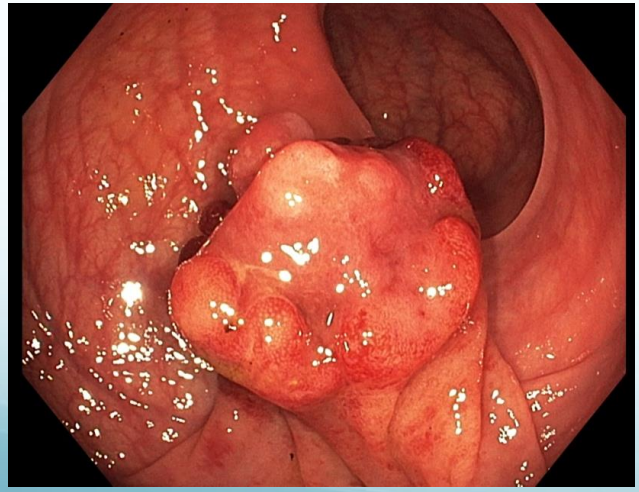
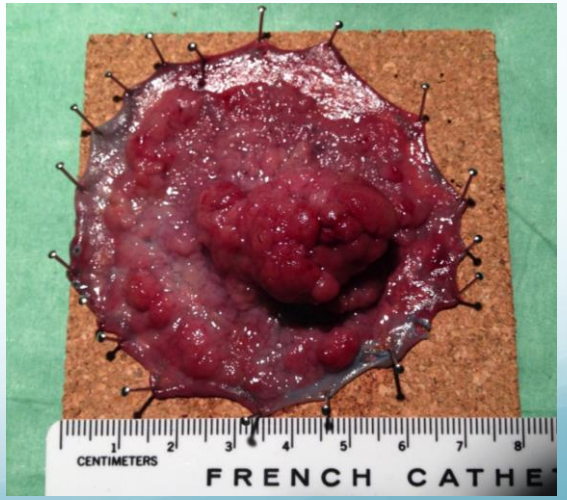
Endoscopische behandeling vroegcarcinoom

James Hardwick, LUMC Leiden





Early cancer

- What is it? What is it not? How often does it occur?
- How do you recognise it?
- What are the treatment options?
- Which endoscopic technique?
- When is endoscopic removal sufficient?

What is early cancer?

- Early cancer = malignant polyp = ‘cancer’ in a ‘polyp’
- Cellular features of cancer

+

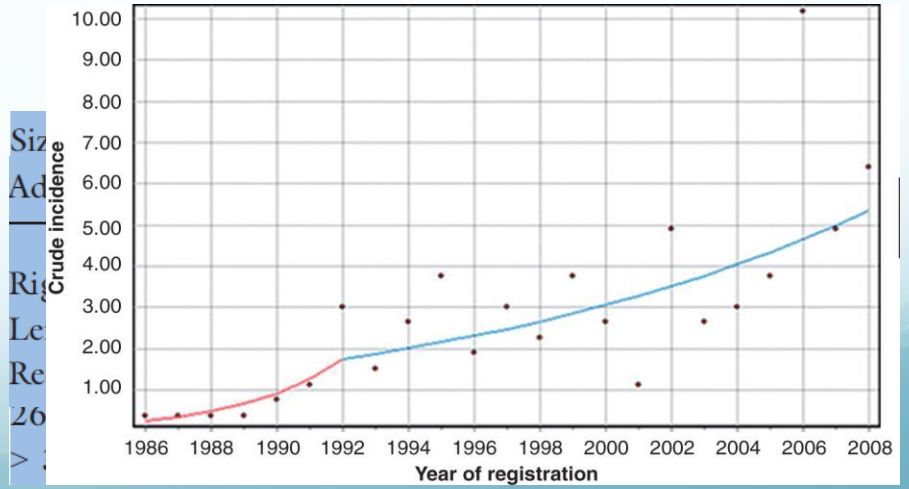
- Invasion through muscularis mucosae
- Biopsies often misleading

What is it NOT?

- NOT ‘Carcinoom in situ’ of ‘intramucosale carcinoom’ of ‘ Intra-epitheliaal carcinoom (0% Meta)
- Cellular features of cancer but no submucosal invasion
- Muscularis mucosae can be difficult to identify
- Pseudo-invasion – sigmoid polyps, previous resection
- NB pathology tricky - “Expert Board” in UK

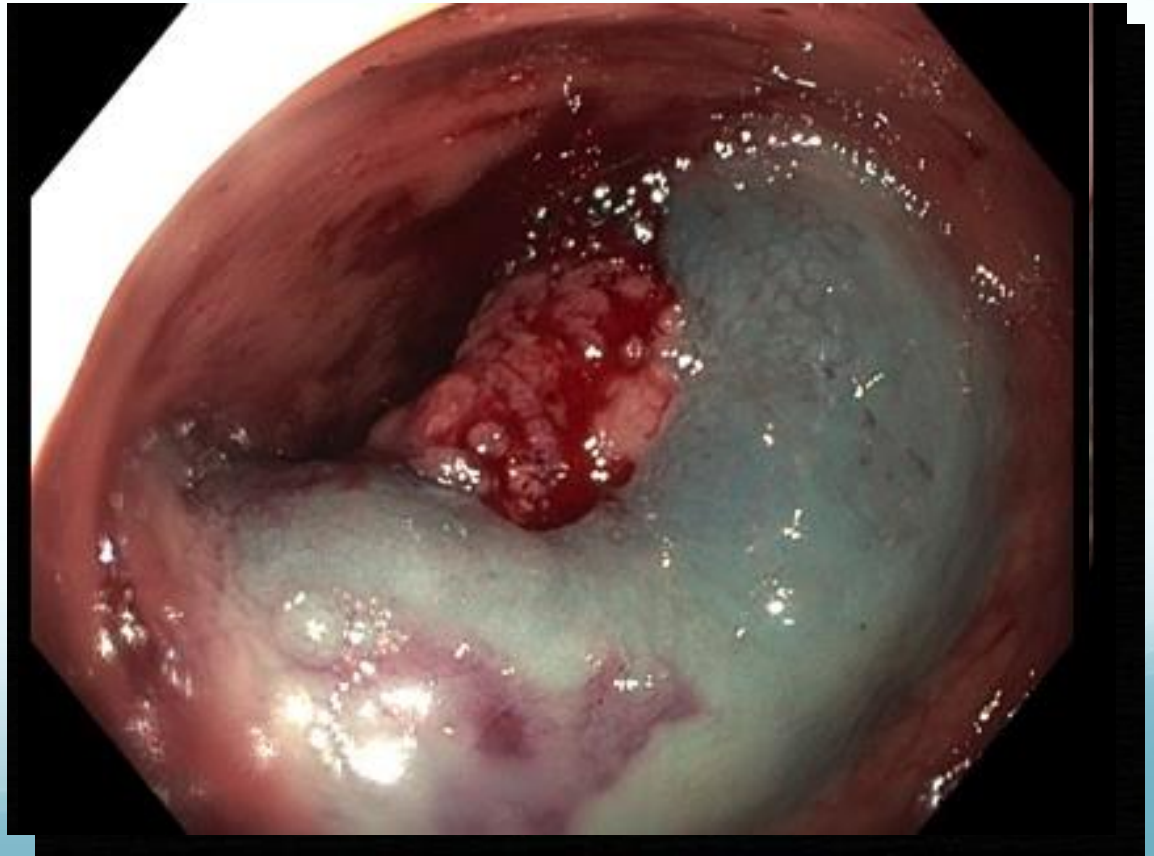
How often does it occur?

