What Can I Find in the Colon?

Polyps, diverticula, angiodysplasia, IBD … and how to describe them

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Conflicts of interest

- No financial conflicts of interest to disclose
- Faculty of GIEQs
- Senior co-editor of the ESGE Academy





Lecture objectives

- Recognise the findings you will meet on (almost) every list: **polyps, diverticula, vascular lesions, inflammation** - and their mimics

- Describe any lesion in one standard sentence: **location · size · morphology · surface**

- Know which classification belongs to which finding - and where to learn it in depth

You can only describe what you have seen

Clean

Adequate prep in **≥90%** (use a validated scale eg BBPS)

Complete

Caecal intubation **≥90%**, photo-documented

Careful

Withdrawal time **≥6 min**

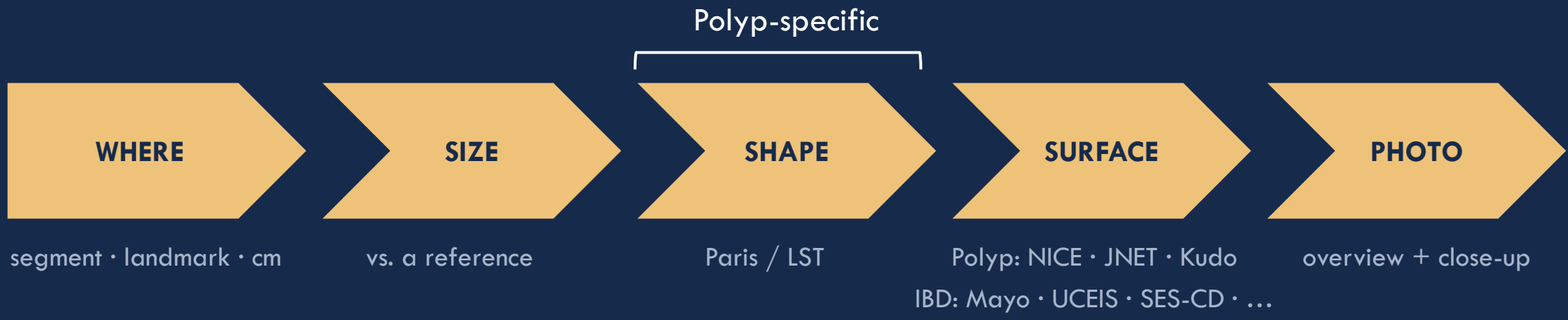
Productive

Adenoma detection rate **≥25%**



Kaminski et al., ESGE performance measures for lower GI endoscopy, Endoscopy 2017; Hassan et al., ESGE bowel preparation guideline, Endoscopy 2019; Corley et al., NEJM 2014

One sentence for every finding



Examples

Ascending colon, 1 fold distal to the ileocaecal valve: **25 mm** LST granular nodular-mixed (**Paris 0-IIa+Is**), regular surface and vessels (NICE II/JNET 2A/Kudo IV/CRIS-R).

From rectum to 35cm (descending colon): erythema, no vascular pattern, erosions, no ulcers – **Mayo 2 colitis**

Same structure for polyps, diverticula, vascular lesions and inflammation

Add treatment if applicable

Part I - Polyps

Size · Morphology · Surface → cancer risk

Why describe a polyp? **Cancer risk**

~90% of polyps are <10 mm

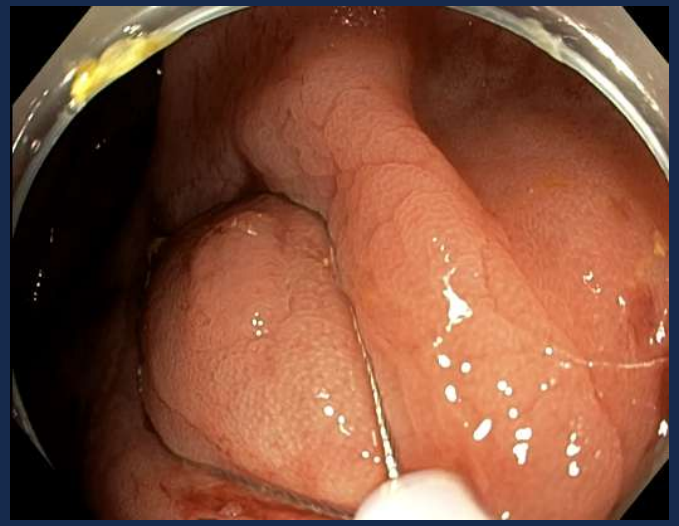
→ cancer risk minimal (0-0.5%)

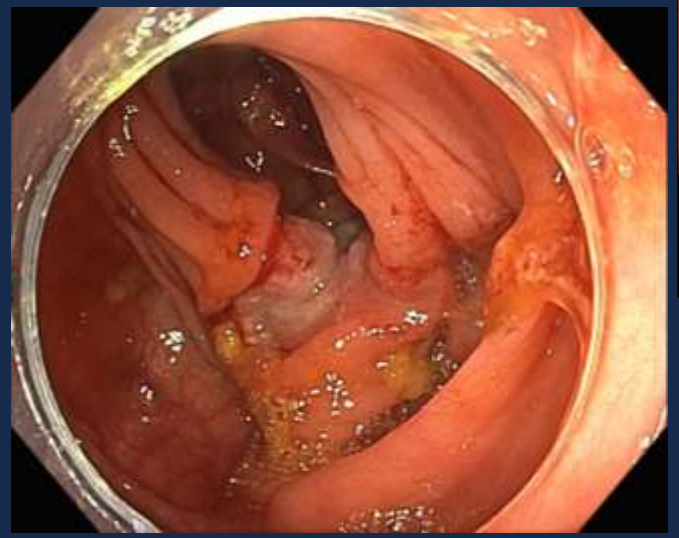
Risk rises with **size**, **morphology** and **surface**

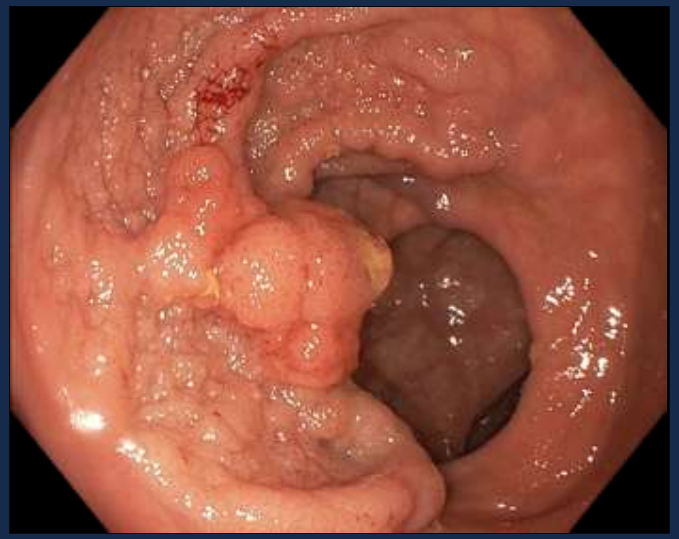
Your description decides:

- resect today, or refer?
- which technique? (→ other talk)
- which surveillance interval?









Ferlitsch et al., ESGE colorectal polypectomy & EMR guideline, Endoscopy 2024; Hassan et al., ESGE post-polypectomy surveillance, Endoscopy 2020

Keep it simple:
the GIEQs algorithm

1 **Blink**

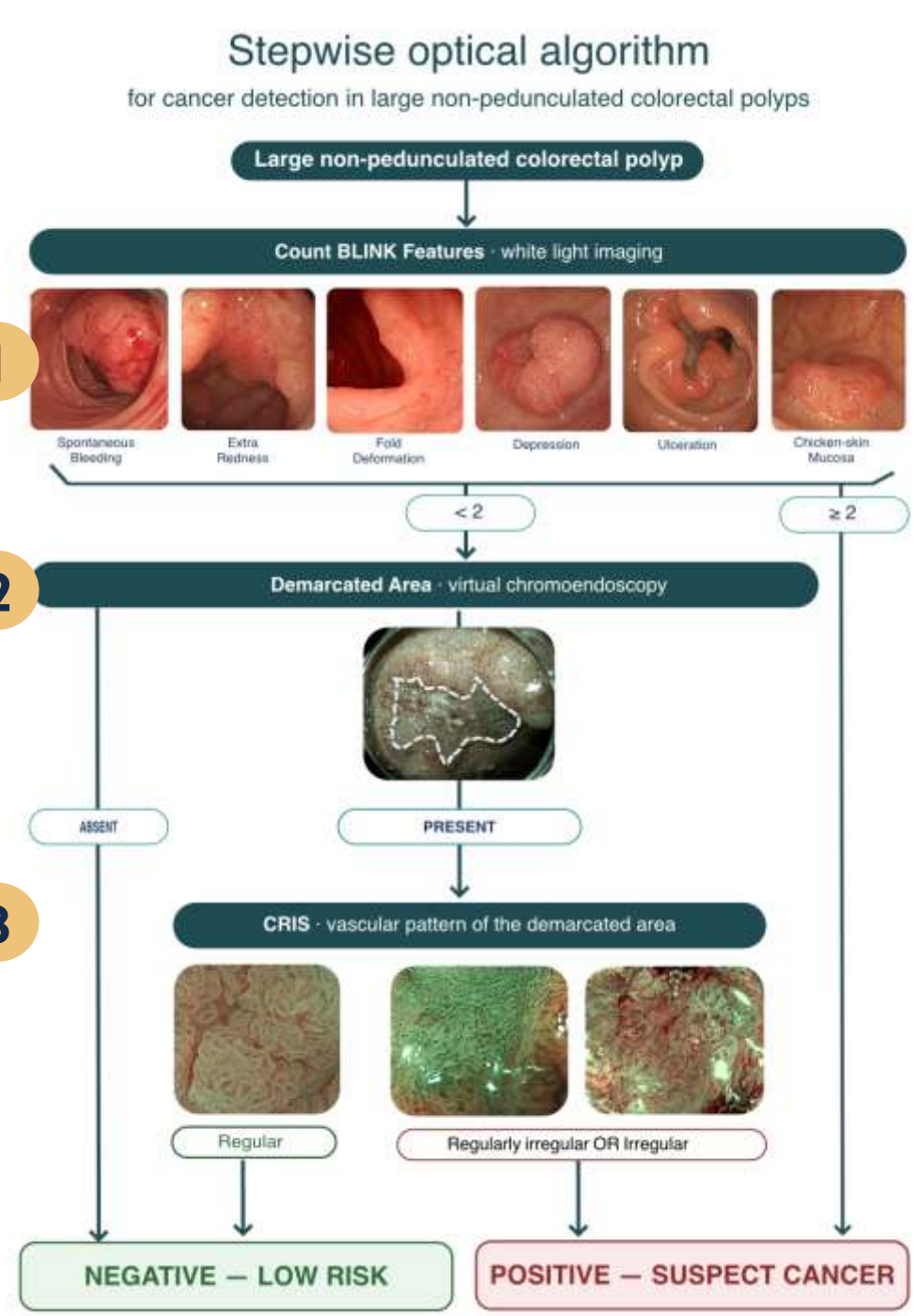
First white-light impression - anything suspicious?

