Australasian Gastrointestinal Pathology Society
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www.agps.org.nz

Pouchitis and Cuffitis
A bloody mess

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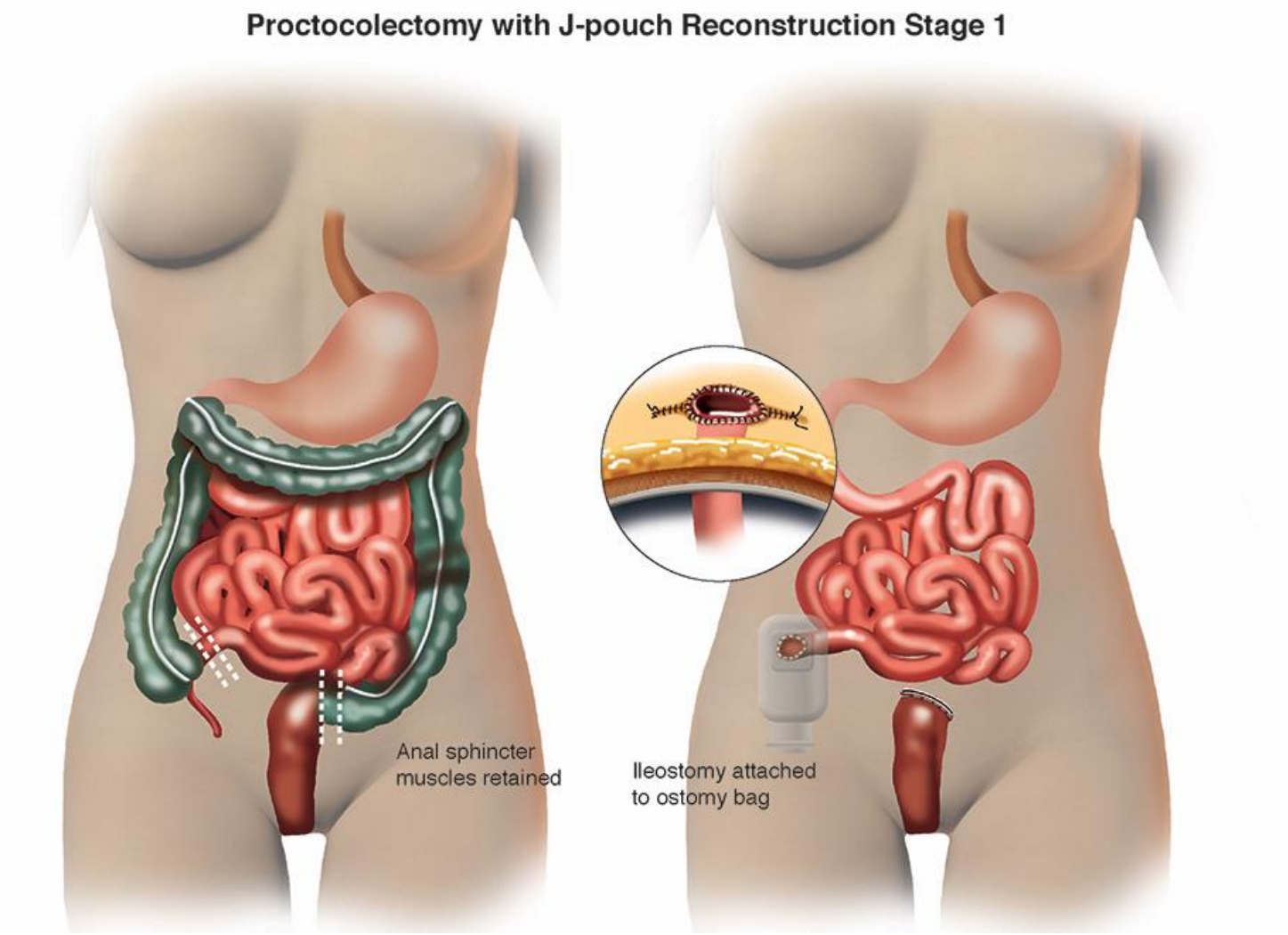
Colorectal Surgeon

