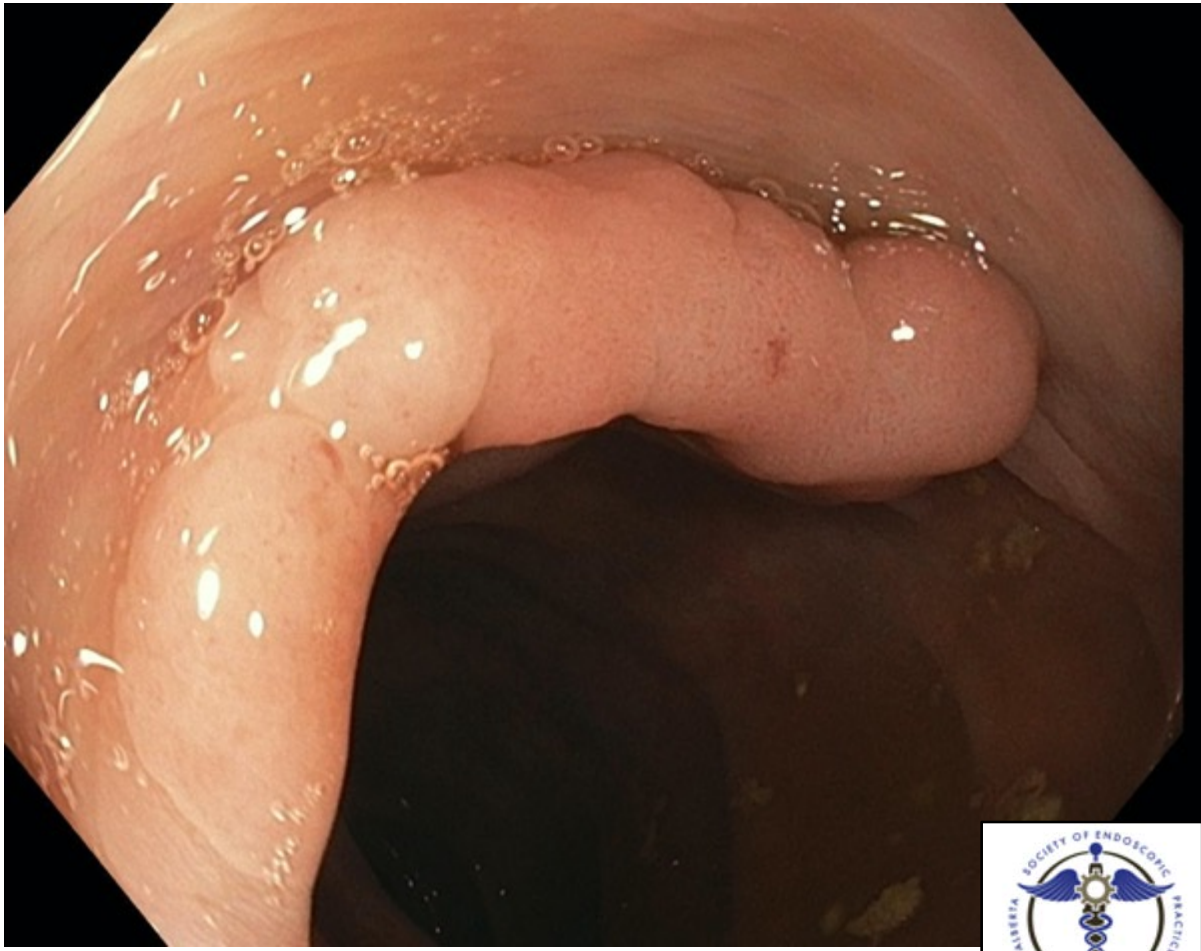
- ***Virtual chromendoscopy***
- ***Description?***
- ***Kudo pit pattern?***
- ***Remove endoscopically?***