2 **Demarcation**

Is there a demarcated area (VCE)?

3 **Vessels - CRIS**

Regular · regularly irregular · irregular?



Step 1 - Size: measure, don't guess

≤5 mm
diminutive

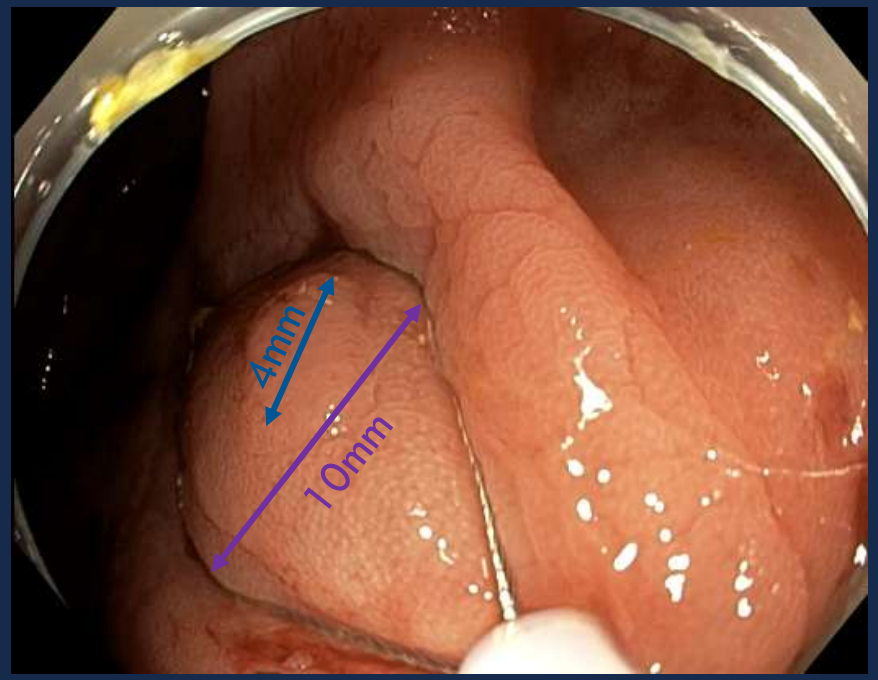
6-9 mm
small

≥10 mm
large

≥20 mm
LNPCP (if non-pedunculated)

Use a reference in the same frame: **open snare** or **biopsy forceps**

Eyeballing is unreliable (but can be trained) - and the error lands exactly on the thresholds that change technique and surveillance



LNPCP: large, non-pedunculated colorectal polyp

Ferlitsch et al., Endoscopy 2024; Hassan et al., Endoscopy 2020

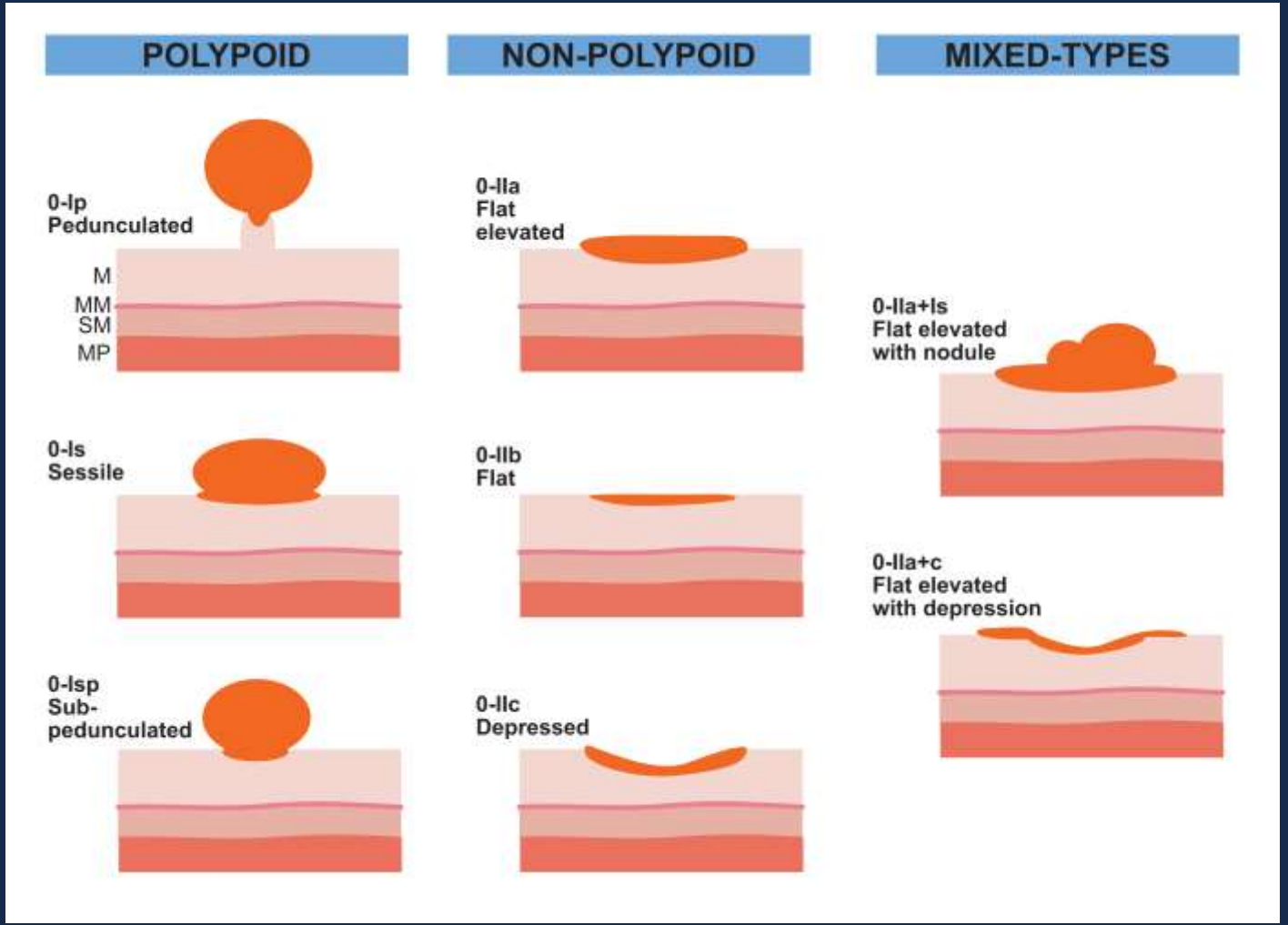
Step 2 - Morphology: the Paris classification

Polypoid (0-I)

0-Ip	pedunculated
0-Isp	subpedunculated
0-Is	sessile

Non-polypoid (0-II)

0-IIa	slightly elevated
0-IIb	flat
0-IIc	slightly depressed



Paris workshop participants, GIE 2003; Endoscopic Classification Review Group, Endoscopy 2005; image: original image (P.J. Poortmans – PhD UGent)