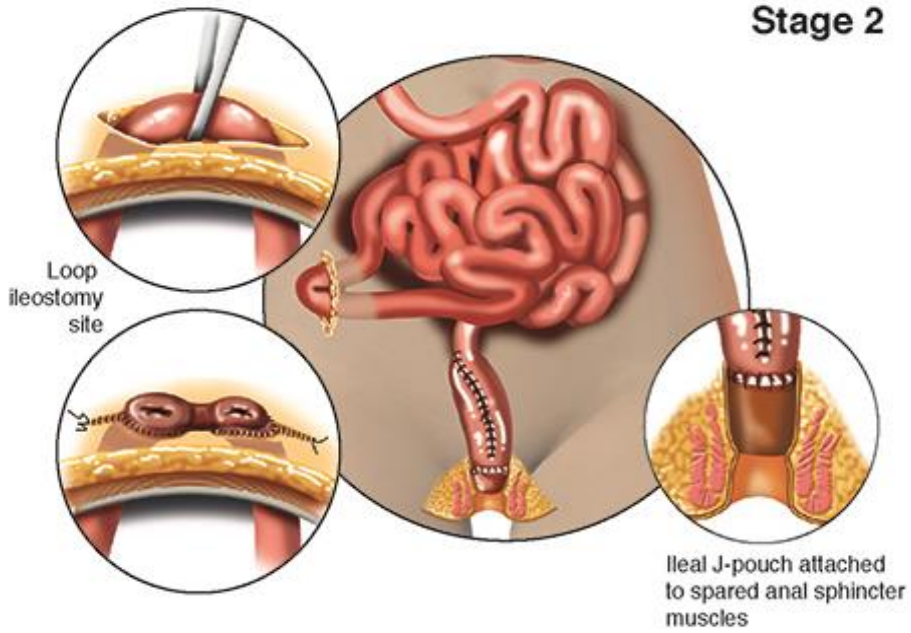
Counties Manukau District Health Board

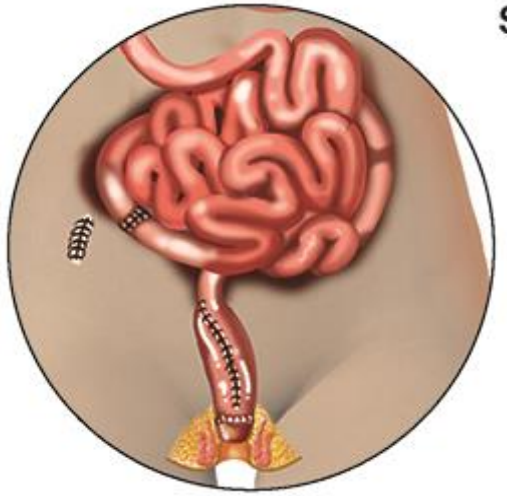
COUNTIES MANUKAU HEALTH

Healthy Together

Ileal-pouch anal anastomosis

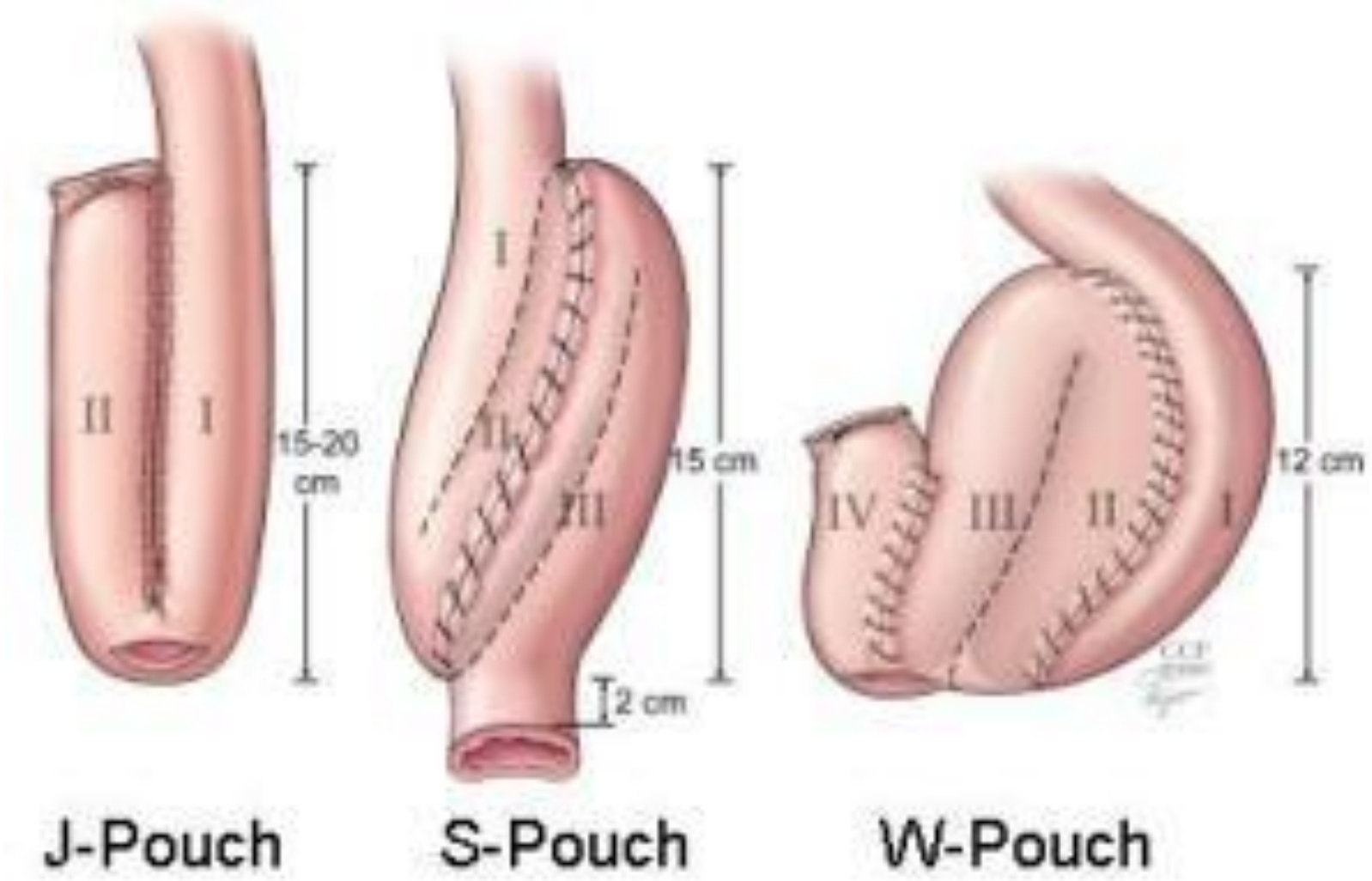




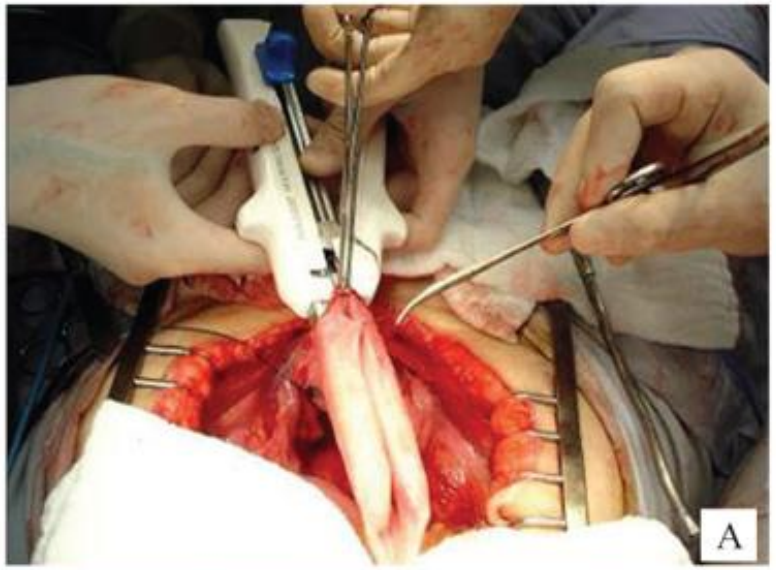


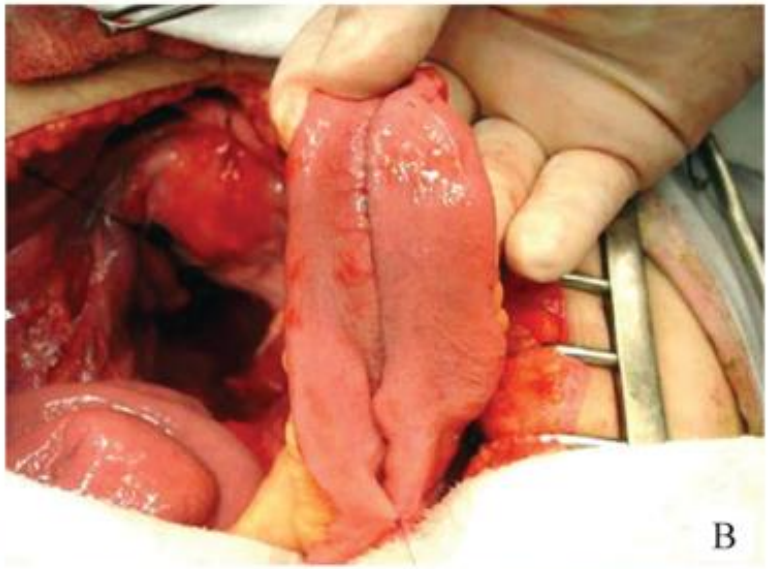
https://www.pennmedicine.org/for-health-care-professionals/for-physicians/physician-education-and-resources/clinical-briefings/2018/february/total-proctocolectomy-with-jpouch-reconstruction-for-ulcerative-colitis

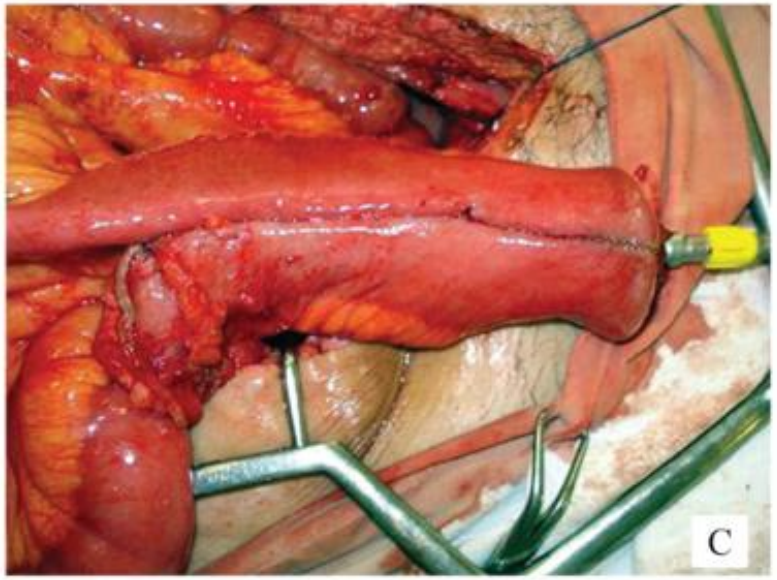
Types of pouch

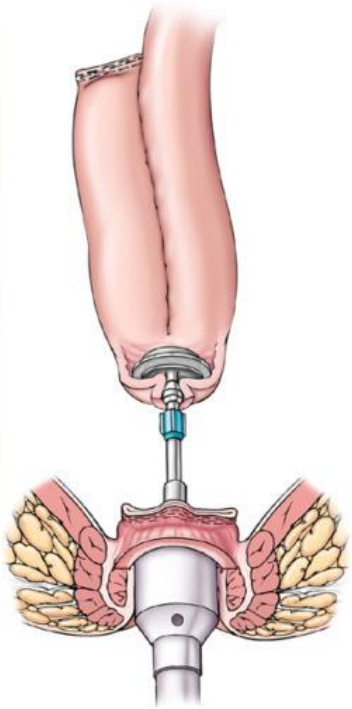


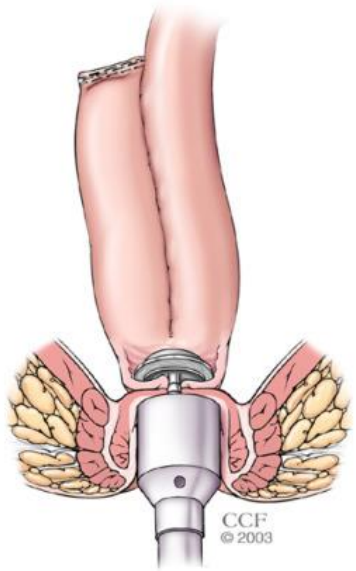
https://my.clevelandclinic.org/health/treatments/17379-pouch-procedure--recovery/types-of-surgeries