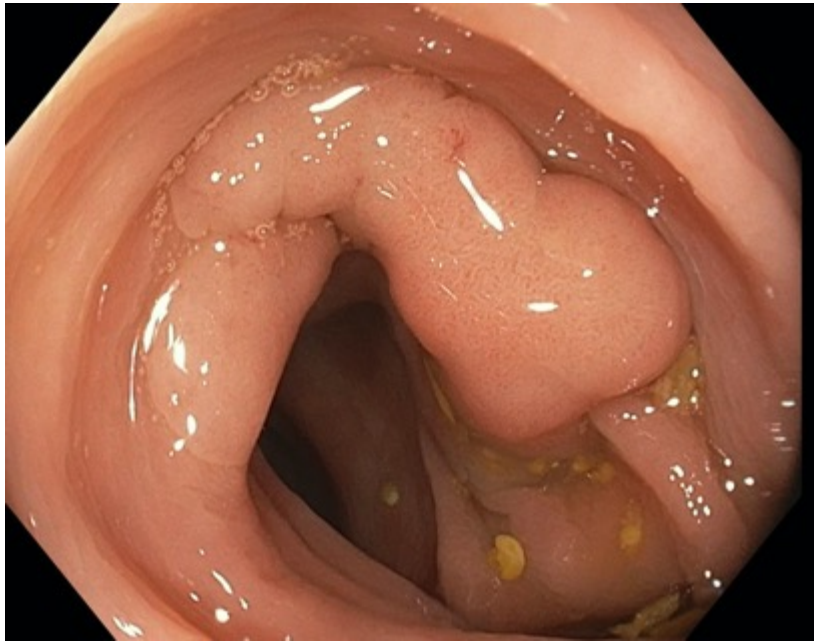
Case 5

- 69-year old woman
- FIT positive
- Transverse colon

- ***Description / Classification***
- ***Size?***
- ***How to visualize?***
- ***Biopsy?***
- ***Inject?***
- ***Resect on this endoscopy?***



