

Colorectal Disease



Virginia Mason
Franciscan Health™
Center for Digestive Health

Hereditary Cancer Syndromes

Gautam Mankaney, MD

Section Head, GI & Hepatology

Director, GI Cancer Prevention Program

Virginia Mason Franciscan Health

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Disclosure

- None

Overview

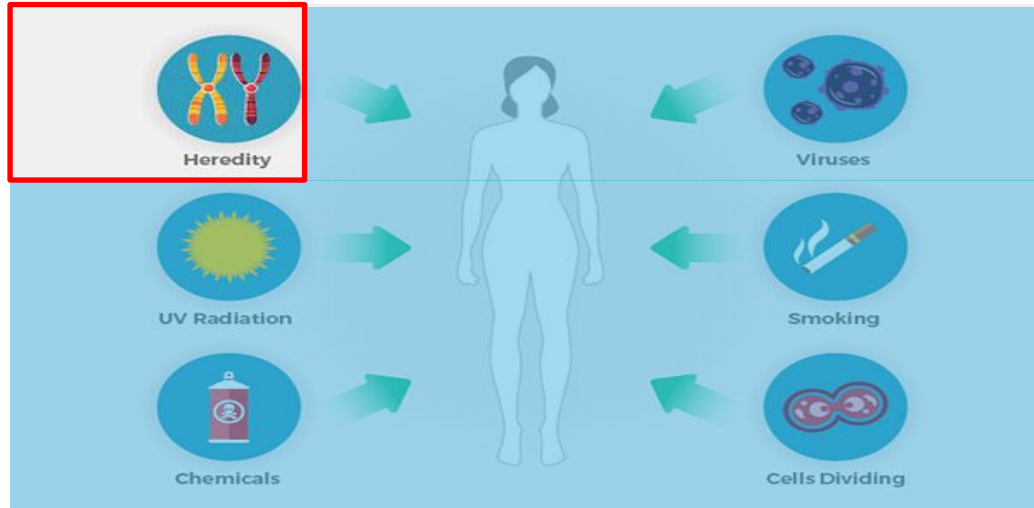
I. Colon Cancer Basics

II. Screening: The Next Frontier

III. High-Risk Patients

Colon Cancer - Basics

Cancer is a Genetic Disease



L
I
F
E

Adenoma-Carcinoma Sequence



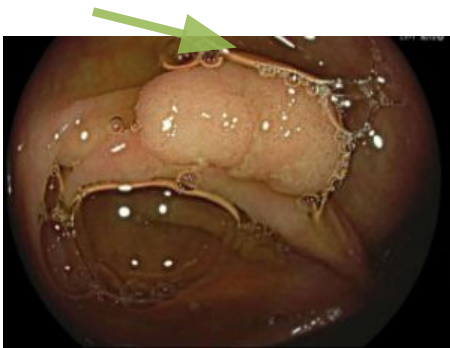
Adenoma-Carcinoma Sequence

**Aberrant
crypt focus**



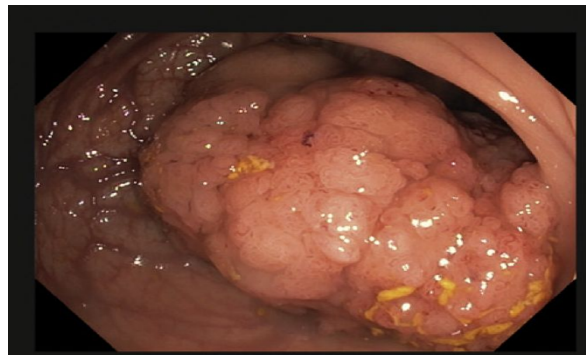
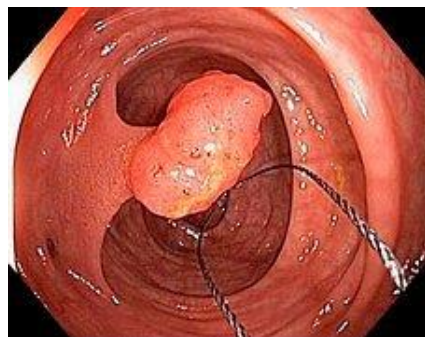
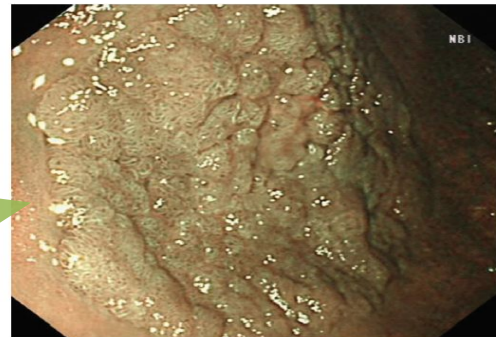
**Early
adenoma**



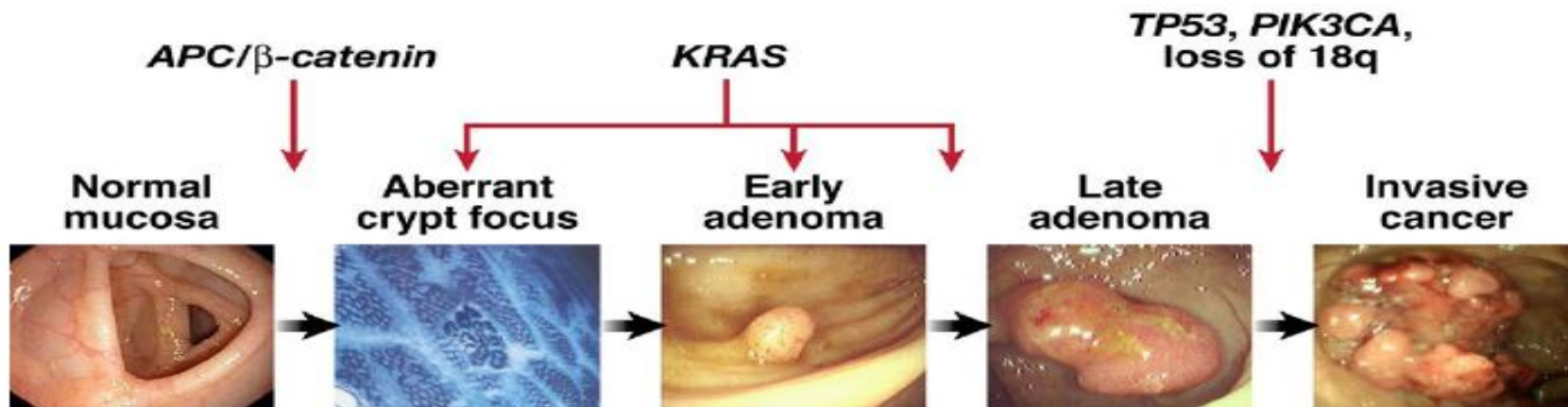


Adenoma-Carcinoma Sequence

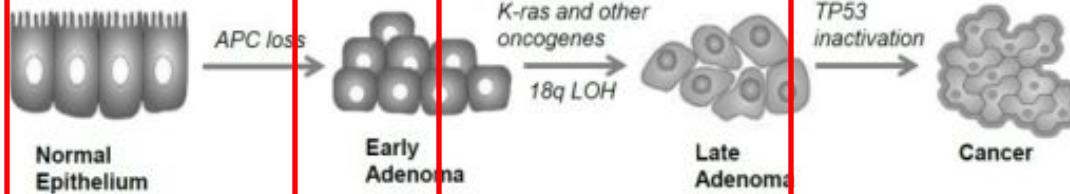




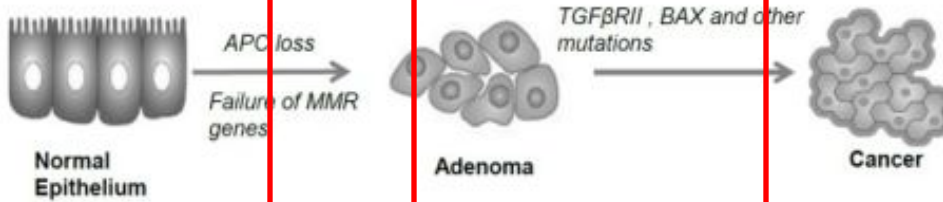
Adenoma-Carcinoma Sequence



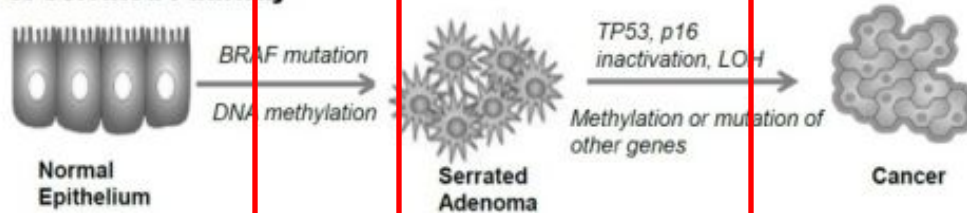
A. Chromosomal Instability (CIN) Pathway



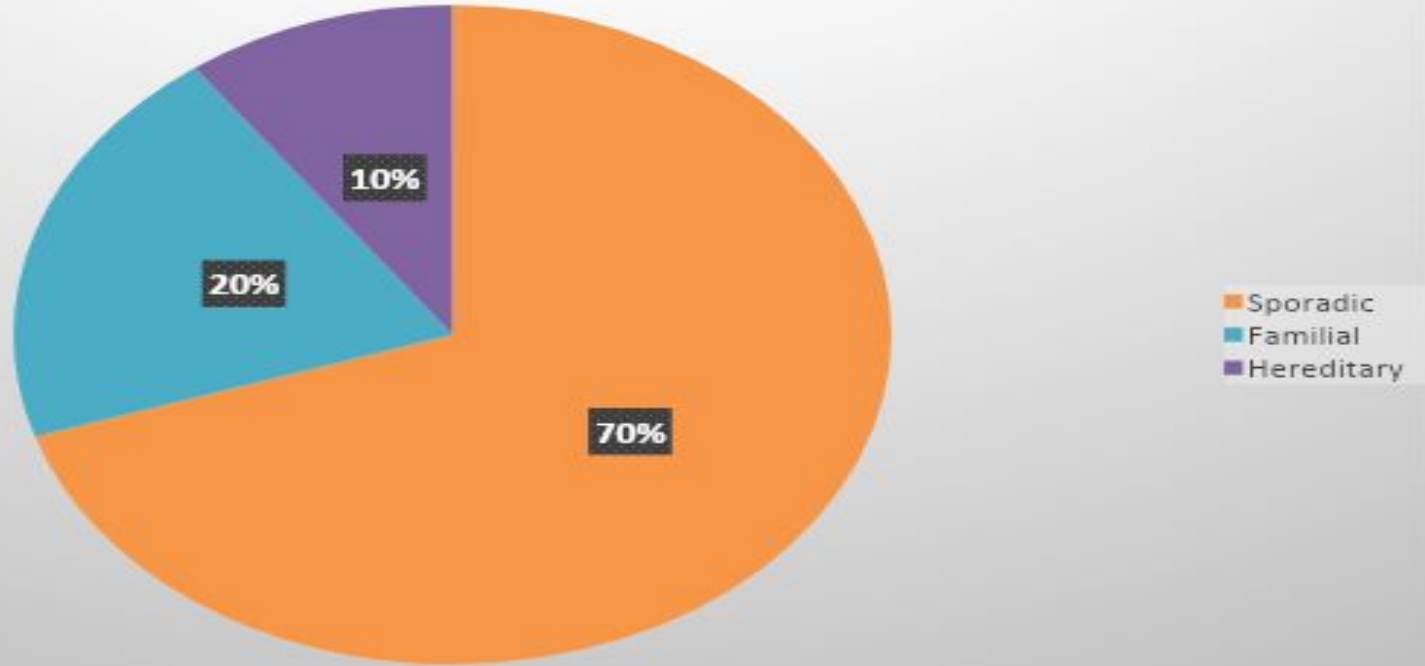
B. Microsatellite Instability (MSI) Pathway



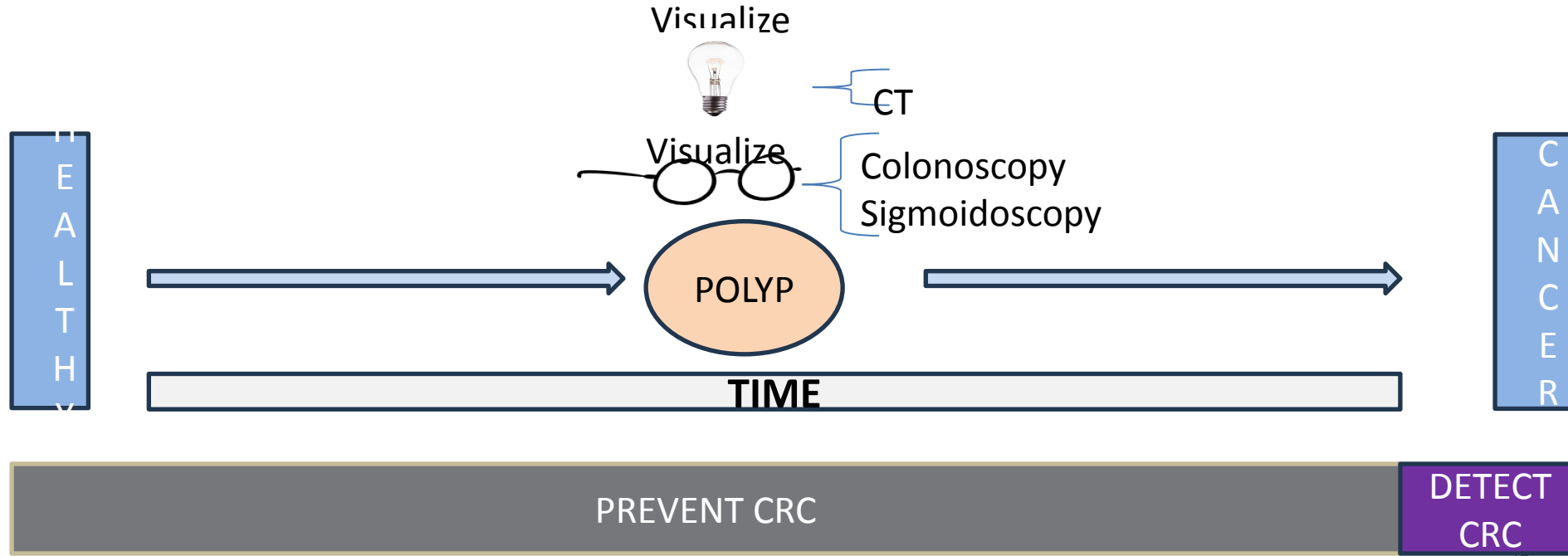
C. Serrated Pathway



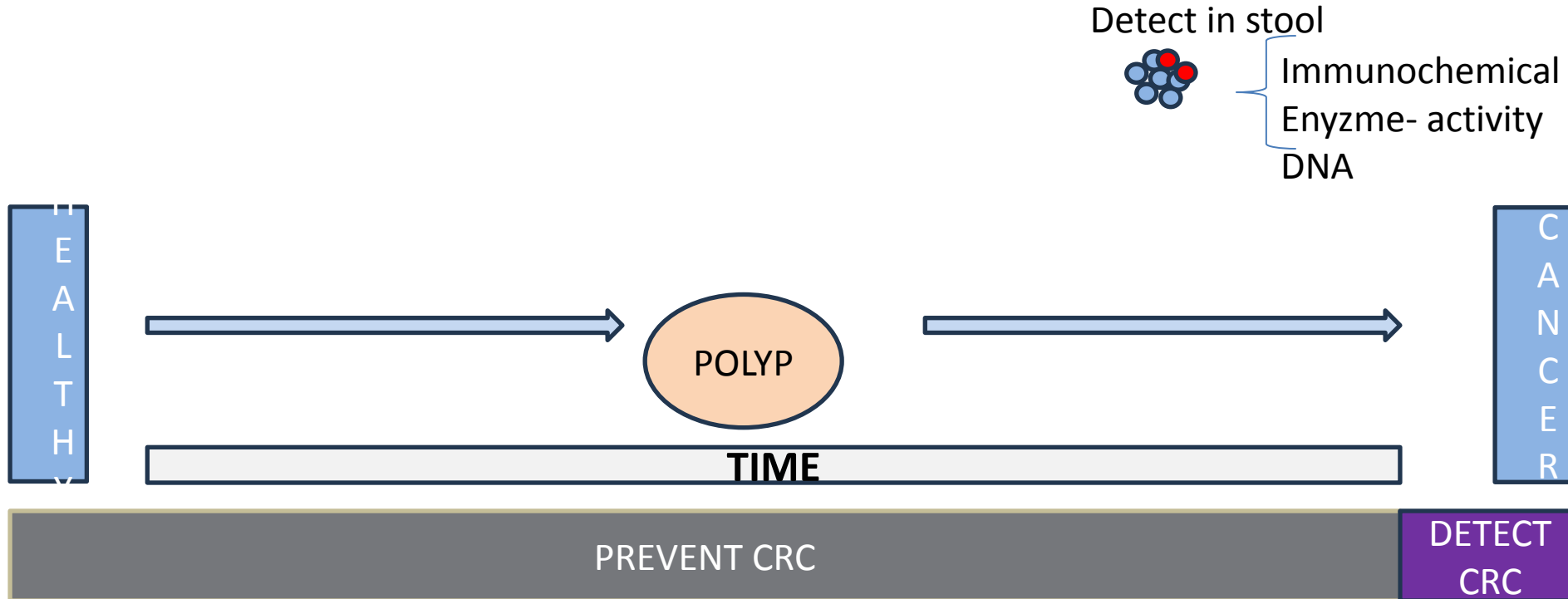
Causes of Cancer



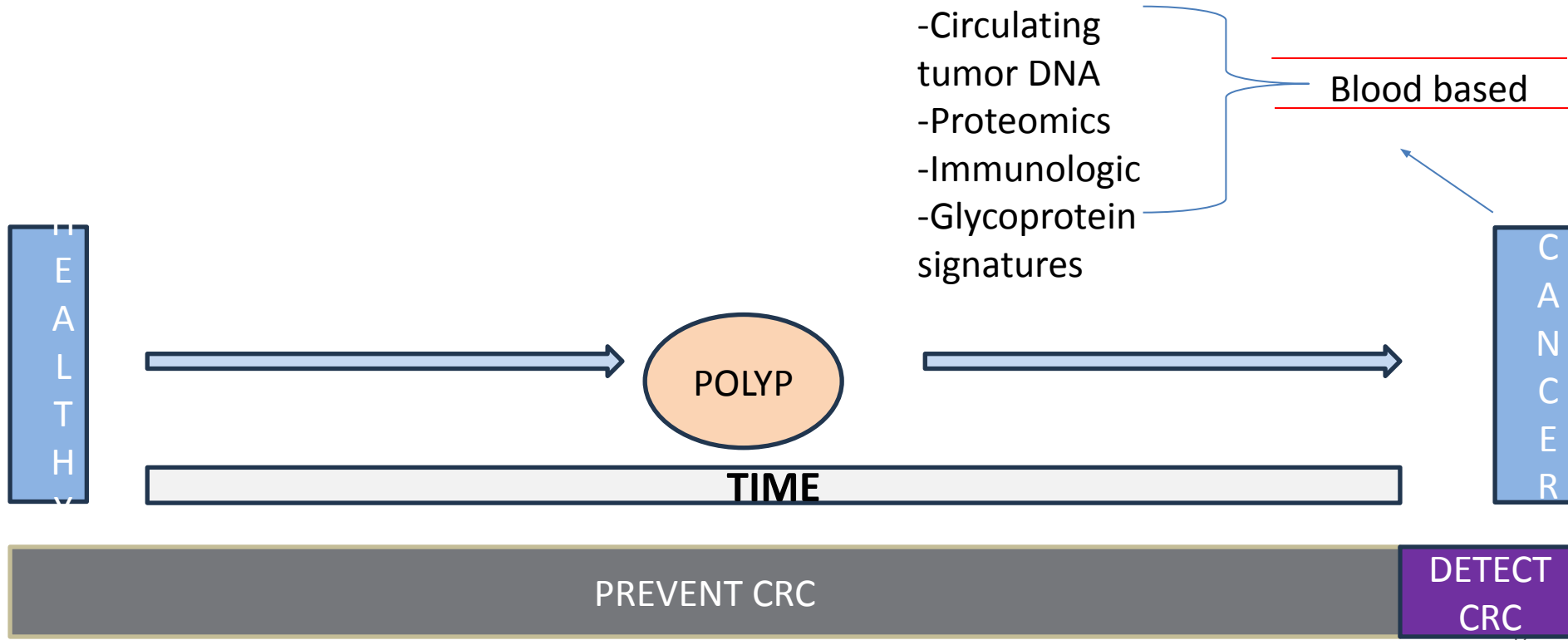
Visualization



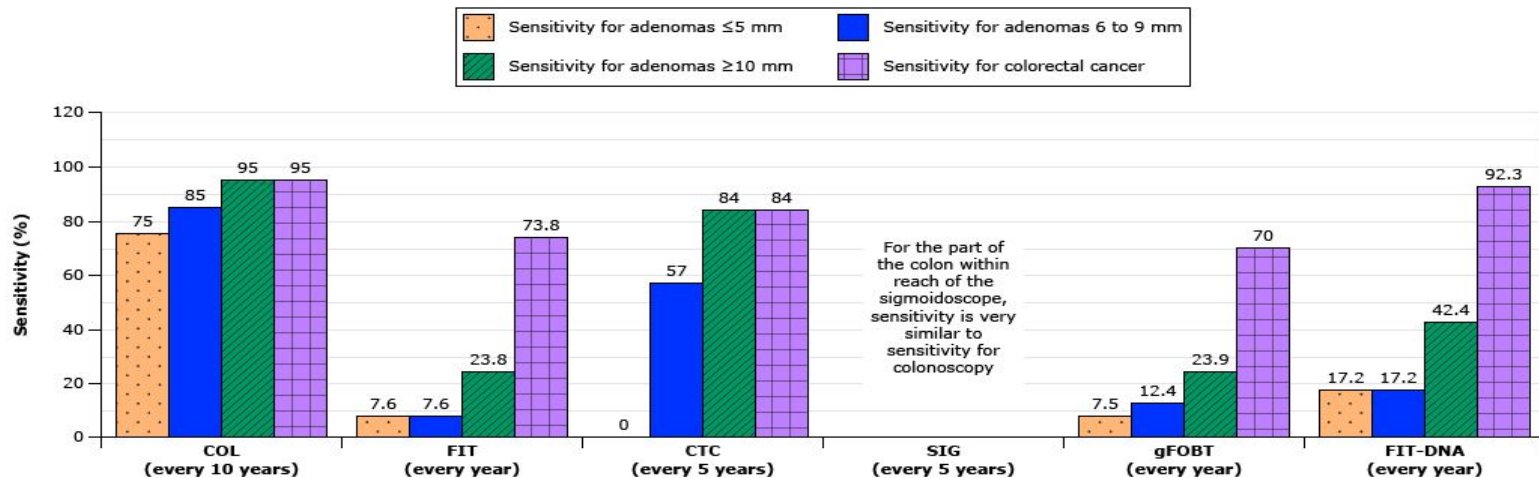
Stool detection



Circulating blood detection



Test Performance

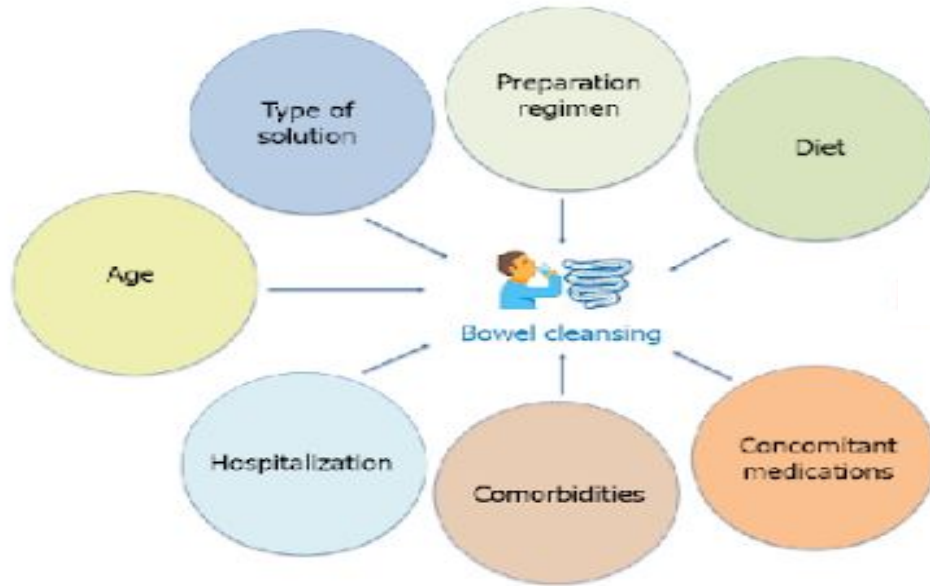


Screening – The Next Frontier

Opportunities to Improve Screening

- Patient Related
 - Bowel preparation
 - Adherence
- Technology Related
- Physician Related
 - Quality of exam
- Systems Related