Lesions ≥10 mm: laterally spreading lesions

LST-G homogeneous

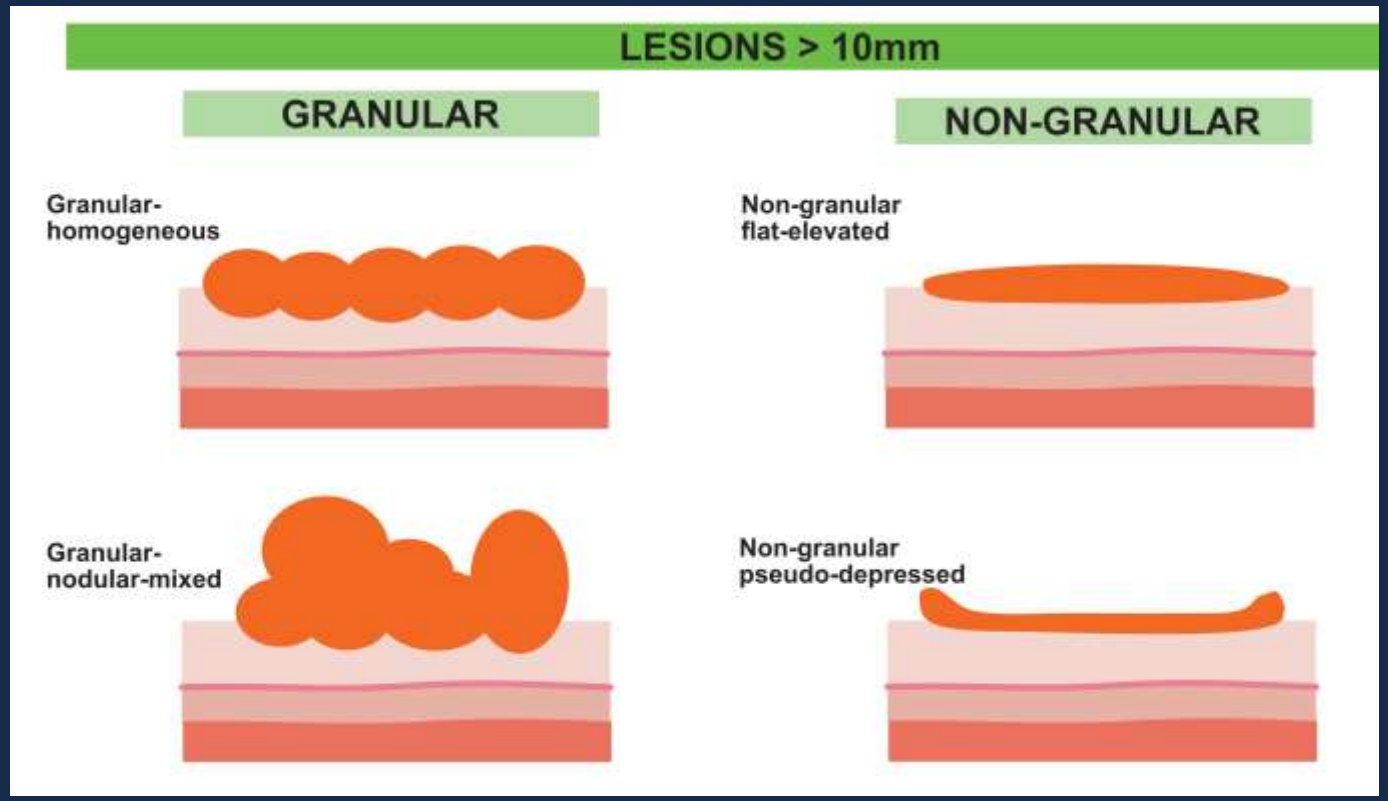
0-IIa ·

lowest risk

LST-G nodular mixed

0-IIa+Is ·

check the dominant nodule



LST-NG flat elevated

0-IIa ·

higher covert-cancer risk

LST-NG pseudodepressed

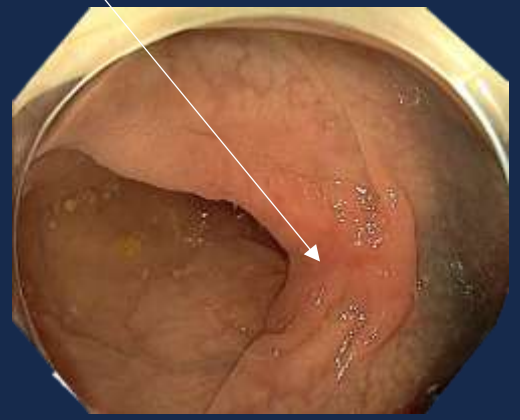
0-IIa+c / 0-IIc ·

highest risk

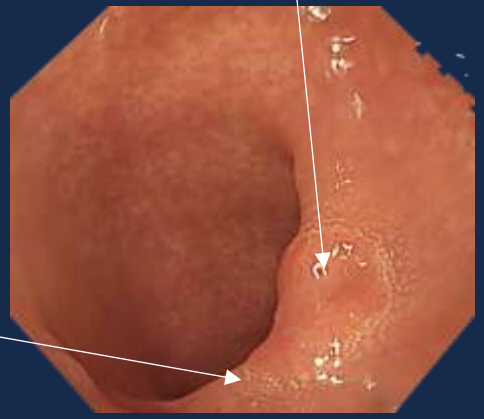
Kudo et al., GIE 2008; Burgess et al., Gastroenterology 2017; image: original image (P.J. Poortmans – PhD UGent)

6 Blink Features

1. Fold deformation
the contour of a colonic haustral fold is interrupted within the polyp / folds converge on this area



2. Extra redness
one area of the polyp is more red than the rest of the polyp

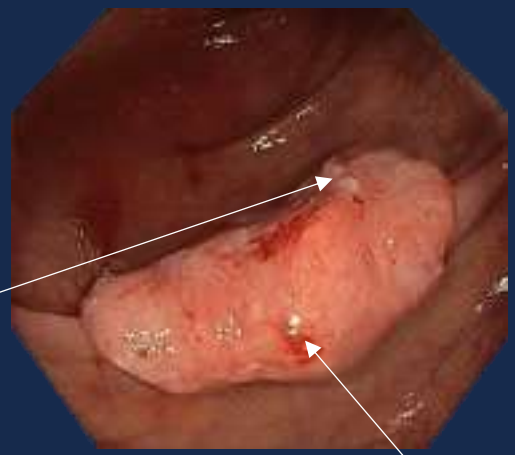


3. Depression
an area within the polyp is sunken/concave with respect to the rest of the polyp



4. Spontaneous bleeding
presence of bleeding on the surface of the polyp not explained by biopsy/scope contact

5. Ulceration
presence of ulceration within the polyp



6. Chicken skin
speckled mucosa surrounding the polyp resembling chicken skin

Sources: Puig et al, GE, 2019; Jang et al, Dig Dis Sci, 2014; Horie et al, Dis colon, 2008; Ikehara et al, J GE H, 2019 ; Debels, EIO 2026.

Examples



Paris 0-IIa, 2mm



LST-NG flat-elevated (Paris 0-IIa), 30mm



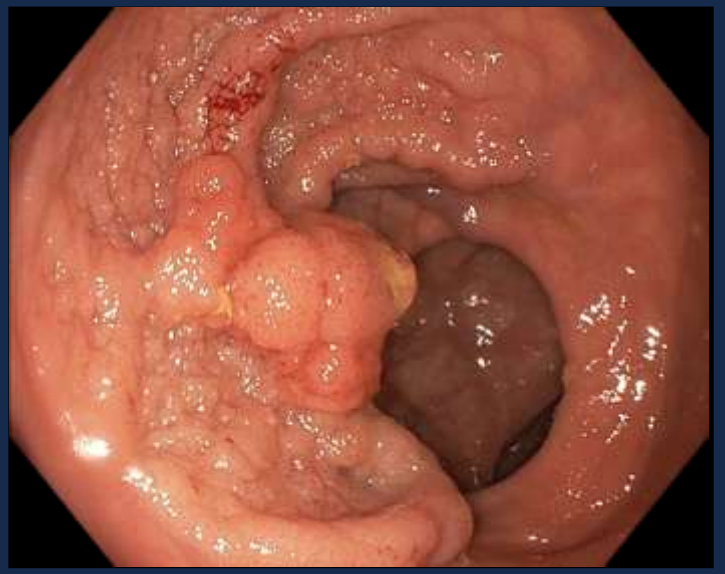
LST-G homogeneous (Paris 0-IIa), 35mm, Blink-



LST-G homogeneous (Paris 0-IIa), 40mm, Blink-

Paris 0-Ip head 15mm stalk 10mm





LST-G nodular mixed (Paris 0-IIa+Is), 55mm

Step 3 - Surface: vessels and pits

NOT FOR PEDUNCULATED POLYPS

NICE

NBI, no magnification

1 hyperplastic (SSL)

2 adenoma

3 deep SM cancer

JNET

NBI, near focus / magnification

1 hyperplastic / SSL

2A low-grade

2B high-grade / superficial SM

3 deep SM cancer

Kudo pit pattern

dye spray ± magnification

I-II non-neoplastic

III-IV adenoma

V (Vi / Vn) cancer

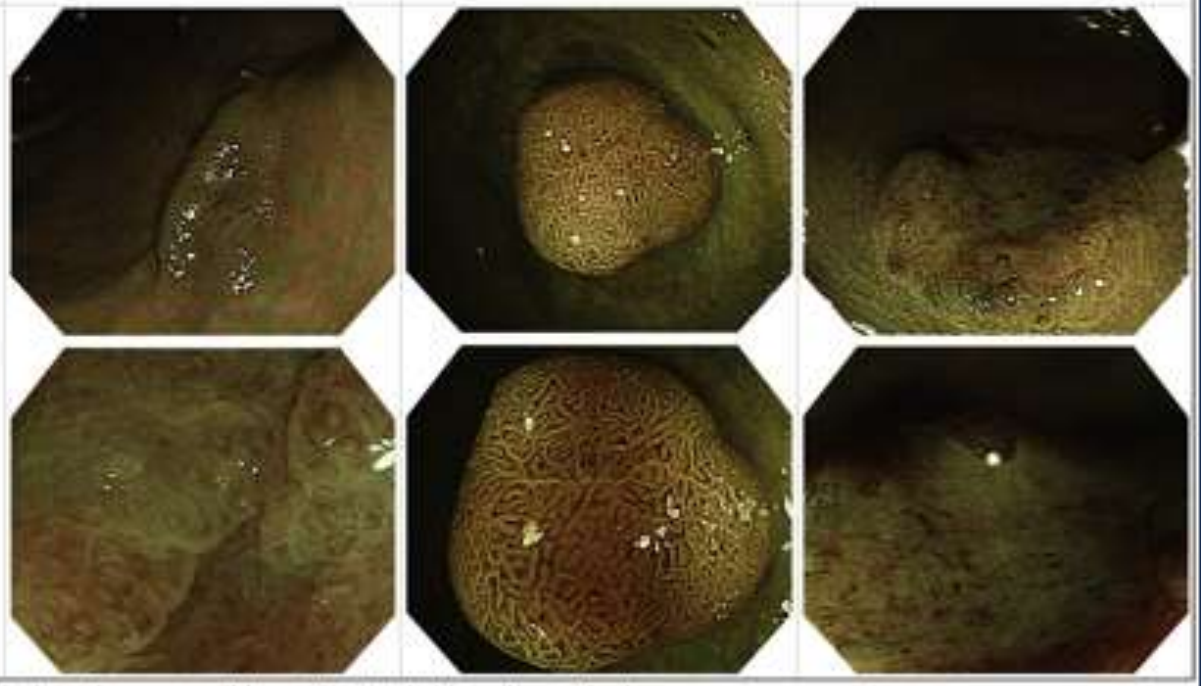
Start with **NICE** for small lesions and **JNET** for larger lesions. Know the others exist.