- Screening colonoscopy – 1% incidence
- FOBT - ?5% of colonscopies
- 5% of all polyps
- More in larger polyps
- More in rectum
- Rising incidence

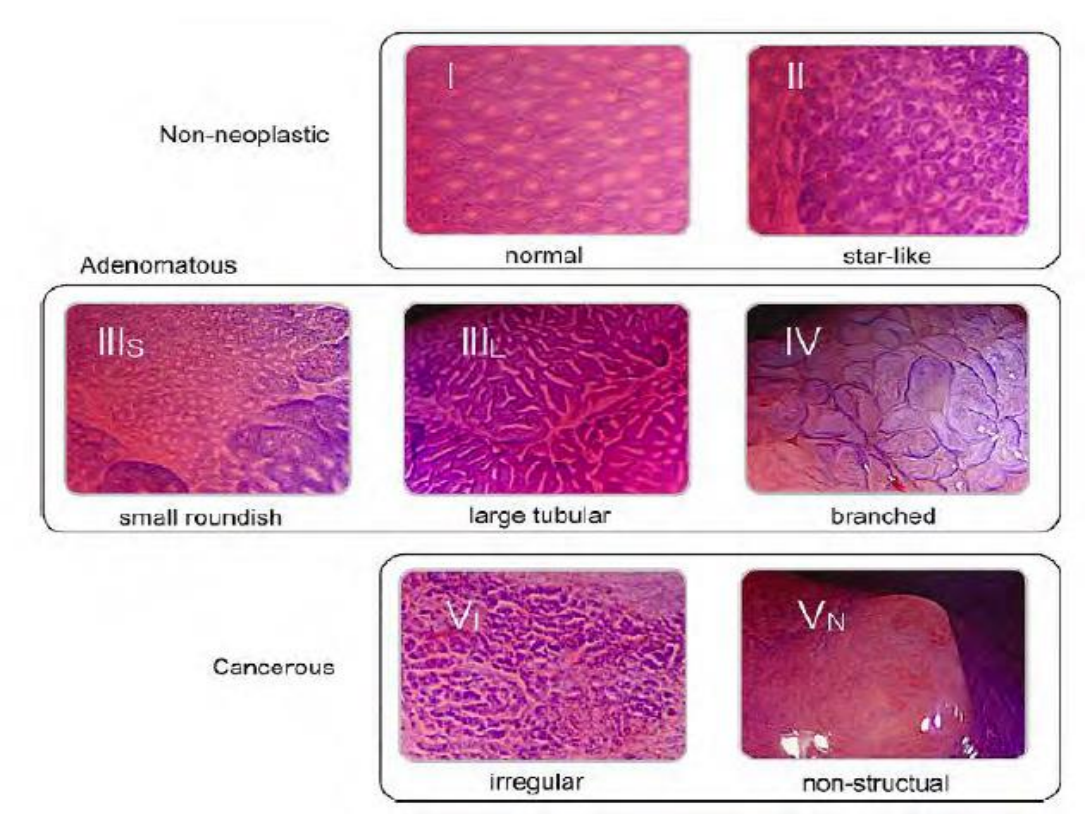


How do you recognise it? - macro

- Central depression
- Ulceration
- Irregular contours
- Friability
- Smooth surface
- Chicken skin
- Non-lifting sign

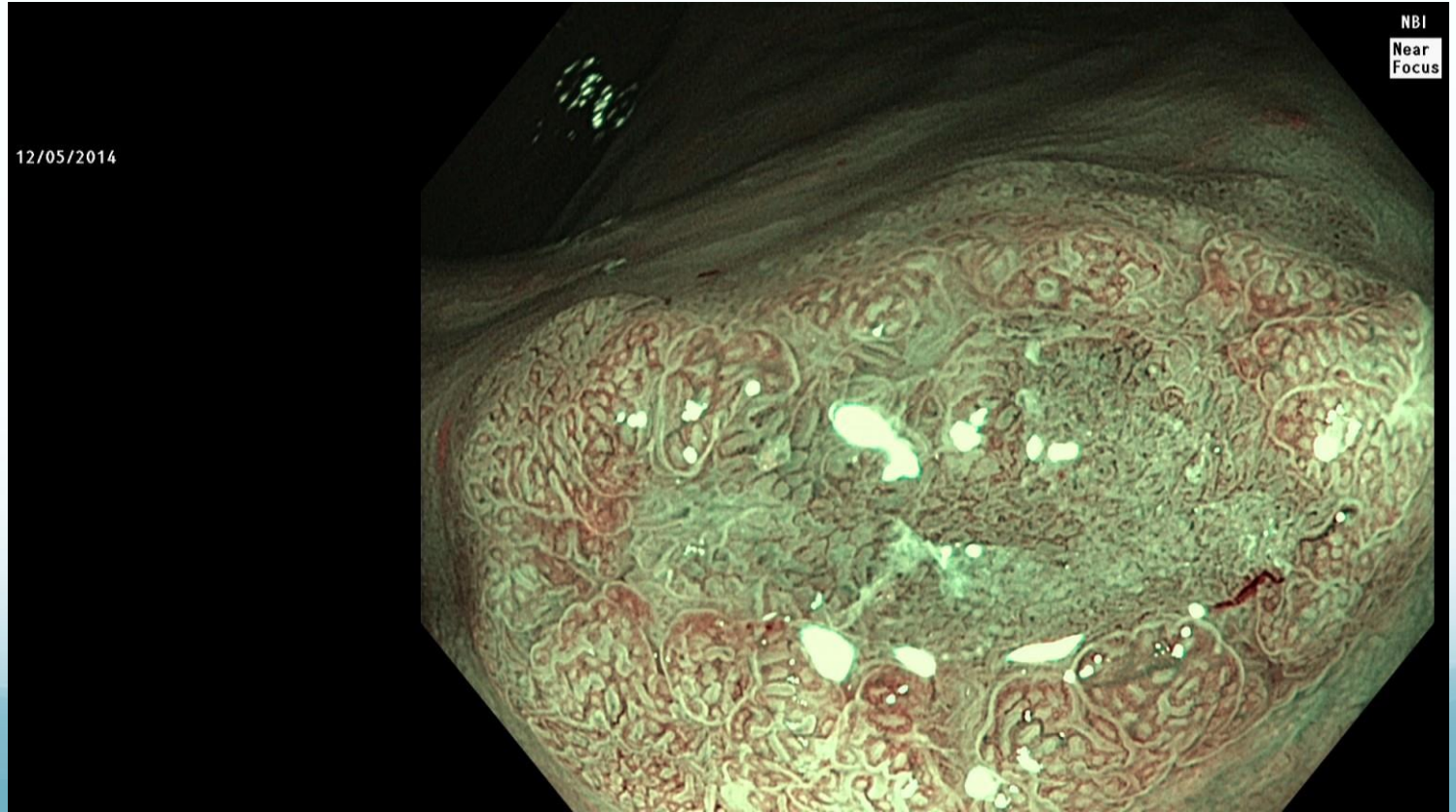


How do you recognise it? - micro



Kudo V pit pattern

How do you recognise it? - micro



Minimise ‘Oeps!’ cancers

- Not suspected by endoscopist
- Accuracy of recognition (90 vs 50%)
- No opportunity to optimise endoscopic resection
  - Inconclusive/inaccurate histology
  - Unnecessary surgery
- No opportunity to optimally prepare polyp for histology
  - Mark stalk
  - Pin sessile/flat polyps to cork

Treatment options?

- Colon
  - Endoscopic resection
  - Surgical oncological segmental resection
- Rectum
  - Endoscopic
  - Surgical (TME, APR or LAR)
  - TEM (SILS port)

Choice for endoscopic resection?

- Can and should the lesion be removed endoscopically?
  - Surgical resection of benign polyp = unnecessary surgery
  - Endoscopic analysis 50% specific
  - Endoscopic resection followed by salvage surgery– not detrimental
  - Poor removal - inconclusive/inaccurate histology, unnecessary surgery
- Can I remove it endoscopically?
  - Time
  - Scope
  - Accessories
  - Experience
  - Support
- Lesions en bloc in one session or refer

Resection or referral?

- Referral– excellent photos, accurate estimation of size, SPOT at a distance, no biopsy, no submucosal injection
- Endoscopic resection– time, positioning of patient, scoop (retroversion), cap, injection fluid, SPOT

Which endoscopic technique?