Patient-related: Bowel Prep

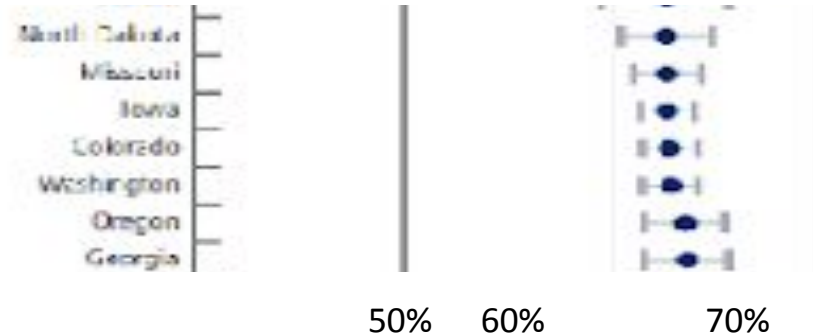


Patient-related: Bowel Prep

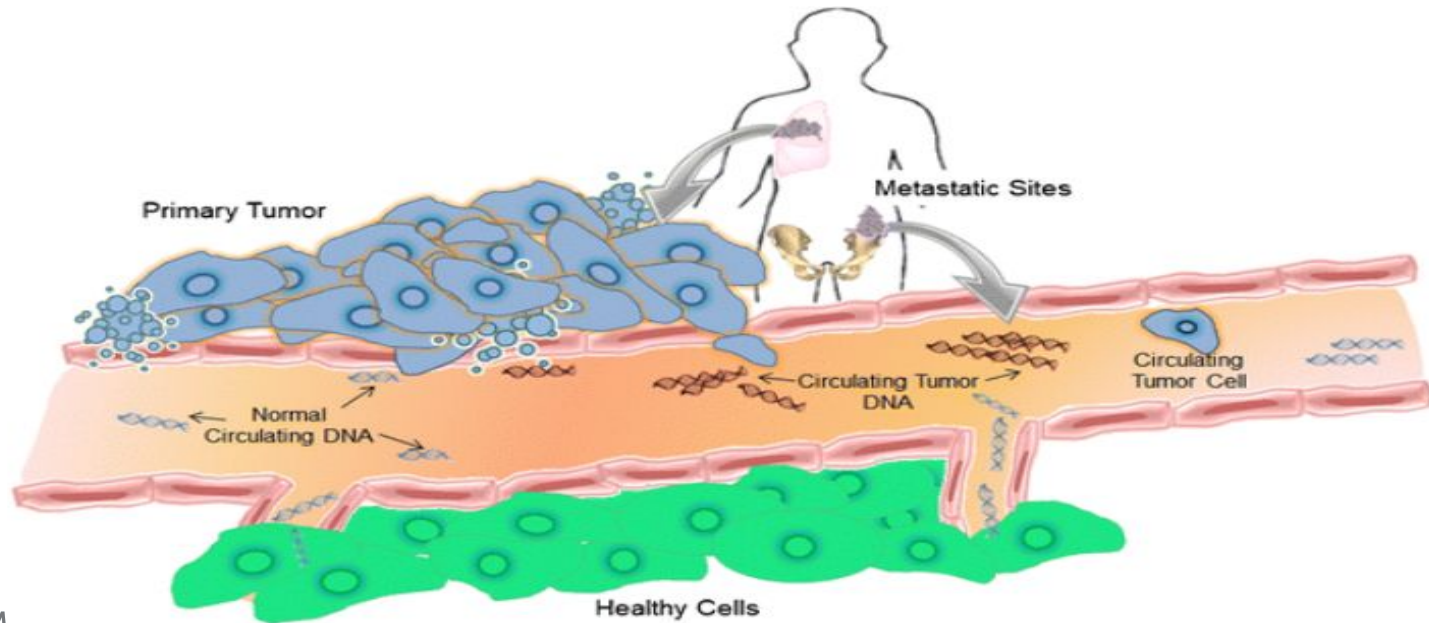
Outcome	High-volume (4 L) preparations	Low-volume (2 L) preparations	Ultra-low-volume (≤ 1 L) preparations
PEG and non-PEG regimens			
Adequate bowel cleanliness overall, % (95% CI)	87.4% (84.1–90.7)	86.1% (82.6–90)	Sodium picosulfate with magnesium citrate: 75.2% (67.6–81.4) 1 L PEG with ascorbic acid: 82.9% (74.4–90.2) Oral sulfate solution: 92.1% (79.7–97.2) Sodium phosphate: 81.9% (66.8–97.2)
Adequate bowel cleanliness, right colon, % (95% CI)	88.6% (87.3–90.0)	91.2% (89.1–93.3)	NA
Patient adherence to regimen, % (95% CI)	88.8% (82.1–91.4)	92.8% (89.6–96.1)	NA
PEG + ascorbic or citric acid regimens			
Adequate bowel cleanliness overall, % (95% CI)	88.3% (82.0–90.5)	84.9% (80.8–89.0)	1 L PEG with ascorbic acid: 82.9% (74.4–90.2)
Adequate bowel cleanliness, right colon, % (95% CI)	88.4% (85.0–91.9)	90.5% (87.3–93.6)	NA
Patient adherence to regimen, % (95% CI)	88.2% (87.0–89.4)	93.4% (92.5–94.3)	NA
Non-PEG regimens^a			
Adequate bowel cleanliness overall, % (95% CI)	91% (87.8–94.2)	89.5% (83.6–95.4)	Sodium picosulfate with magnesium citrate: 75.2% (67.6–81.4) Oral sulfate solution: 92.1% (95% CI, 79.7–97.2) Sodium phosphate: 81.9% (95% CI, 66.8–97.2)
Adequate bowel cleanliness, right colon, % (95% CI)	91.4% (87.9–94.9)	92.2% (86.8–95.6)	NA
Patient adherence to regimen, % (95% CI)	88.4% (86.3–92.4)	90.2% (86.7–93.0)	NA

Patient-related: adherence

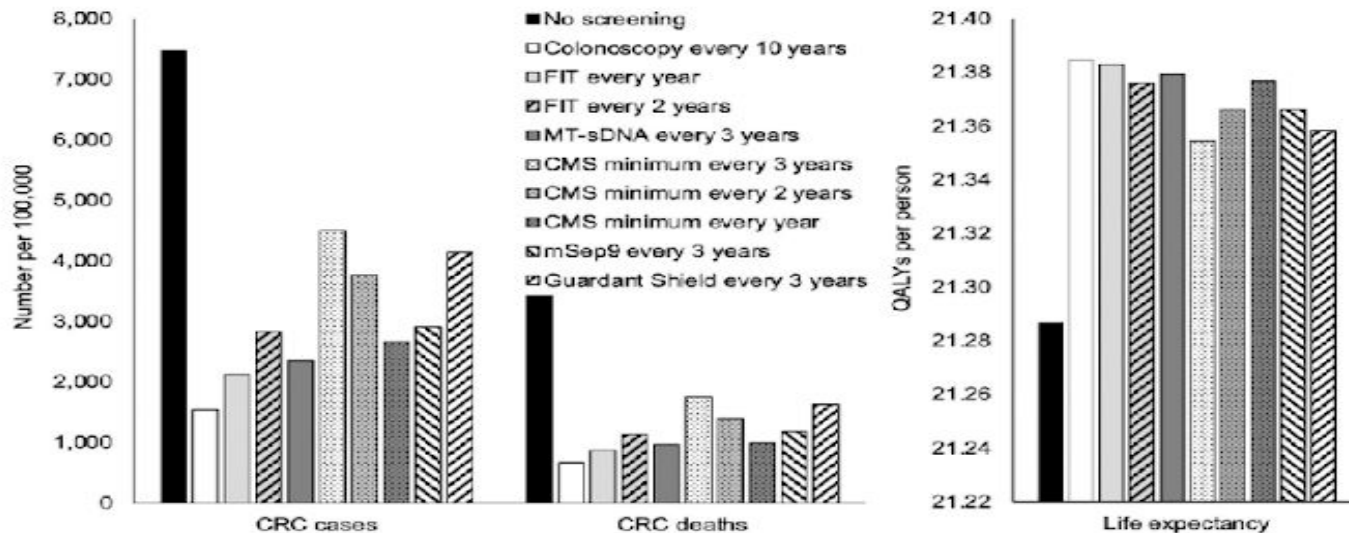
- Screening prevalence: 53% (CA) – 70% (MA/D.C.)
- 59% of all adults 45-75yo
- Lowest: Asians, immigrants, uninsured, <HS education, 45-49yo
- Factors: time, fear, insurance, cost, physician recs



Technology-Related: blood based tests



Technology-Related: blood based tests



Circulating blood detection

-Circulating tumor DNA
-Proteomics
-Immunologic
-Glycoprotein signatures

Blood based

-Circulating tumor DNA
-Proteomics
-Immunologic
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Blood based

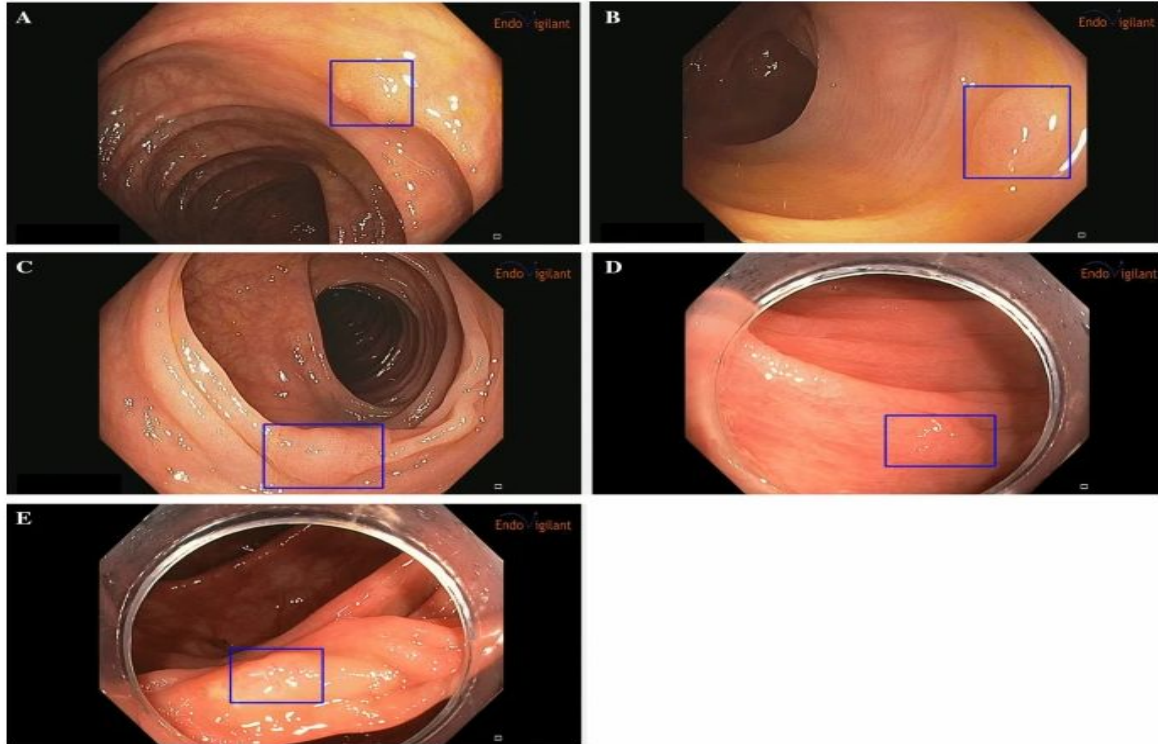
POLYP

TIME

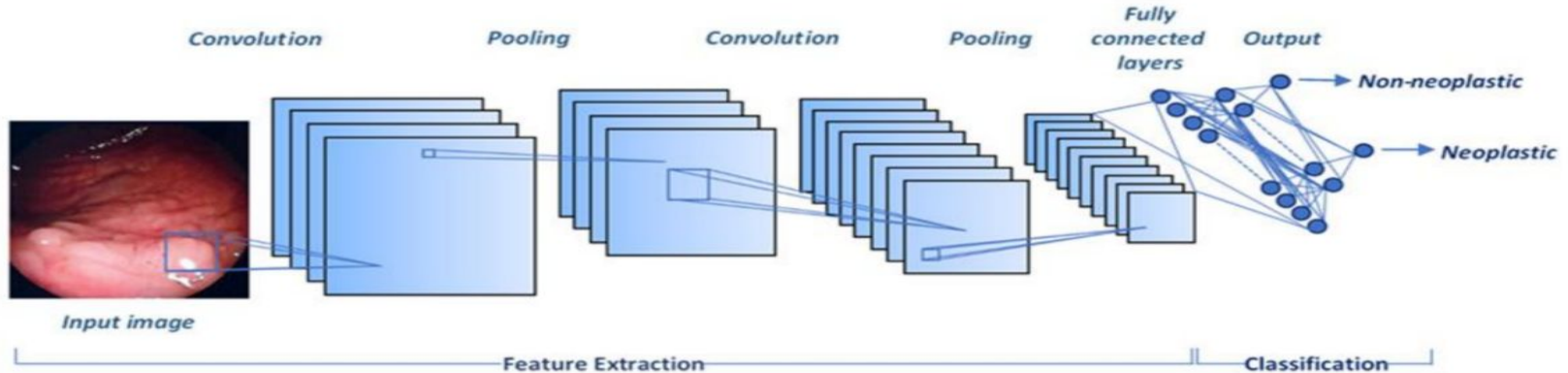
PREVENT CRC

DETECT
CRC

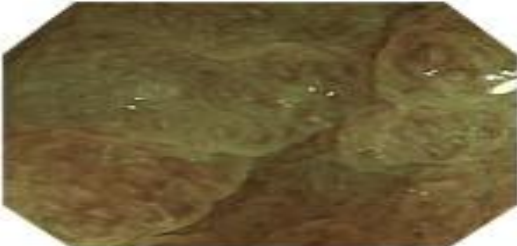
Technology-Related: Improving Colonoscopy through AI



Technology-Related: Improving Colonoscopy through AI



NBI International Colorectal Endoscopic (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 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 structure surrounded by brown vessels**	Amorphous or absent surface pattern
Most likely pathology	Hyperplastic	Adenoma***	Deep submucosal invasive cancer
Examples			
			

The Workgroup on serrated polyps and Polyposis (WASP) SSP vs HP

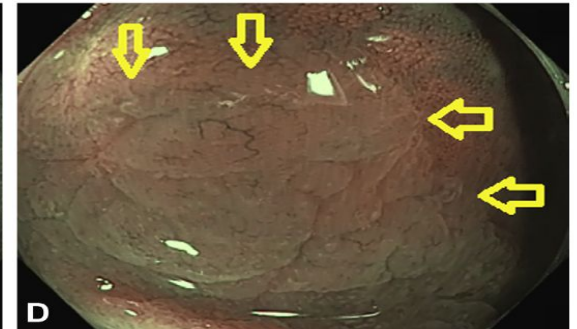
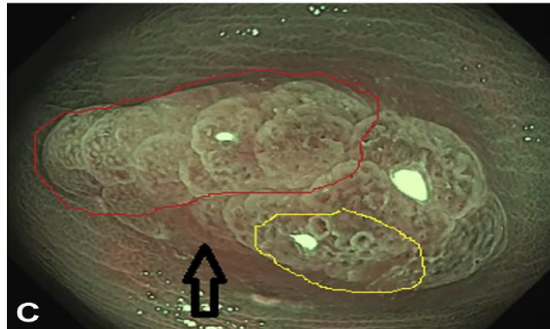
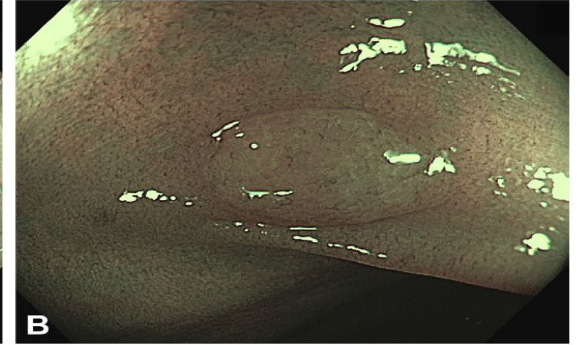
Irregular surface

Indistinct edges

Cloud-like surface

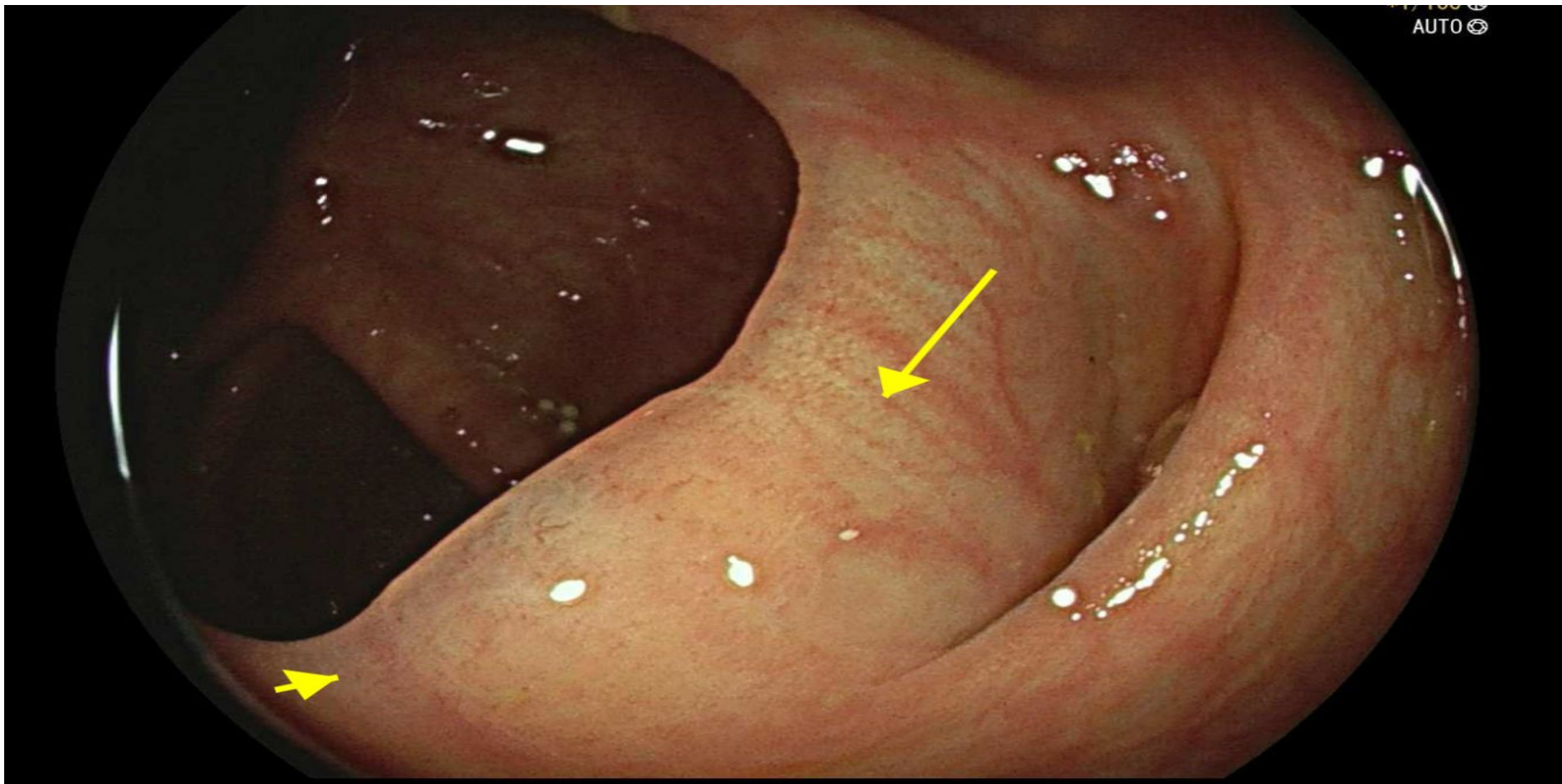
Large open pits

Dark spots, brown vessels



Physician-Related

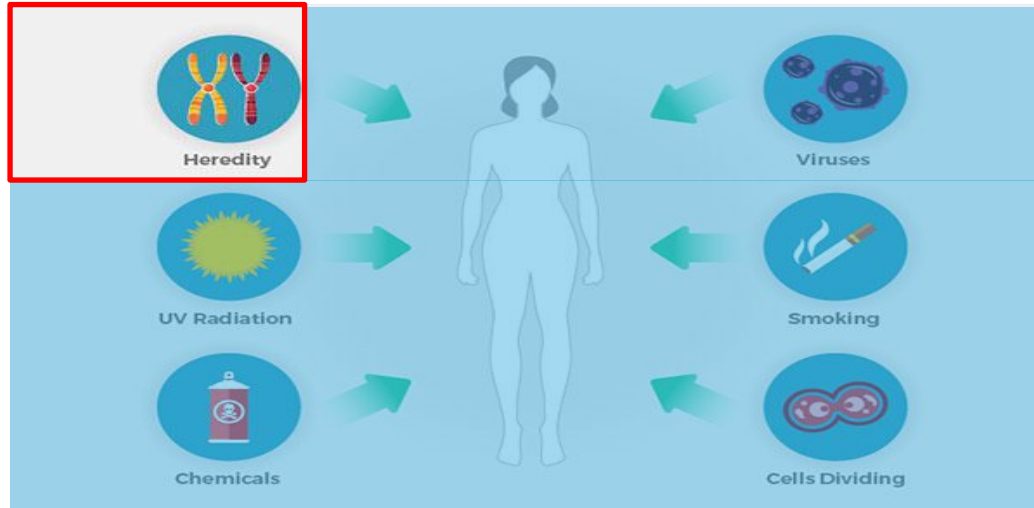
- Quality Metrics
 - Withdrawal Time (≥ 8 mins)
 - Cecal Intubation Rate ($\geq 95\%$)
 - Bowel Preparation
 - Adenoma Detection Rate ($\geq 25\% - 35\%$; M $\geq 30\% - 40\%$, F $\geq 20\% - 30\%$)
 - Mean ADR in the US 38%



17/100
AUTO

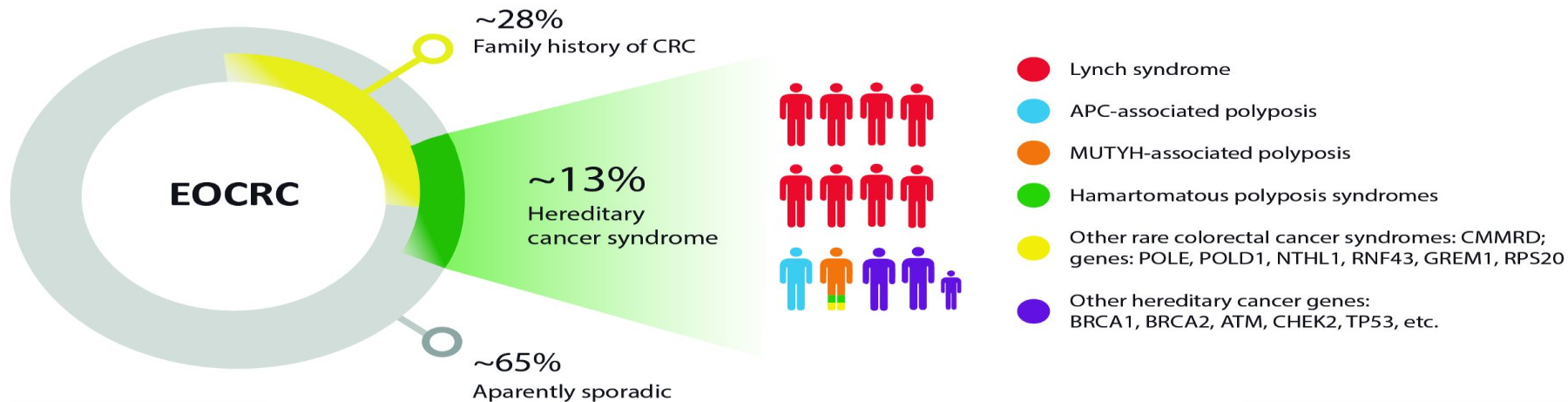
High-Risk Patients

Cancer is a Genetic Disease

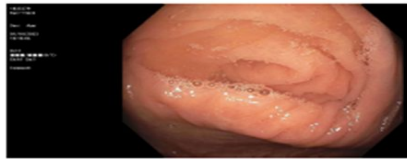


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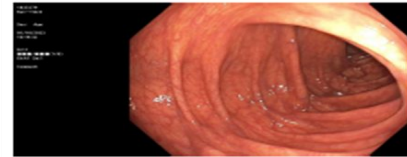
Early-Onset CRC (< 45yo)



Add Images:



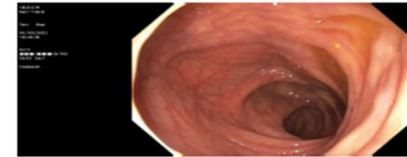
2 Appendiceal Orifice



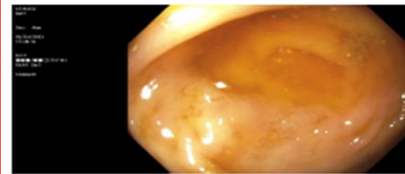
4



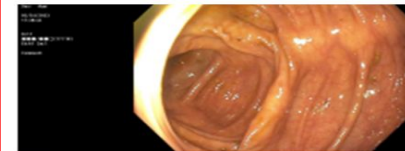
3 Ascending Colon



5 Transverse Colon

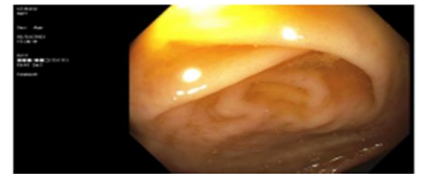


1 Appendiceal Orifice

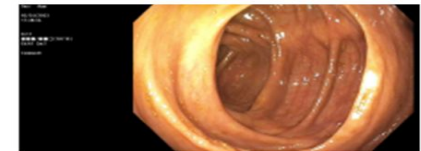


3 Cecum

Transverse Colon

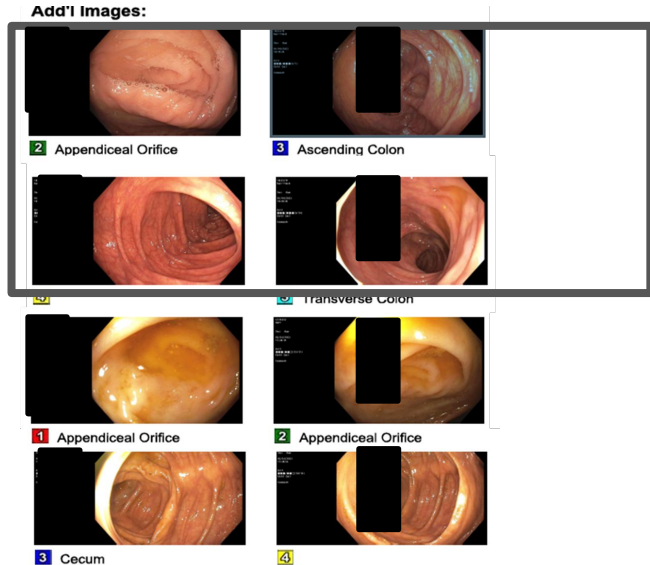


2 Appendiceal Orifice



4

Organs Affected



Lynch Syndrome

- Colon cancer
10-74%
- Endometrial cancer
14-71%
- Stomach cancer
0.2-13%
- Ovarian cancer
4-20%
- Urinary tract cancer
0.2-25%
- Small bowel cancer
0.4-12%

Average risk

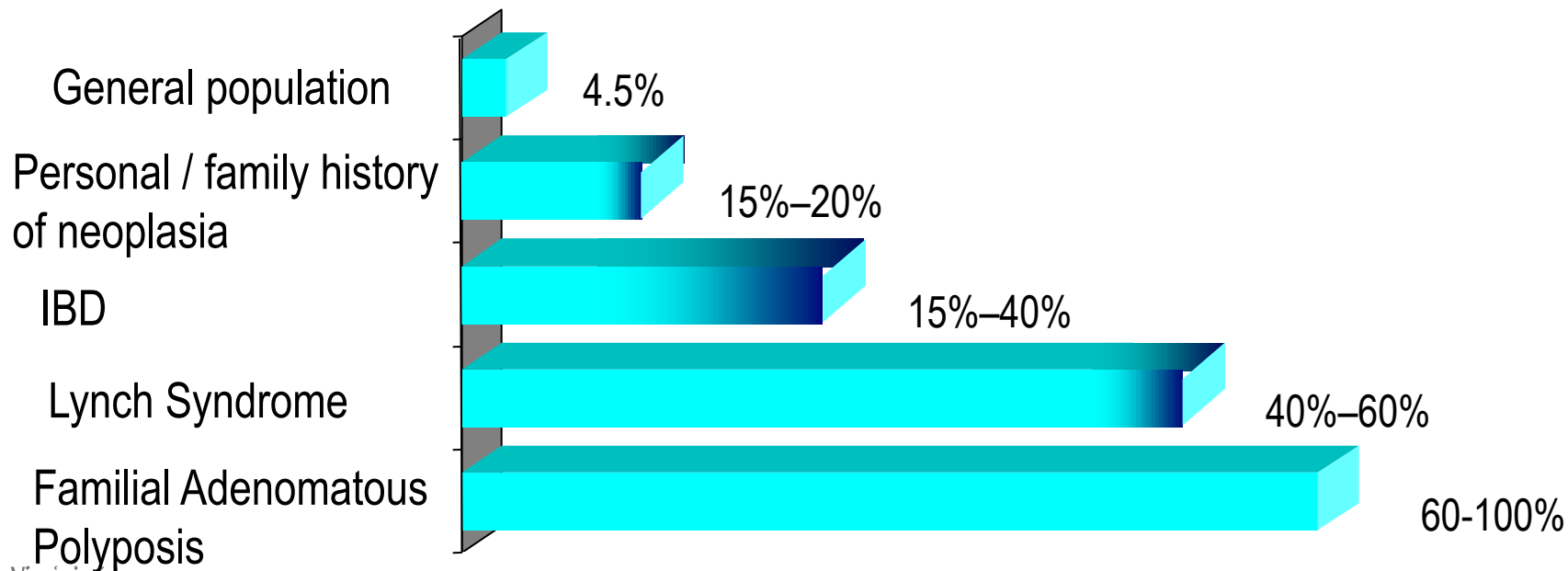
- Colon cancer
4.5%
- Endometrial cancer
2.7%
- Stomach cancer
<1%
- Ovarian cancer
1.6%
- Urinary tract cancer
<1%
- Small bowel cancer
<1%

Prevalence by Cancer Type

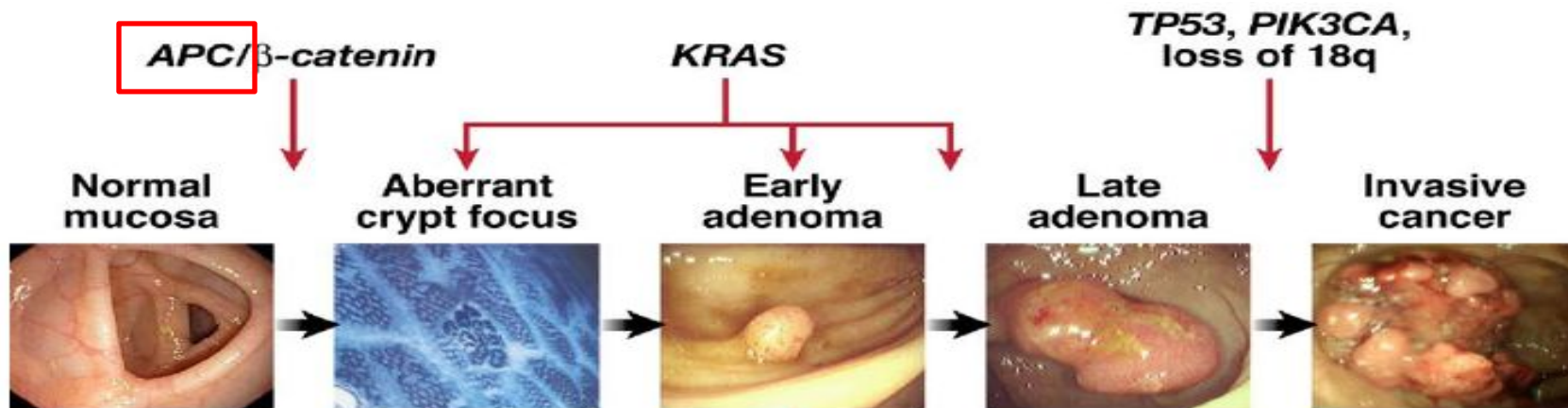
Cancer type	Prevalence of hereditary cancer syndromes
Epithelial ovarian/fallopian tube	18.1-23.6%
Breast cancer	9.3%
Stage I-III	10.7%
Triple negative	14.1-14.6%
Colorectal	9.9%
Age <50	16.0-18.3%
Endometrial	9.2%
Pancreatic	3.8-19.5%
Prostate (metastatic)	11.8%



Lifetime CRC Risk



Familial Adenomatous Polyposis



Organs affected & cancer risks

Familial adenomatous polyposis

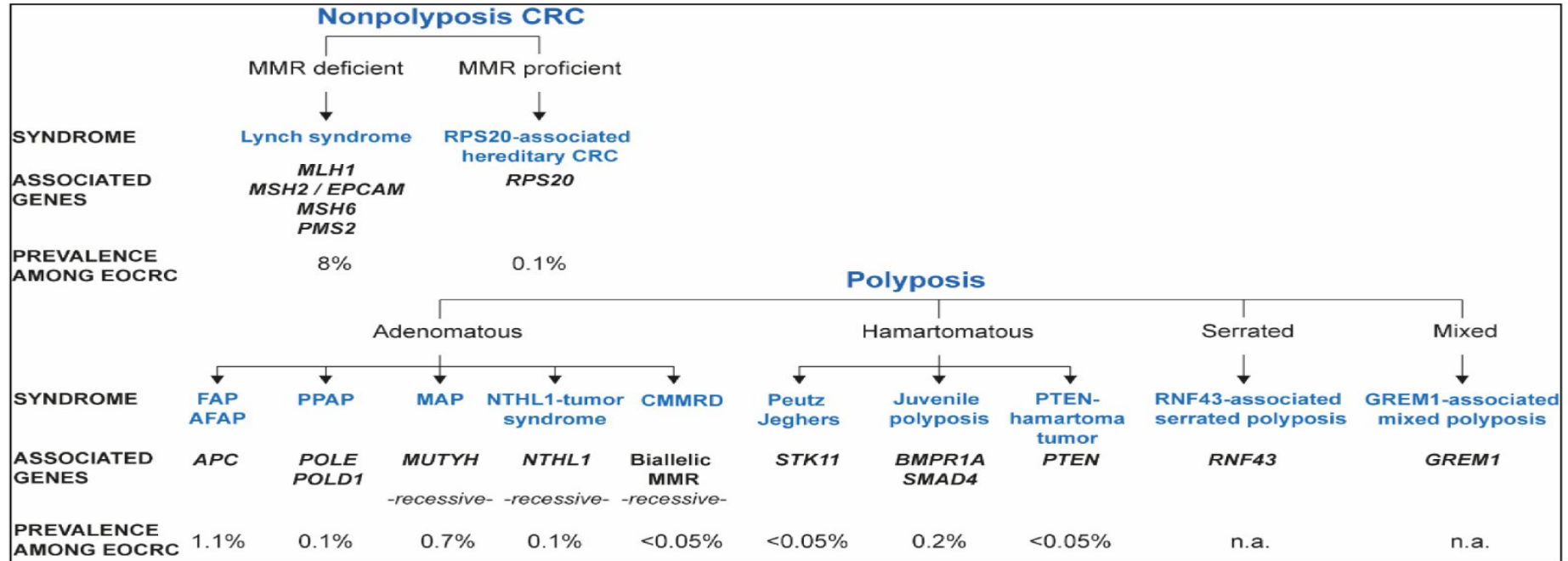
- Osteomas (50-90%)
- CHRPE (70-80%)
- Supernumerary teeth (11-27%)
- *Thyroid carcinoma (2-17%)
- *Hepatoblastoma (<2%)
- *Gastric cancer (1.6%)
- Duodenal cancer (12%)
- Desmoid tumors (15%)
- Colon cancer (93%)
- Adrenal adenoma (7-13%)

• Soft tissue tumors (50%)

○ Lipoma, fibroma,
sebaceous cysts



Hereditary Cancer Syndromes



When to suspect one

- Early onset of cancer
- CRC with abnormal immunohistochemistry/MSI
- Many polyps
 - ≥ 10 -20 tubular adenomas
 - ≥ 5 serrated polyps
- Polyps with unusual pathology
 - E.g. hamartomas
- Many cancers (same person or same side of family)
- Many generations affected

Colon Phenotypes

- Classic (>100 adenomas)
- Attenuated (10-100 adenomas)
- Profuse (>5000 adenomas)



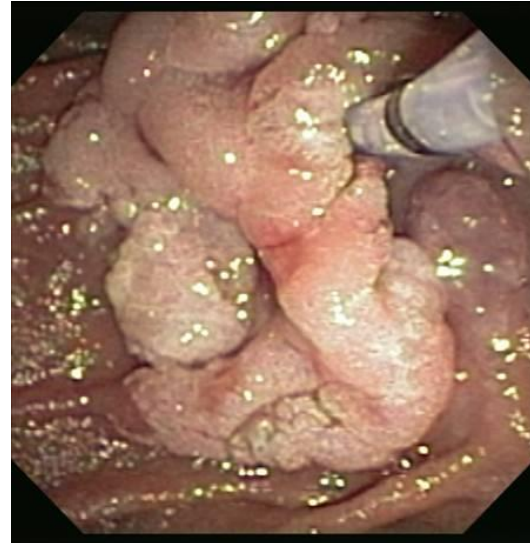


- Tubular adenomas including some with high grade dysplasia

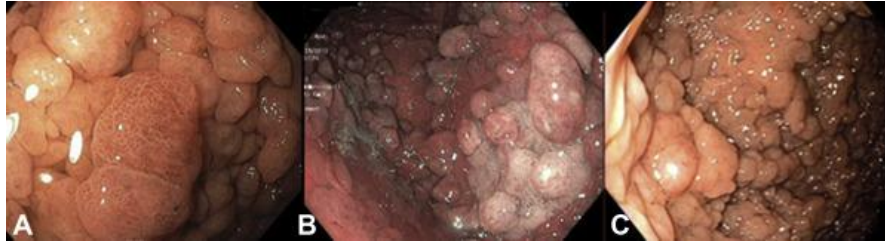
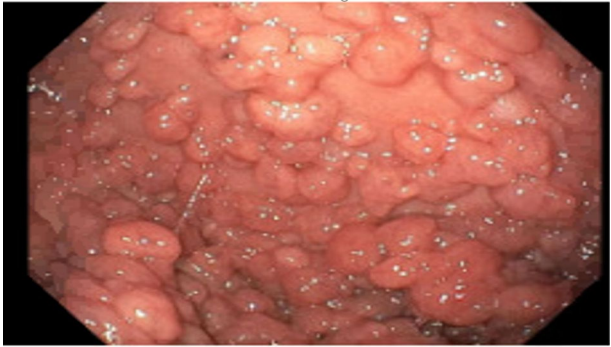
Serrated polypoidis syndrome



FAP – Duodenum



FAP - Stomach

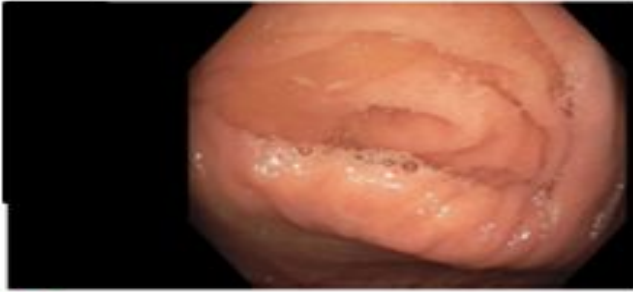


General Principles of Surveillance

- Number of polyps
 - Types of polyps
 - Organs affected
 - Cancer risks
- 
- Cancer Surveillance Plan
 - GI Endoscopy plan
 - age to start
 - frequency
 - Surgery options
 - Other screening tests to offer
 - Medications to use

Management Principles

- Decrease cancer incidence & mortality
 - Surgery
 - Medication
 - Endoscopy
 - Surveillance
- Improve quality of life
- Educate family



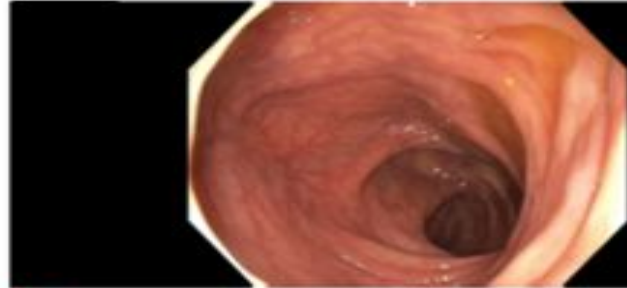
2 Appendiceal Orifice



3 Ascending Colon



4



5 Transverse Colon

Time from last colonoscopy to CRC

Months since last colonoscopy	Number	Cumulative number of	Cumulative %
0-5			0
6-11			6
12-17			33
18-25			58
26-35			73
36-41			79
42-59			92
60-125	12	145	100

58% diagnosed within 2.5 years

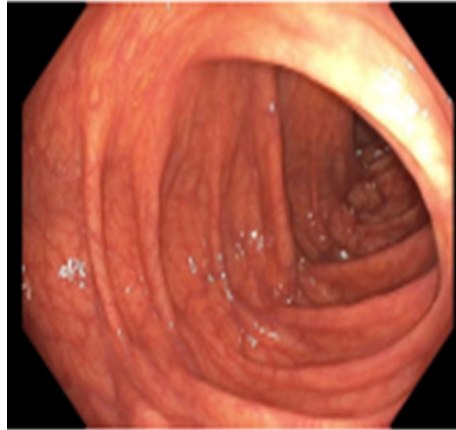
Median = 27 months (7-123)

Interval cancer rate 6-35%

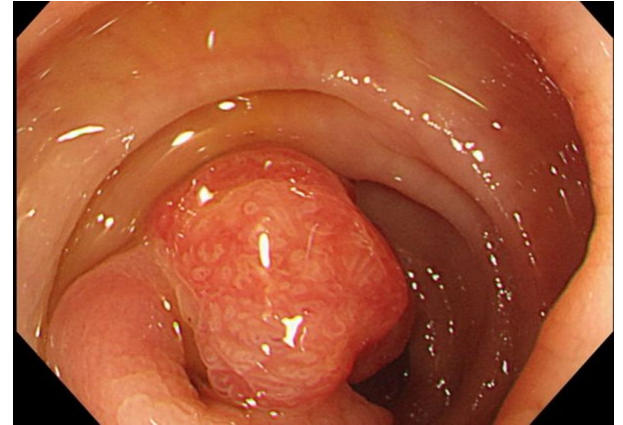
Number & Types of polyps



Familial adenomatous polyposis



Lynch syndrome
(upto 74%)



Peutz-Jeghers
(68%)

Management principles

- Decrease cancer incidence and mortality
 - surgery
 - medication
 - endoscopy
 - cancer screening & surveillance
- Improve quality of life
- Educate family

Program for Gastrointestinal Cancer Prevention

*Multidisciplinary healthcare team focused on the early detection
and management of gastrointestinal cancers in at-risk
individuals and families*

Services

- Genetic testing
 - Cascade testing
- Quarterback all cancer surveillance
 - GI
 - Non-GI
- Chemoprophylaxis
- Clinical Trials

Thank You

Gautam.Mankaney@commonspirit.org

Glcancerpreventionprogram@commonspirit.org

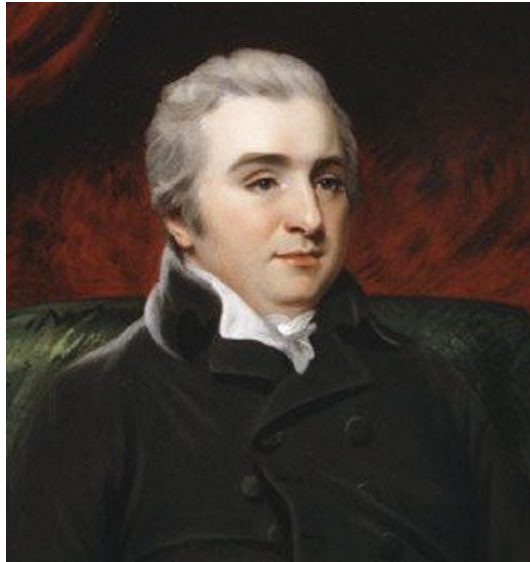
Contemporary Management of Inflammatory Bowel Disease (IBD): What Do I Treat and What Do I Send?

James Lord, MD, PhD

Benaroya Research Institute

INFLAMMATORY BOWEL DISEASE (IBD)

Ulcerative Colitis (UC)



Maybe described by by
Matthew Baillie in *Morbid
Anatomy*, 1793?

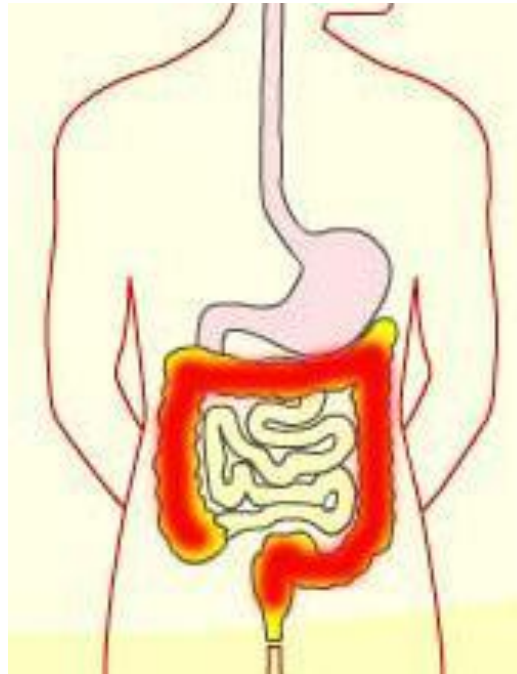
Crohn's Disease (CD)



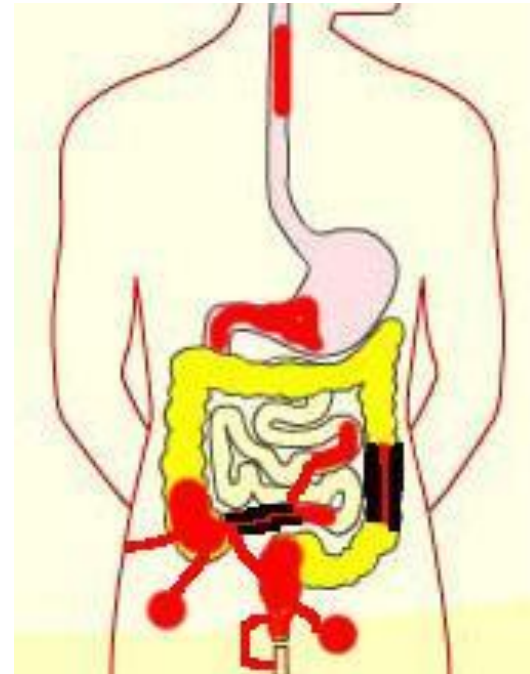
Described by Burrill Crohn et
al, 1932, Mt Sinai Hospital,
NYC

INFLAMMATORY BOWEL DISEASE (IBD)

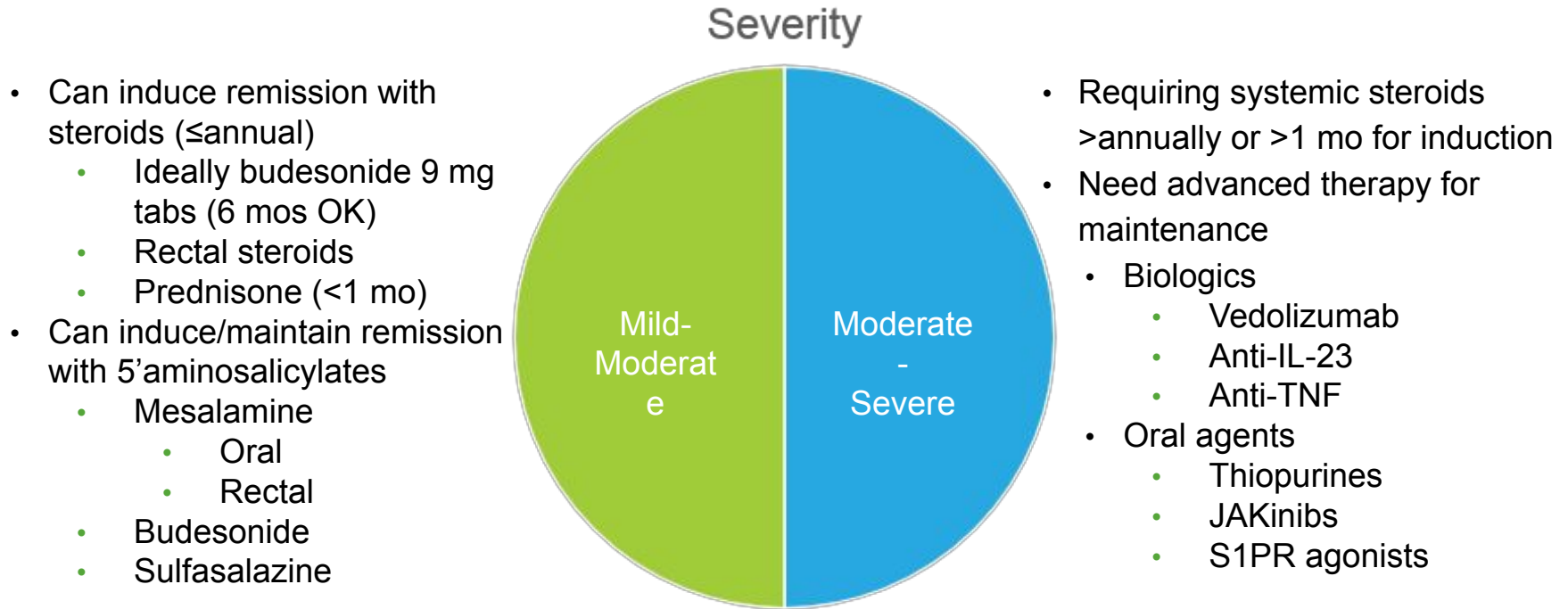
Ulcerative Colitis (UC)



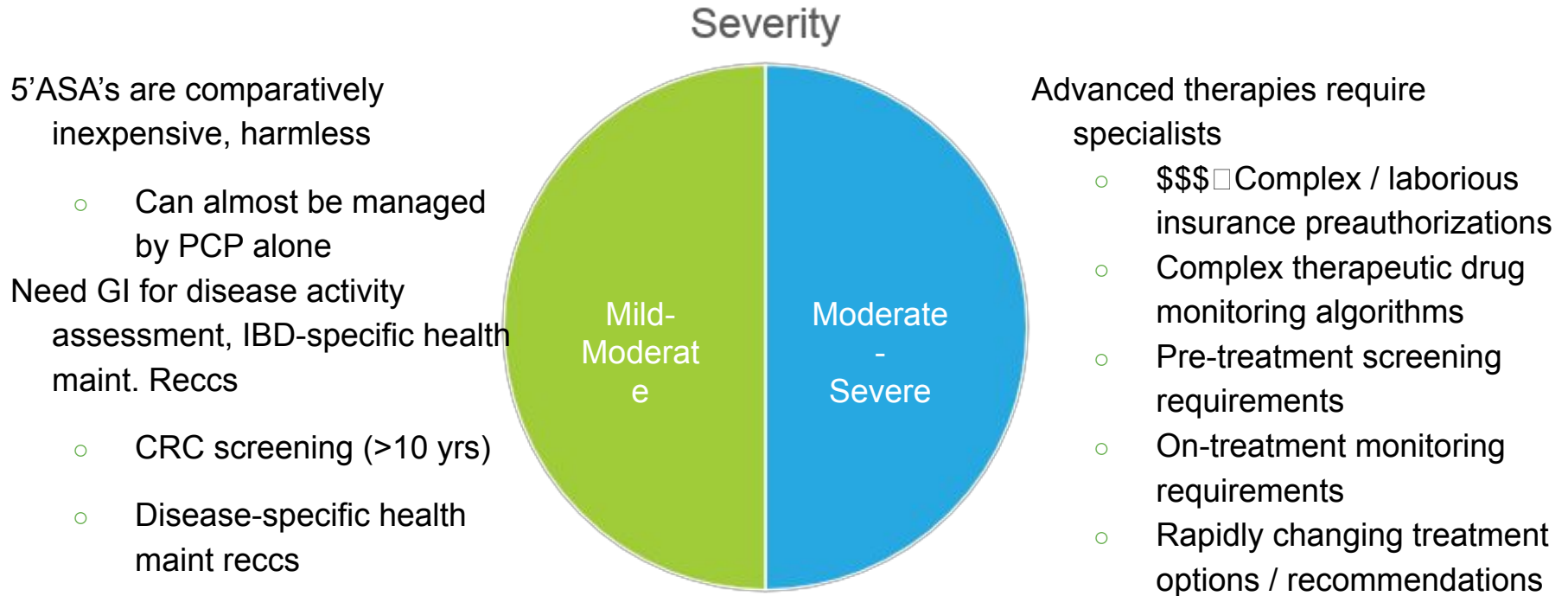
Crohn's Disease (CD)



Ulcerative Colitis

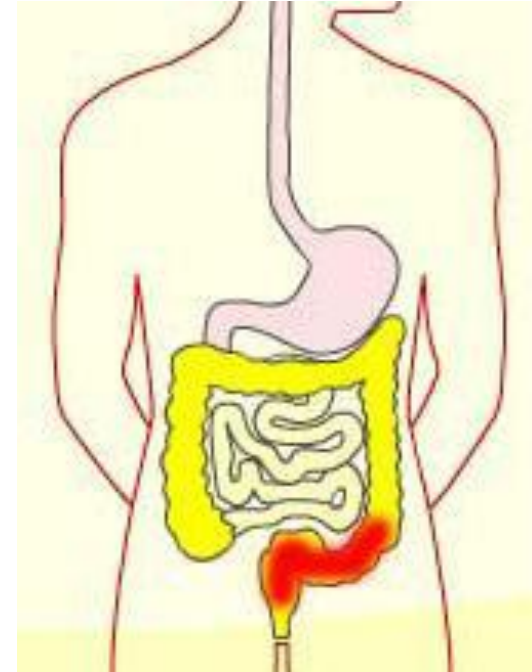


Ulcerative Colitis



UC Case 1

- 25 yr old male with no PMH
- 1 month of bloody diarrhea 3x/day
- Urgency but no incontinence
- Nocturnal stooling 1–2x/wk
- Colonoscopy shows red, edematous distal colon without ulceration
- Biopsies consistent with UC
- CRP is 18
- CBC & CMP normal



Treat or refer?