→ GIEQs: **CRIS** - regular · regularly irregular · irregular

Hewett et al., Gastroenterology 2012; Hayashi et al., GIE 2013; Sano et al., Dig Endosc 2016; Kudo et al., GIE 1996

NICE

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			

* Can be applied using colonoscopes with or without optical (zoom) magnification

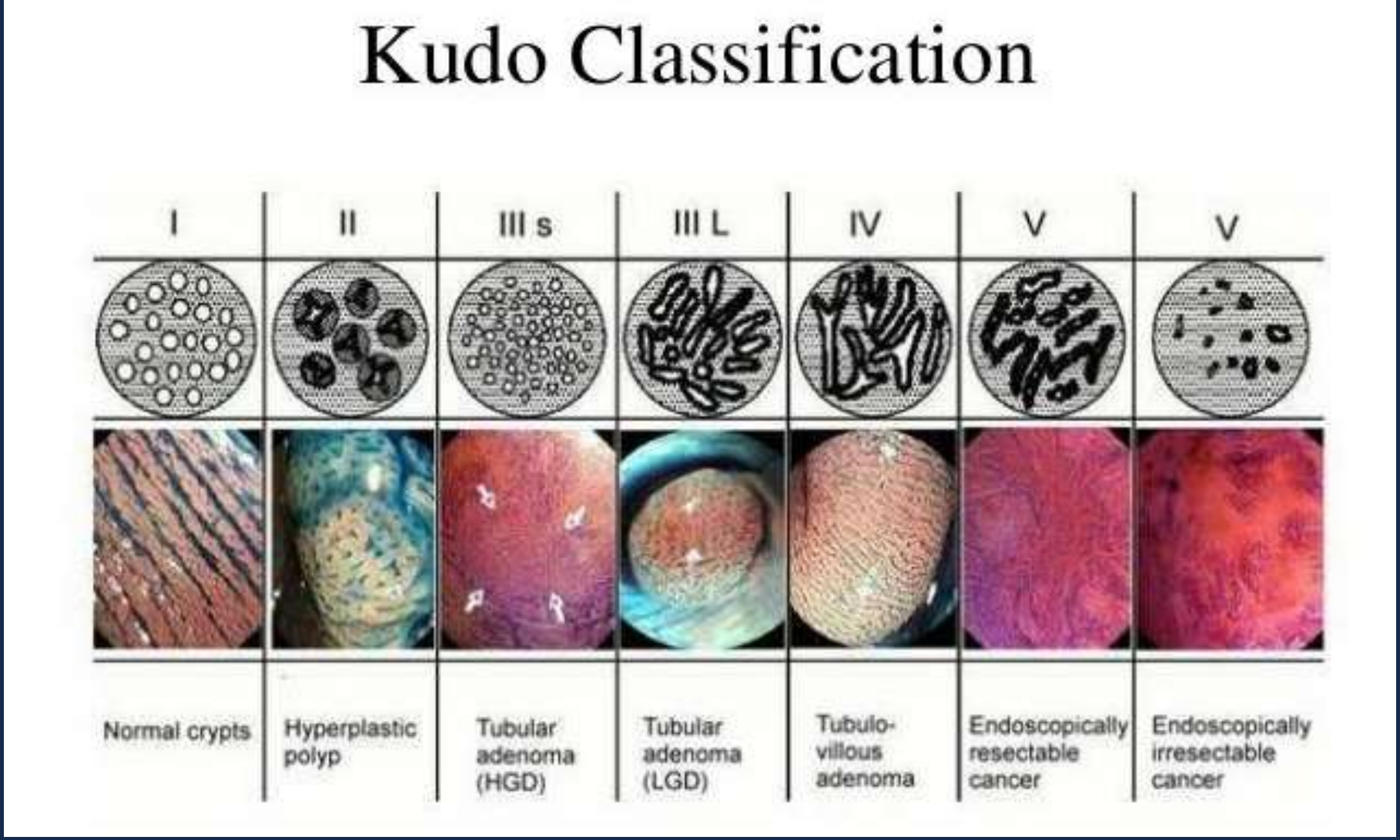
** These structures (regular or irregular) may represent the pits and the epithelium of the crypt opening.

*** Type 2 consists of Vienna classification types 3, 4 and superficial 5 (all adenomas with either low or high grade dysplasia, or with superficial submucosal carcinoma). The presence of high grade dysplasia or superficial submucosal carcinoma may be suggested by an irregular vessel or surface pattern, and is often associated with atypical morphology (e.g., depressed area).

JNET

NBI	Type 1	Type 2A	Type 2B	Type 3
Vessel pattern	· Invisible [1]	· Regular caliber · Regular distribution (meshed/spiral pattern) [3]	· Variable caliber · Irregular distribution	· Loose vessel areas · Interruption of thick vessels
Surface pattern	· Regular dark or white spots · Similar to surrounding normal mucosa	· Regular (tubular/branched/papillary)	· Irregular or obscure	· Amorphous areas
Most likely histology	Hyperplastic polyp/ Sessile serrated lesion [2]	Low grade intramucosal neoplasia	High grade intramucosal neoplasia/ Shallow submucosal invasive cancer [4]	Deep submucosal invasive cancer
Endoscopic image	 Hyperplastic polyp	 Tubular adenoma	 Intramucosal adenocarcinoma	 Deep submucosal invasive cancer
	 Sessile serrated lesion	 Tubulovillous adenoma	 Shallow submucosal invasive cancer	 Deep submucosal invasive cancer

Kudo


Kudo Classification
I
II
III s
III L
IV
V
V
Normal crypts
Hyperplastic polyp
Tubular adenoma (HGD)
Tubular adenoma (LGD)
Tubulo-villous adenoma
Endoscopically resectable cancer
Endoscopically irresectable cancer

CRIS

NICE	NICE 1	NICE 2	NICE 2	NICE 3
JNET	JNET I	JNET 2A	JNET 2B	JNET 3
	CRIS-R	**CRIS-R**	**CRIS-RI**	**CRIS-I**
	Hyperplastic Serrated	Adenoma	Adenoma + HGD/Cancer	Adenoma + Deep Cancer
Cancer Risk	**LOW**		**HIGH**	



Red flags for deep submucosal invasion

- Depressed component (**0-IIc**)
- A **demarcated area** with disrupted surface / vessels (**NICE 3 · JNET 3 · Kudo Vn**)
- Large dominant nodule, ulceration, rigidity, fold convergence/deformation
- "Non-lifting" after injection (late, non-specific, **not advised**)

⚑ No blink features
⚑ Paris 0-IIa
⚑ JNET 2A
→ **TA LGD**



⚑ Multiple blink features
⚑ Paris 0-IIa+c
⚑ JNET 3
→ **AC T3N1**



Then:

Don't snare · photograph · potentially tattoo (distal, not into it) · potentially biopsy · discuss / refer

Ferlitsch et al., Endoscopy 2024; Bisschops et al., ESGE advanced imaging guideline, Endoscopy 2019

Keep it simple:
the GIEQs algorithm

1 **Blink**

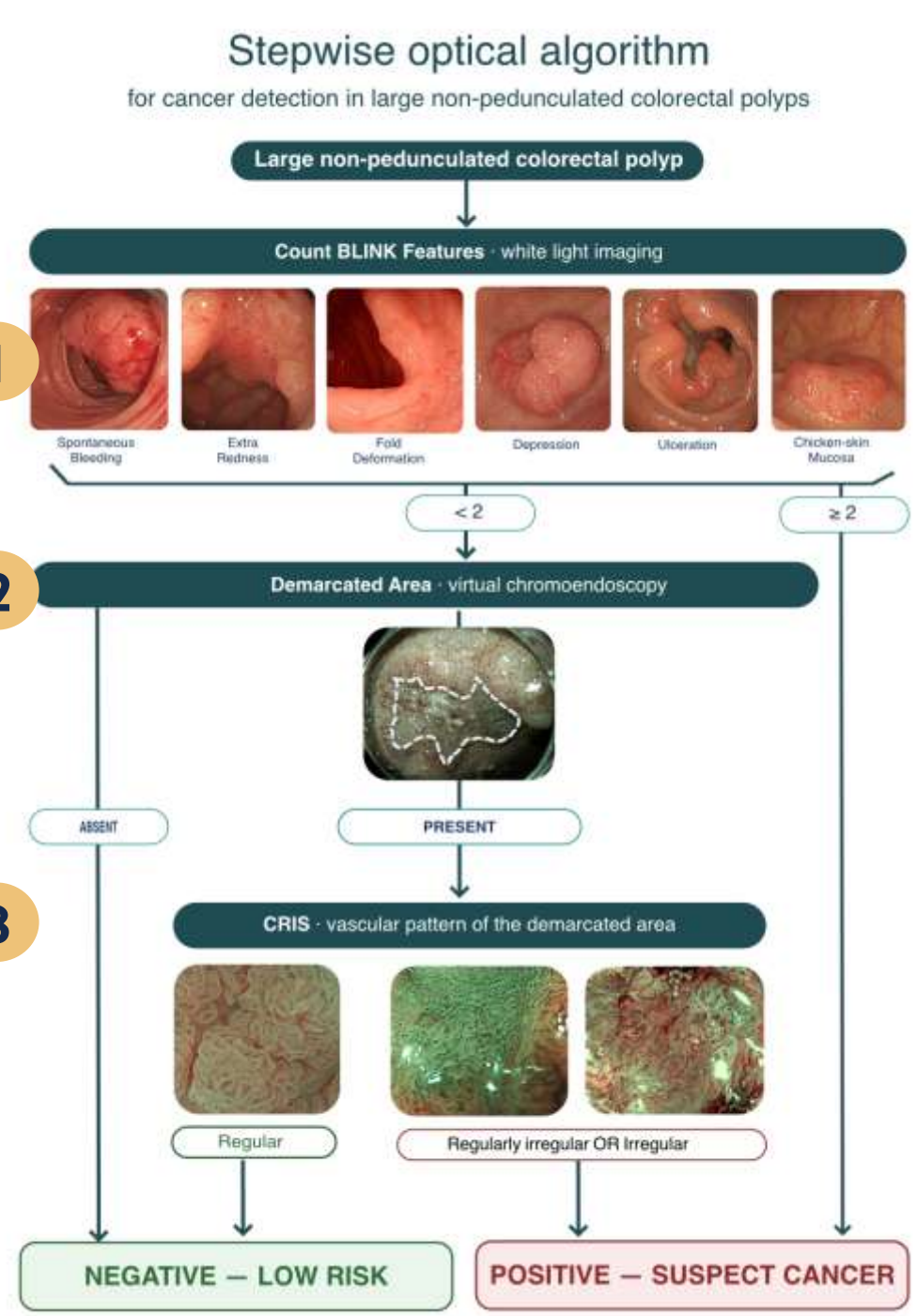
First white-light impression - anything suspicious?