- Pedunculated - Snare, margin of normal mucosa
- Sessile < 2cm - EMR, colloid injection
- Sessile < 2cm non-lifting – FTRD, ESD
- Sessile >2cm - ESD

EMR

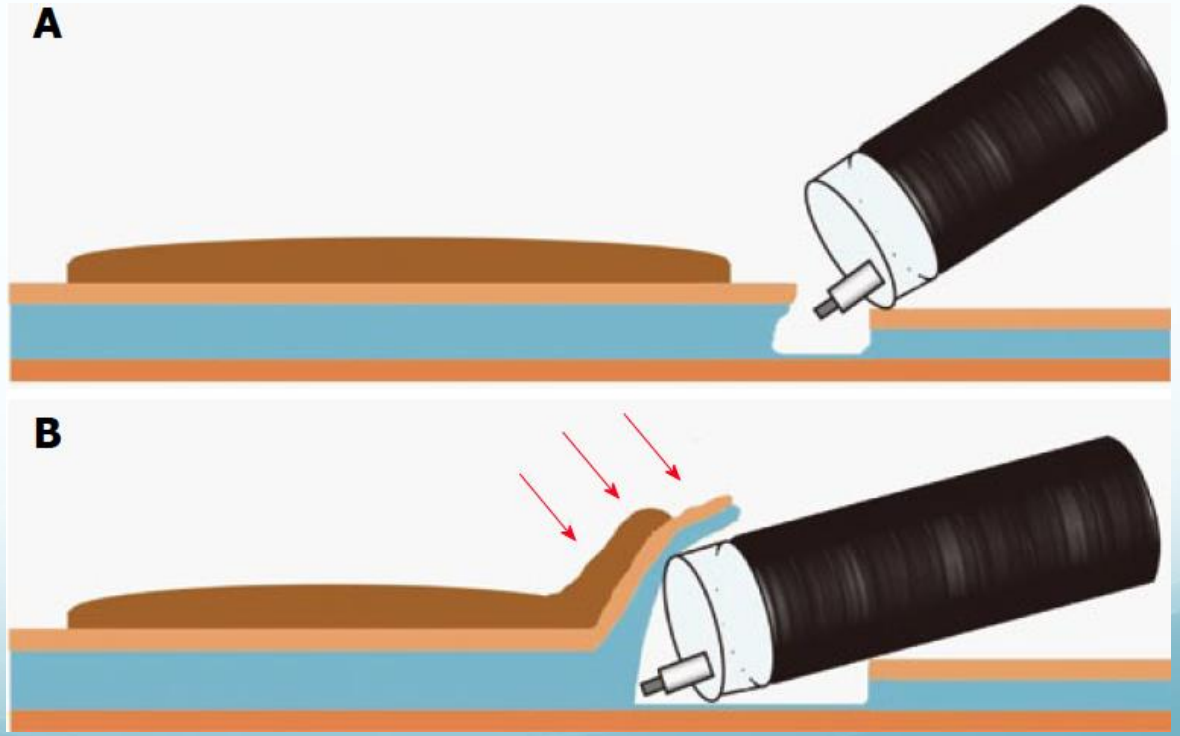
- Endoscopic Mucosal Resection
- All regions of colon - linea dentata, I-C valve, appendix, terminal ileum
- Quick, safe, easy
- No control over depth
- Little control over lateral margins

ESD

- Endoscopic Submucosal Dissection
- Control over lateral and deep margins
- Minimises residual/recurrent disease
- Optimal specimen for accurate histology
- Long procedure time
- Higher chance of perforation
- Technically very demanding

ESD

Creation of mucosal flap



ESD

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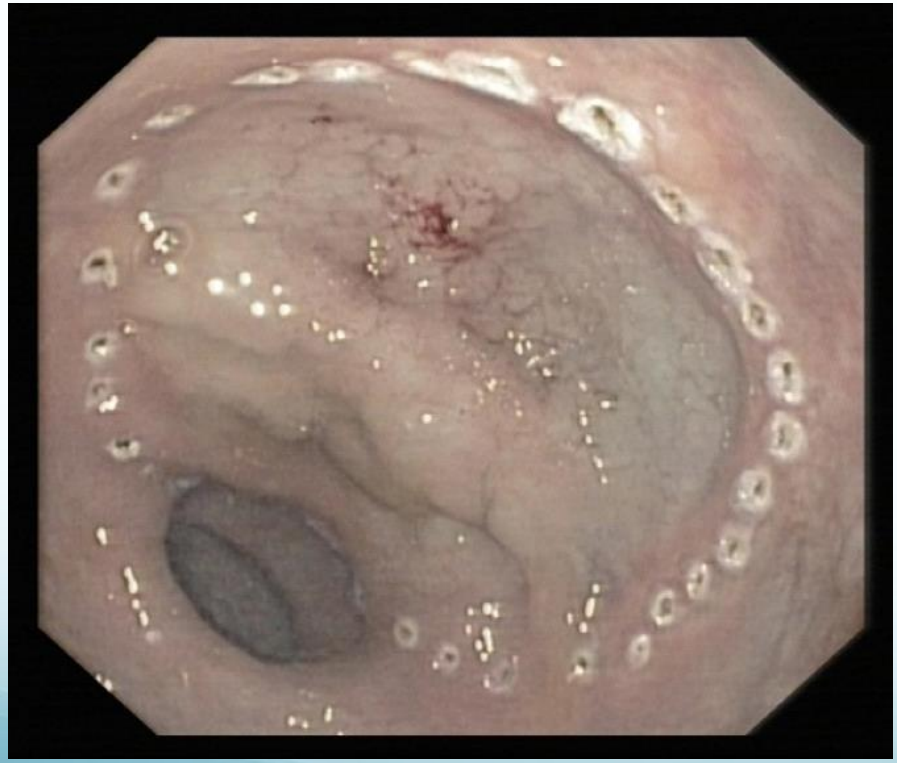
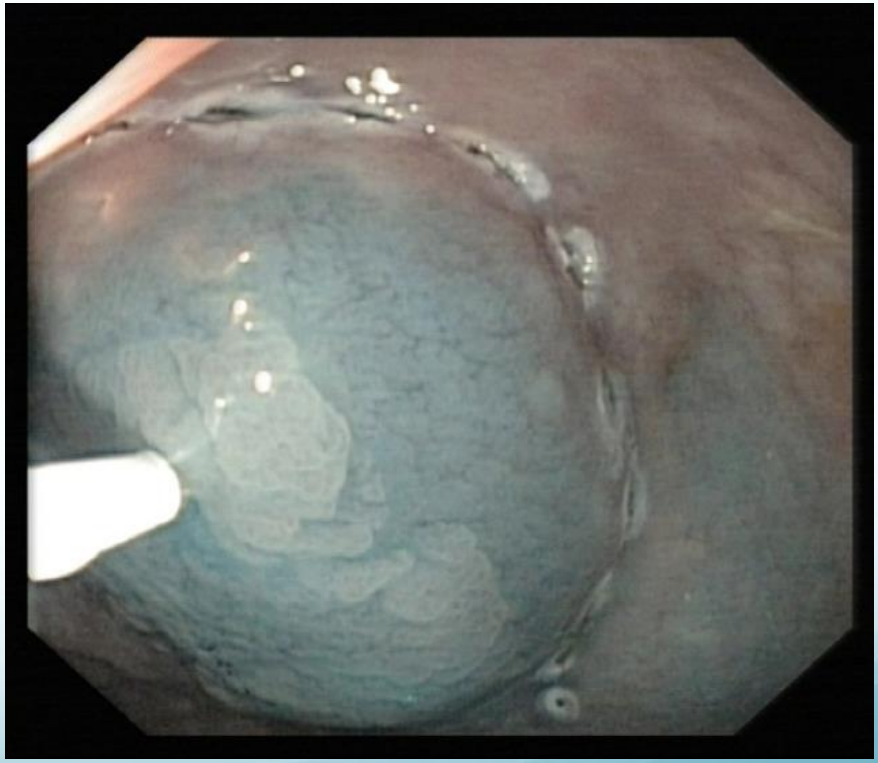
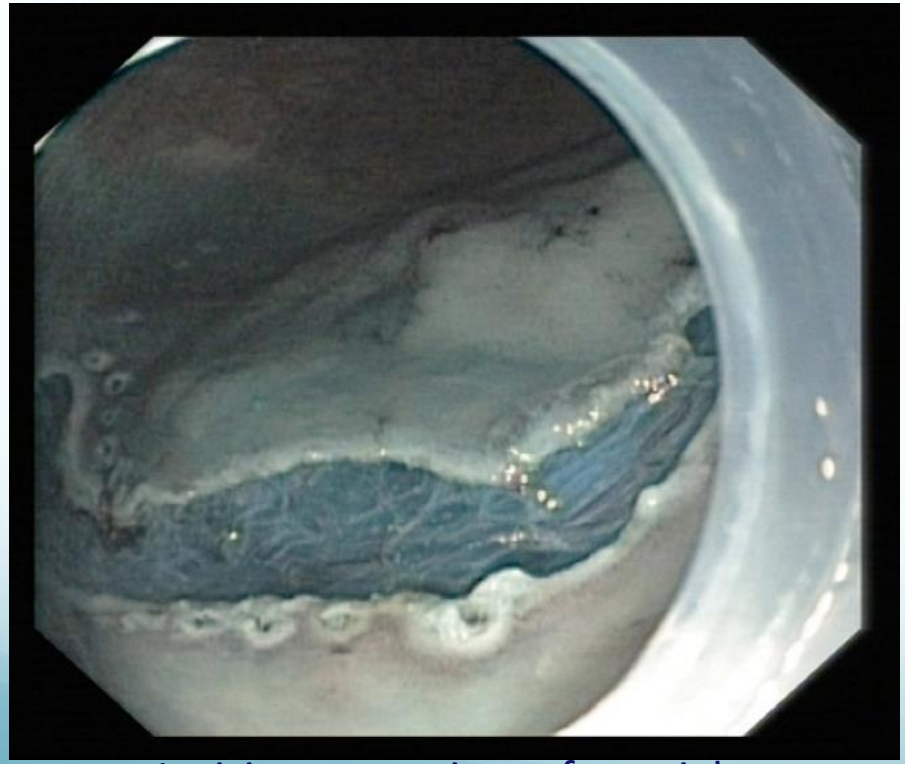