Treatment options for mild UC

- For any mild UC
 - Oral 5'aminosalicylates (5'ASA) (indefinite)
 - Mesalamine (cheap)
 - Balsalazide (cheaper)
 - Sulfasalazine (cheapest)
 - Oral budesonide (temporary, <6 mos)
 - 9mg tabs are built to release in colon for UC (but often not covered)
 - 3 mg tabs (x3) are built to release in the small bowel for Crohn's
- For left-sided UC only (rectum, sigmoid, +/- descending colon)
 - Mesalamine enemas (more effective than steroid enemas)
- For proctitis (rectum) only
 - Mesalamine suppositories

UC Case 2

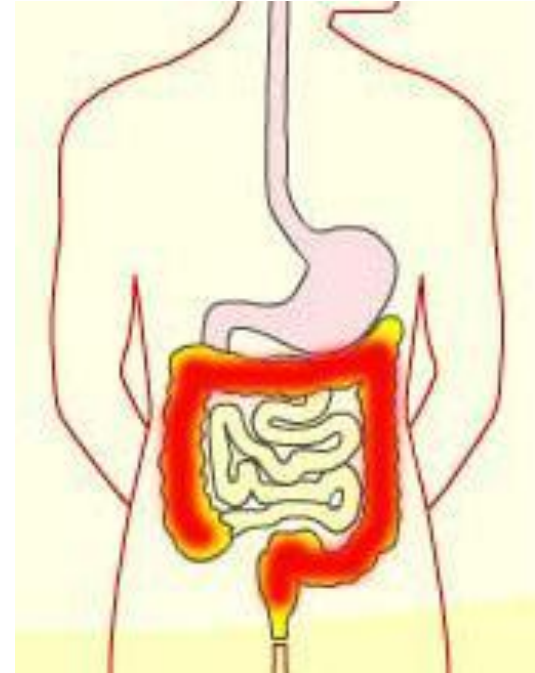
30 year old female with left-sided UC diagnosed 2 yrs ago,
on mesalamine

2 months of progressive bloody diarrhea, now 8x a day,
1x/night

Colonoscopy now shows erythema, edema, adherent
mucous, shallow ulcers throughout colon (pancolitis)

Hct 31, MCV 77, CRP 32, Alb 3.1

Otherwise normal CBC, CMP



Treat or refer?

Treatment options for moderate UC (old)

- Systemic steroids (prednisone): only a “bridge” therapy
 - Taper pt off over 1-2 mos, if not faster
 - Too toxic for long term use
 - Might recover 5'ASA-responsive UC, but usually not
- Thiopurines (azathioprine, 6-mercaptopurine)
 - Very slow (mos) to reach steady-state/benefit
 - Avoid if history of pancreatitis, non-melanoma skin cancer, EBV lymphoma, HPV
 - Check TPMT (and if Asian, NUDT15) to optimize 1st dose, exclude rare homozygote null
 - Can optimize dose with metabolite (6-TGN, 6-MMPN) monitoring
 - Now rarely used as primary monotherapy (less safe/effective than newer agents)
 - Require close lab monitoring due to liver/hematologic risk

Treatment options for moderate UC (new)

- Biologics
 - Anti-Integrin (vedolizumab): Slow and safe, IV or SQ
 - Anti-IL-(12/23) (ustekinumab, risankizumab, guselkumab, mirikizumab): Slow and safe, IV, then SQ
 - Anti-TNF (infliximab, adalimumab, golimumab): Slightly faster and less safe, immunogenic (beware anti-drug antibodies), IV or SQ
 - Can reduce immunogenicity with immunomodulators (thiopurine, methotrexate)
 - Use methotrexate with caution in fertile women
 - Fear of hepatosplenic T cell lymphoma with thiopurines in males <35yo
- Novel small molecule (oral) therapies
 - S1PR agonists (ozanimod, etrasimod): safe, but limited efficacy
 - JAK inhibitors (tofacitinib, upadacitinib): potent, VERY fast, less safe
 - Black box warning reserves use for anti-TNF failures



UC Case 3

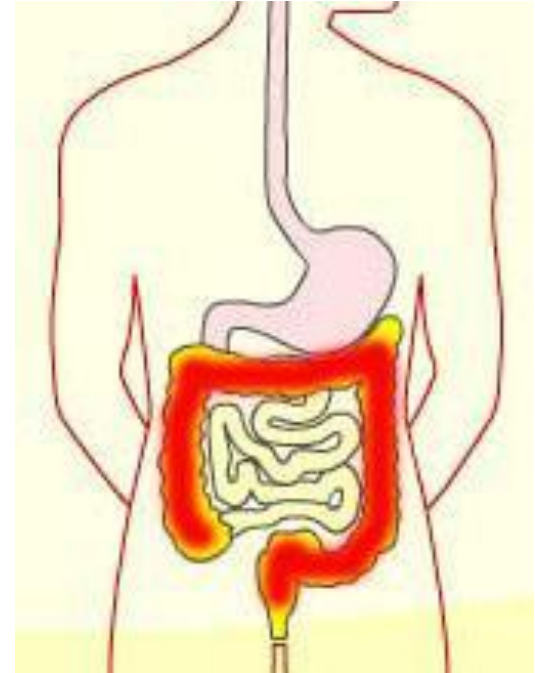
22 year old male with a preadolescent history of lymphoma

2 weeks of severe bloody diarrhea >20x/day, abd pain, fever, wt loss

CT and colonoscopy 1 wk ago show severe UC (pancolitis), no lymphoma, CMV, C. diff

Prednisone 40 mg PO QD for past wk having no effect on symptoms

Hct 18, MCV 82, CRP 110, Alb 2.2, AP 320, WBC 14, granulocytosis



Treat or refer?

Treatment Options for severe UC

Inpatient IV steroids (methylprednisolone)

- If no improvement within 3-5 days, MUST do more:

Urgent ileostomy (+/- subtotal colectomy with eventual J-pouch)

IV Infliximab (at increased dose [10-20mg/kg])

- Repeat in 1 wk if not improving

JAK inhibitor (upadacitinib more potent than tofacitinib)

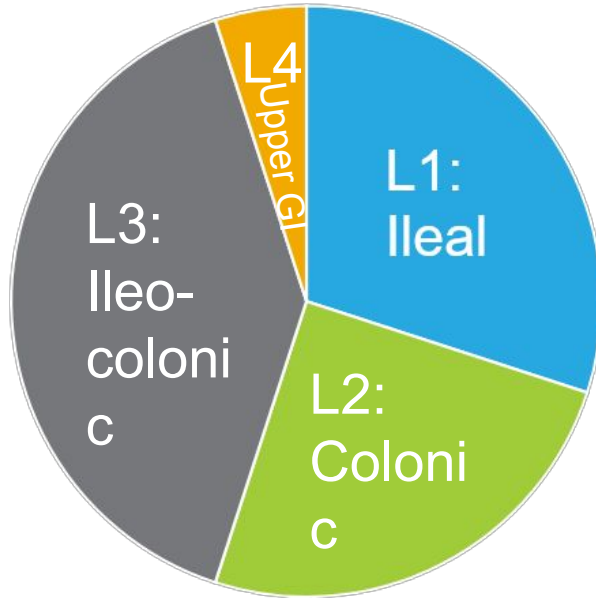
- Faster than infliximab
- Hard to get for inpatients
- Often denied for anti-TNF-naïve
 - Can appeal urgently for mitigating circumstances (disease acuity, h/o lymphoma?...)

Calcineurin inhibitors (cyclosporine, tacrolimus)

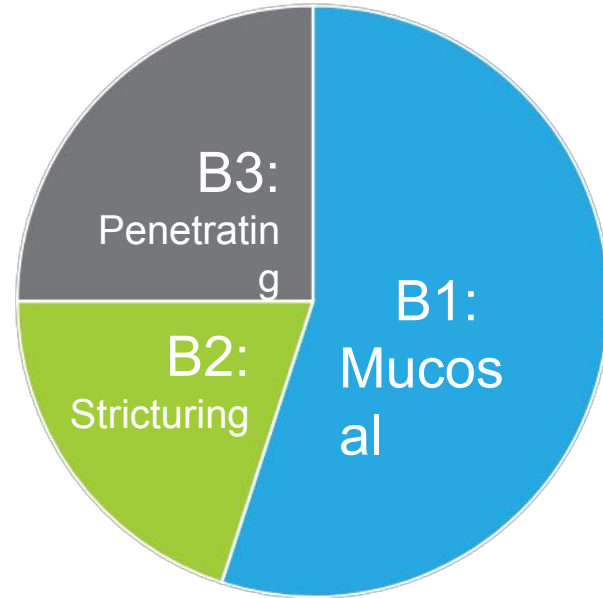
- Rarely ever used now due to toxicity, infection risk

Crohn's Disease: more heterogeneous than UC

Anatomic Location

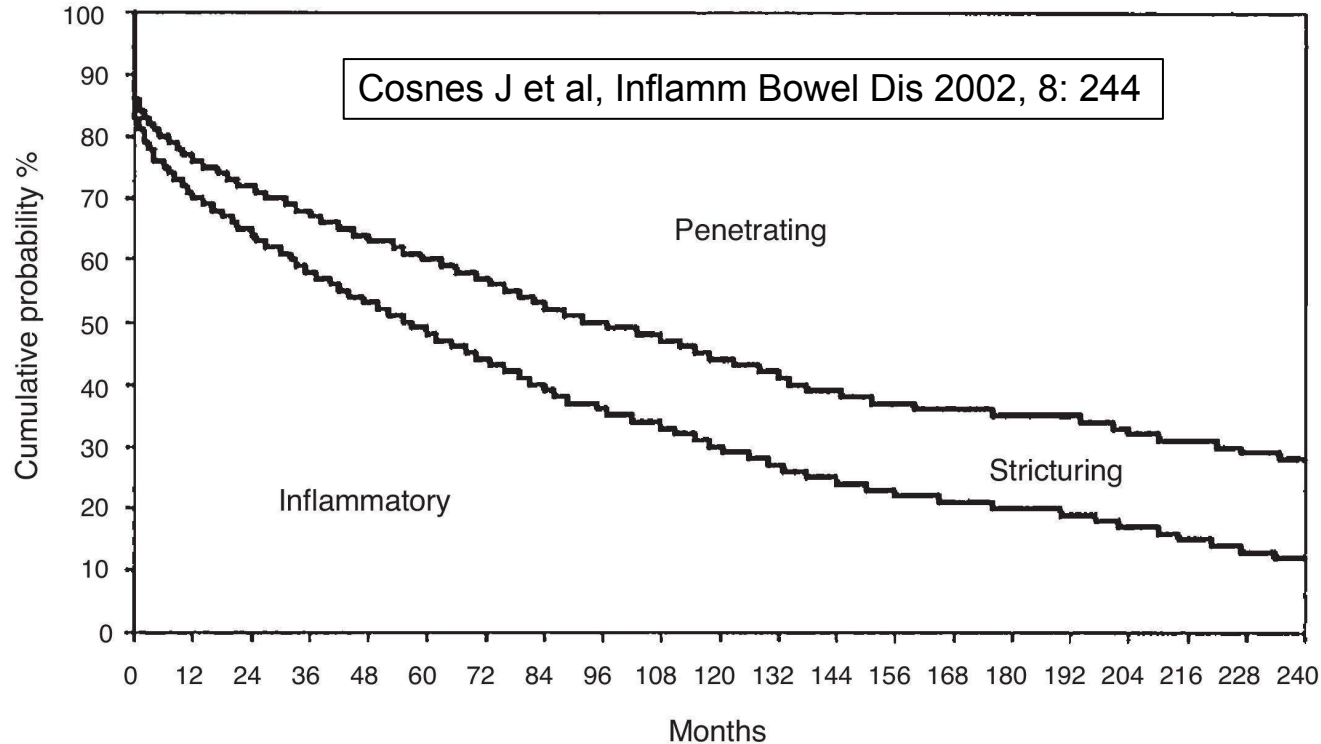


Behavior at Diagnosis*



*over time, B1 progresses to B2 and B3

Crohn's disease behavior progresses over time



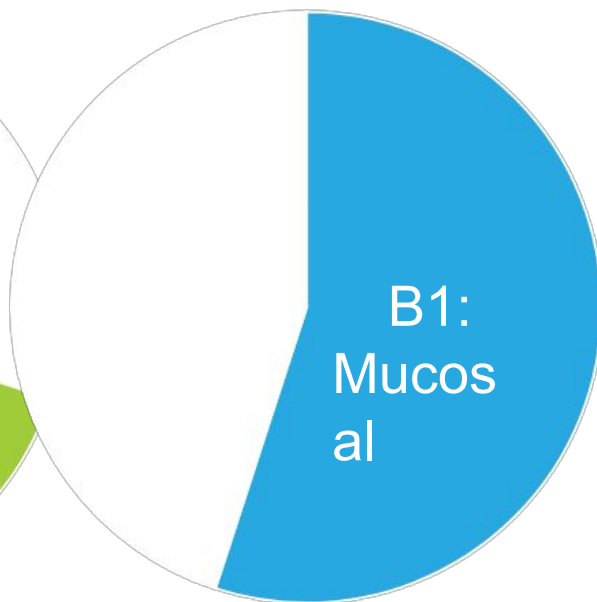
No evidence that existing therapies halt (or even slow) this progression

L2, B1 Crohn's can be managed like UC

Anatomic Location



Behavior at Diagnosis



Mild:

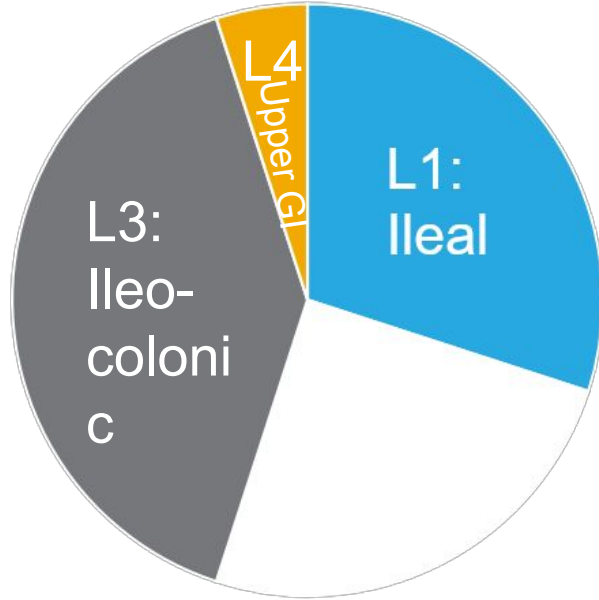
- 5'aminosalicylates
- Episodic budesonide (9mg)

Moderate to Severe:

- Anti-integrin (vedolizumab)
- Anti-IL-(12/23)
- Anti-TNF + immunomodulator
- Janus kinase inhibitor

More proximal Crohn's has fewer options

Anatomic Location



Mild:

- ~~5-aminosalicylates~~
- Episodic budesonide (3mg tabs)

Moderate to Severe:

- Anti-integrin (vedolizumab) ??
- Anti-IL-(12/23)
- Anti-TNF + immunomodulator
- Janus kinase inhibitor

B3: Penetrating Crohn's has even fewer effective treatment options

Behavior

B3:
Penetrating

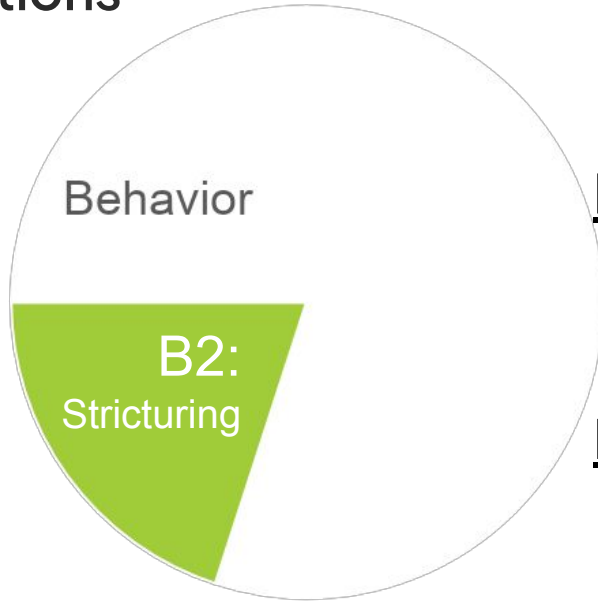
Mild:

- ~~5'aminosalicylates~~
- ~~Episodic budesonide~~

Moderate to Severe:

- ~~Anti-integrin (vedolizumab)~~
- Anti-IL-(12/23) ??
- Anti-TNF + immunomodulator
- Janus kinase inhibitor

B2: Stricturing Crohn's has no effective pharmaceutical treatment options



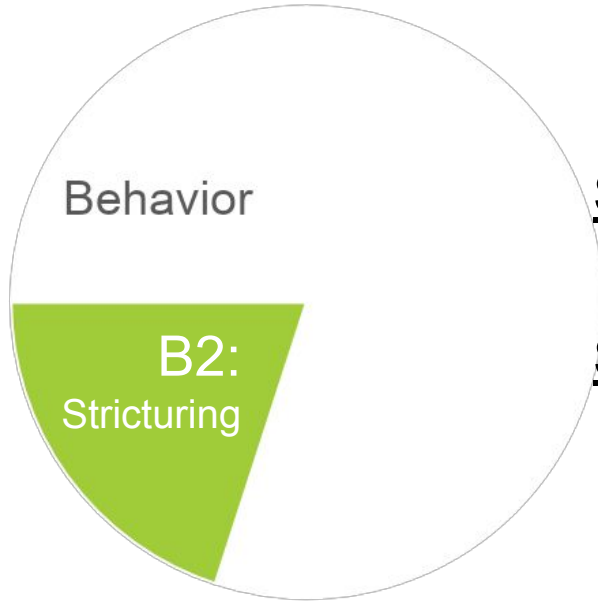
Mild:

- ~~5'aminosalicylates~~
- ~~Episodic budesonide~~

Moderate to Severe:

- ~~Anti-integrin (vedolizumab)~~
- ~~Anti-IL-(12/)~~23
- ~~Anti-TNF + immunomodulator~~
- ~~Janus kinase inhibitor~~

B2: Stricturing Crohn's is currently managed mechanically



Strictures < 5cm, without fistulas:

- Endoscopic balloon dilation

Strictures >5cm or with fistulas:

- Surgical resection
- Surgical bypass
- Strictureplasty

Crohn's case 1:

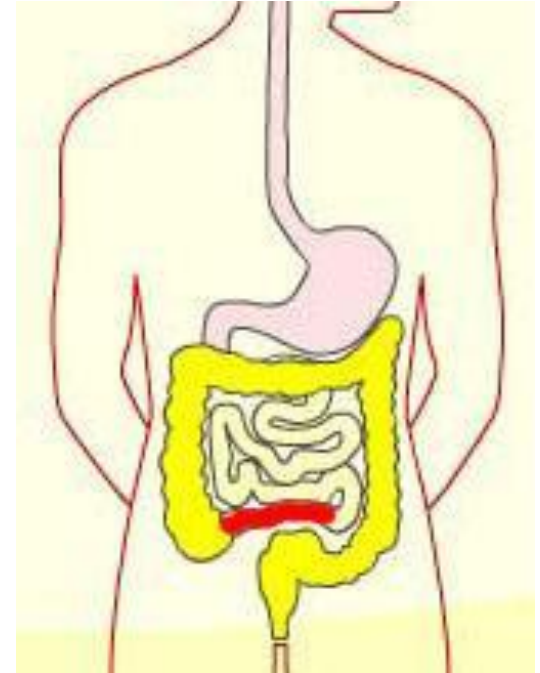
50 yr old man with ileal aphthae and granulomas found on screening colonoscopy

Insists he never uses NSAIDs

No symptoms

Normal CBC, CMP, CRP

What should be done?



NOTHING

- There are no good long-term treatments for asymptomatic mild ileal Crohn's disease
- If patient endorsed any symptoms, a limited course of ileal-release (3 mg tabs) budesonide could be used to see if there is any improvement, to warrant long-term treatment
- Otherwise, it is reasonable to watch and wait for any progression

Crohn's case 2:

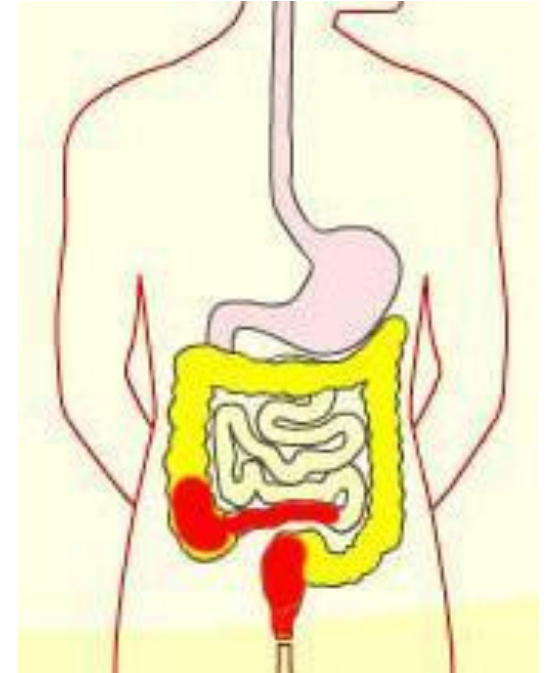
32 yo woman with abdominal pain, urgency (tenesmus) and non-bloody diarrhea 3x/day x 3 wks

Colonoscopy/biopsy shows patchy aphthous, granulomatous inflammation in colon and ileum

No fistulas or strictures on CT enterography

Hct 35, MCV 80, CRP 11

Otherwise normal CBC, CMP



What should be done?