2 **Demarcation**

Is there a demarcated area (VCE)?

3 **Vessels - CRIS**

Regular · regularly irregular · irregular?



Don't miss serrated lesions

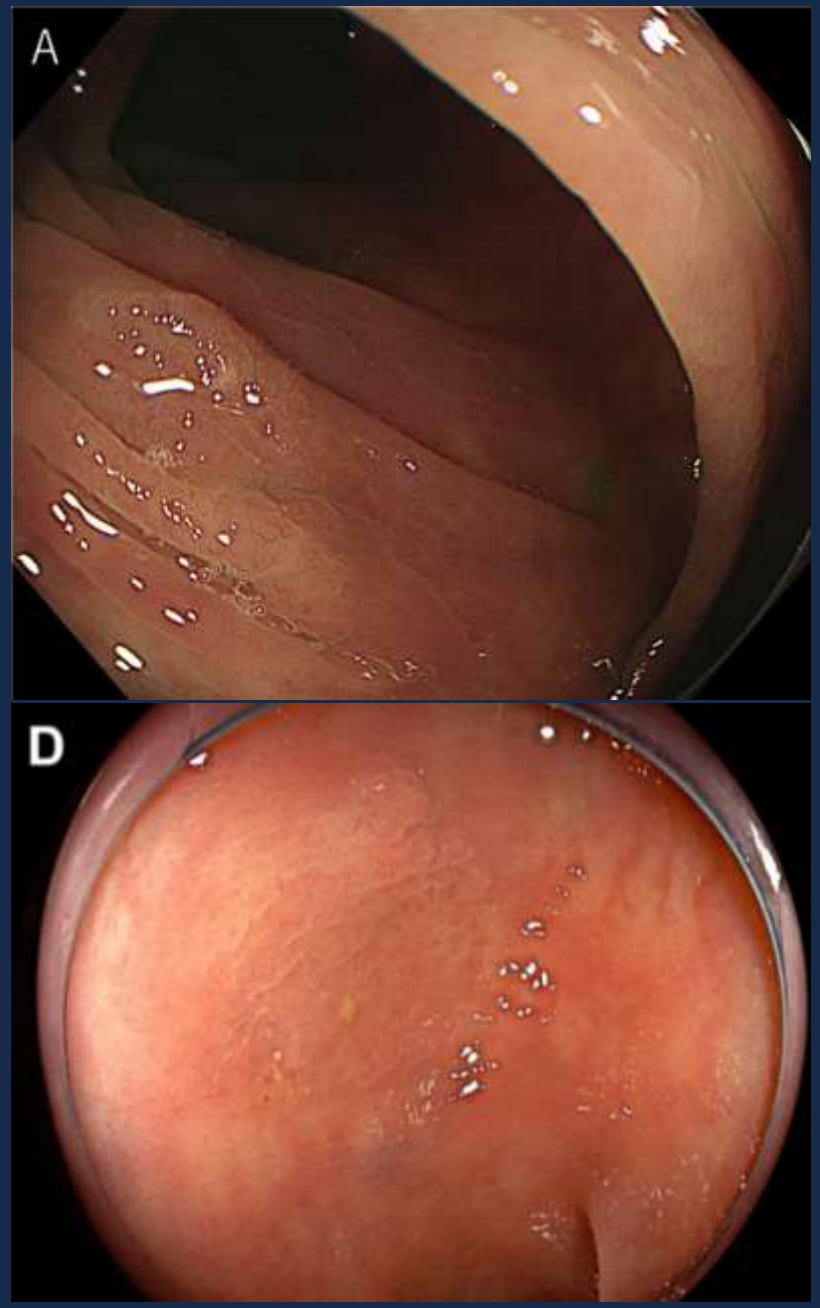
Right colon · flat · pale · easily missed

White light: mucus cap, cloud-like surface, indistinct border

NBI: dark spots in crypts, varicose vessels (WASP)

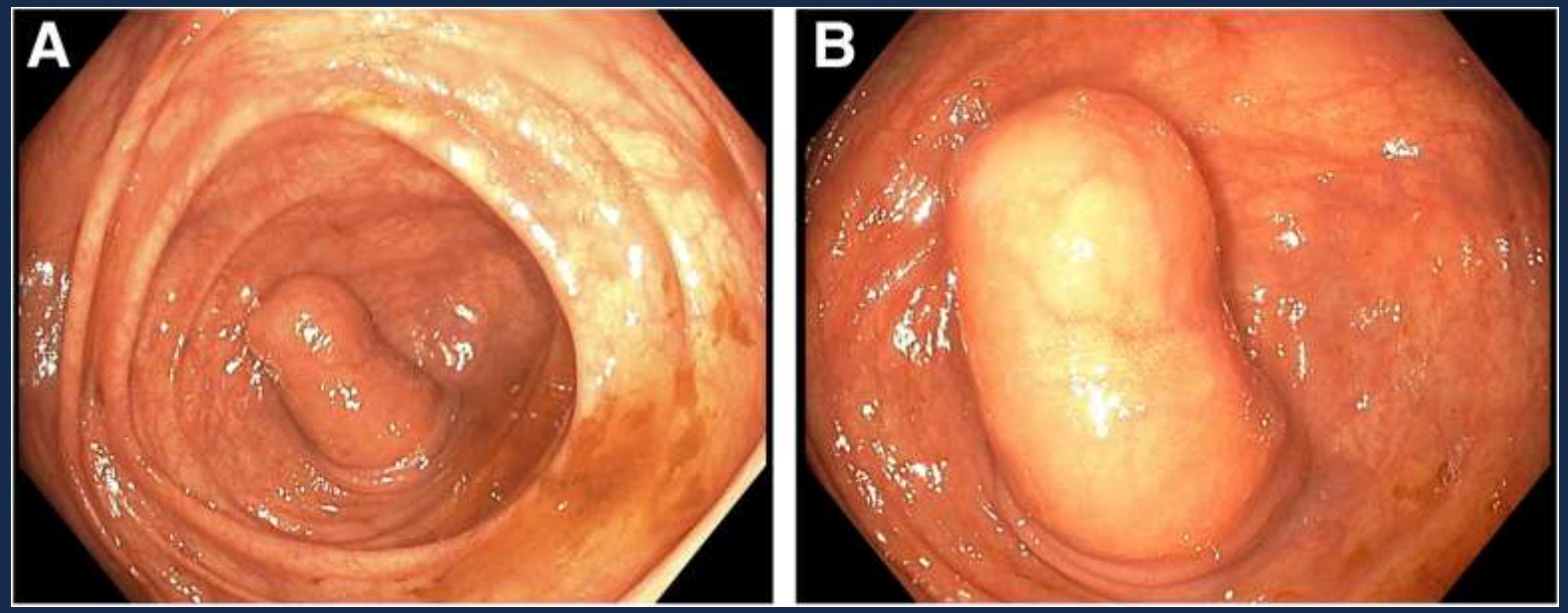
Nodule or adenomatous area inside an SSL = **dysplasia**