6 cm non-granular lesion rectum

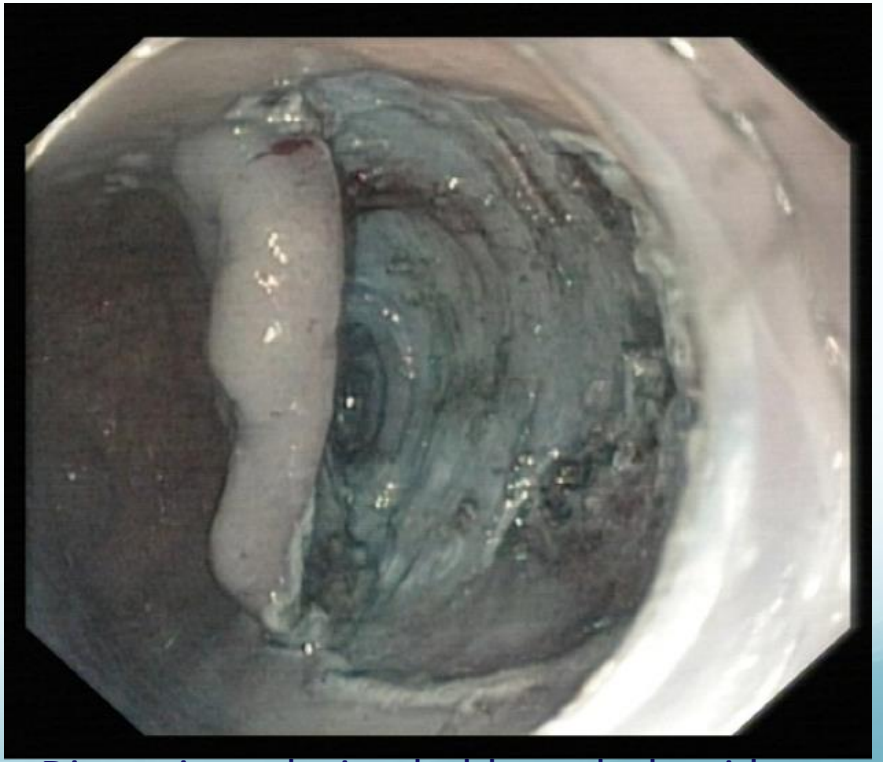


Injection of Volufen through polyp

ESD

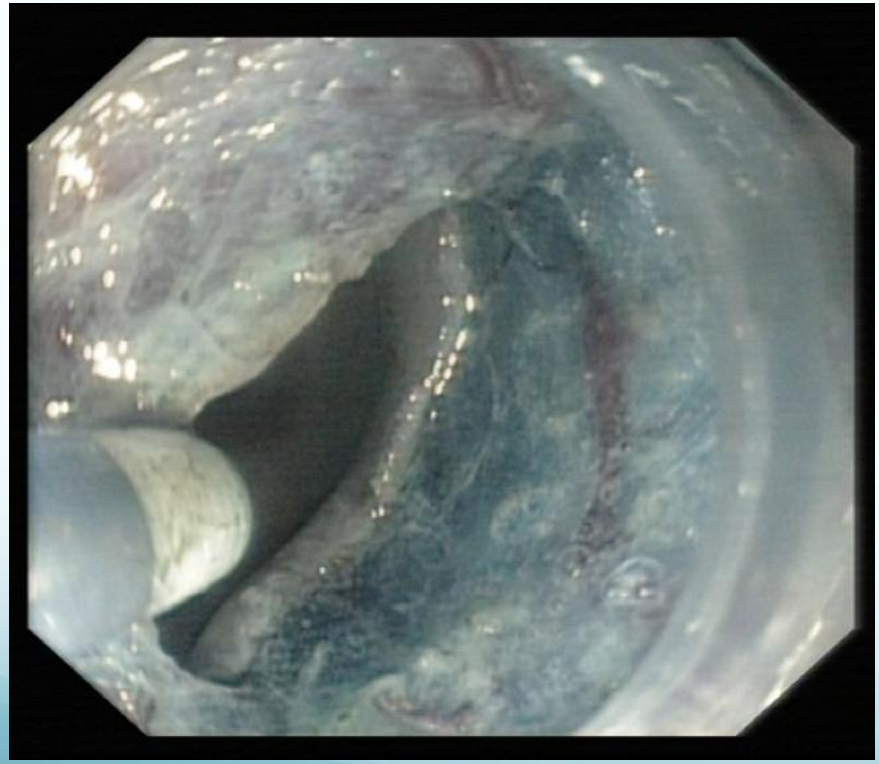


Incision – not circumferential

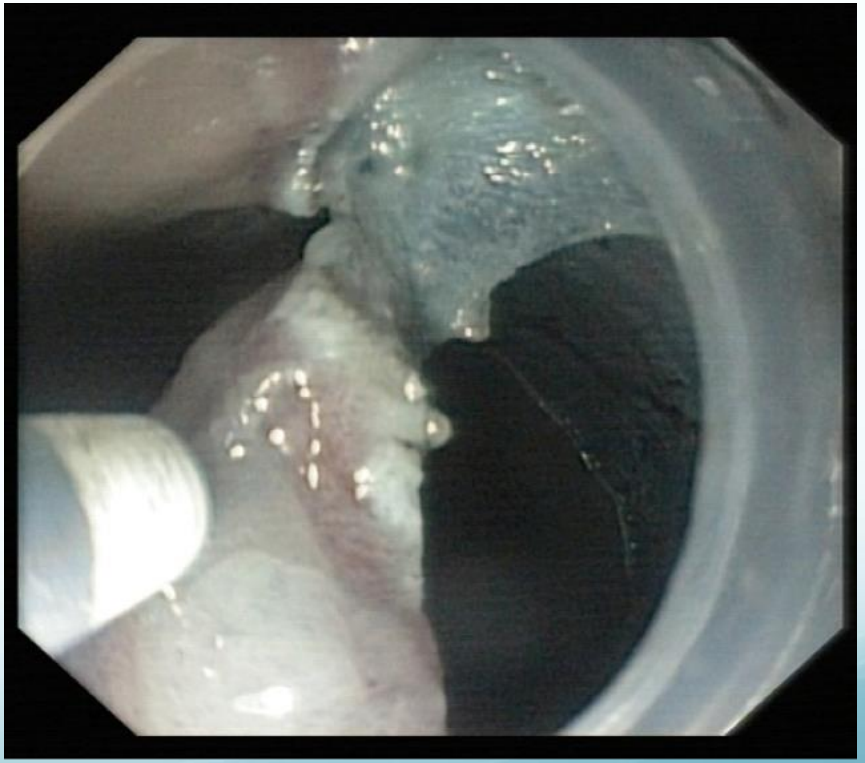


Dissection – lesion held taught by sides

ESD

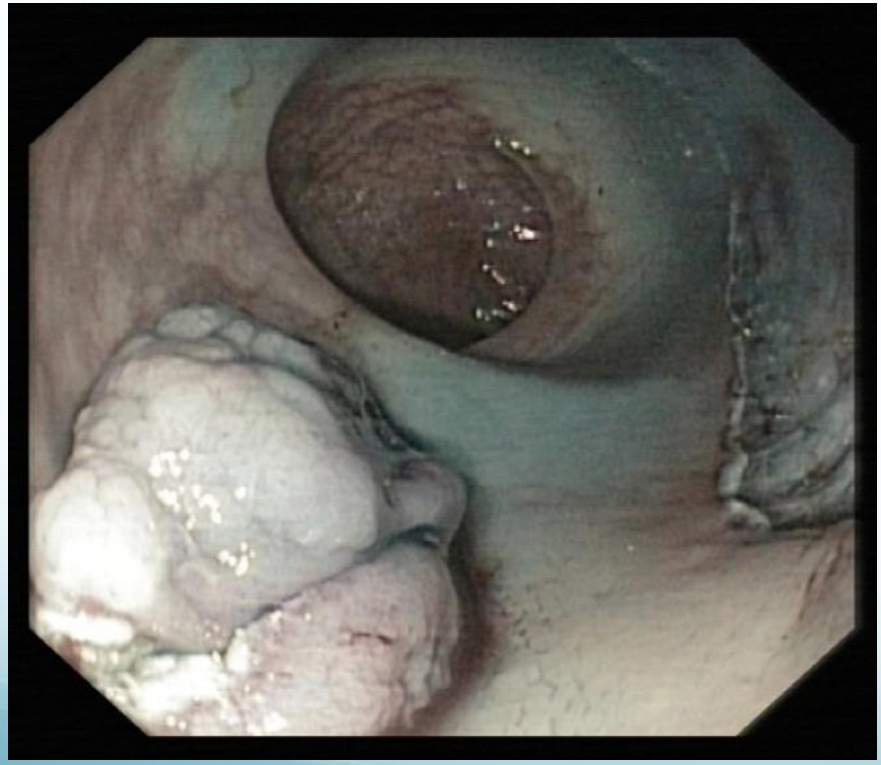


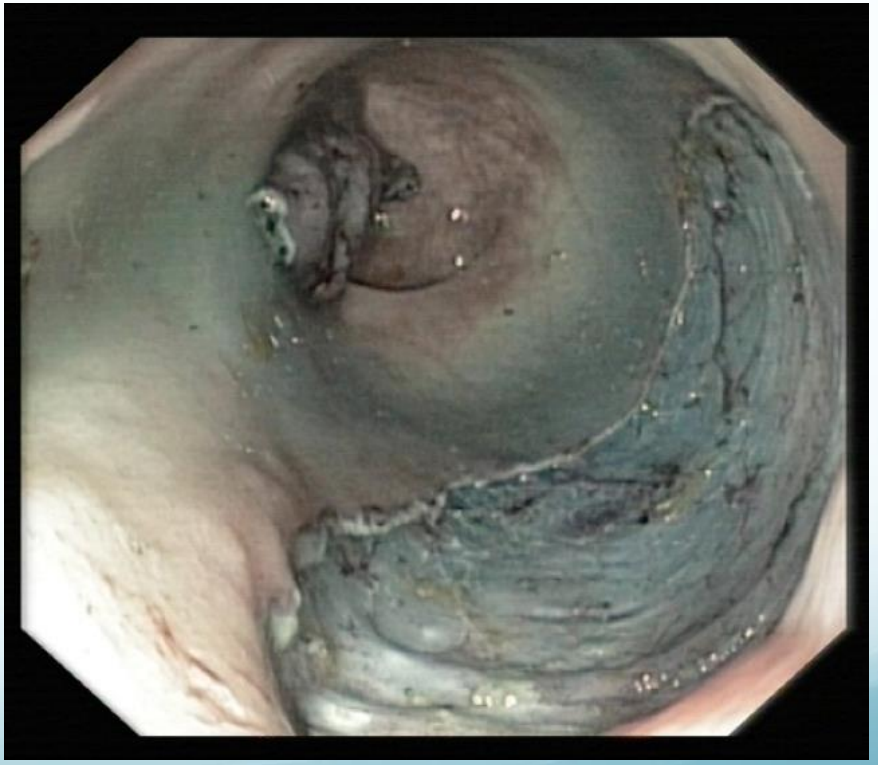
Distal edge of lesion through ‘tunnel’