Treatment for mild but symptomatic Crohn's

5' aminosalicylates (PO +/- PR) might help colonic mucosal Crohn's

- Can monitor efficacy on colon (L>R) via fecal calprotectin
- No demonstrable 5'ASA benefit for ileal disease
- But colon (esp rectum) may be primary source of symptoms

If symptoms persist, trial of ileal release budesonide tabs to see if symptoms are responsive and hence inflammatory

If so, biologic therapy may be justified

- Anti-IL-(12/23) (ustekinumab, risankizumab, guselkumab, mirikizumab)
- Anti-TNF (infliximab, adalimumab, certolizumab pegol)
- Anti-integrin (vedolizumab)

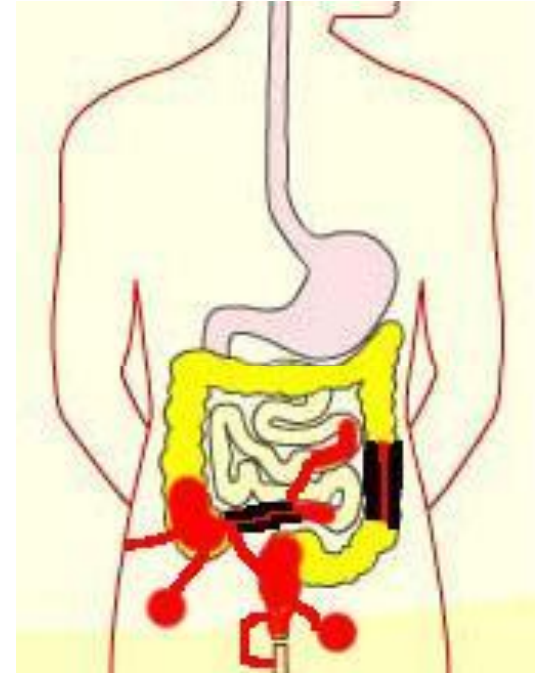
Crohn's Case 3:

48 yr old man with 12 yr h/o Crohn's presents with N/V, abdominal pain and fever of 38

Was previously on anti-TNF + azathioprine, vedolizumab, now on risankizumab + methotrexate

Was in ER 2 wks ago, Rx'd 40 mg/d prednisone, has been on this since w/ no improvement

CT shows ileocolitis, multiple strictures, partial obstruction, fistulas, intra-abdominal and perianal abscesses



Treat or refer?

Treatment of complex Crohn's

Fistulas, strictures, and treatment-refractory Crohn's are best managed by a well-coordinated multidisciplinary team:

Colorectal surgeons

- Fistulotomies/setons
- Diverting stoma
- Resections/stricturoplasty

Interventional radiologists

- Percutaneous drainage

Therapeutic endoscopists

- Deep enteroscopy (double-balloon)
- Balloon dilations

Gastroenterologists with IBD experience and resources

- Advanced/combination therapies (insurance appeals)
- Clinical trials

Summary:

- UC and colonic Crohn's without strictures/fistulas can be simple to manage
 - If 5' aminosalicylates (mesalamine, etc) are adequate
 - If short steroid courses are rare (<annual)
- More advanced therapies might need extra resources
 - Infusion centers for IV medications
 - Extra staff for insurance pre/reauthorizations and appeals, copay assistance
 - Specialty pharmacists for navigating and educating re advanced therapies
- Severe/complex IBD is very difficult to manage without a multidisciplinary team
 - Colorectal surgeons
 - Specialized (interventional) radiologists
 - Therapeutic endoscopists
 - Clinical trials unit

Doing better for our Patients: Taking Robotic-Assisted Surgery for Colorectal Disease to the Next Level

Vlad V. Simianu, MD, MPH

Medical Director, Colon and Rectal Disorders, Center for Digestive Health

November 15, 2025

Disclosures

- Grant support from Digestive Disease Institute at Virginia Mason, Robert and Helen Hitchman Charitable Trust
- Medical Director, Clinical Trials Program, Benaroya Research Institute
- Associate Medical Director, Colorectal Surgery, Surgical Care Outcomes Assessment Program (SCOAP)
- BD Advisory Board
- Consultant for C-SATS, Inc.
- Education, travel support from Intuitive Surgical, Inc.

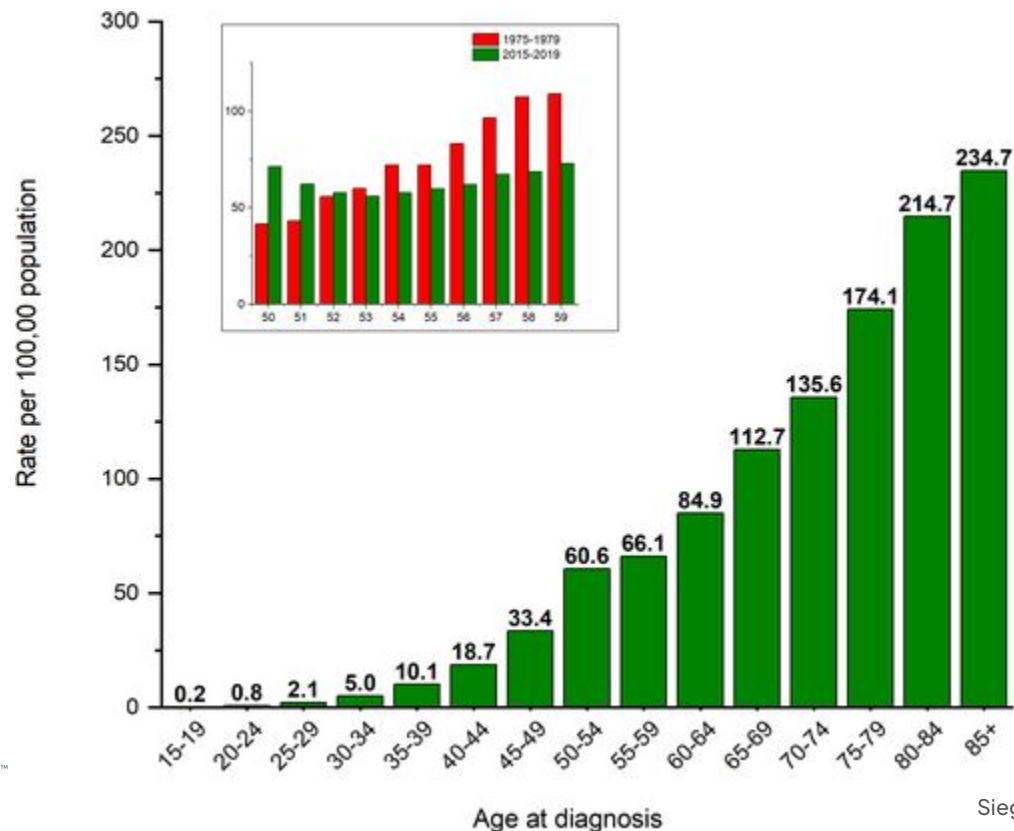
Why this conversation matters

Concerning trends in increasing complexity:

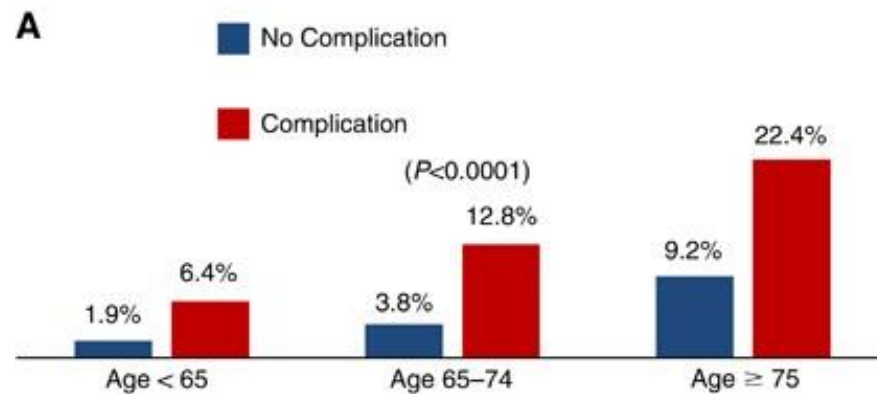
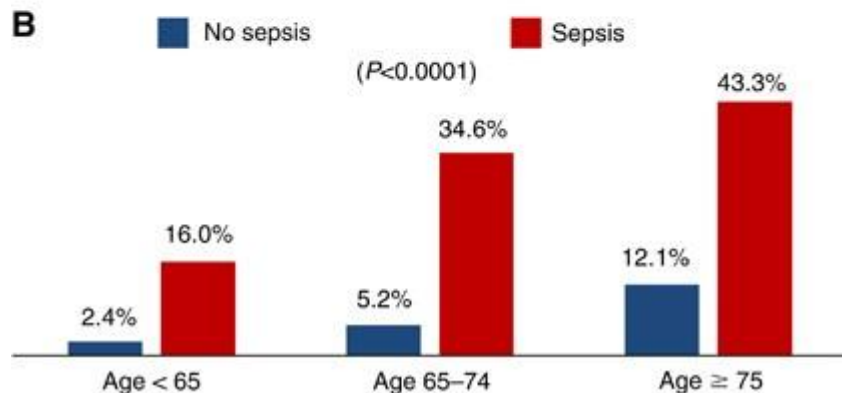
- Rising incidence of colon and rectal cancer, diverticulitis, IBD
 - Aging population, more obesity
 - Pressure for better outcomes (LOS, SSI), patient outcomes (function, QOL, etc)
-
- Case 1 - colorectal cancer
 - Case 2 - diverticulitis
 - Case 3 - inflammatory bowel disease

Colorectal cancer

Why this conversation matters



Why this conversation matters

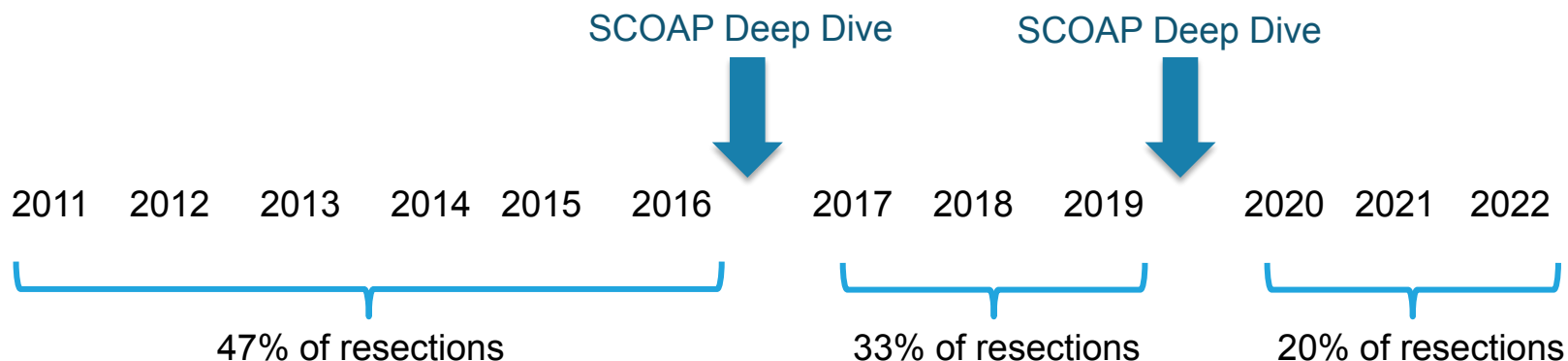


Case example – Rectal Cancer Surgery

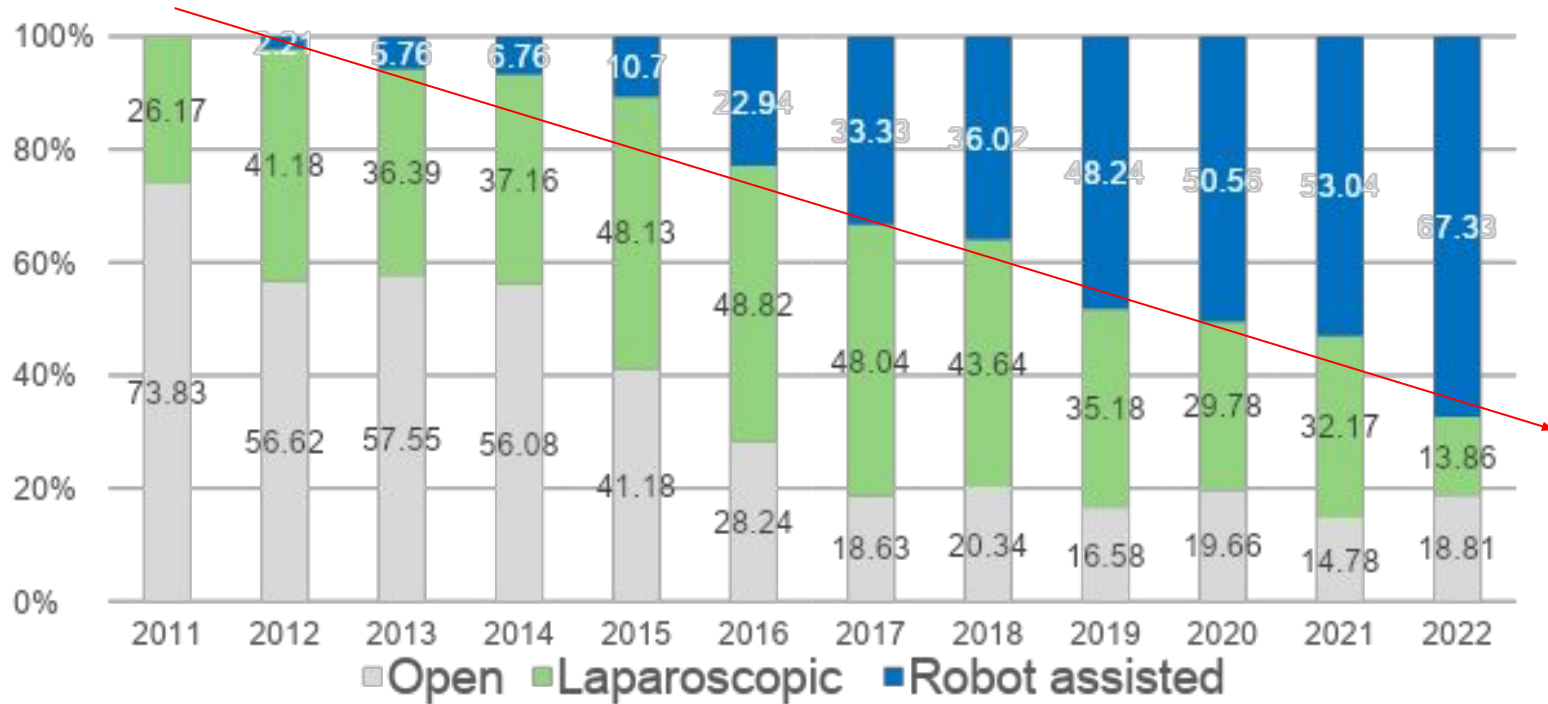
Surgical Care Outcomes Assessment Program

19 institutions participated for duration of the study period

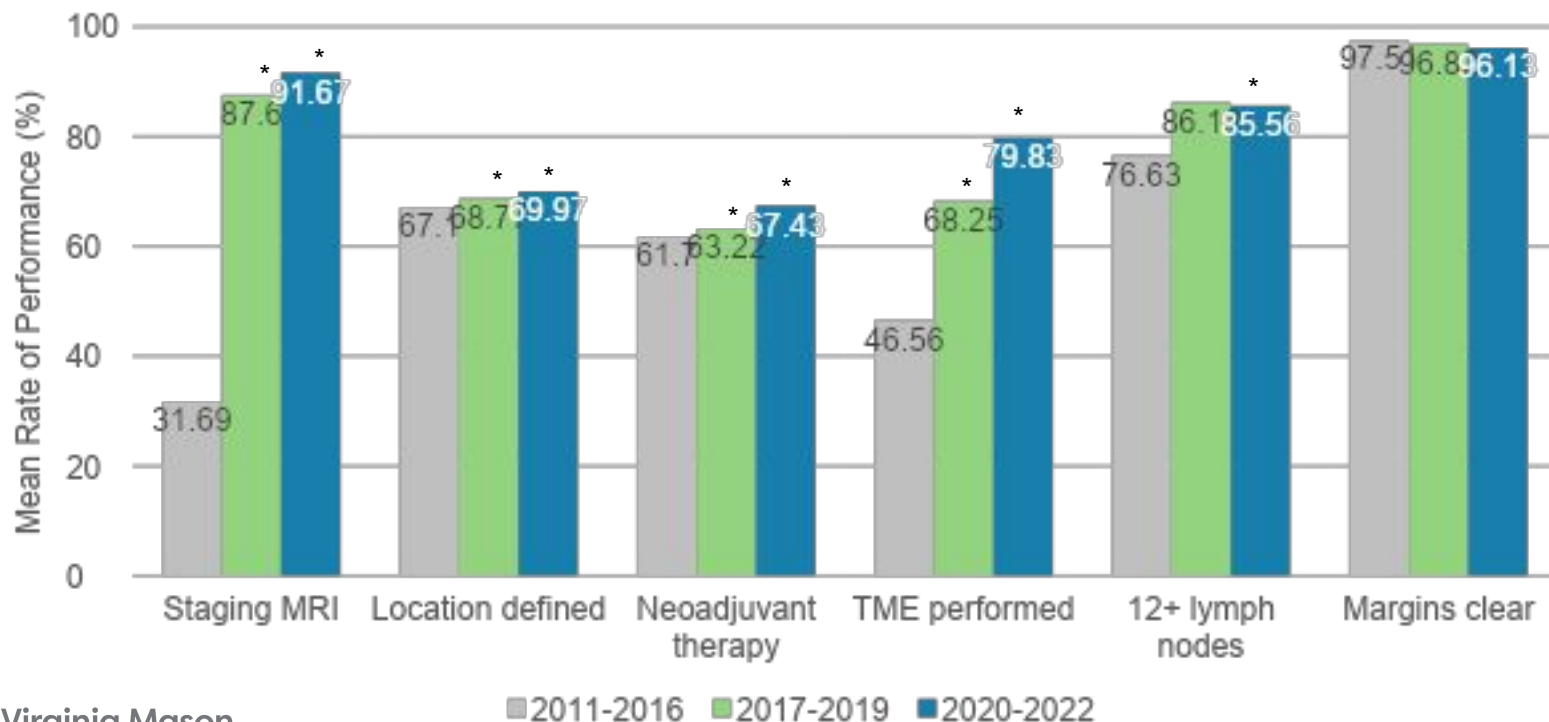
Range 9 to 322 resections - 1,962 total resections



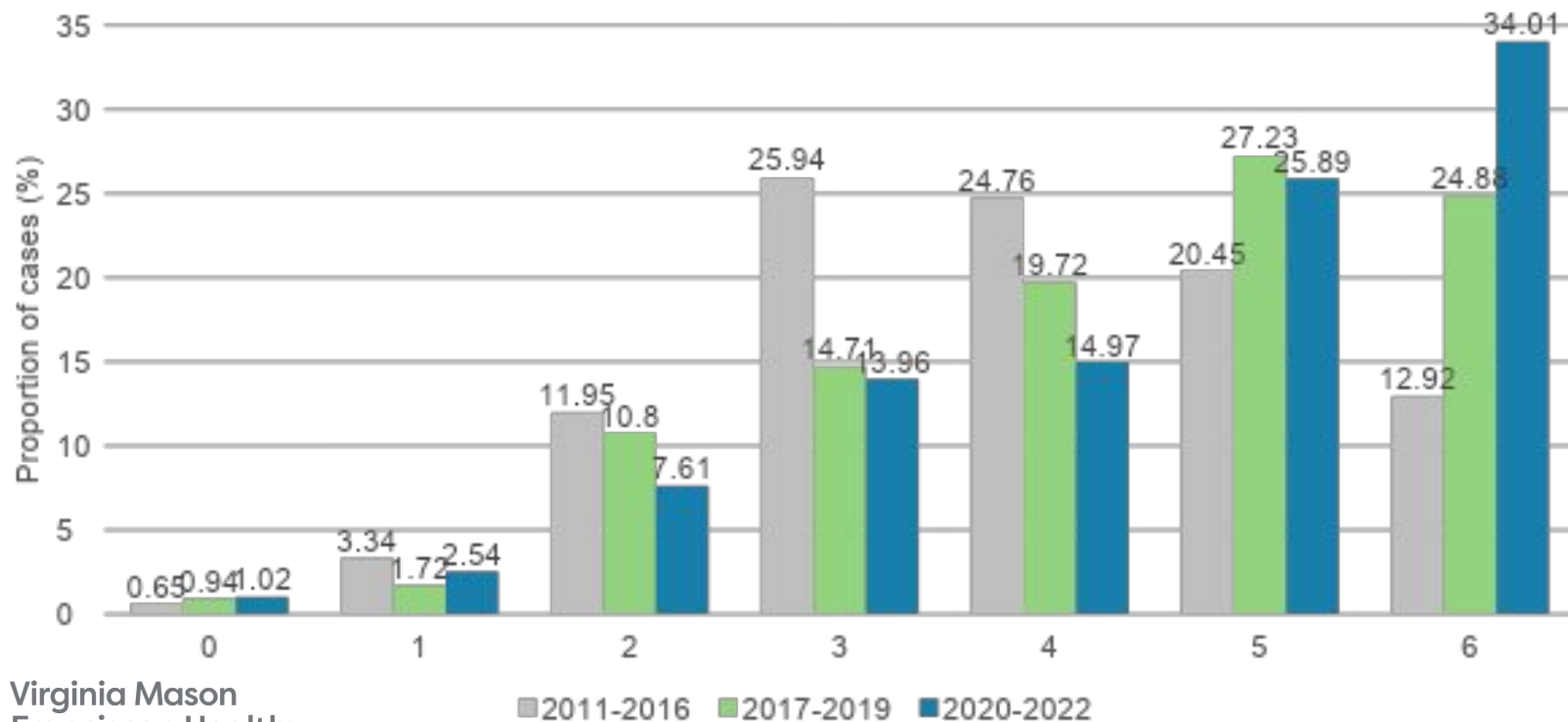
The Evolution of Surgical Approach



Results – increasing high quality surgery

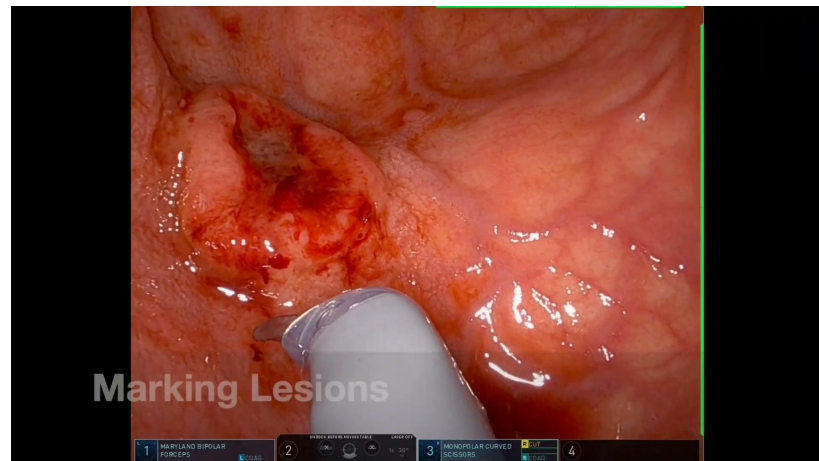
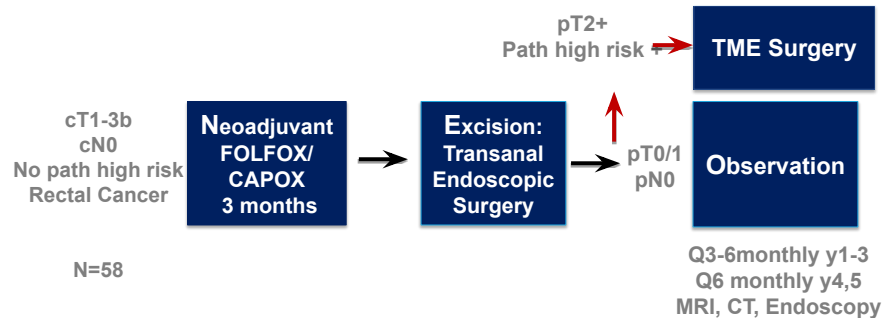