Case 5

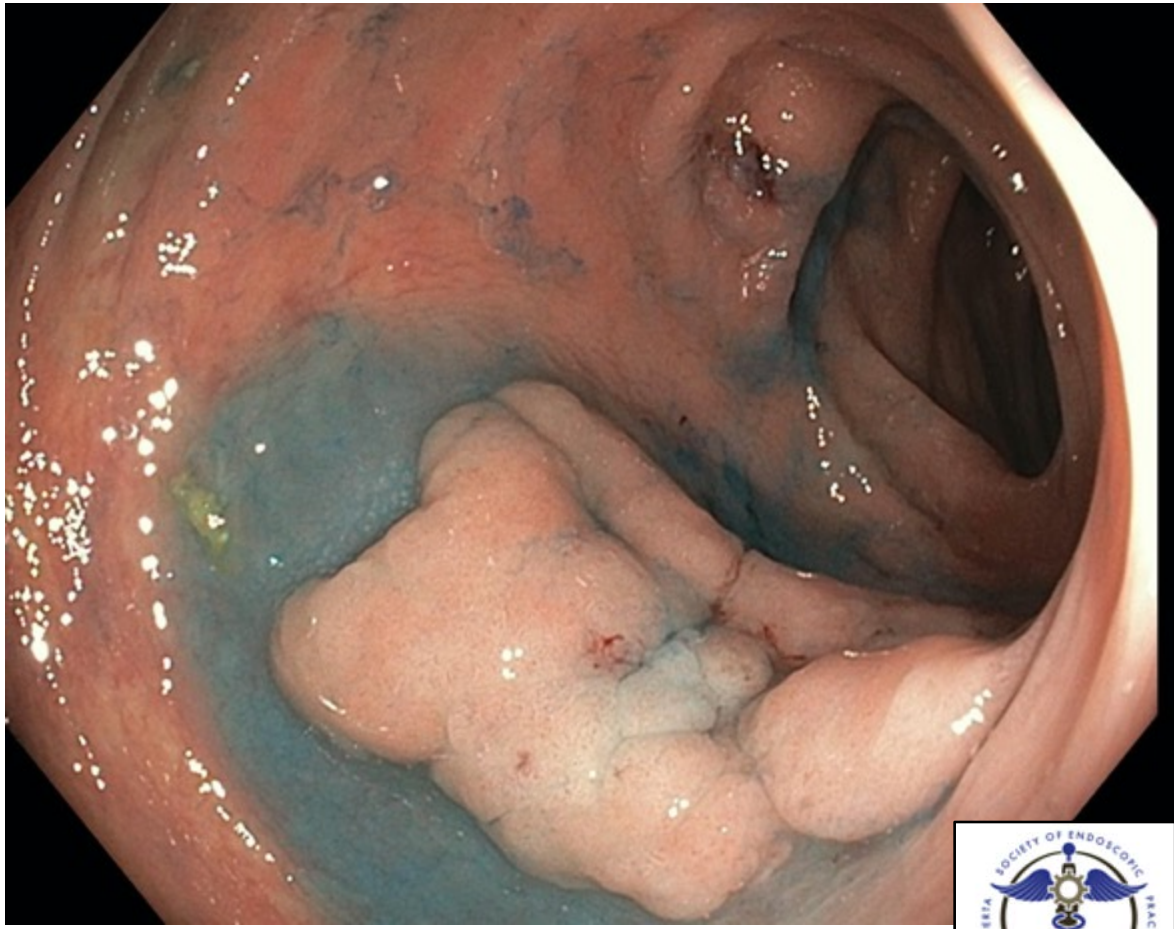


- ***After manoeuvres, lesion is more***
- ***Classification? Size?***
- ***Next steps?***

Case 5

- 69-year old woman
- FIT positive
- Transverse colon

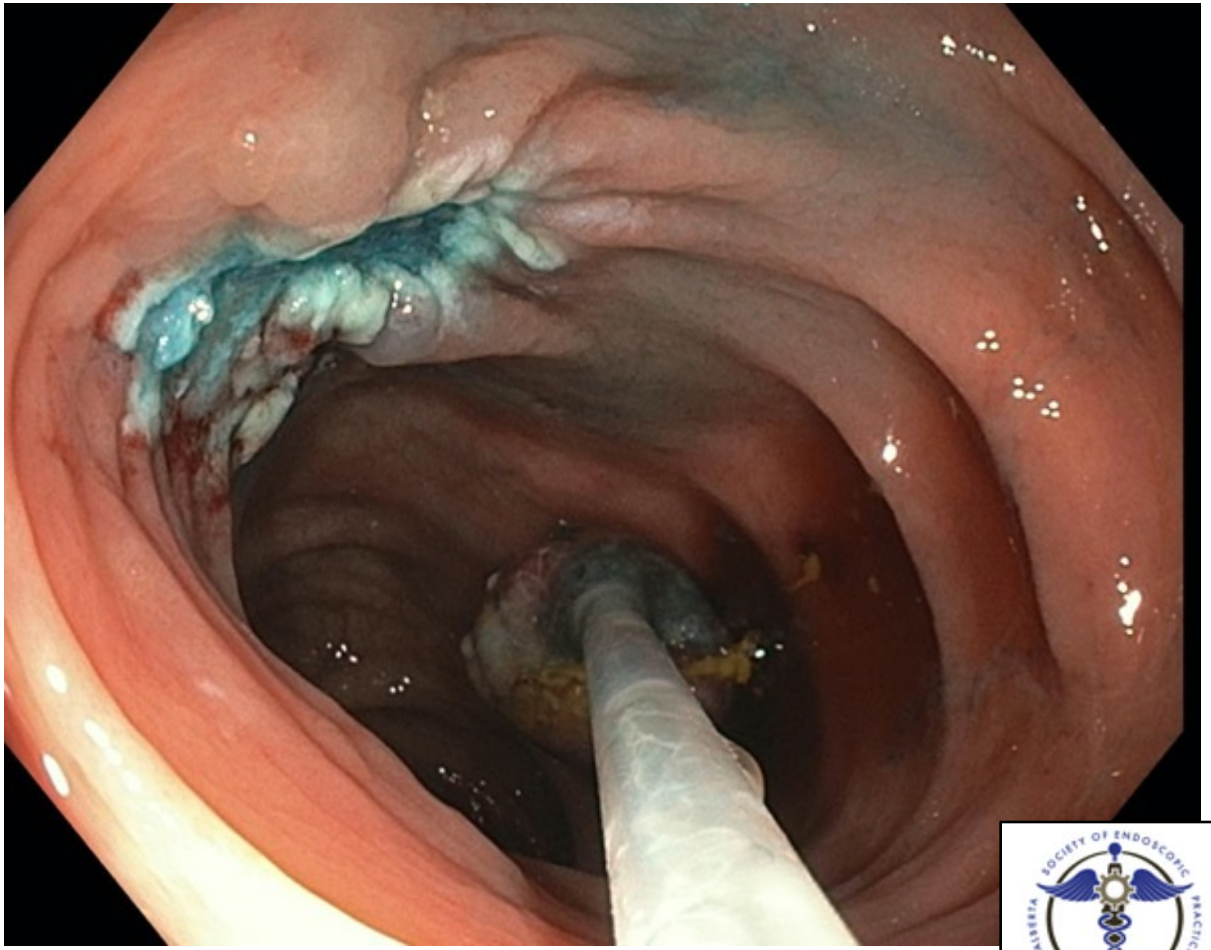
- ***Lesion was lifted***
- ***What agents?***
- ***Would you tackle?***
- ***What do you think of the appearance?***