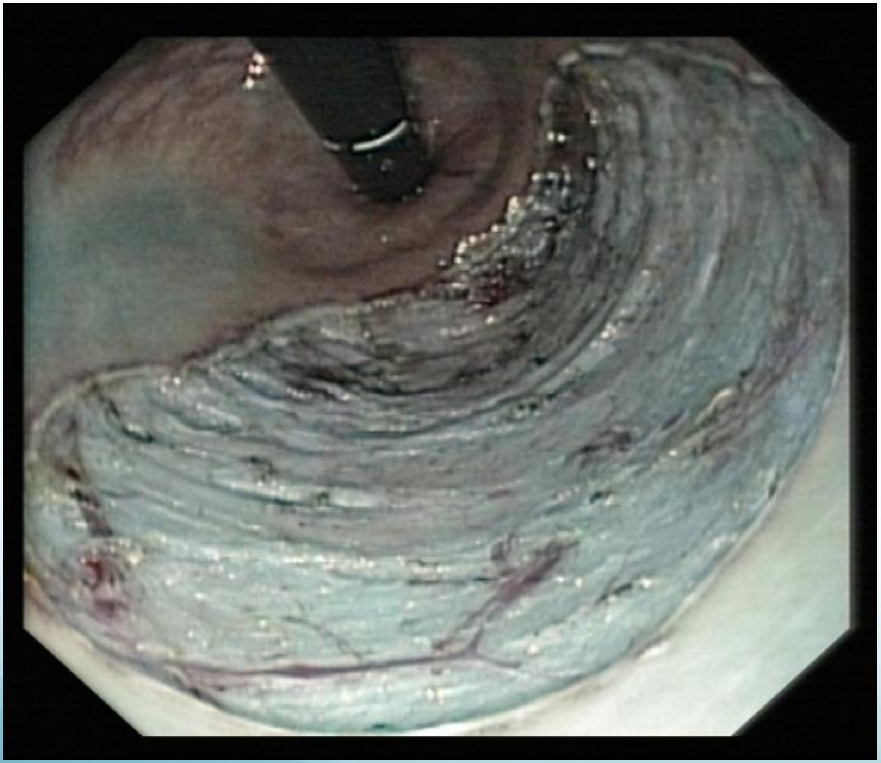
Resection of edges

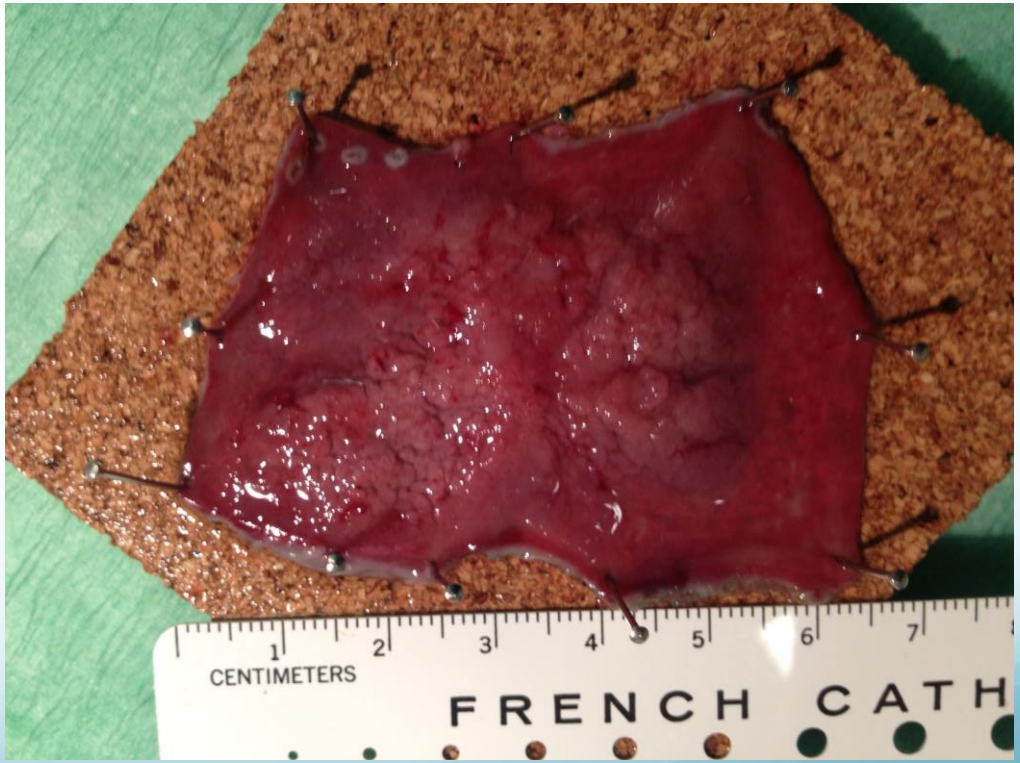
ESD





ESD





View in retroversion

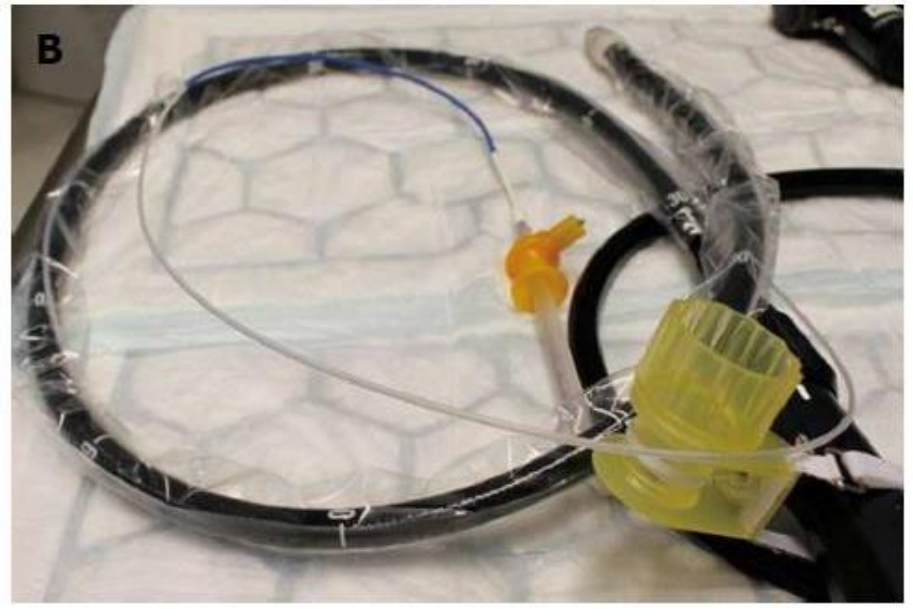
Specimen – Small focus of invasive cancer <1mm submucosa

FTRD

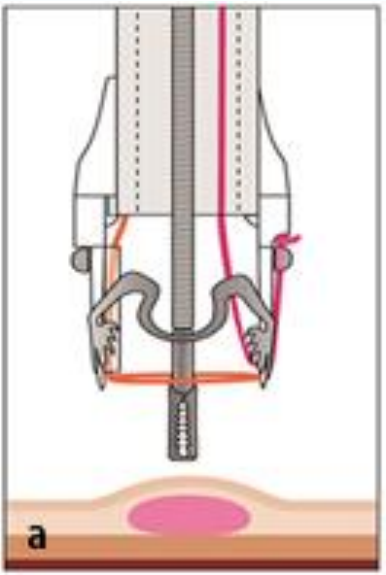