Results



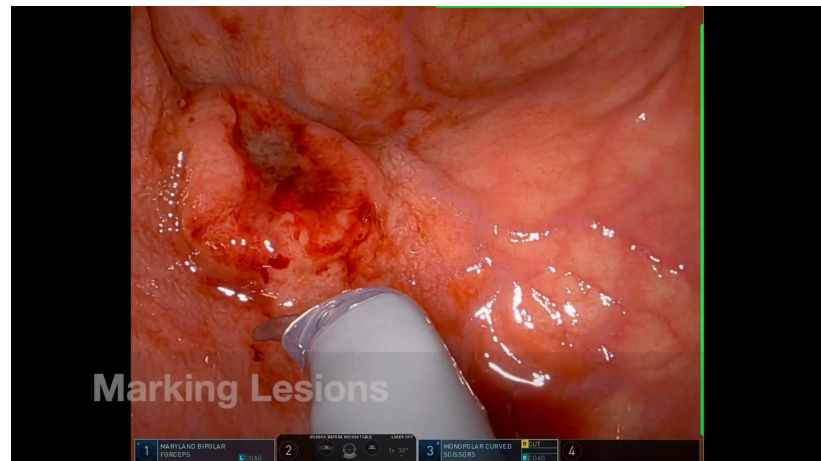
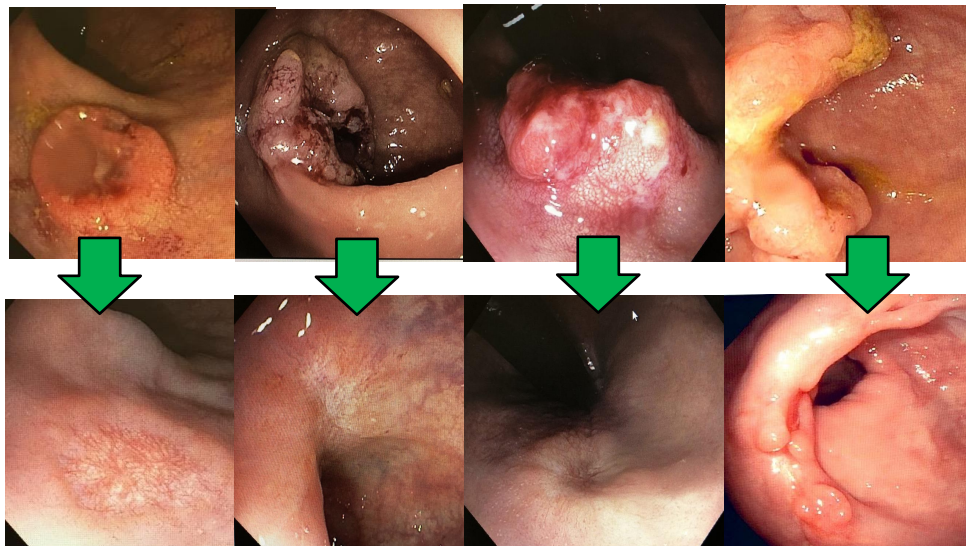
Future state: Trans-anal robotic surgery

original Neoadjuvant Chemotherapy, Excision, and Observation for Early Rectal Cancer: The Phase II NEO Trial (CCTG CO.28) Primary End Point Results



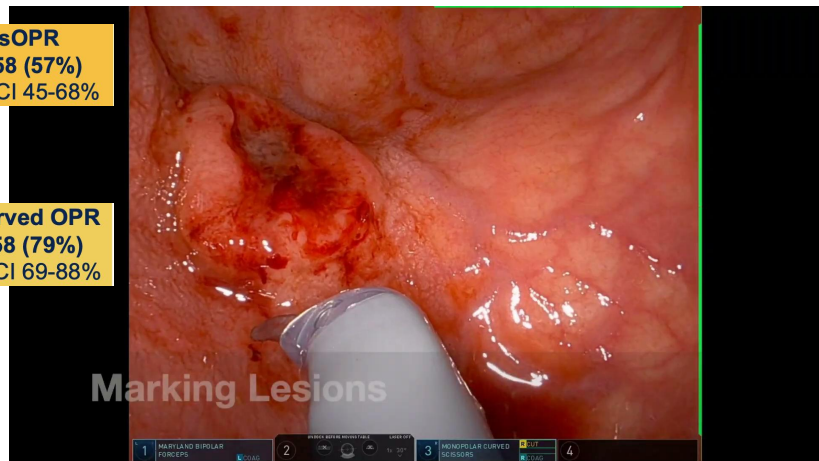
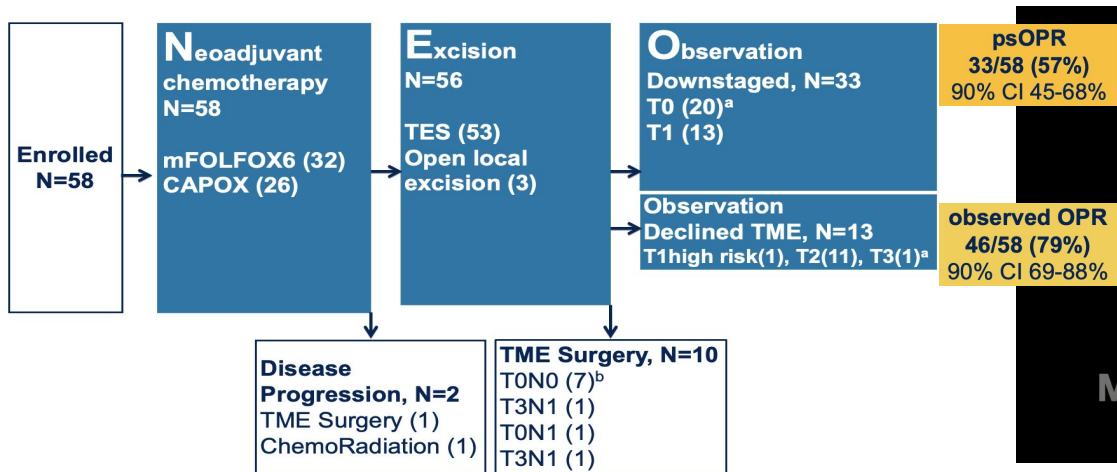
Future state: Trans-anal robotic surgery

original © **Neoadjuvant Chemotherapy, Excision, and Observation for Early Rectal Cancer: The Phase II NEO Trial (CCTG CO.28) Primary End Point Results**



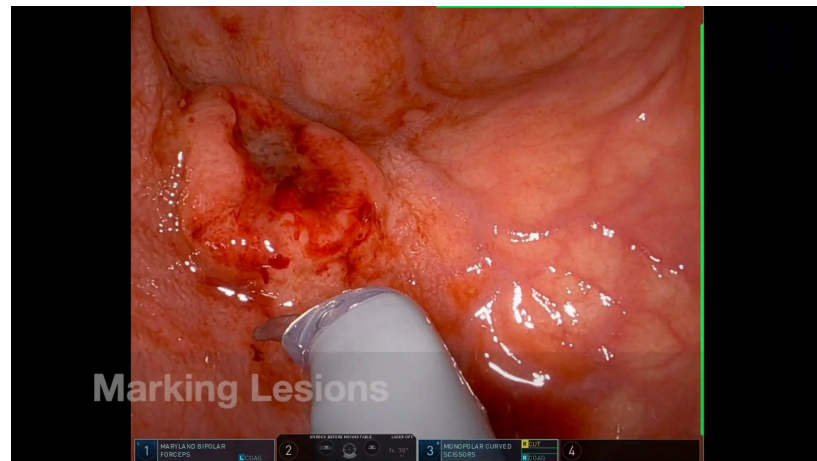
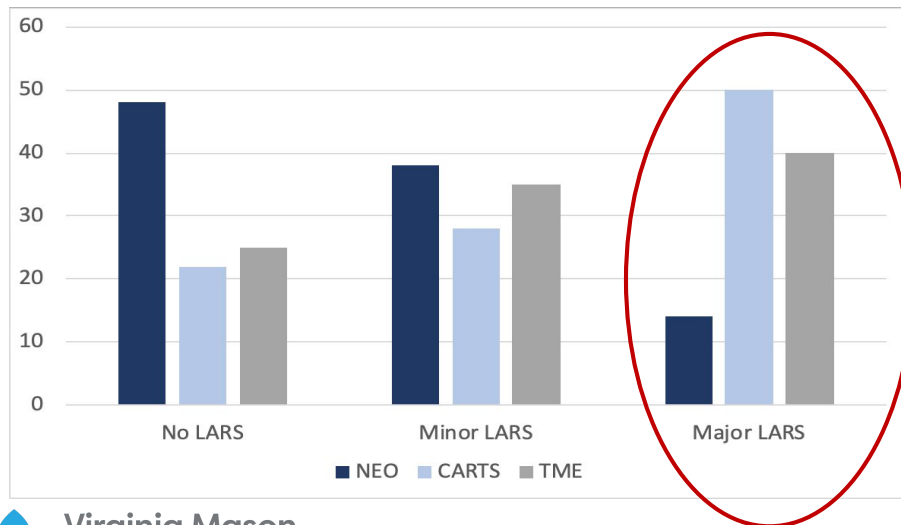
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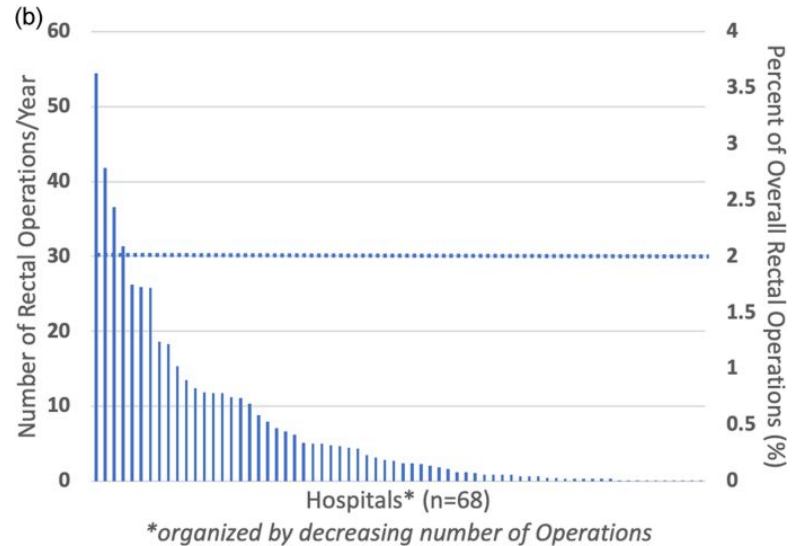
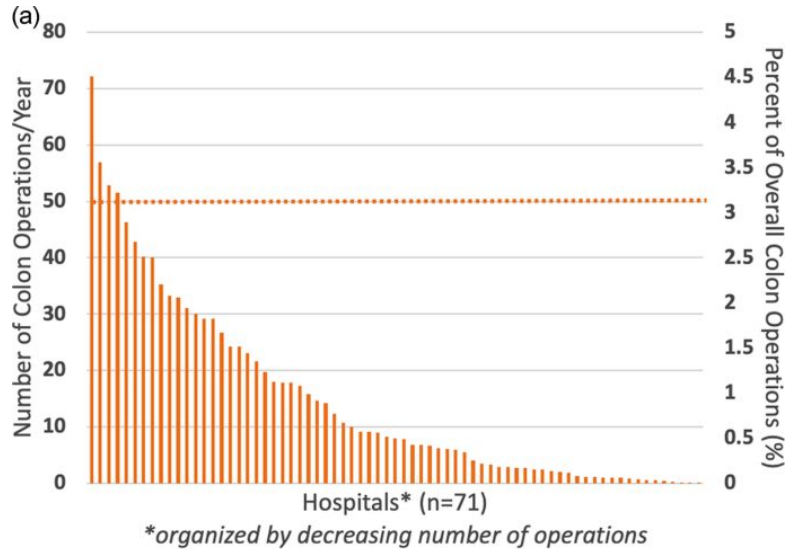


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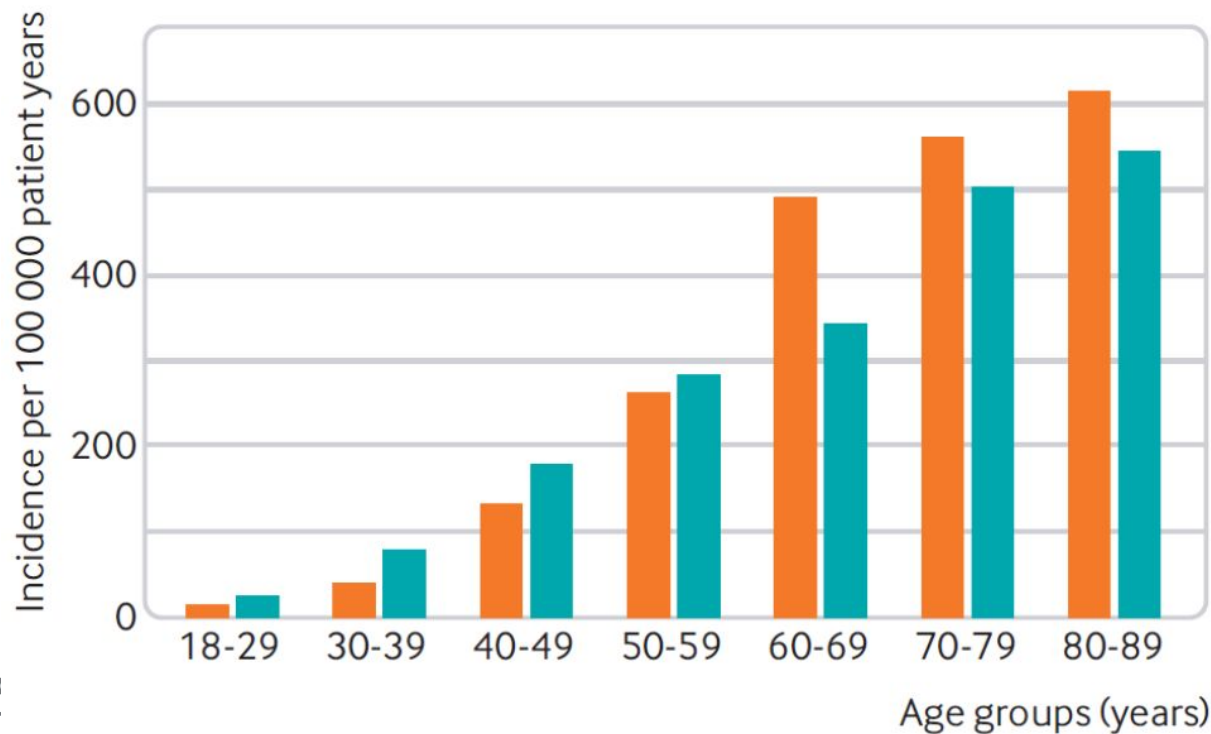
Challenge: who should care for rectal cancer?



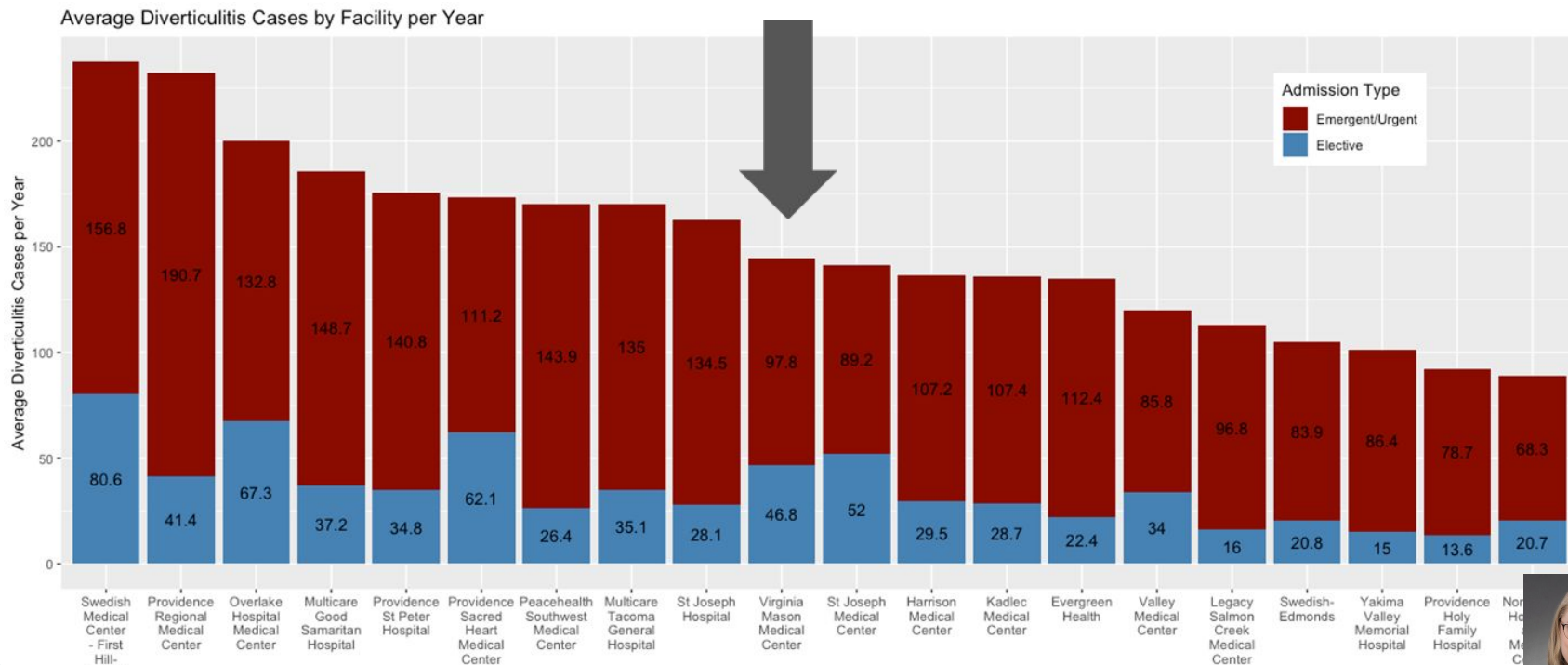
Diverticulitis

- 50% of patients over age 60 have diverticulosis at colonoscopy
- Diverticulitis **209** per **100k** person-years
- Hospitalization **49** per **100k** person-years
(perforation **2.7** per **100k** person-years)
- Surgery for diverticulitis **8** per **100k** person-years
- Emergent surgery **2** per **100k** person-years
- Death related to diverticulitis **0.9** per **100k** person-years
- Colorectal Cancer in WA **40/100k** person-years (mortality 10/100k person-years)
- IBD in North America **20/100k** person-years

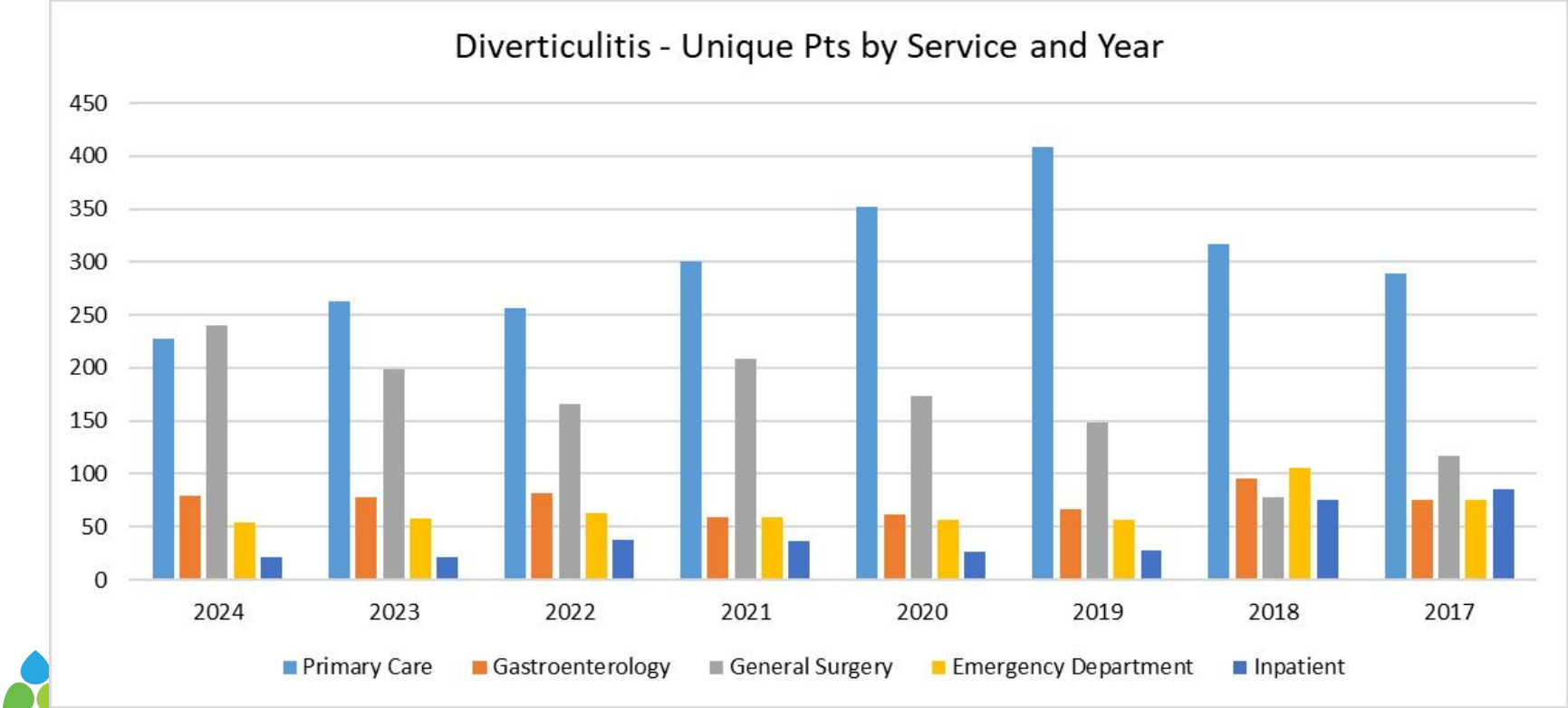
More **men** when young, more **women** when older



~12 hospitalizations / day in WA



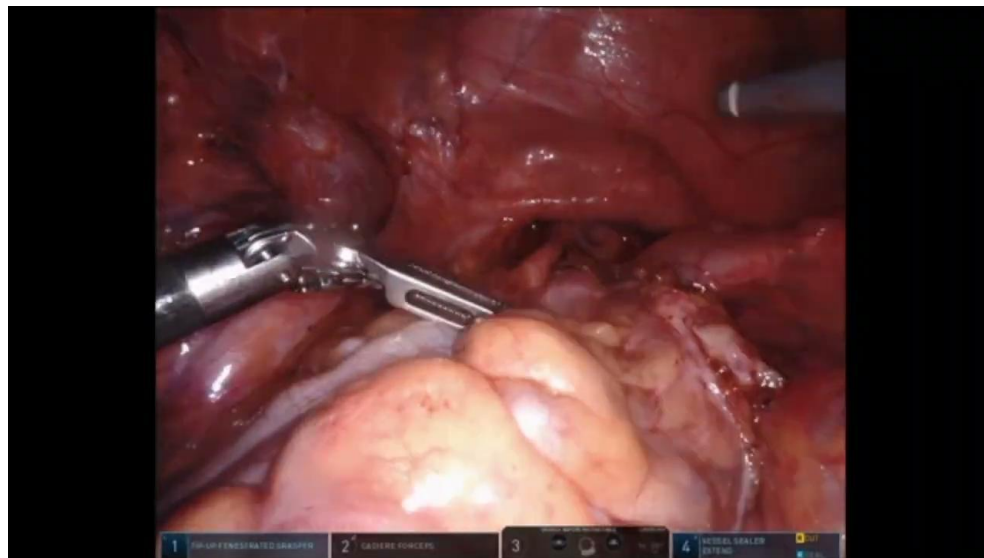
Unique Diverticulitis Patients at Virginia Mason



Does Surgery work at preventing diverticulitis?

Complicated Diverticulitis

- Uncontained, free perforation
- Fistula
- Stricture
- Obstruction
- And as of 2020.... abscess

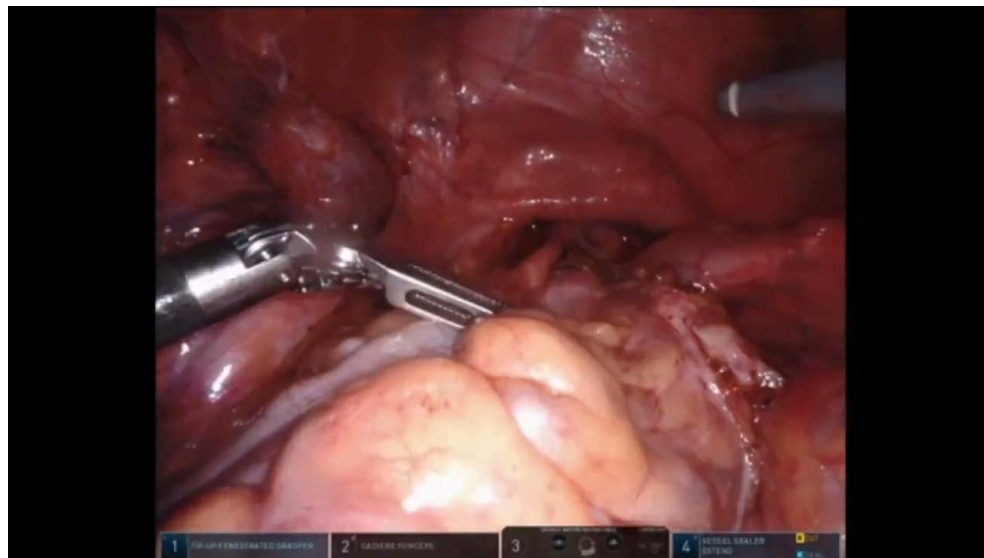


Does Surgery work at preventing diverticulitis?