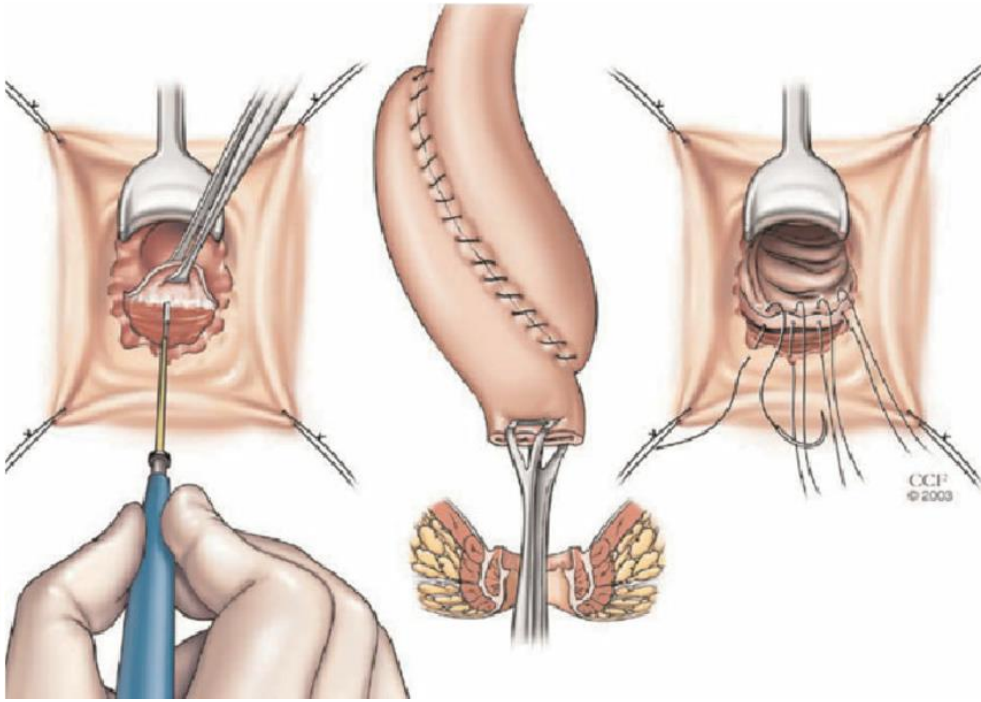






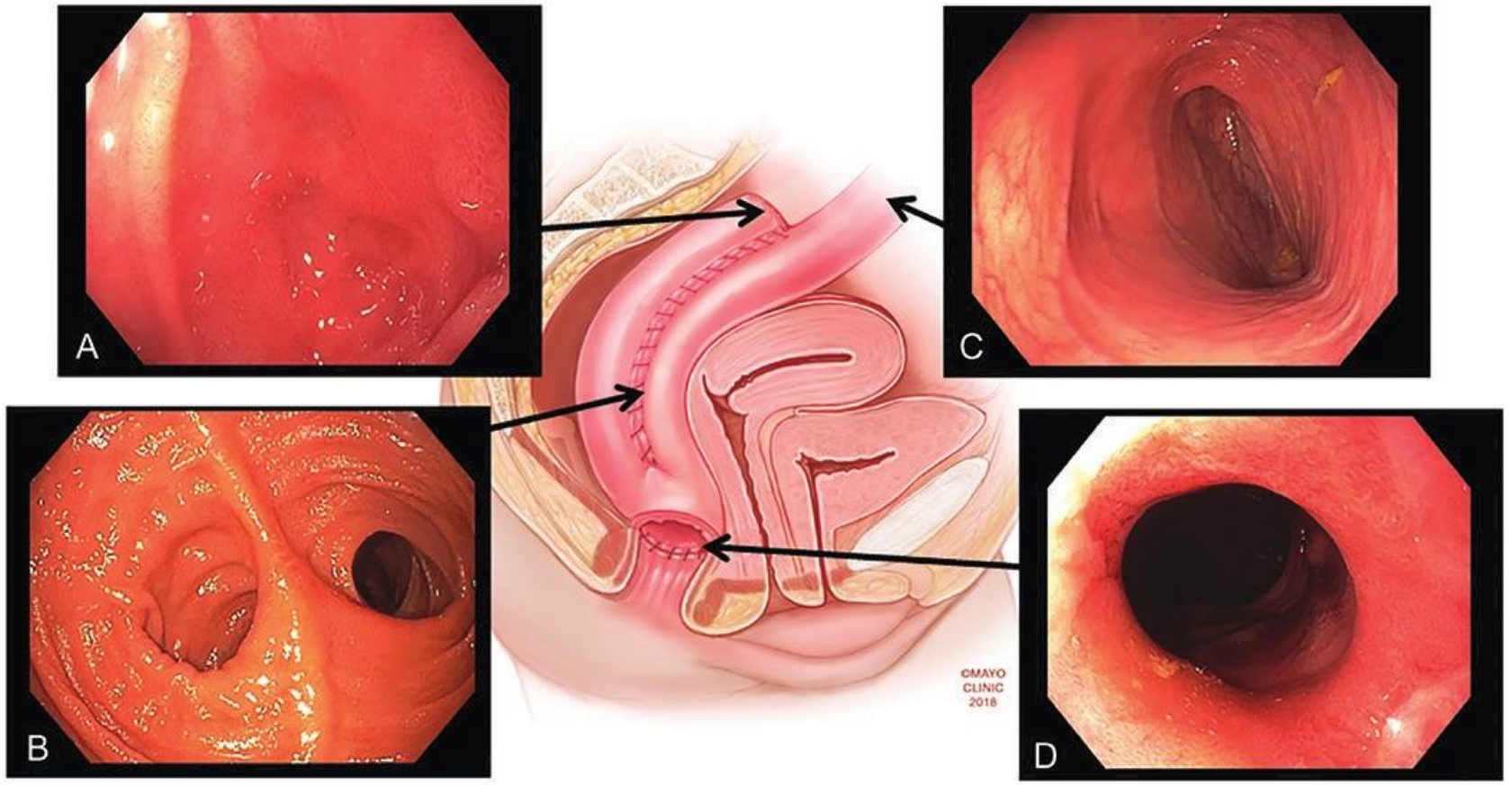


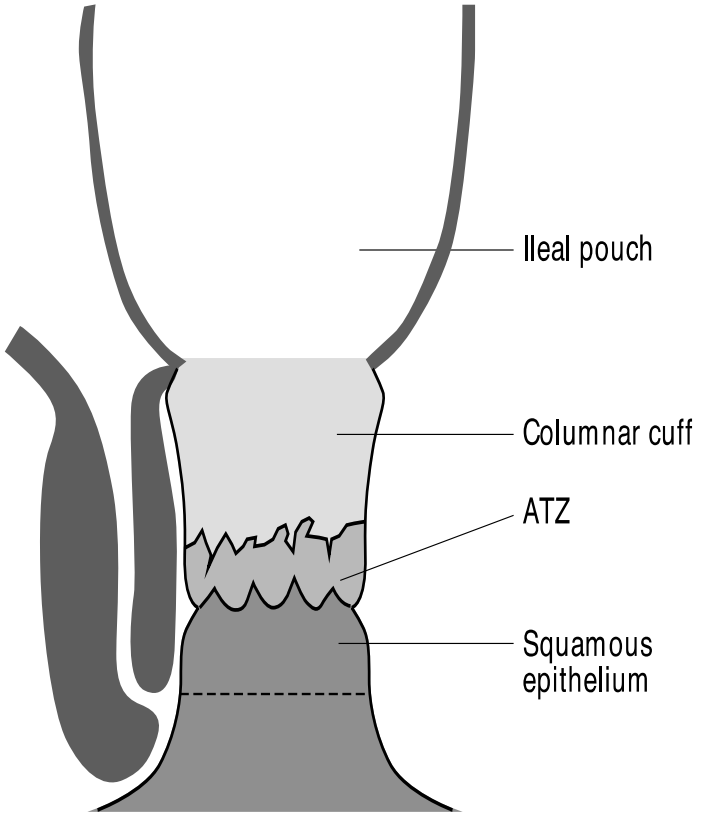




https://doi.org/10.1053/j.scrs.2015.09.013; http