- Full Thickness Resection Device
- Up to 2cm
- Technically easy
- Damage to tissue outside colon

FTRD

FTRD



FTRD



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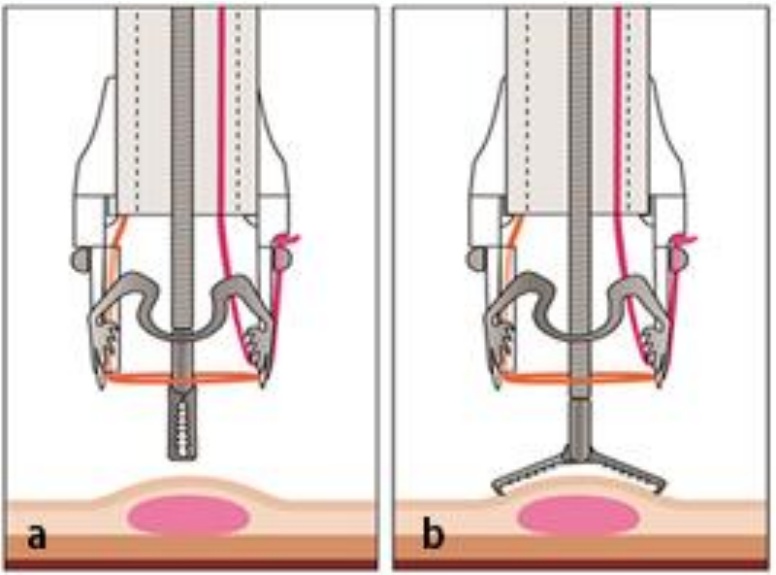

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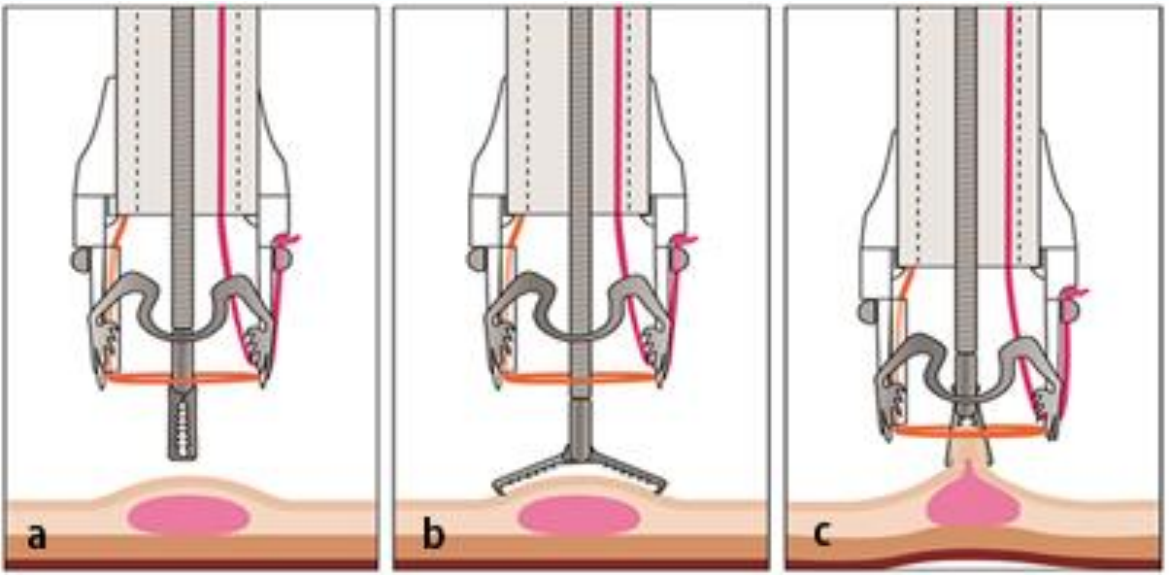