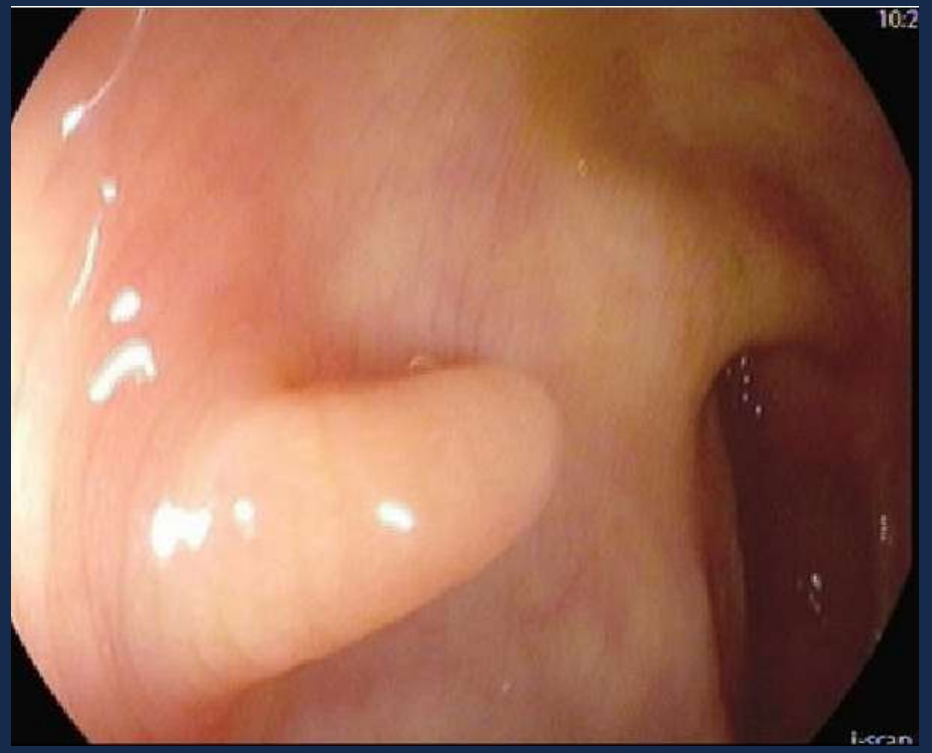
Plenty more examples on gieqs.com



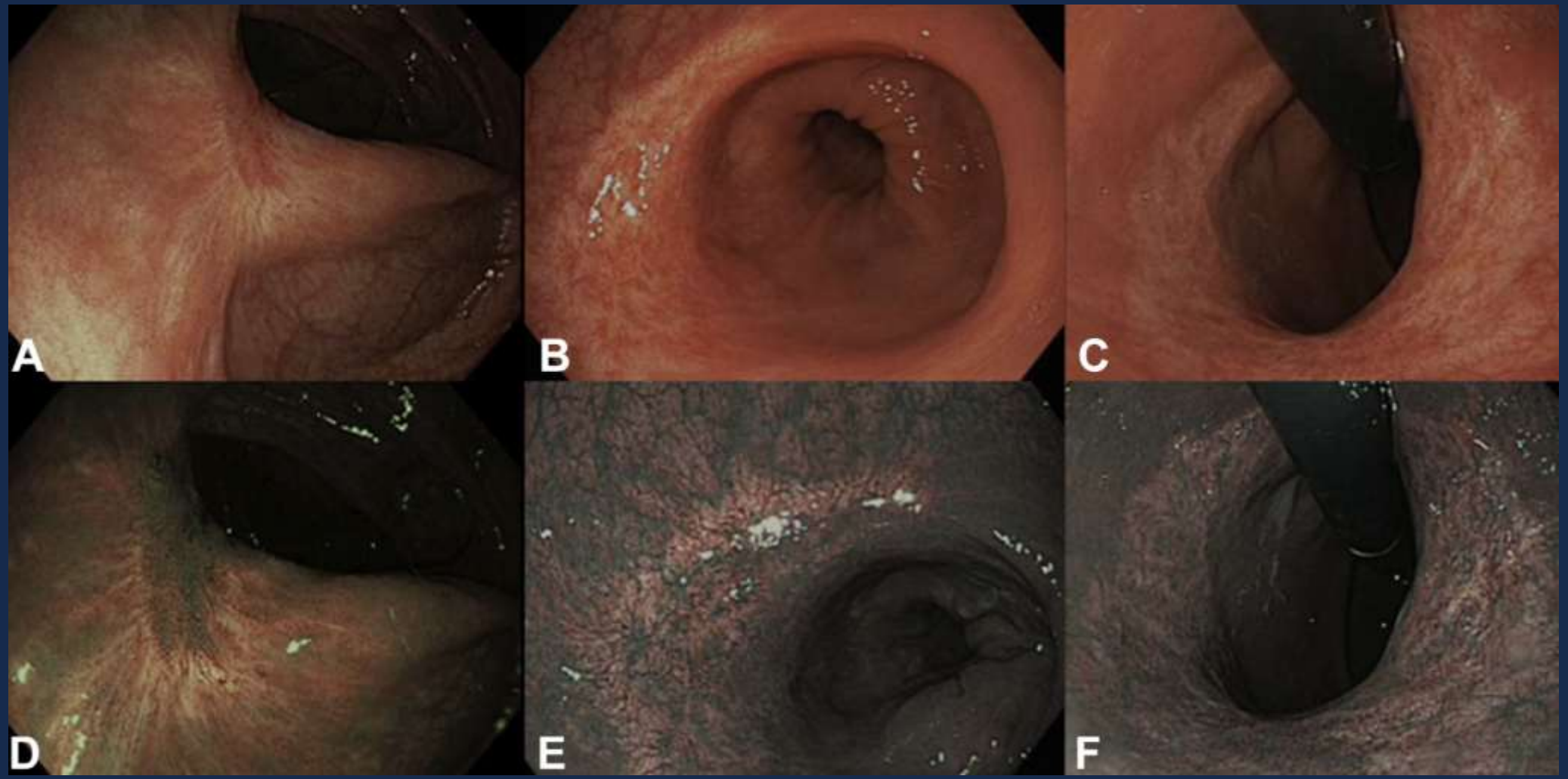
IJspeert et al., Gut 2016 (WASP); Hassan et al., Endoscopy 2020

But not all polypoid lesions are polyps





Resection scar: look for residual adenoma



Desomer L. GIE 2016.

Part II - Diverticula

Common, mostly harmless - but know the pitfalls

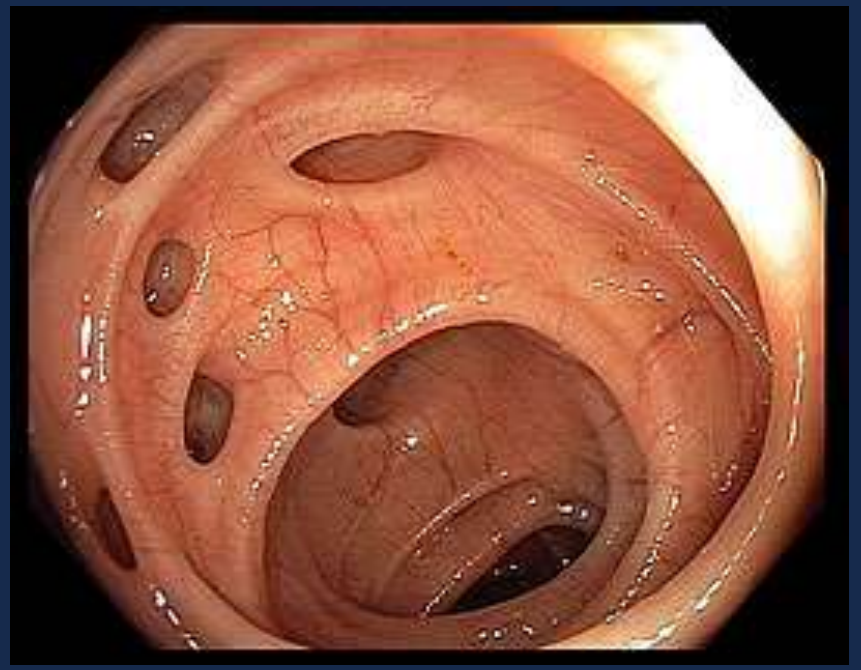
Diverticulosis: mind the scope

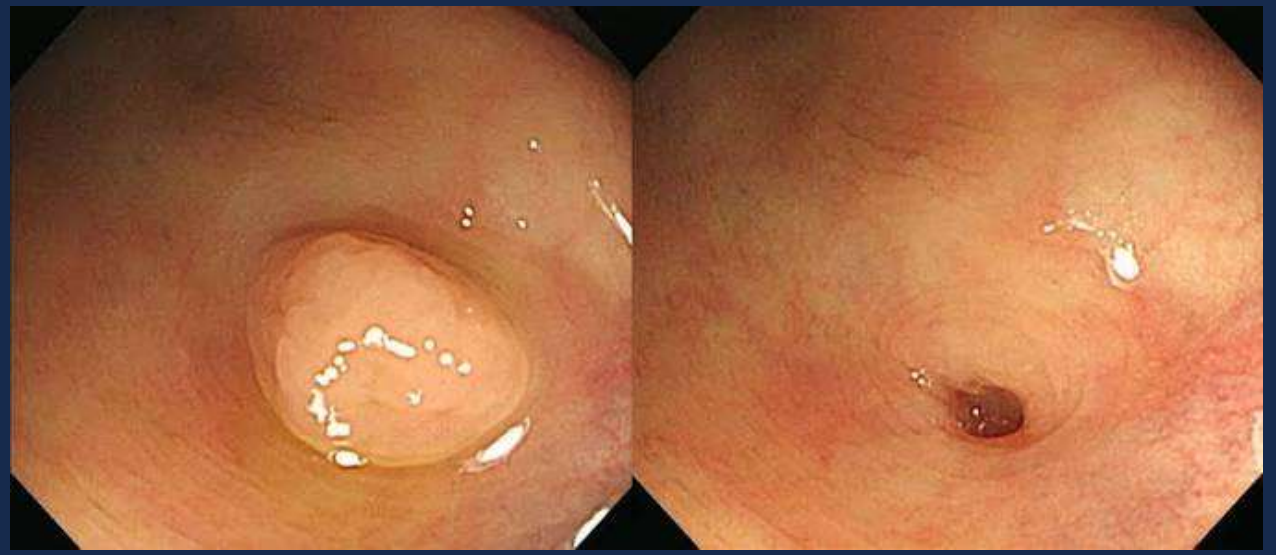
Sigmoid in Western patients, **right-sided** in Asian patients

A diverticulum is **not the lumen** - never push blind;
→ reduce, straighten, cap / slimmer scope

Inverted diverticulum mimics a polyp: normal pattern, everts with air or gentle forceps push → **don't snare**