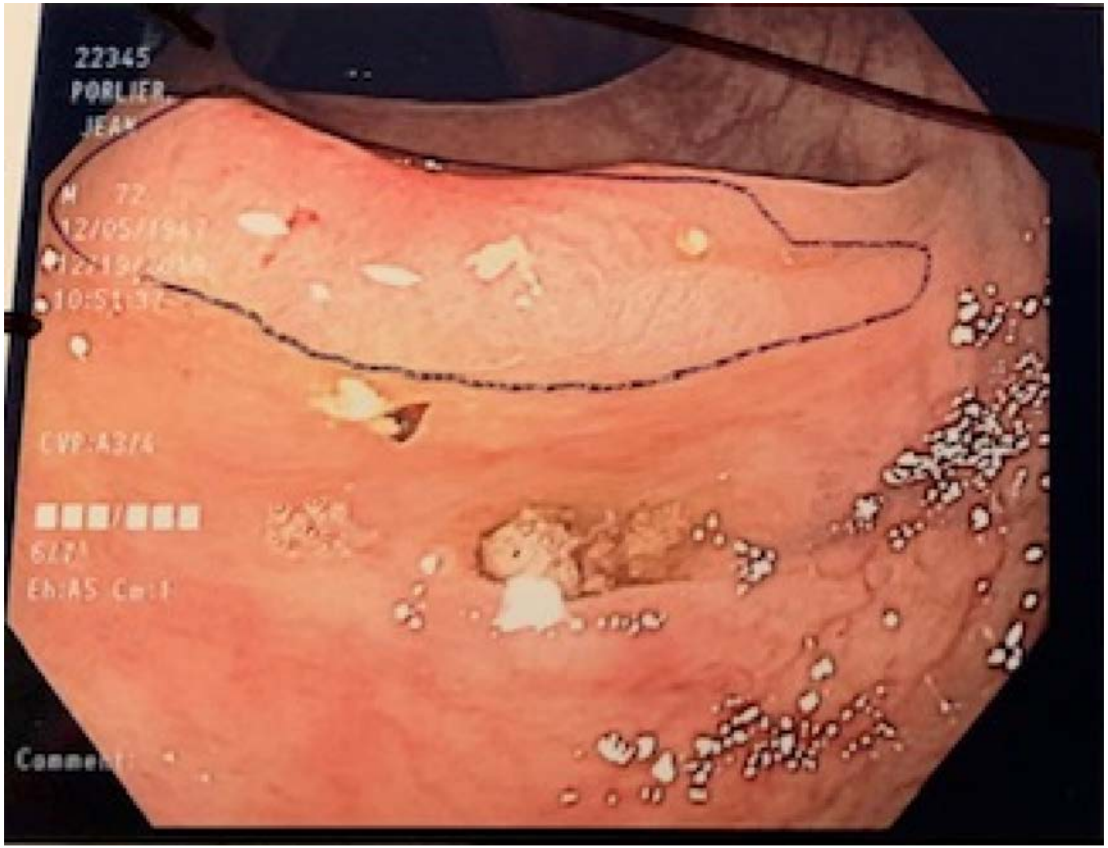
Case 5

- 69-year old woman
- FIT positive
- Transverse colon

- ***Next steps?***
- ***Edges?***
- ***Retrieval?***
- ***Follow-up endoscopy***