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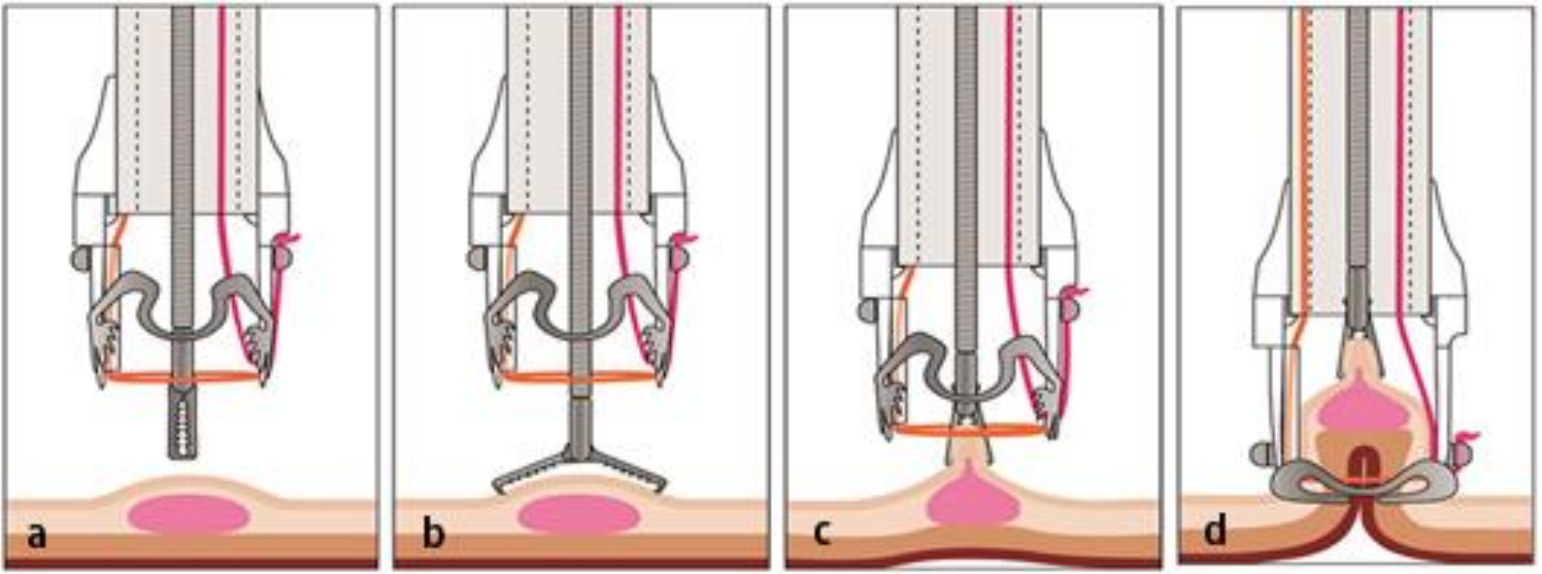
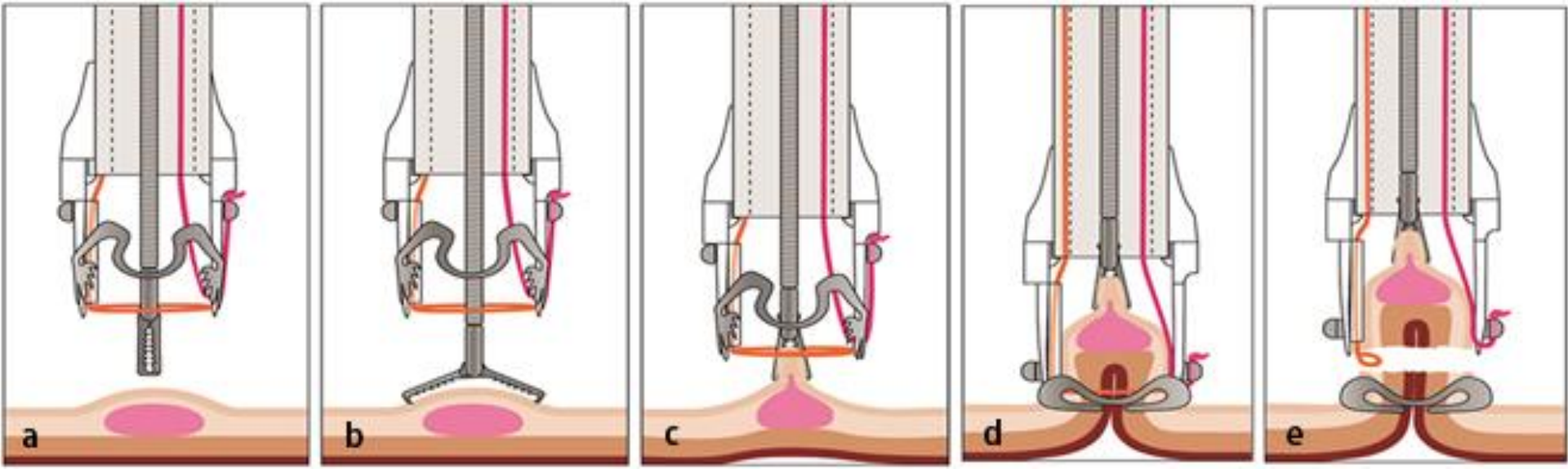


FTRD



When is endoscopic resection sufficient?

- Guidelines:

  - >1mm resection margin
  - No lymphangio invasion
  - No poor differentiation
  - No Haggit 4
    - ➢ Endoscopic resection sufficient

When is endoscopic resection sufficient?

- Guidelines:
  - Radically removed
  - No lyphangio invasion
  - No poor differentiation
  - Low grade tumour budding
  - <1000 µM submucosal invasion
    - ➢ Endoscopic resection sufficient

Future

(a)

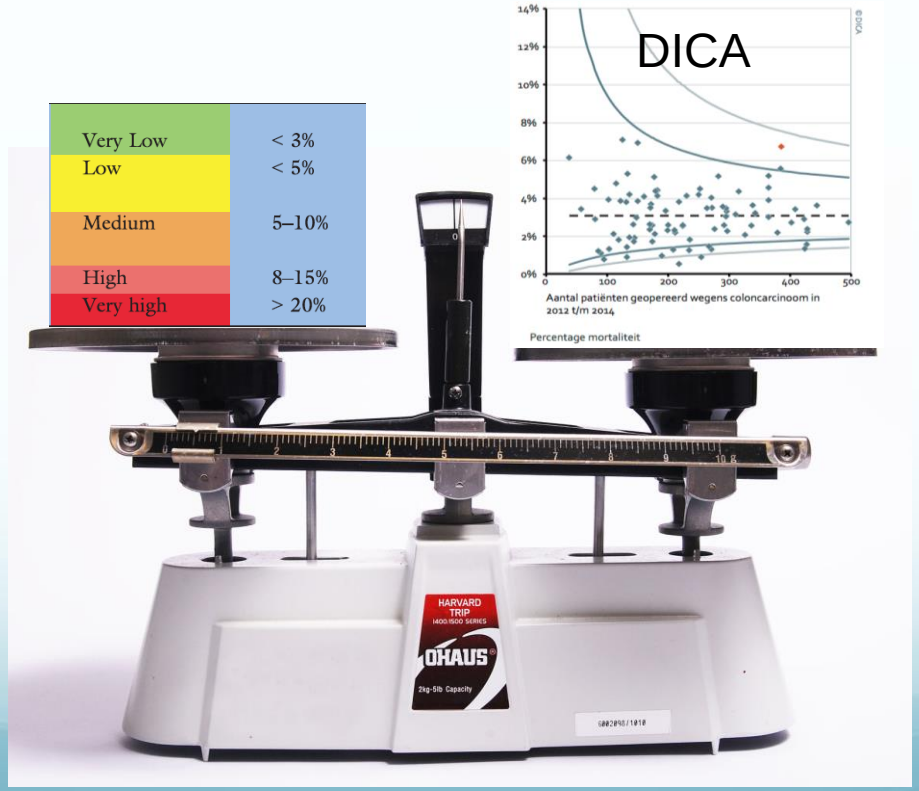
Criteria	Degree of Risk
Resection Margin < 1 mm	++++
Resection Margin 1–2 mm	+
Pedunculated Haggitt level 4	++++
Sessile: Kukuchi 2	++
Sessile: Kukuchi 3	++++
Poor differentiation	+++
Mucinous tumour	+
Tumour budding	+
Lympho-vascular invasion	++

(b)

Total score	Grade of Risk	Current estimate of potential % risk of residual cancer	Recommended course of action to be discussed with patient
0	Very Low	< 3%	Routine Follow up
+	Low	< 5%	Assess other factors Careful follow up
++	Medium	5–10%	Discussion of risks/benefit of surgery or follow up with patient
+++	High	8–15%	Discuss risks with patient – err towards surgery
++++ (or more)	Very high	> 20%	Recommend surgery unless patient unfit