Complicated Diverticulitis

- **7.9%** cancer on Colonoscopy
- **5%** need Emergency Surgery
- **30%** have complicated recurrence or admission
- **50%** need surgery within 6 months

Updated colonoscopy and surgical resection typically recommended



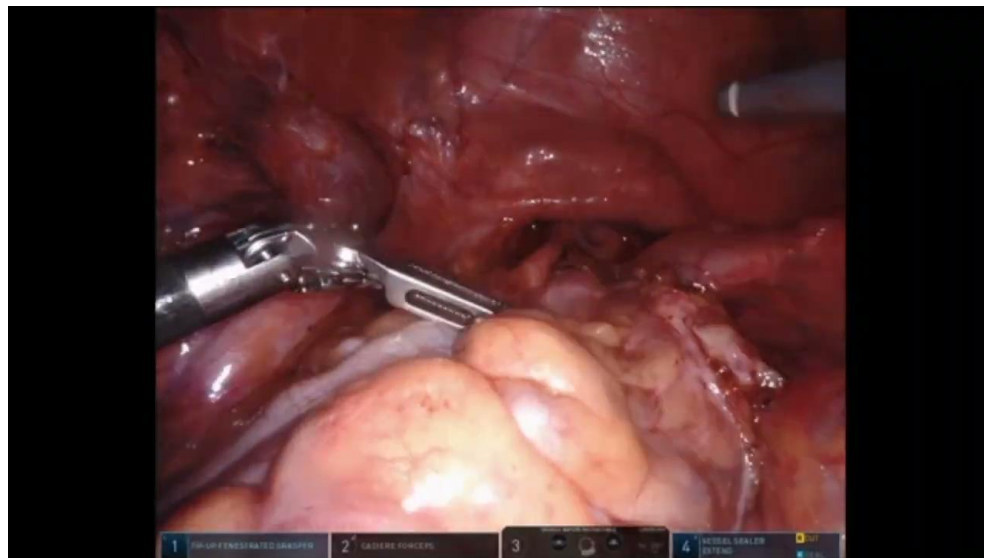
Does Surgery work at preventing diverticulitis?

Uncomplicated?

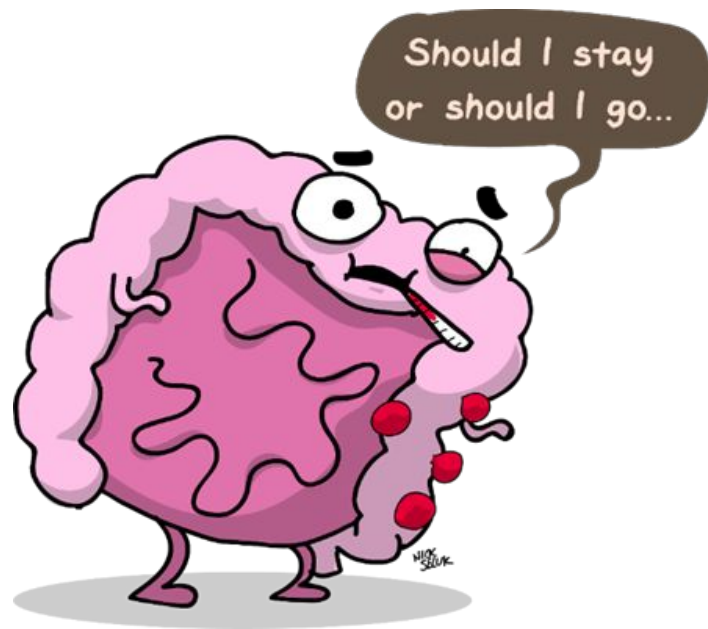
Anything not 'complicated'?

- **1.3%** adenoma or CA on Colonoscopy
- **5%** develop complicated diverticulitis
- **6%** have smoldering symptoms
- 15% have a recurrent episode
- 45% ongoing GI symptoms

Recommendation for colonoscopy and surgery are individualized



Does Surgery work at preventing diverticulitis?



DIRECT trial (RCT)

- Colectomy vs non-operative management
- QOL better at 5 years
- Healthcare costs better at 5 years
- 46% of conservative eventually operation

We see this in our practice

- 12,073 pts with 2+ episodes of diverticulitis
- At 1 year, recurrence after surgery 6% (vs 32%)
- At 5 years, recurrence after surgery 15% (vs 61%)

LASER trial (RCT)

- Higher GI QLI scores with surgery
- 5% recurrence after surgery, 31% after med mgnt



Health-related quality of life and functional disorders after diverticular surgery

Daniel Segna , Paul J. Jaklin, Beat Schnüriger, and Benjamin Misselwitz

Ther Adv Gastroenterol

2021, Vol. 14: 1–18

DOI: 10.1177/
17562848211066437

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- **9 out of 10** longitudinal cohort studies showed increase HRQoL
- In RCT and retrospective cohort, **elective surgery superior** to conservative treatment regarding HRQoL
- Pts report satisfaction with choice for surgery as “high” or “very good”

COSMID

Comparison of Surgery and Medicine on the Impact of Diverticulitis

Patients with QoL-limiting diverticular disease:

- Recurrent/asymptomatic or symptomatic after resolution
- Surgeon deems reasonable for partial colectomy
- CT-proven episode within 5 years

300 Randomized

100 Non-randomized

Partial
colectomy

Best medical
management
“toolbox”

COSMID Sites: 26 active



West:

- University of Washington
- Northwest Hospital
- Virginia Mason Med Center
- University of Utah
- U Colorado Denver
- UC San Francisco
- Stanford

Midwest:

- Rush University Med Center
- Mount Carmel Health System
- University of Iowa
- Northwestern

South:

- LBJ Medi
- Virginia C
- UT South
- Universit
- Atrium H
- Medical l
- Universit

Northeast:

- Columbia
- Universit
- Alleghen
- Boston M
- NY Presb
- Rocheste
- Lahey Cli
- Weill Cor

TOP 5 RECRUITING SITES

COSMID RCT

1	VIRGINIA MASON MEDICAL CENTER	X4..... 26!
2	UNIVERSITY OF FLORIDA	23
3	LYNDON B. JOHNSON HOSPITAL	22
4	ALLEGHENY HEALTH	14
5	NEW YORK-PRESBYTERIAN QUEENS	12

We've seen 3 enrollments over the last month, and with the latest randomization, Virginia Mason re-takes the first place spot, with 24 participants enrolled in the RCT!

Many thanks to all of you for your hard work in helping us reach our recruitment goals.

We are so close!

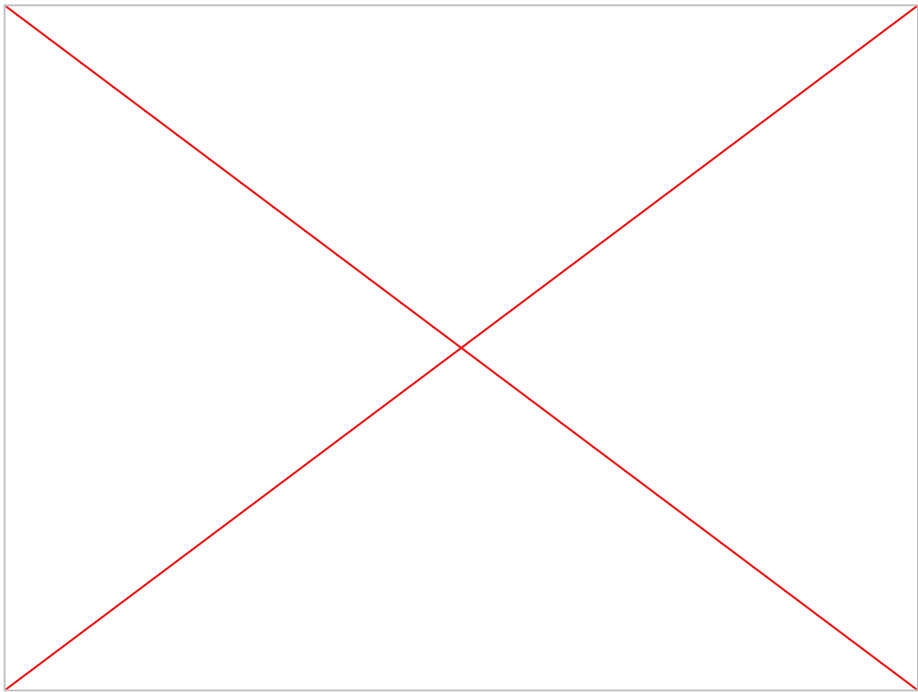
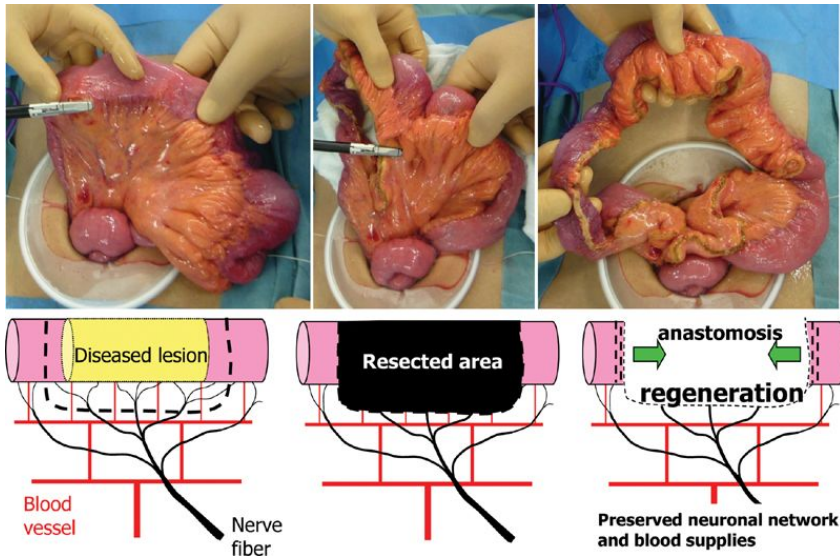
Inflammatory Bowel Disease

Surgical Management of Crohn's Disease

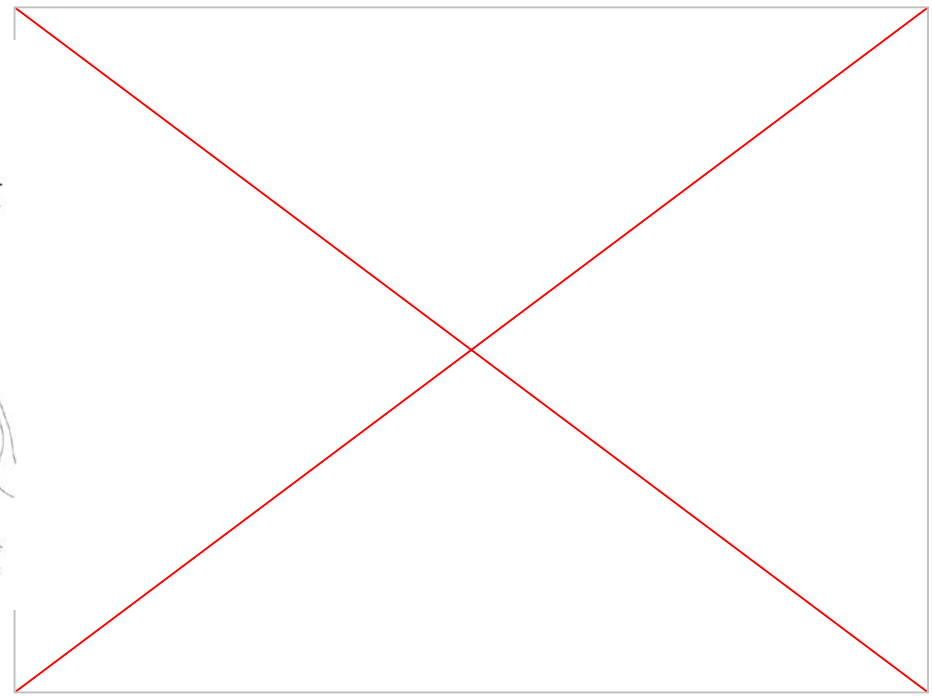
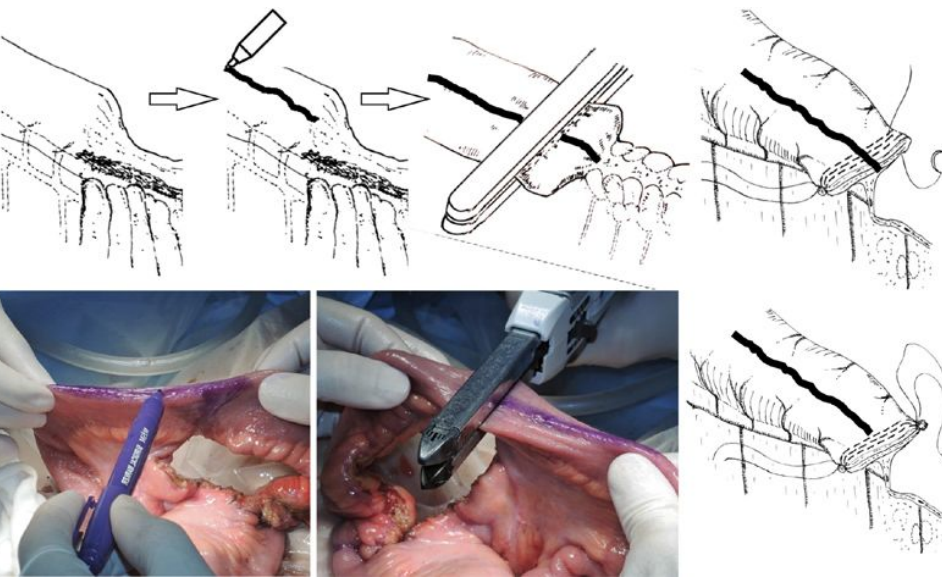


- Up to 47% patients with medically refractory Crohn's disease undergo surgery
- While surgery is helpful, recurrence & repeat resection is common (35%)
- Kono-S anastomosis: antimesenteric, functional end-to-end anastomosis with wide lumen and supporting column
- Lower rate of recurrence (22% Kono-S vs 63% conventional)

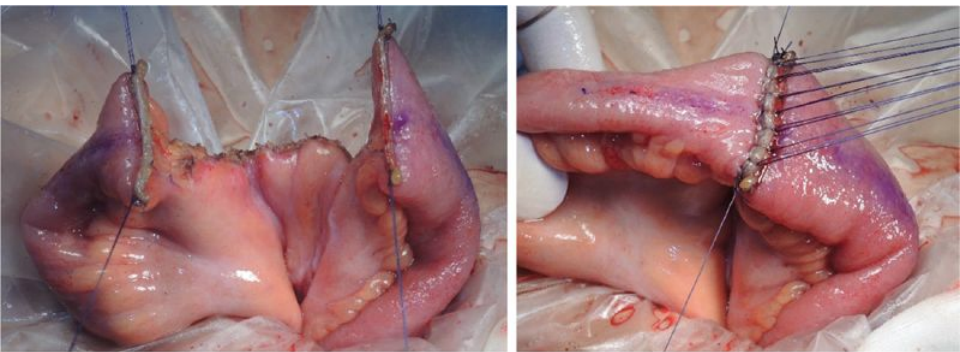
Kono-S Anastomosis



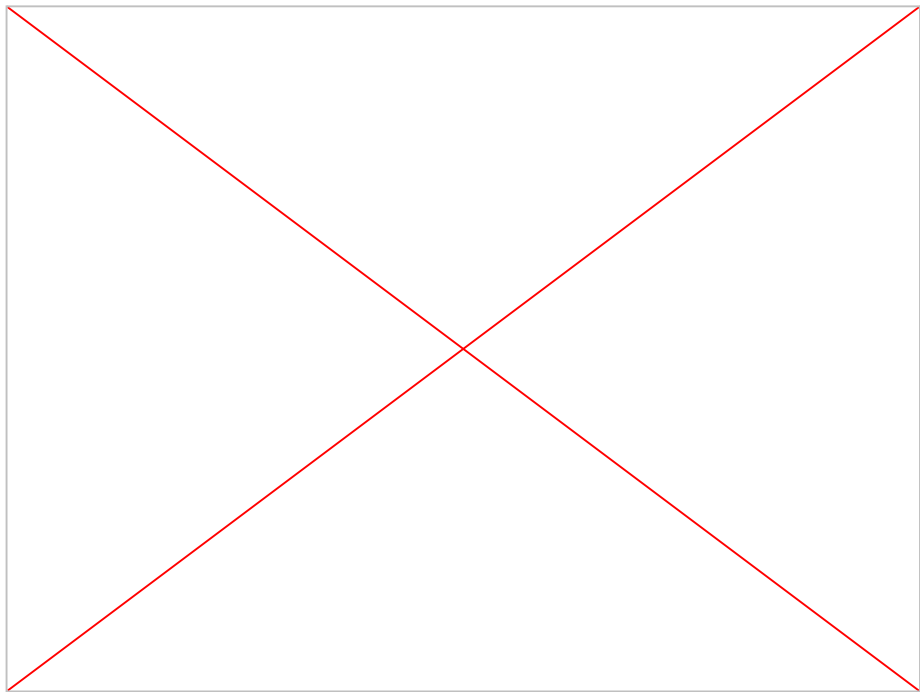
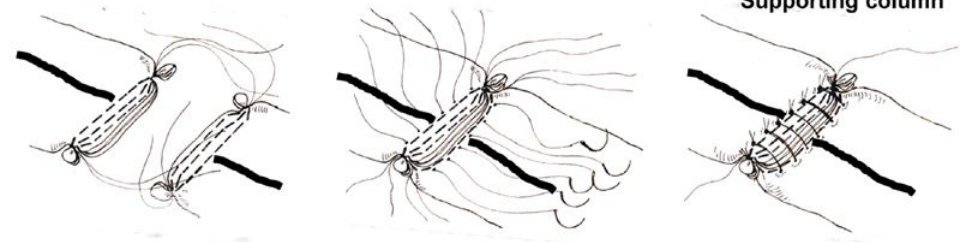
Kono-S Anastomosis



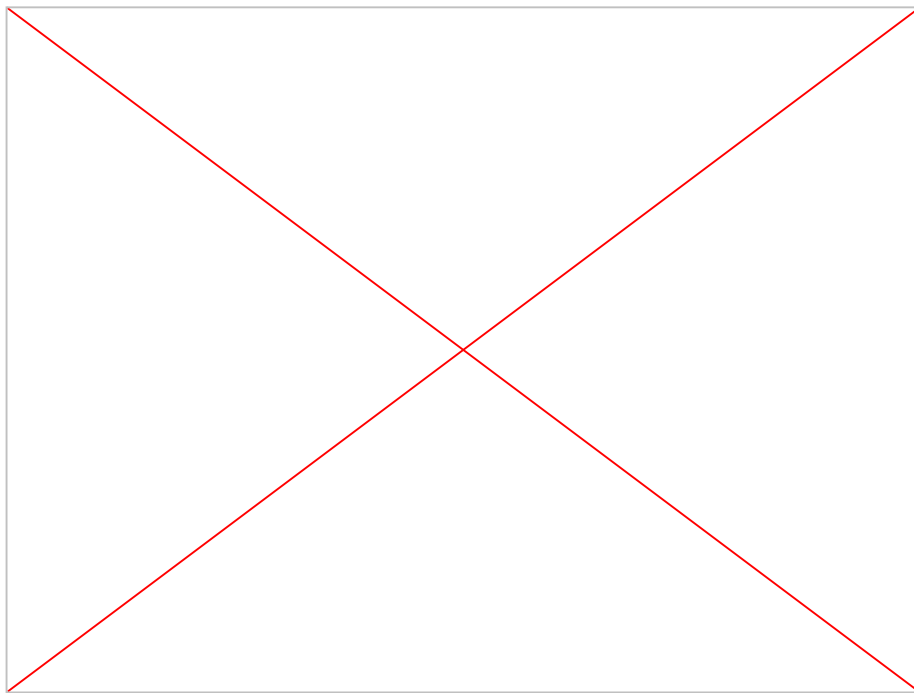
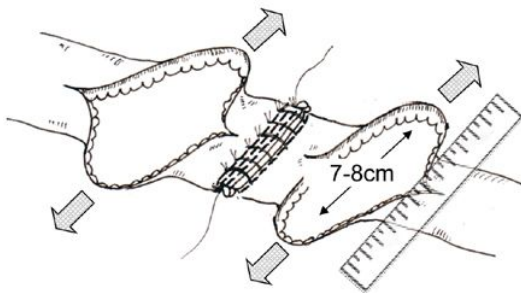
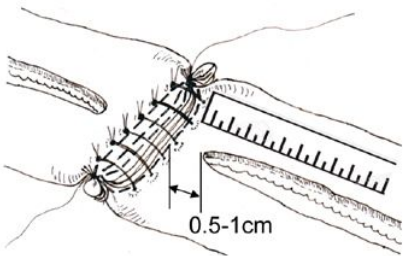
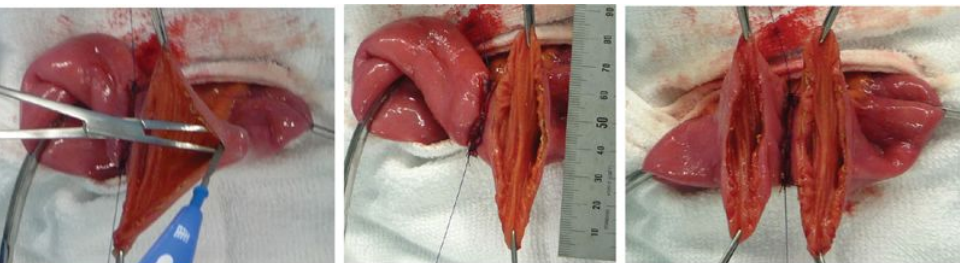
Kono-S Anastomosis



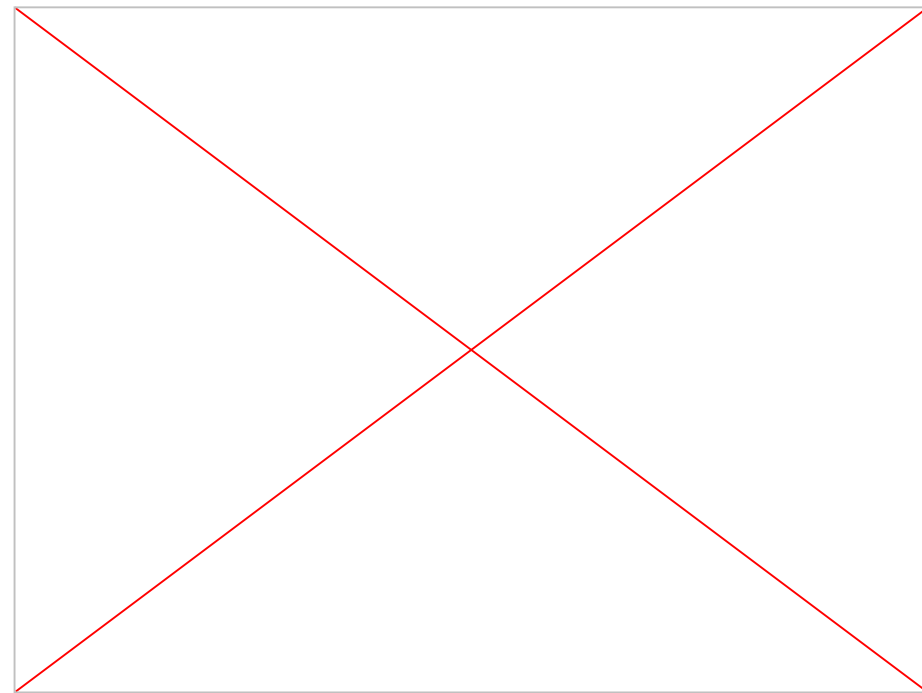
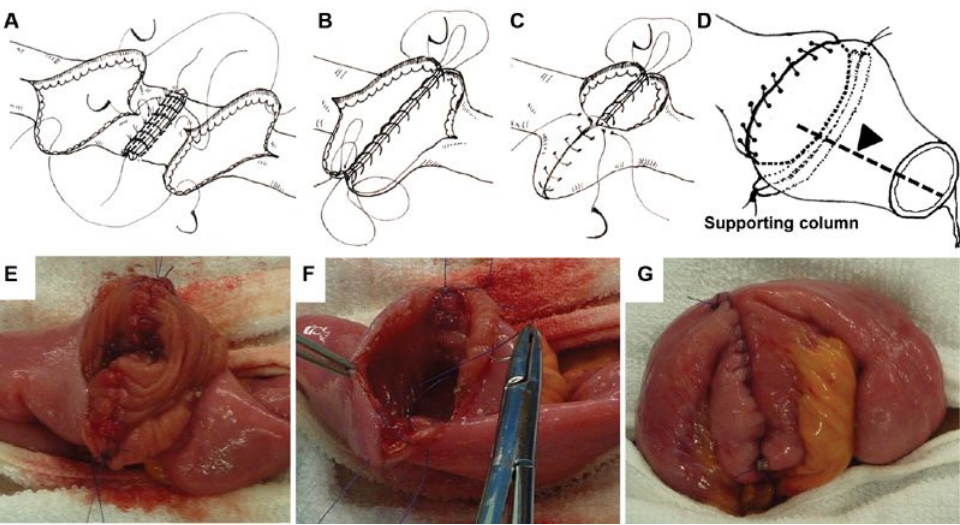
Supporting column