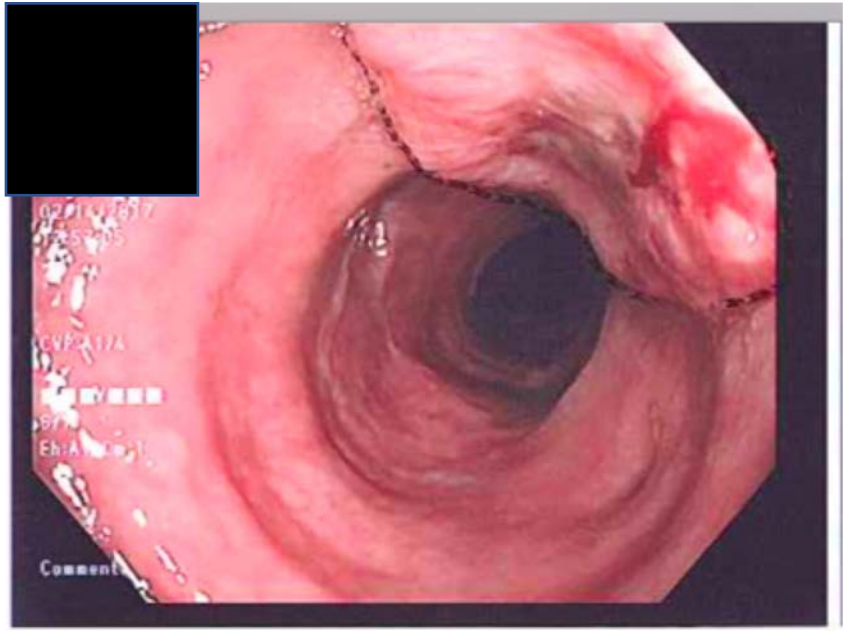


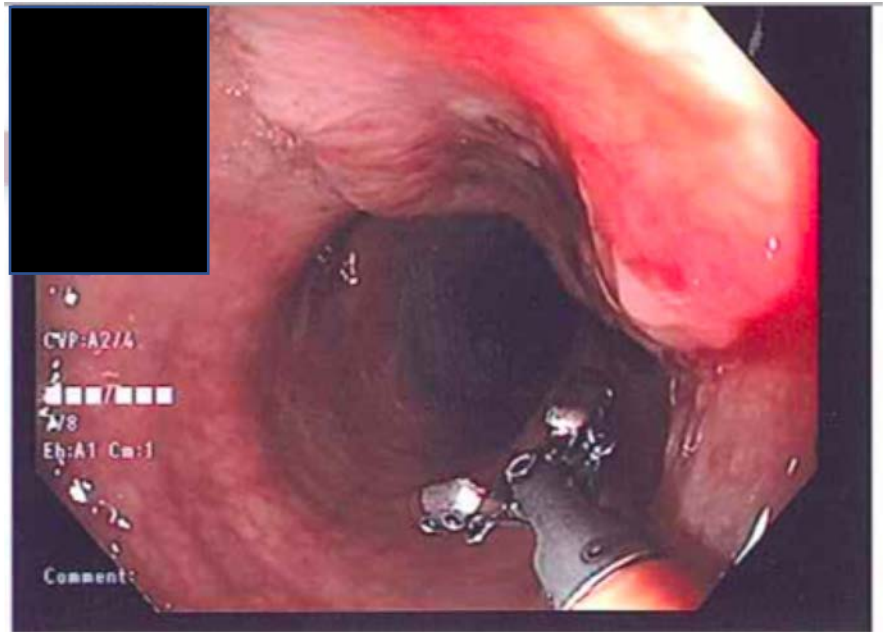
Case 6 – What Would You Do With This?



Case 6 – What If Your Injection Went Like This?

Case 7 – What Would You Do With This?