://dx.doi.org/10.1590/S2237-93632012000300009

The anatomy of a pouch





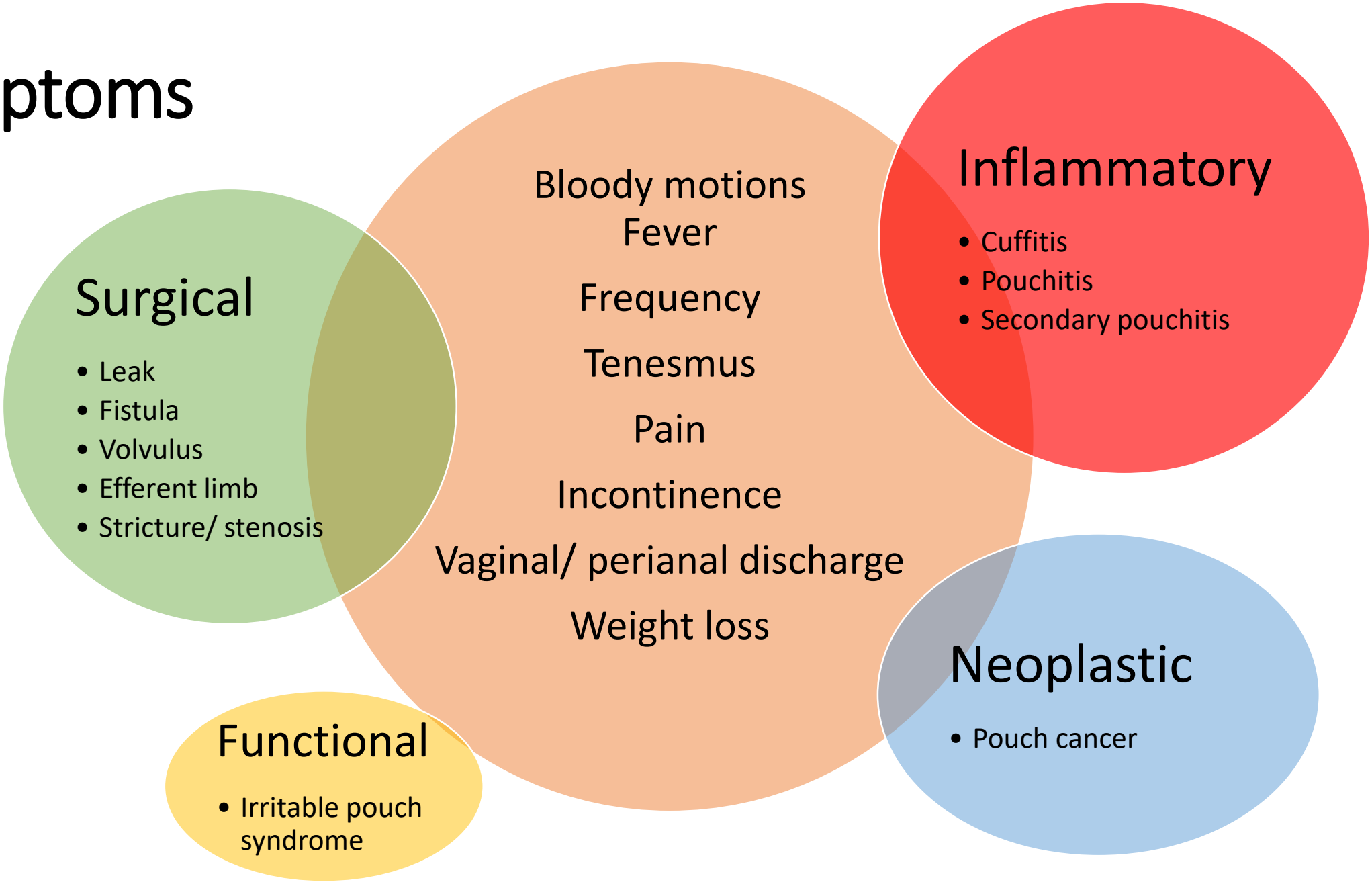
A = efferent limb B= pouch C = afferent limb D= anastomosis