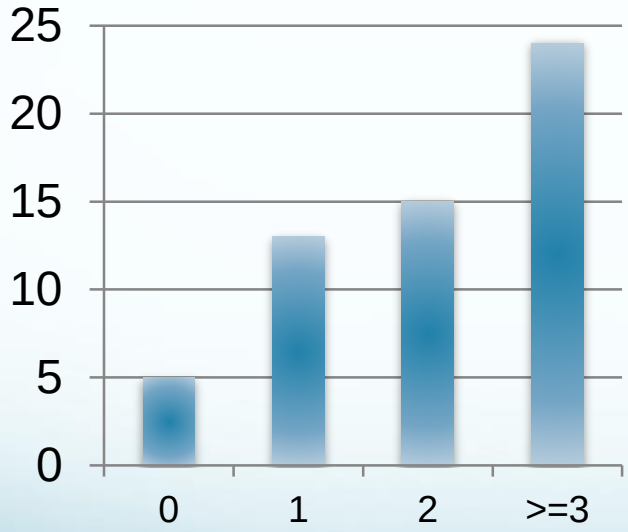
Estimate chance (%) of residual cancer

Weigh cancer risk vs operative risk

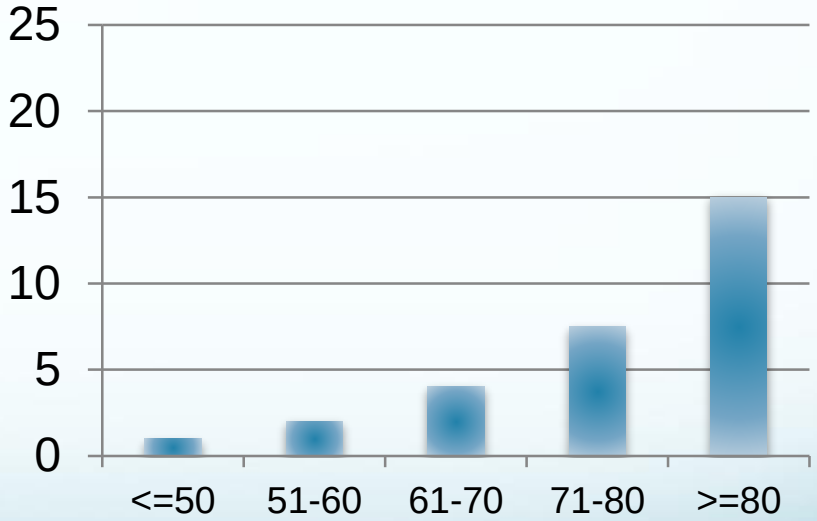


Operative risk

Co-morbidity – Charlson score

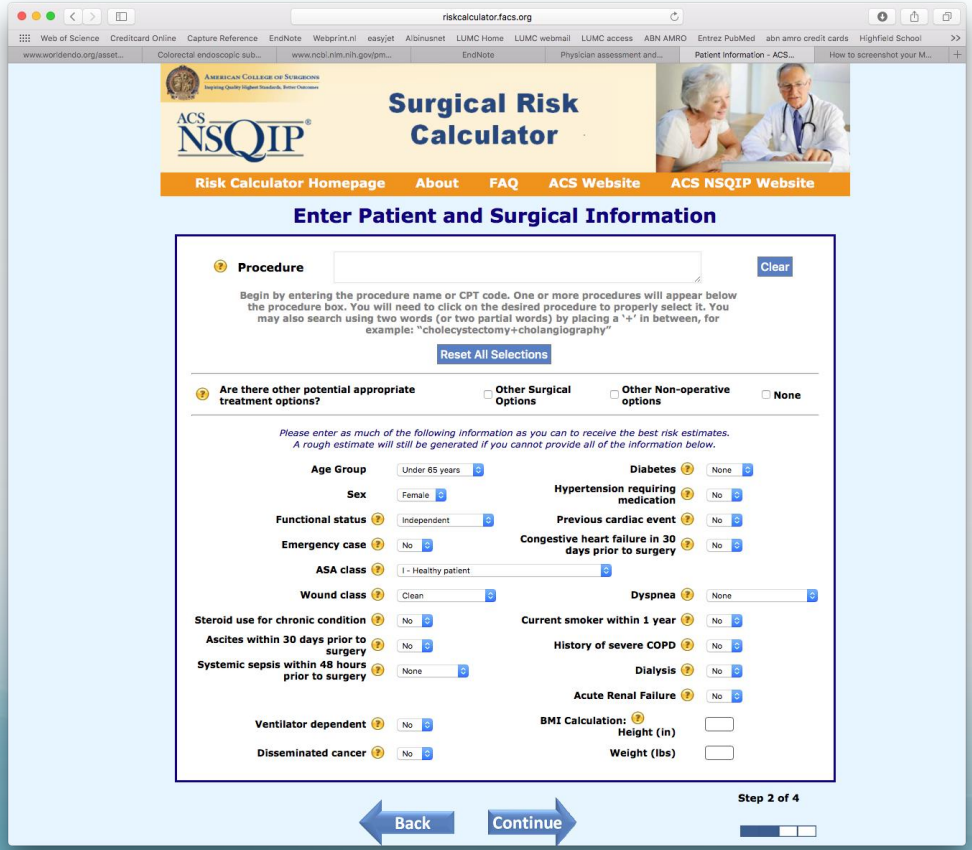


Age



UK 1998-2006 30 day mortality

Operative risk



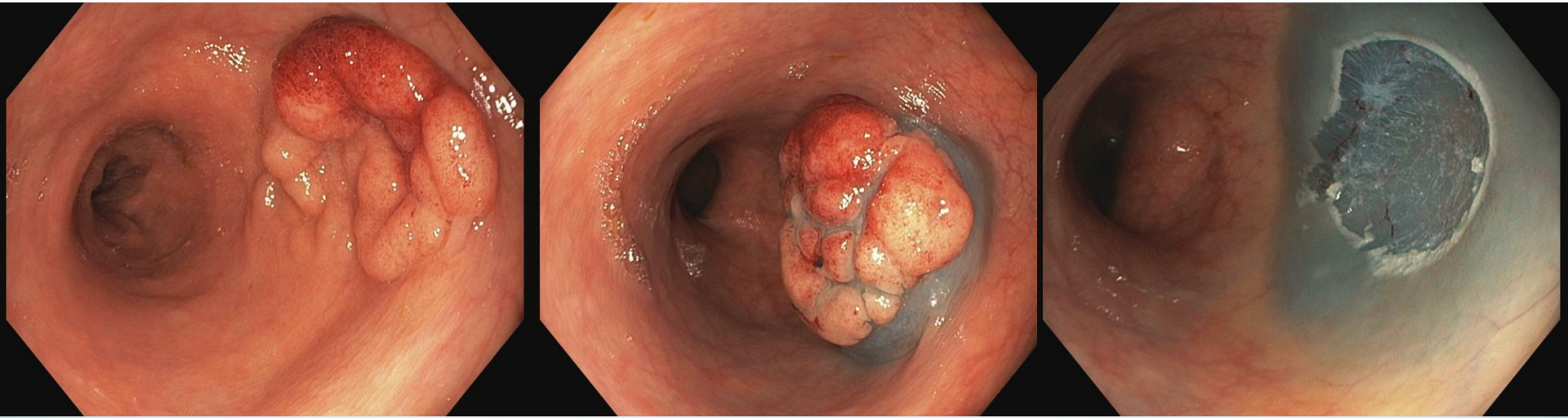
American College of Surgeons

National Surgical Quality Improvement Program

Polypectomy or surgery?

- Surgery doesn’t cure all LN+
- Morbidity especially rectal surgery
- Pathologist and endoscopist must liase

Case history



Pathology – reporting

- I: Type biopt : Polypectomie Lokalisatie : Rectum Diameter : 3,1 cm Primaire afwijking : met invasieve maligniteit Snijvlak : niet vrij Type tumor : Adenocarcinoom (Lymf-)angioinvasie : Niet aanwezig Differentiatie : Goed/matig Invasie diepte : niet te beoordelen Vorm van de laesie: poliepeus

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Pathology – reporting

- Revised report
- I: Polypectomie Rectum: matig gedifferentieerd adenocarcinoom met invasieve groei in de steel. Het adenocarcinoom toont invasieve groei in het bovenste deel van de poliep en in de steel, derhalve te beschouwen als kikuchi level 1 tot 2.
- Het adenocarcinoom bevindt zich niet in het resectievlak van de poliep. De tubulair adenoom component met laaggradige dysplasie reikt wel tot in de basis van de steel, en is derhalve niet vrij.

Pathology – reporting

- Revised revised report
- Aanvullend desmine kleuring toont geen ingroei door de muscularis mucosae, derhalve betreft het een intramucosaal adenocarcinoom. Er is geen invasie in de submucosa.
- I: Poliepectomie rectum, klinisch betreft het een sessiele laesie: intramucosaal carcinoom, zonder invasie in de submucosa. Het snijvlak van de poliep is vrij van intramucosaal carcinoom, doch adenoom component met laaggradige dysplasie reikt tot in het snijvlak. Diameter van de gehele poliep 3,1 cm, geen lymfangio-invasieve groei. De vorm van de laesie: sessiel. Geen expressie verlies van de mismatch repair eiwitten. Bovenstaande conclusies vervallen.

Conclusions

- Careful endoscopic inspection
- Aggressive en bloc resection
- Current surgery guidelines unhelpful in the elderly
- No “one size fits all”
- Excellent pathology essential – insist on it!