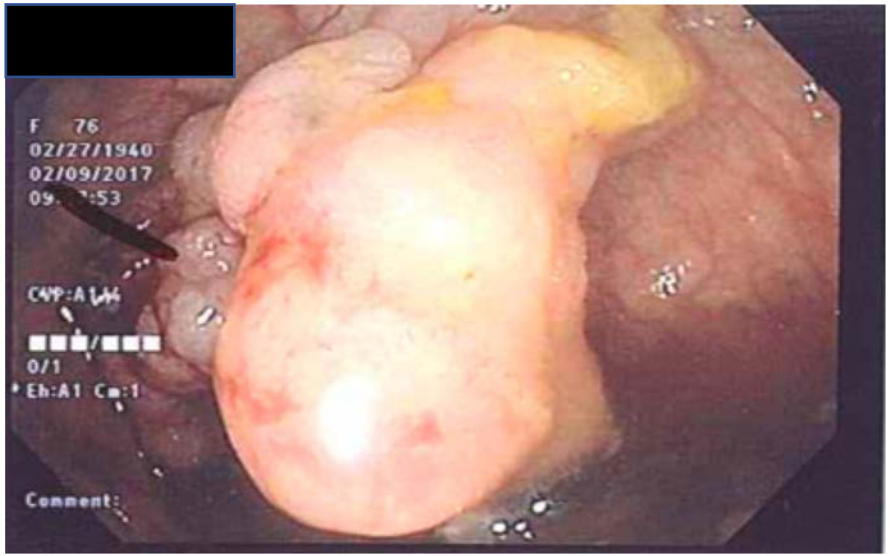


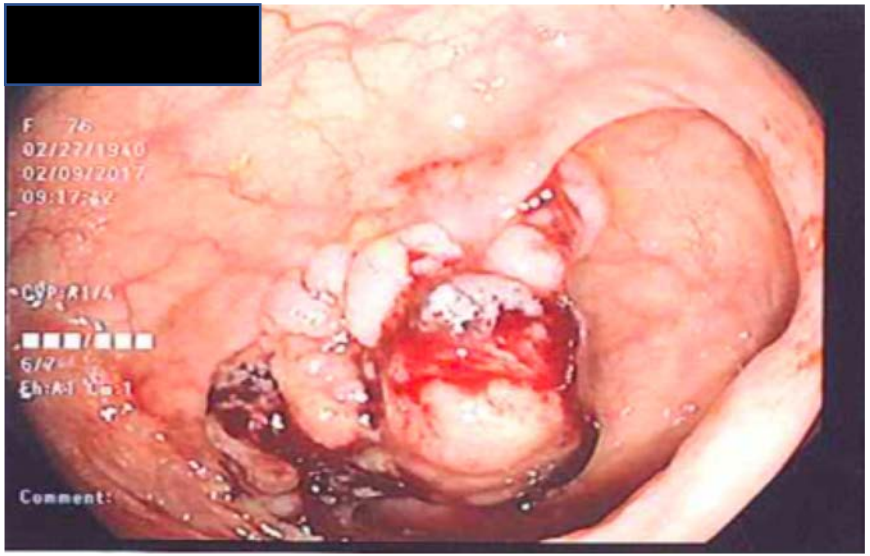


- ***Description?***
- ***Classification? Size?***
- ***How to visualise?***

- ***Biopsy?***
- ***Inject?***
- ***Resect on this endoscopy?***

Case 8 – What Would You Do With This?