Inflamm Bowel Dis • Volume 00, Number 00, Month 2018, *British Journal of Surgery* 1998, **85**, 1517–1521

Pouch function and life span

- 4-8 motions a day, 1-3 motions at night
- Continent
- Good QOL at 12 months
- Dietary modification + loperamide
- Fecal incontinence up to 40-50% in 20-30yrs
- 15% pouch failure at median 6 yrs
  - Loop ileostomy or pouch excision
  - Even higher in Crohn’s disease 25-100%

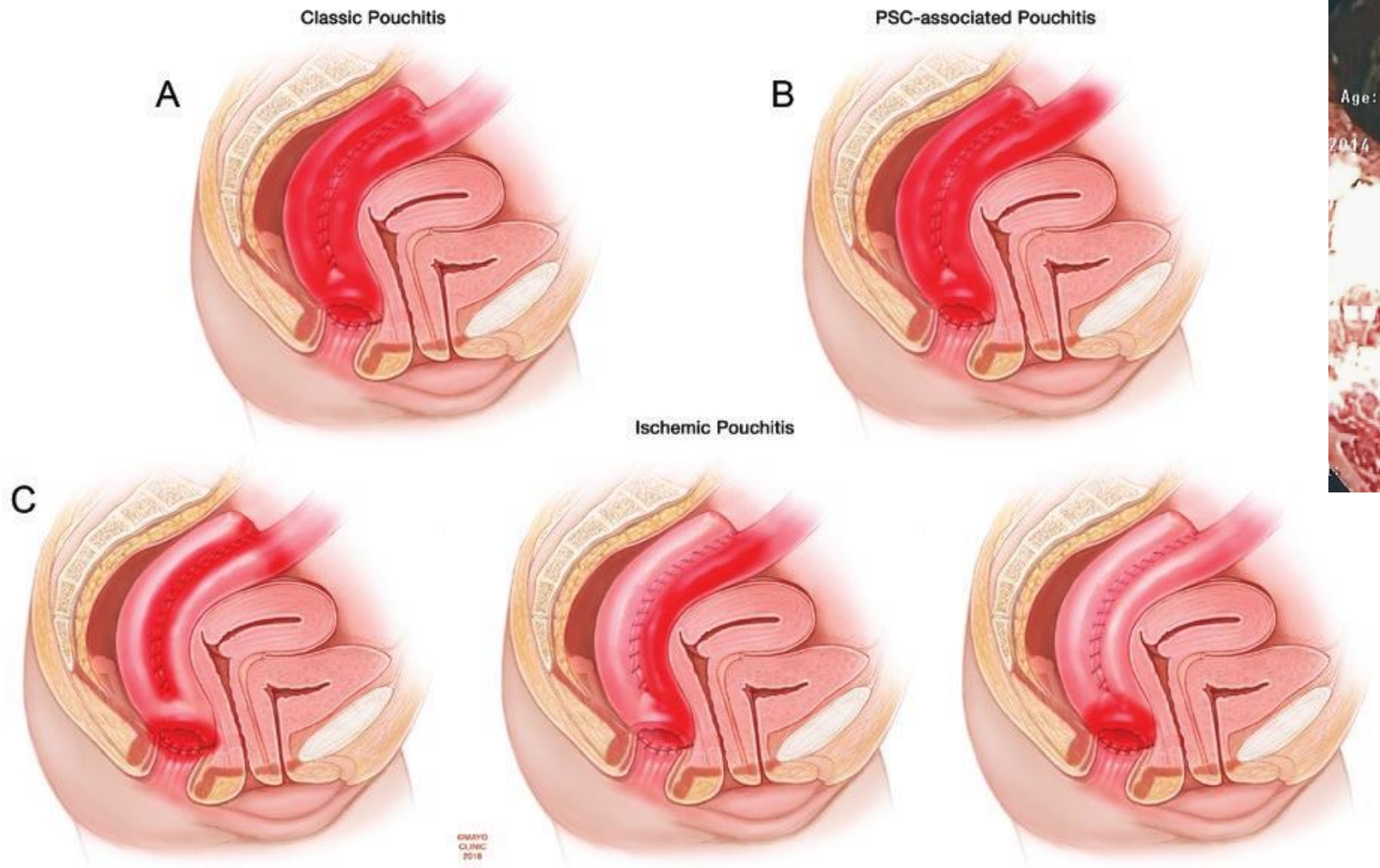
Symptoms

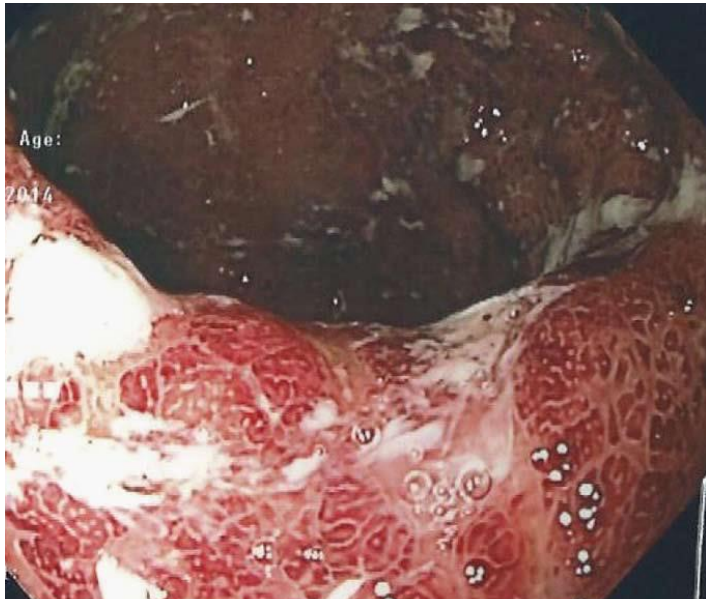

Surgical
• Leak
• Fistula
• Volvulus
• Efferent limb
• Stricture/ stenosis
Bloody motions
Fever
Frequency
Tenesmus
Pain
Incontinence
Vaginal/ perianal discharge
Weight loss
Inflammatory
• Cuffitis
• Pouchitis
• Secondary pouchitis
Neoplastic
• Pouch cancer
Functional
• Irritable pouch syndrome

Clinical approach

- History