Kono-S Anastomosis

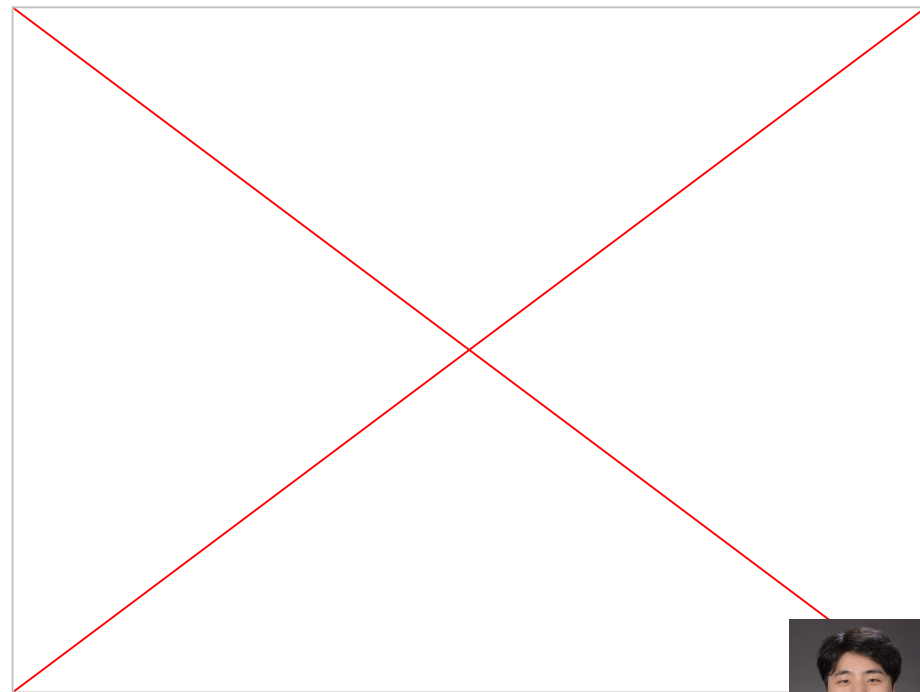


Kono-S Anastomosis



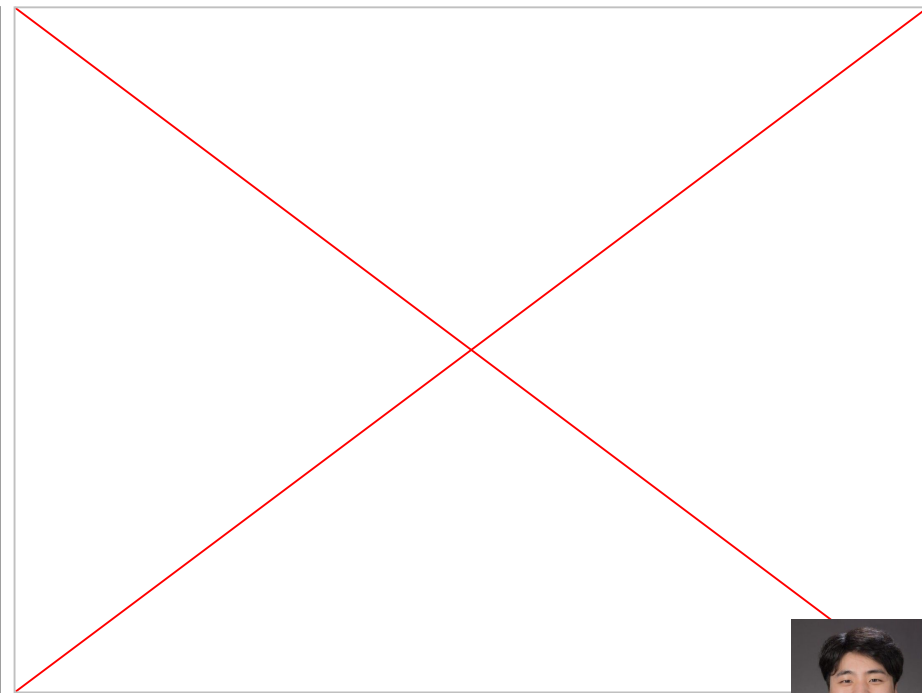
62 patients (mean age 45 years, +/- 17), 55% female

	Intracorporeal Anastomosis (n = 8, 13%)	Extracorporeal Anastomosis (n = 54, 87%)	
Female	62.5%	53.7%	p = 0.64
BMI > 30 kg/m ²	33%	8%	p = 0.97
ASA > 3	15%	25.9%	p = 0.41
Charlson Comorbidity Index > 3	0%	9.3%	p = 0.84
Medications	87.5%	90.7%	p = 0.77

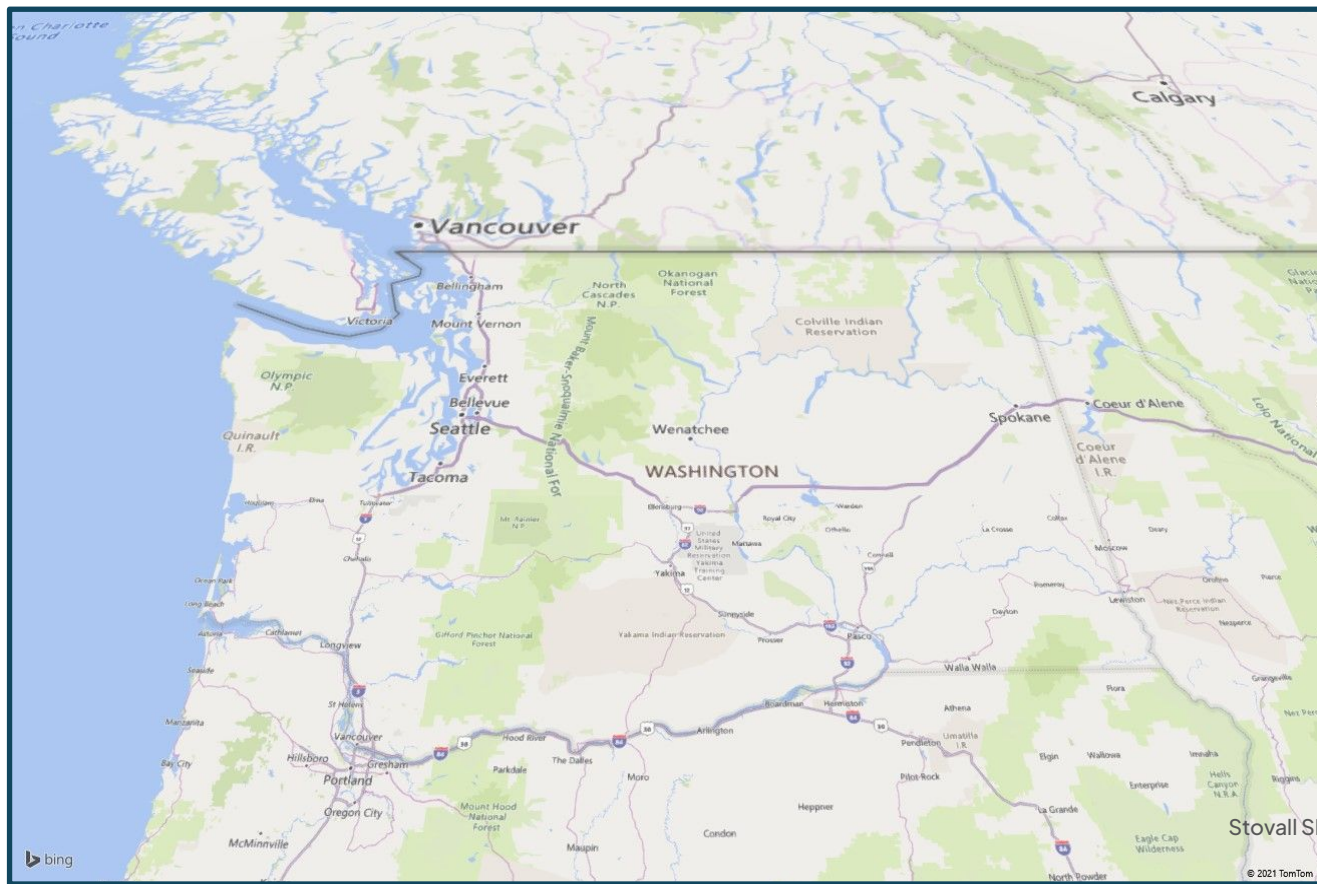


62 patients (mean age 45 years, +/- 17), 55% female

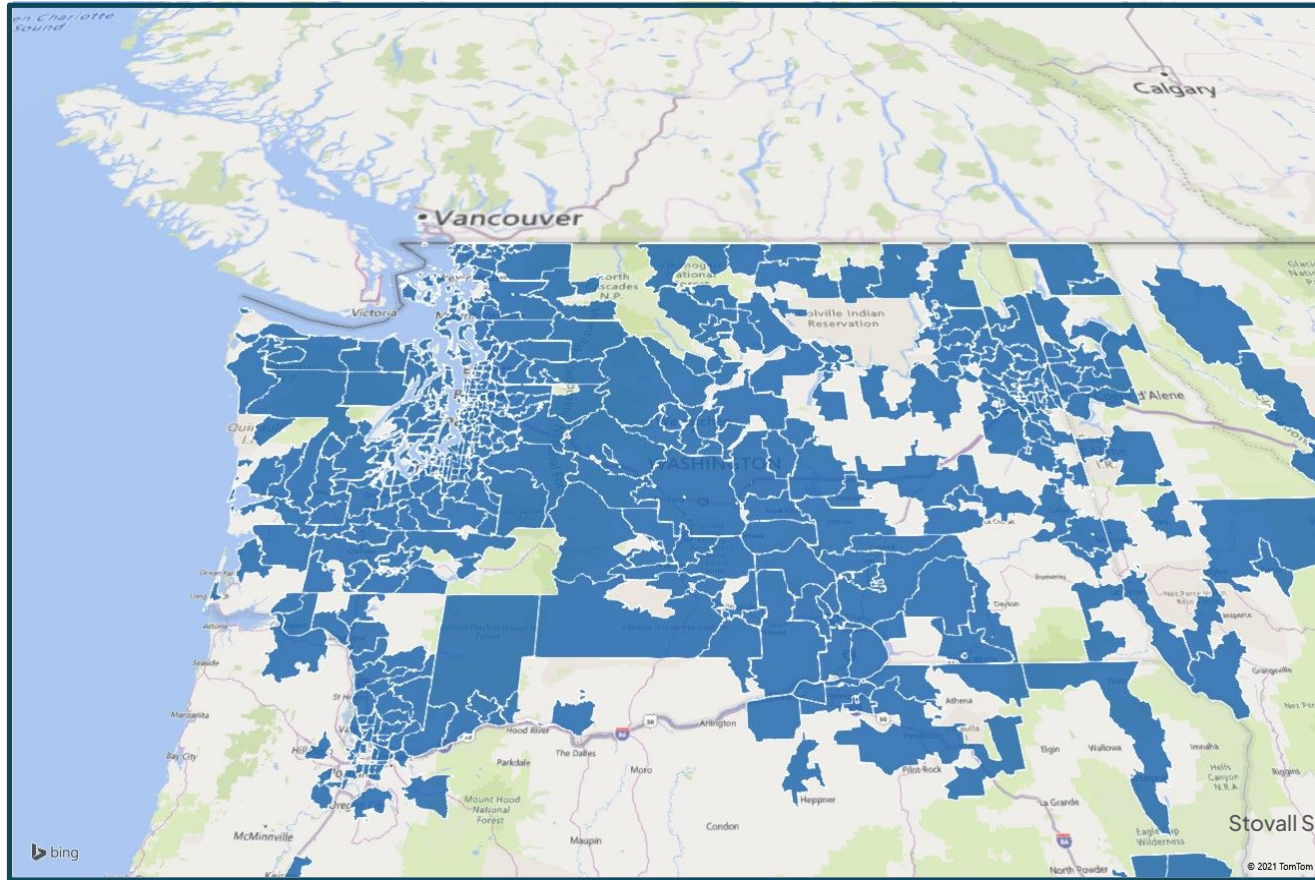
	Intracorporeal Anastomosis (n = 8, 13%)	Extracorporeal Anastomosis (n = 54, 87%)	
Operative Time (min)	180	215	p = 0.09
Length of Stay (days)	1.4	3.2	p = 0.02
In-hospital Complication	0%	5.6%	p = 0.49
Readmission	0%	5.6%	p = 0.49
Clinical Recurrence	0%	1.9%	p = 0.72
Endoscopic Recurrence	0%	2.4%	p = 0.70



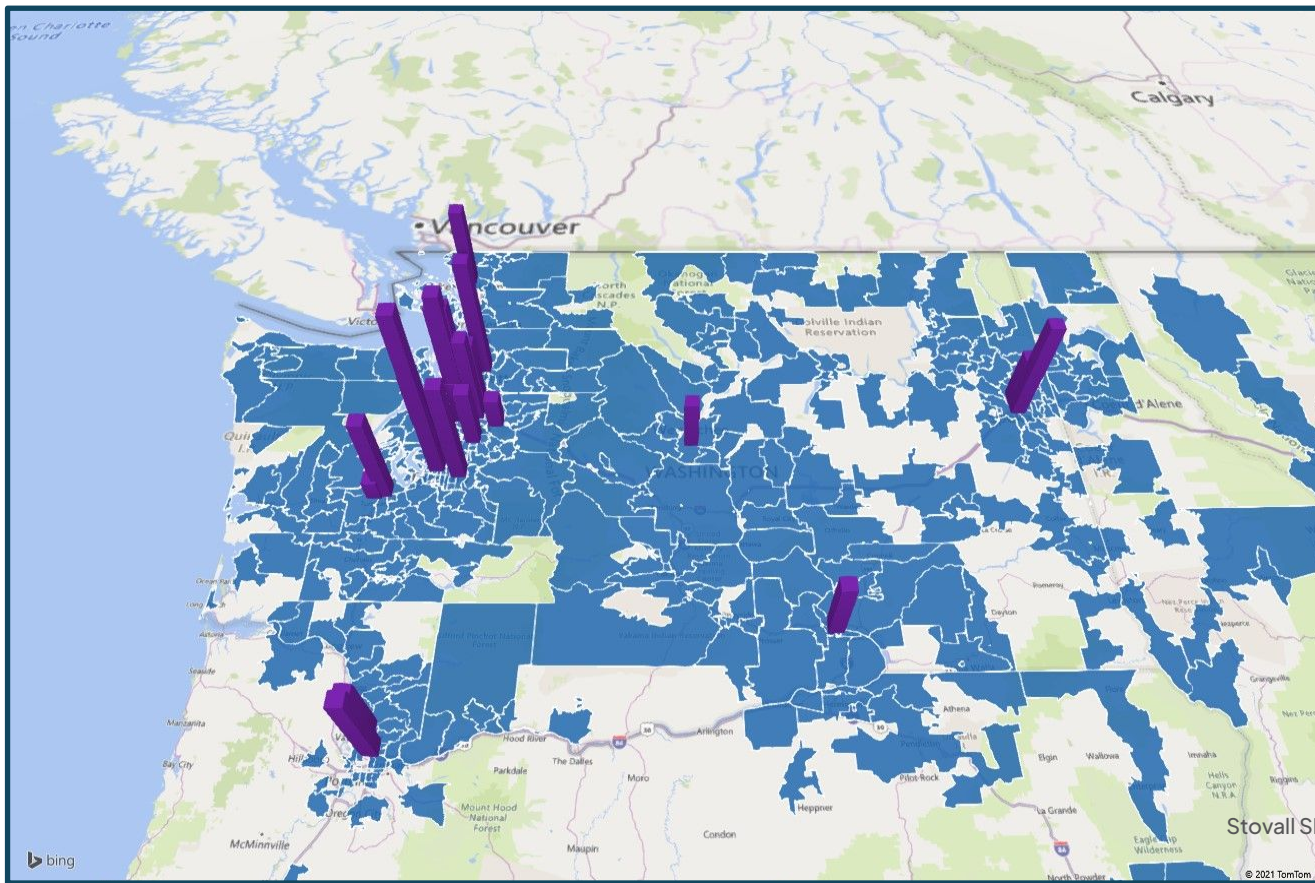
Success story for IBD regionalization?



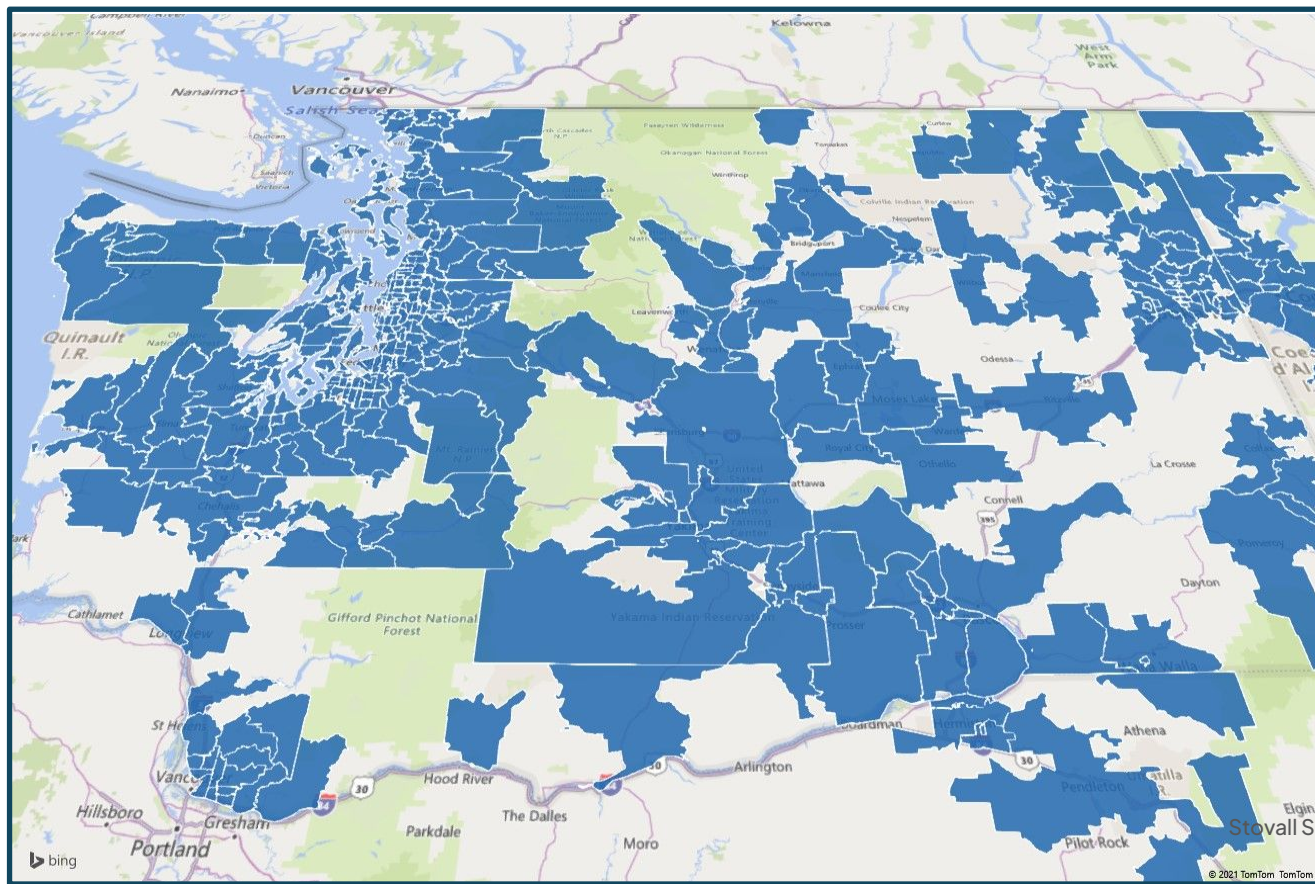
Success story for IBD regionalization?



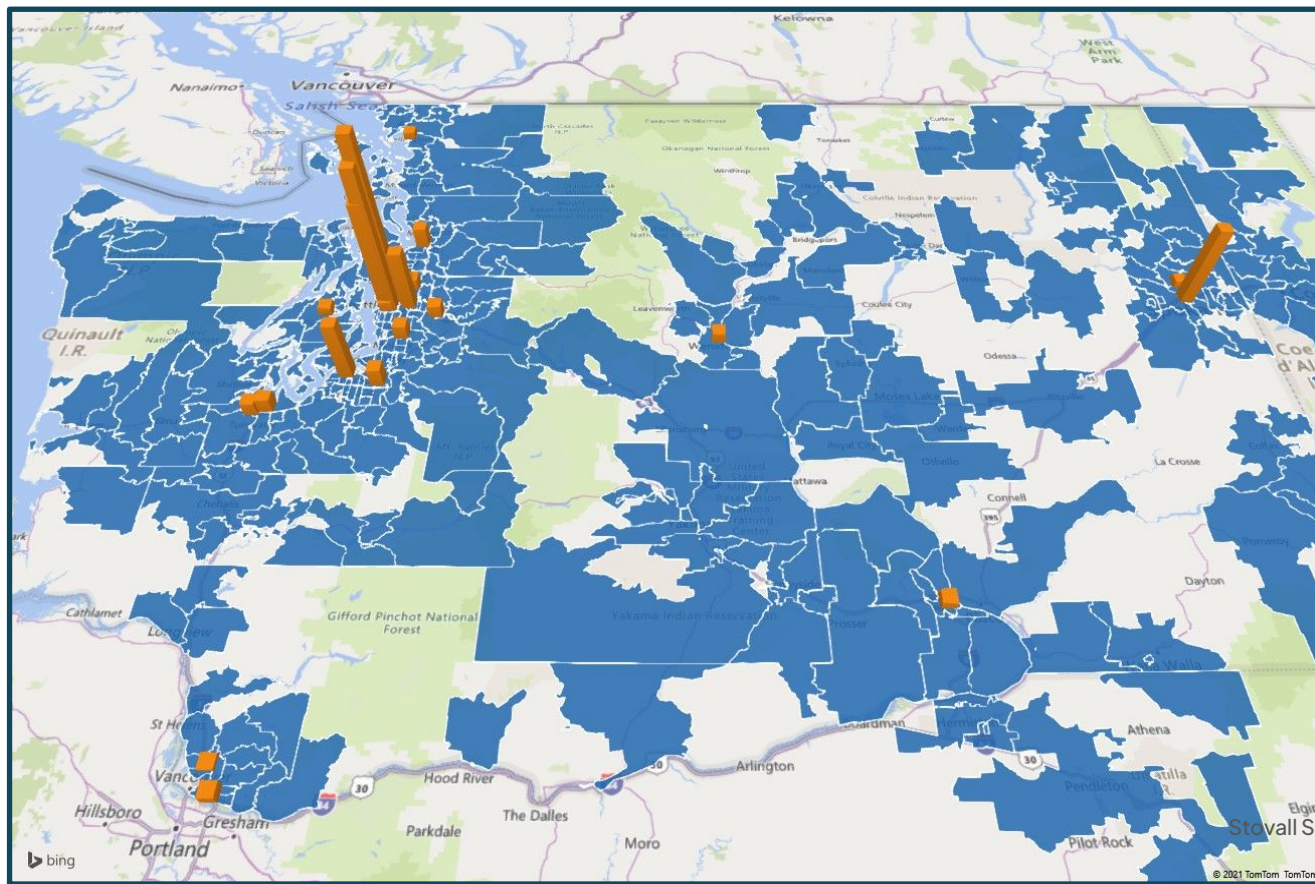
Success story for IBD regionalization?



Success story for IBD regionalization?



Success story for IBD regionalization?



Takeaway points

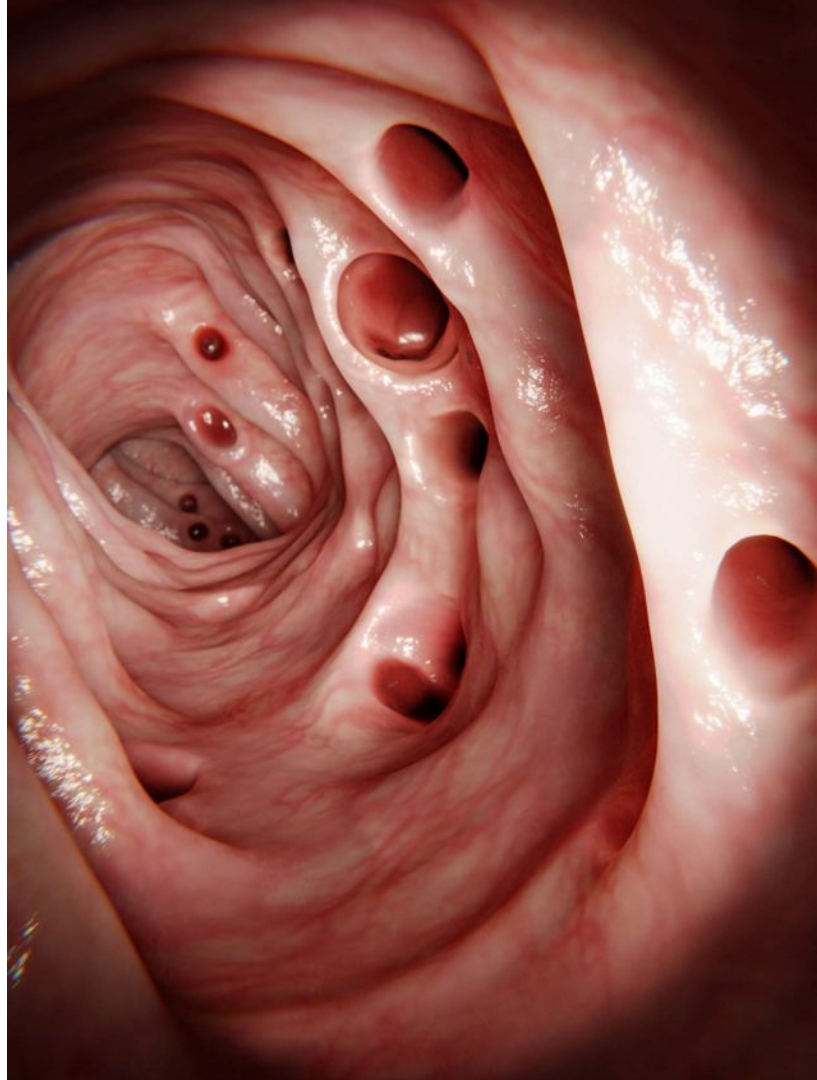
Takeaway points

Colorectal pathology is increasing, and increasingly complex

Robotics is a minimally-invasive surgery enabler

Challenges ahead:

- Appropriate patient selection
- Regionalization of care
- Continued outcomes evaluation



Thank you

Question & Answer

Live Audience: Please raise your hand and a mic will come to you.
Virtual Attendees: Please click on the Q&A button to enter your question.



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