- ***Description?***
- ***Classification? Size?***
- ***How to visualise?***

- ***Biopsy?***
- ***Inject?***
- ***Resect on this endoscopy?***

Technical Aspects – Electrocautery

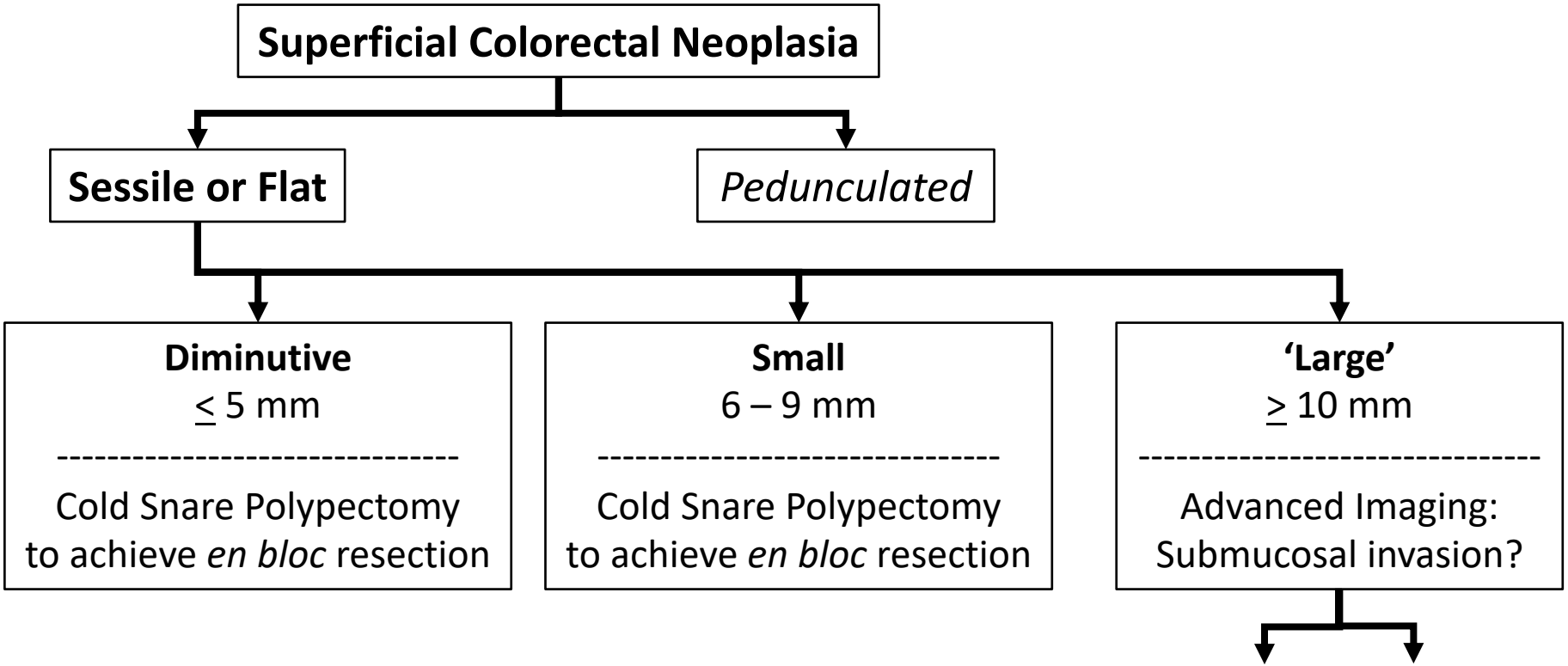
- **Type of Electrocautery Settings**
  - Blended current – mix of cut and cautery
  - Forced Coagulation
    - Greater thermal injury – greater potential for deep injury
- *Keep closed snare away from mucosa before applying current to reduce risk of deep thermal injury*

Technical Aspects – Snare Selection

- **More coagulation:** Larger braided wire
- **More cutting:** Thin wire / monofilament
- **Diminutive polyp:** Thin wire / mini-diameter
- **Piecemeal EMR:** Medium / large diameter
- **Islands / edges:** Stiff, spiral wire