  - Review previous scopes, histology and operation notes
  - Toxins
- Examination+ Biopsies
  - Endoscopy
  - Examination under anaesthesia
- Investigations
  - Bloods
  - MRI/ CT
  - Stool cultures

Standardised pouchoscopy report



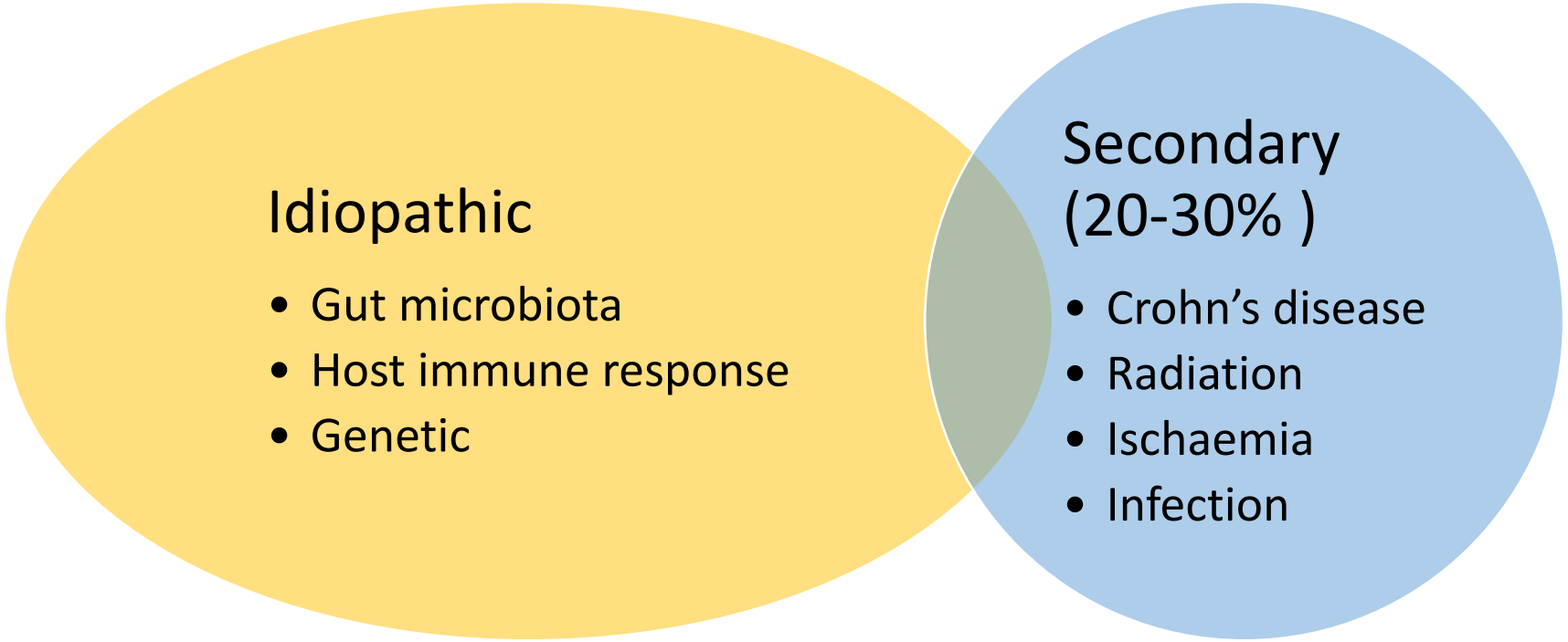


Inflamm Bowel Dis • Volume 00, Number 00, Month 2018

Pouchitis

- Most common long term complication
- Cumulative incidence 20-50% (1 – 5 yrs)
- 40% occur in the 1st 12 months post ileostomy closure
- 40% single episode only
- 5-20% end up with refractory disease
- Risk factors
  - Extensive UC, PSC, pANCA +ve, non-smoker, young, regular NSAIDs, obesity, backwash ileitis, genetic polymorphisms

Pathogenesis



Pouch disease activity index (PDAI)

Histology useful in clinical practice

- Detection of specific pathogens (such as CMV, Candida)
- Granulomas
- Ischemia
- Mucosal prolapse
- Dysplasia