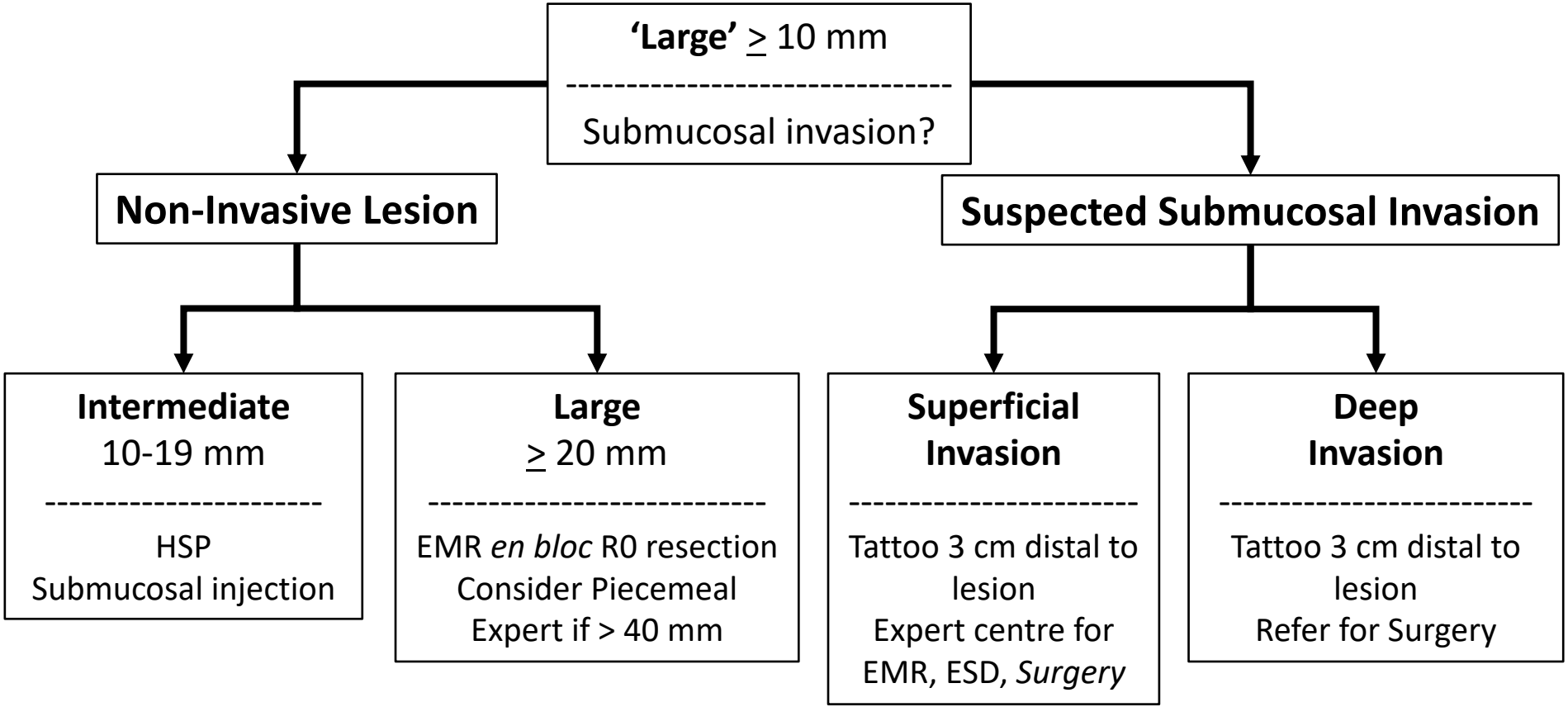
Risk of deep tissue injury increases if resection > 20 mm

ESGE Guidelines – Sessile of Flat Polyps – 1



Ferlitsch M et al. Endscopy 2017;49:270-297

ESGE Guidelines – Sessile of Flat Polyps – 2



Ferlitsch M et al. Endscopy 2017;49:270-297

Curative Resection

- R0 resection: Microscopically margin-negative resection
  - No gross or microscopic tumor in the primary tumor bed
- R1 resection: Removal of all macroscopic disease,
  - Microscopic margins are positive for tumor.
- R2 resection: Gross residual disease with gross residual tumor that was not resected
  - Primary tumor
  - Regional nodes
  - Macroscopic margin involvement

Hermanek P, Wittekind C. Semin Surg Oncol. 1994;10:12–20

Considerations for Post-Polypectomy Bleeds

- Ongoing anticoagulation is required
- Prompt resumption of anticoagulation is required
- Underlying coagulopathy
  - Renal insufficiency
  - Chronic liver disease
  - Thrombocytopenia
- Difficult access to health care
  - Long distance travel (remote community; planned holiday)
  - Elderly, live alone

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