Chronic histological may reflect ‘normal’ adaptive changes to stasis

Criteria	Score
Clinical	
Stool frequency	
Usual postoperative stool frequency	0
1-2 stool/d > postoperative usual	1
3 or more stool/d > postoperative usual	2
Rectal bleeding	
None or rare	0
Present daily	1
Fecal urgency or abdominal cramps	
None	0
Occasional	1
Usual	2
Fever (temperature > 37.8 ℃)	
Absent	0
Present	1
Endoscopic findings	
Edema	1
Granularity	1
Friability	1
Loss of vascular pattern	1
Mucous exudates	1
Ulceration	1
Histological findings - acute histological inflammation	
Polymorphonuclear leucocyte infiltration	
Mild	1
Moderate without crypt abscess	2
Severe with crypt abscess	3
Ulceration per low-power field (mean)	
< 25%/25%-50%/> 50%	1/2/3
Total pouchitis disease activity index (max 18) pouchitis ≥ 7	

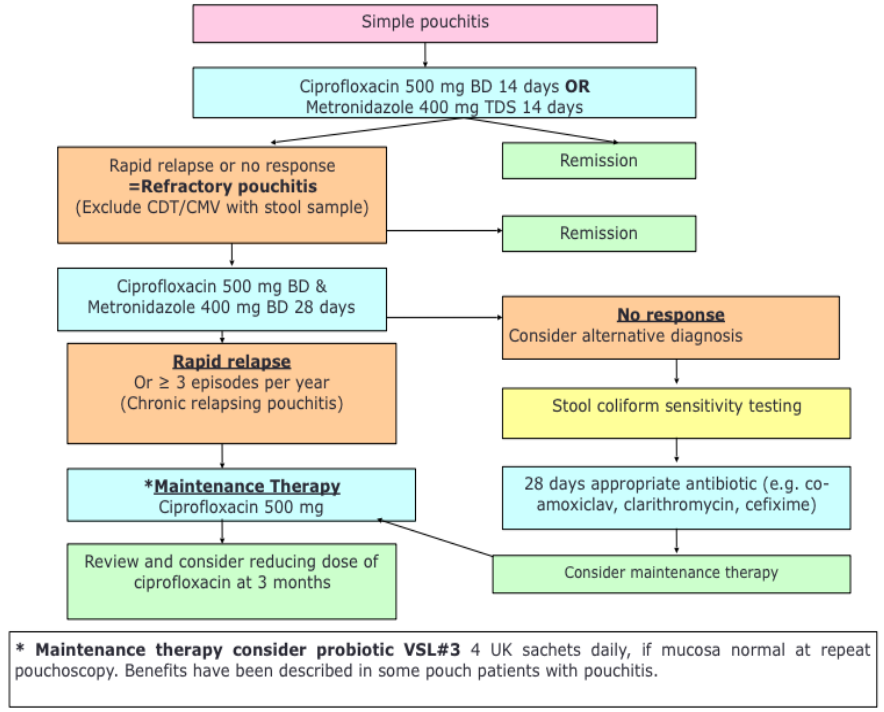
Classification of pouchitis

Duration	• acute (< 4 weeks) • Relapsing (≥3 acute episodes in 12 months) • chronic (≥ 4 weeks)
Antibiotic response	• Responsive • Dependent • Refractory
Cause	• Idiopathic • Secondary

Treatment

- Antibiotics initial treatment
  - Ciprofloxacin 500mg BD or Metronidazole 400mg TDS po 14 days
- http://www.e-guide.ecco-ibd.eu/algorithm/pouchitis

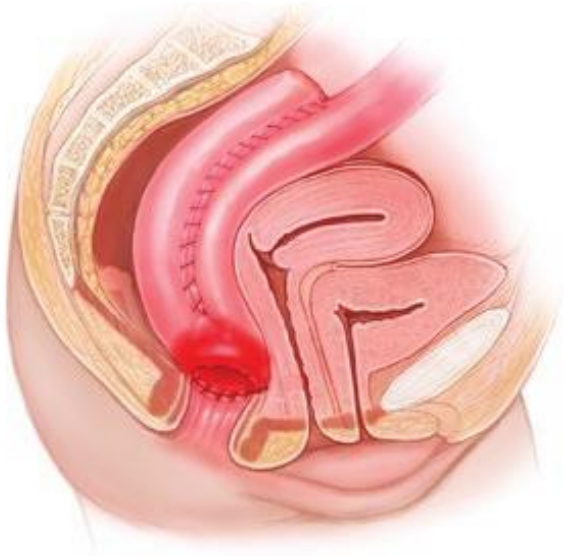
- Escalating therapies (budesonide, biologics..)
  - ? Reducing pouch failure incidence
  - Crohns still leading cause of pouch failure



CMV

- May not be always pathogenic
- Probably uncommon cause of pouchitis
- Clinical features
  - Fever
  - Prepouch ileal ulcerations
  - Immunosuppression more common
- Histology
  - Immunohistochemistry/ PCR
  - Inclusion bodies not always present
  - Biopsies taken from ulcers more likely to contain CMV DNA
- Treatment
  - 2-4 week course of ganciclovir
  - Repeat endoscopy should be considered to confirm CMV eradication/ mucosal healing, especially when features of Crohns i.e deep mucosal ulcerations and/or prepouch ileitis
- Prognosis
  - Most have normal pouch function after treatment for CMV

Cuffitis



- Retained columnar epithelium 1.5-2cm
- UC or UC-like inflammatory process vs

  other (ischaemia/ surgical sepsis/ dysplasia)
- Clinical
  - Can co-exist with pouchitis
  - > bloody
  - Toxic megacolon, fulminant colitis, preoperative biologic use
- Usual treatment is topical ASA, steroids →→ biologics
  - Responsive
  - Dependent
  - Refractory up to 50% - 1/3 Crohns, 1/3 surgical complications,
    - Pouch failure around 10%

Summary

- Pouchitis and cuffitis are challenging conditions to diagnose and treat
- 1st line rx for pouchitis = antibiotics
- 1st line rx for cuffitis = immunomodulators
- Multidisciplinary approach essential
  - Surgical anatomy
  - Complex medical pathogenesis
  - Balance with function and quality of life