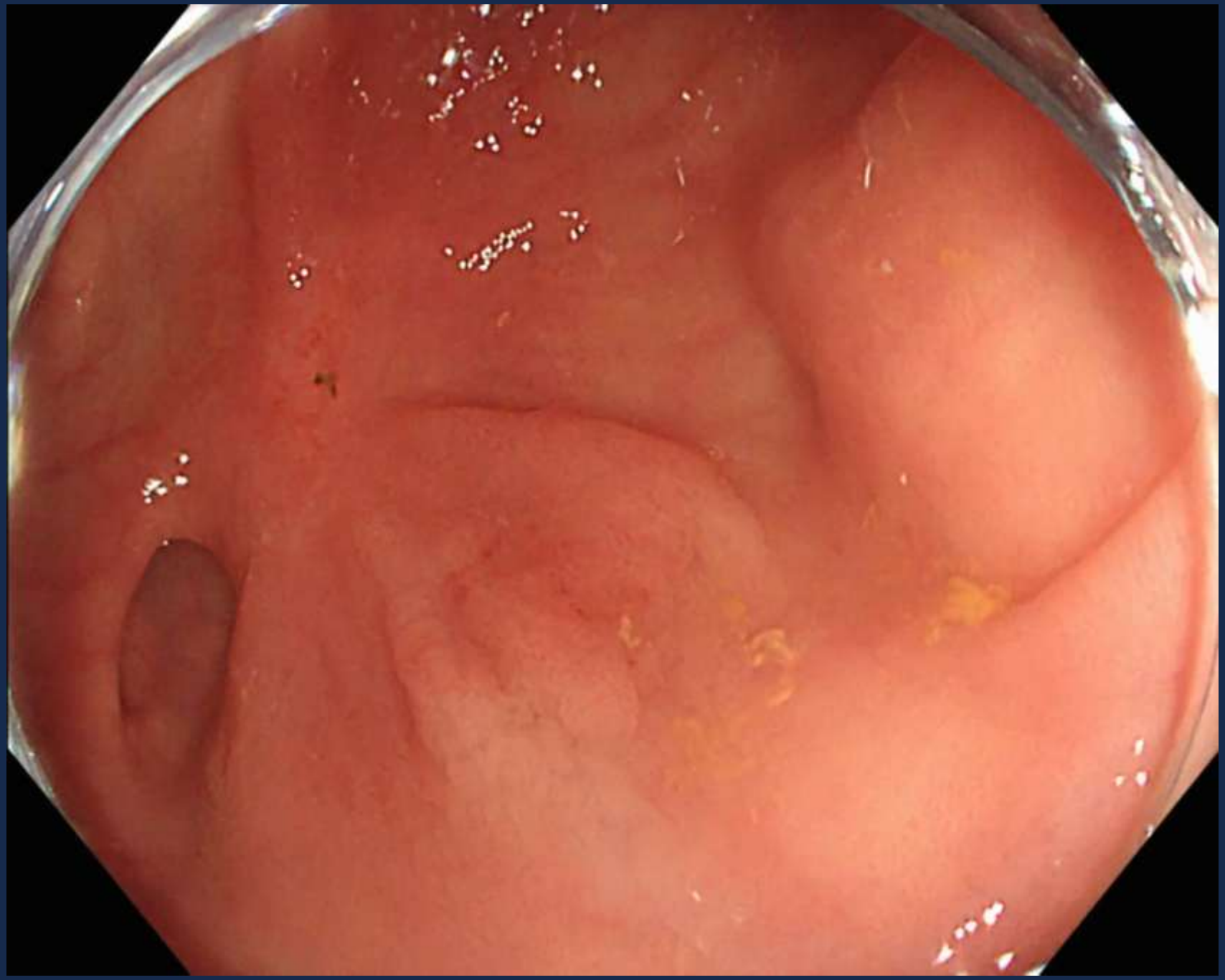
Look inside - polyps and bleeding can hide there



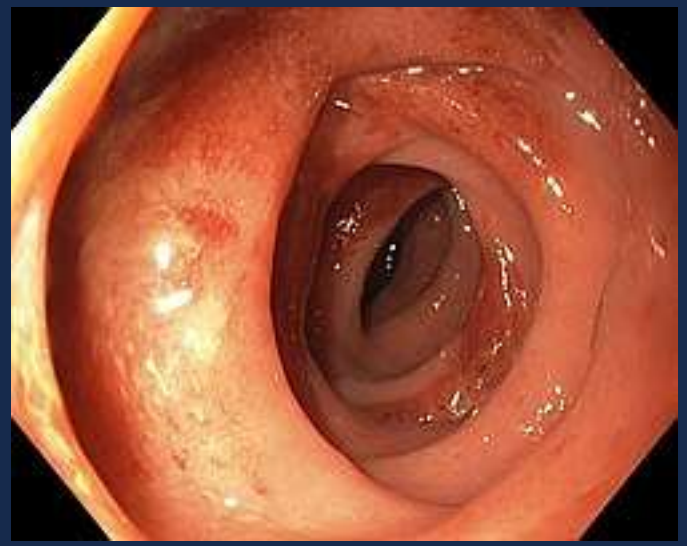


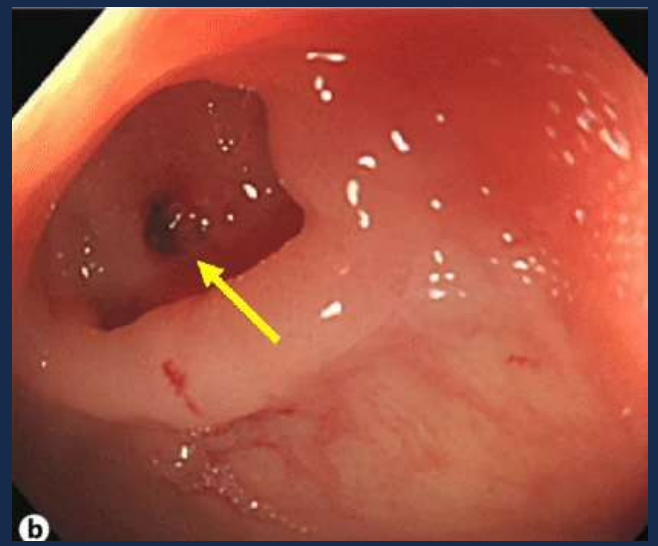
Tursi et al., Nat Rev Dis Primers 2020

Diverticulosis



Diverticular disease: what to look for





Inflammation

SCAD: colitis between diverticula, rectum spared

IBD mimic → **biopsy the rectum too**

SCAD: segmental colitis associated with diverticulosis

Bleeding

Stigmata: active bleeding, visible vessel, adherent clot

→ treat (clip or RBL)

After diverticulitis

Risk of stenosis in chronic/recurring diverticulitis

If stenotic / difficult passage

→ consider a pediatric coloscope!

Samasca et al, J Clin Med 2026 ; Schultz et al., ESCP guideline, Colorectal Dis 2020; Triantafyllou et al., ESGE acute LGIB guideline, Endoscopy 2021

Part III - Angiodysplasia & Radiation Proctitis

Small, red, flat - and usually innocent

Angiodysplasia

Flat, bright red, 2-10 mm (sometimes larger), fern-like margin

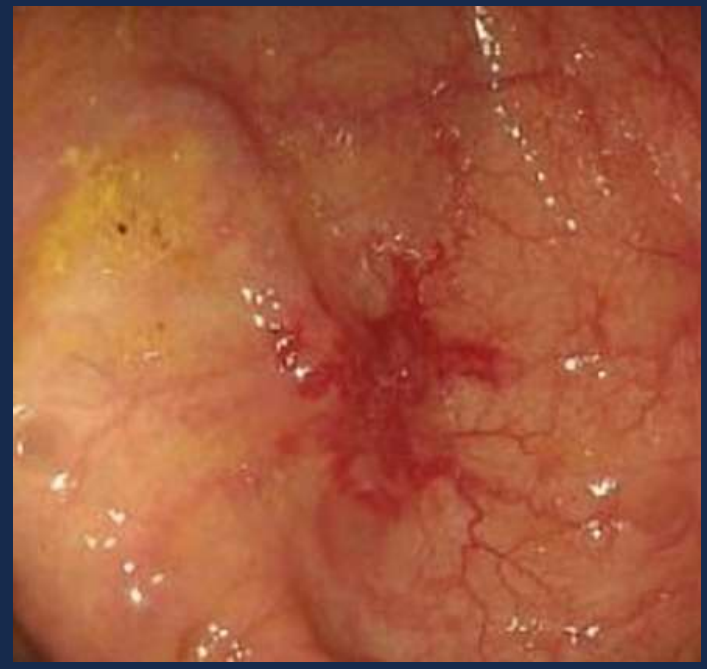
Typical: Caecum / right colon · elderly

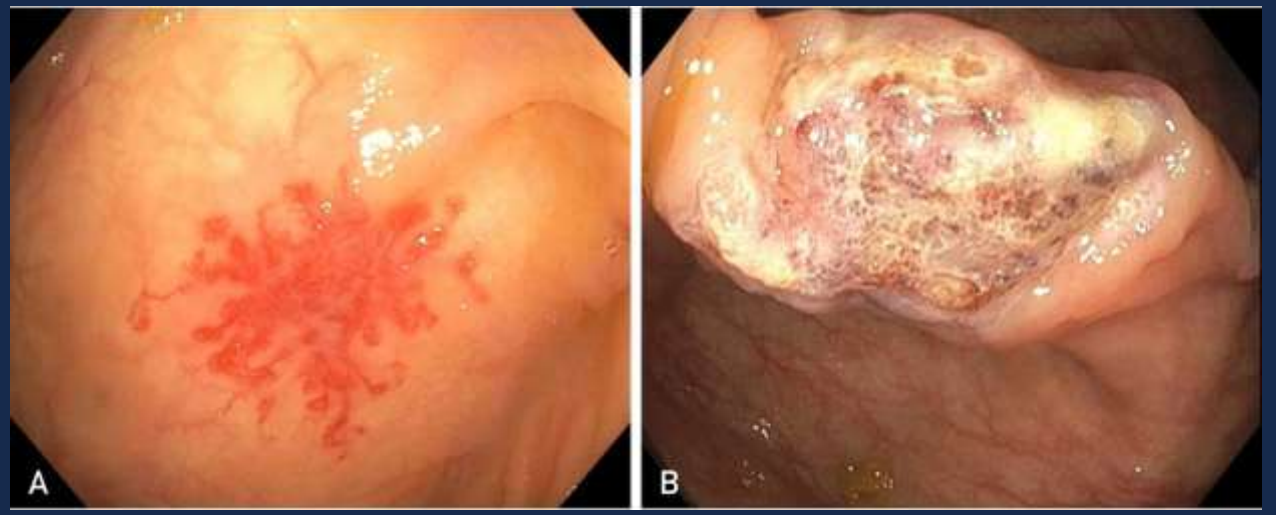
Linked to aortic stenosis (Heyde syndrome), CKD, LVAD

<u>2 options</u>:

- Incidental find → leave, don't treat
- bleeding / iron-deficiency → submucosal injection + **APC** ± clipping

Photograph **before** washing or suction





Sami et al., Aliment Pharmacol Ther 2014; Becq et al., GIE 2017

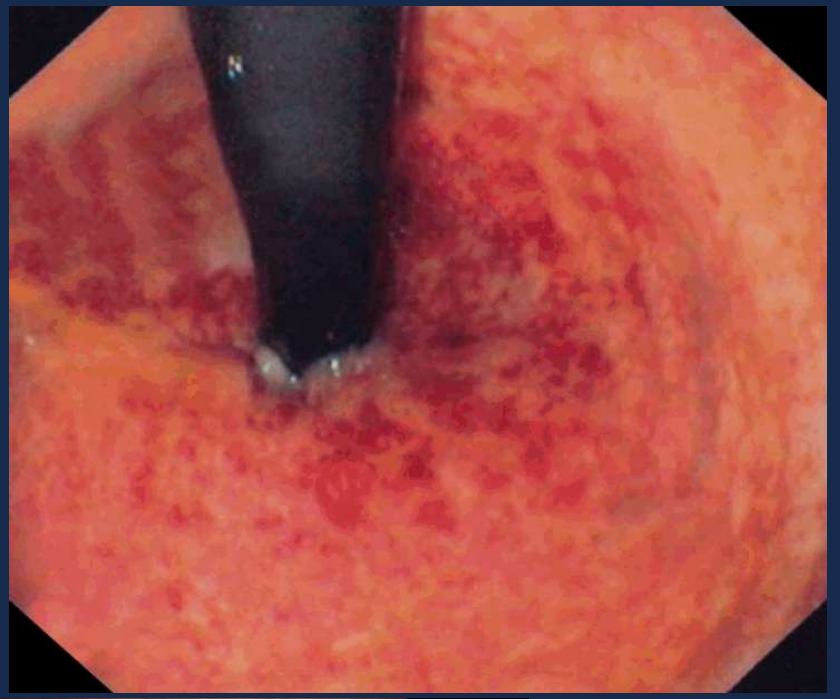
Radiation proctitis

Post-radiotherapy of the pelvis (prostate ++)

Difficult to treat - dilemma

<u>3 options</u>:

- Incidental find → leave, don't treat, report
- Recurrent RBPA → Sucralfate enema 2x/day, hyperbaric oxygen therapy
- Active bleeding → submucosal injection + **APC** ?

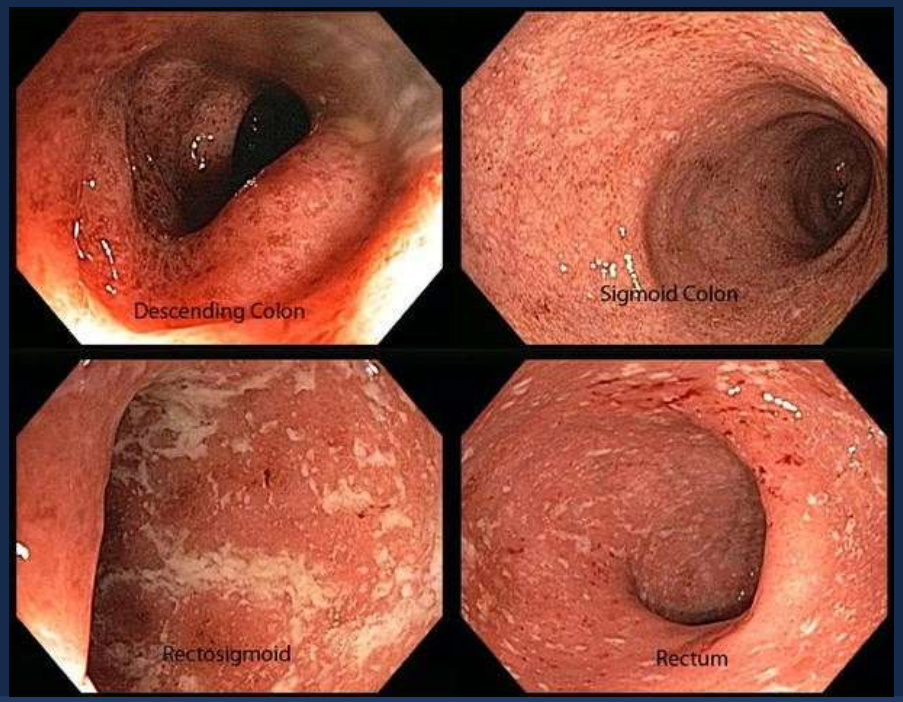


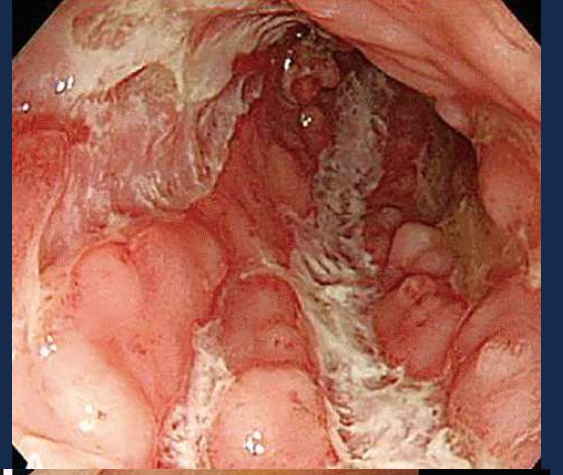


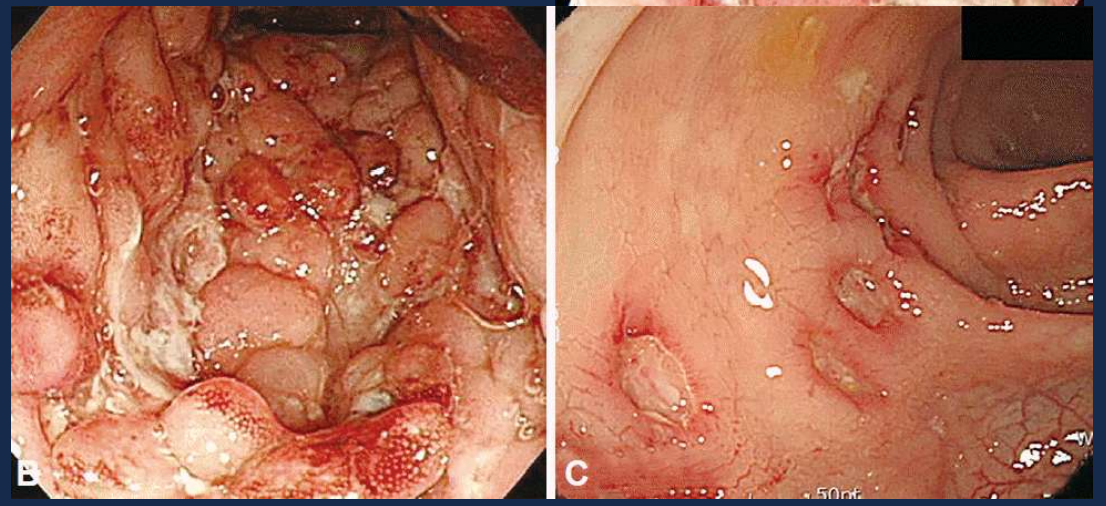
Part IV - Inflammation & IBD

Read the pattern · think of mimics · biopsy · score

Is this IBD? Read the pattern







Ulcerative colitis

From the rectum, **continuous**, sharp border

Vascular pattern lost → granular, friable → ulcers

NB: Caecal patch / backwash ileitis possible

Crohn's disease

Skip lesions, rectum often spared, most commonly ileal

Aphthae → deep longitudinal ulcers, cobblestoning

Terminal ileum, strictures, fistulae

Kucharzik et al., ECCO-ESGAR-ESP-IBUS diagnostics & monitoring guideline (part 1), J Crohns Colitis 2025

Suspect IBD? 4 things to do

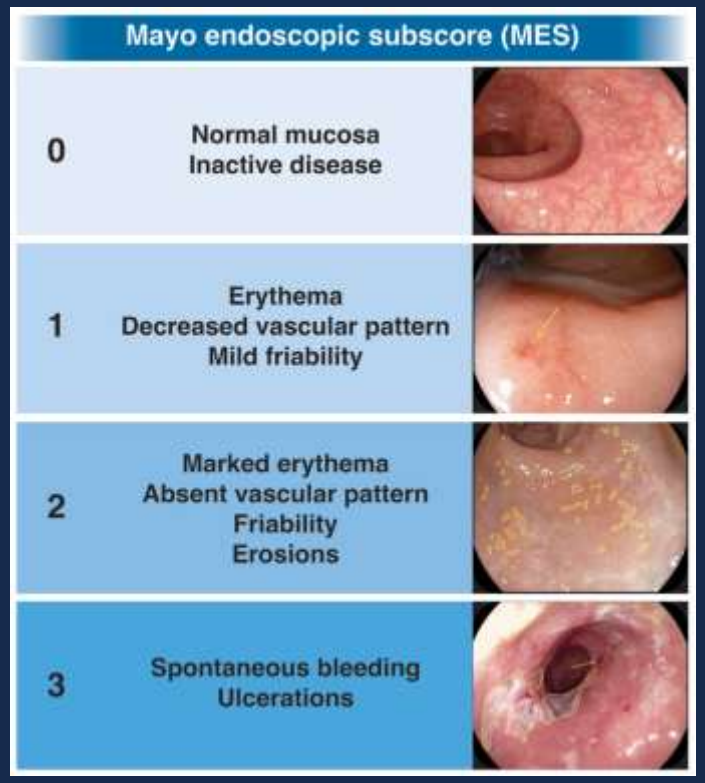
1. Intubate the terminal ileum
2. Biopsies: **≥2 from ≥5 sites** incl. rectum + ileum, separate pots, also normal mucosa
3. Describe **extent** (Montreal) and **severity** (validated score)
4. Photo-document every segment

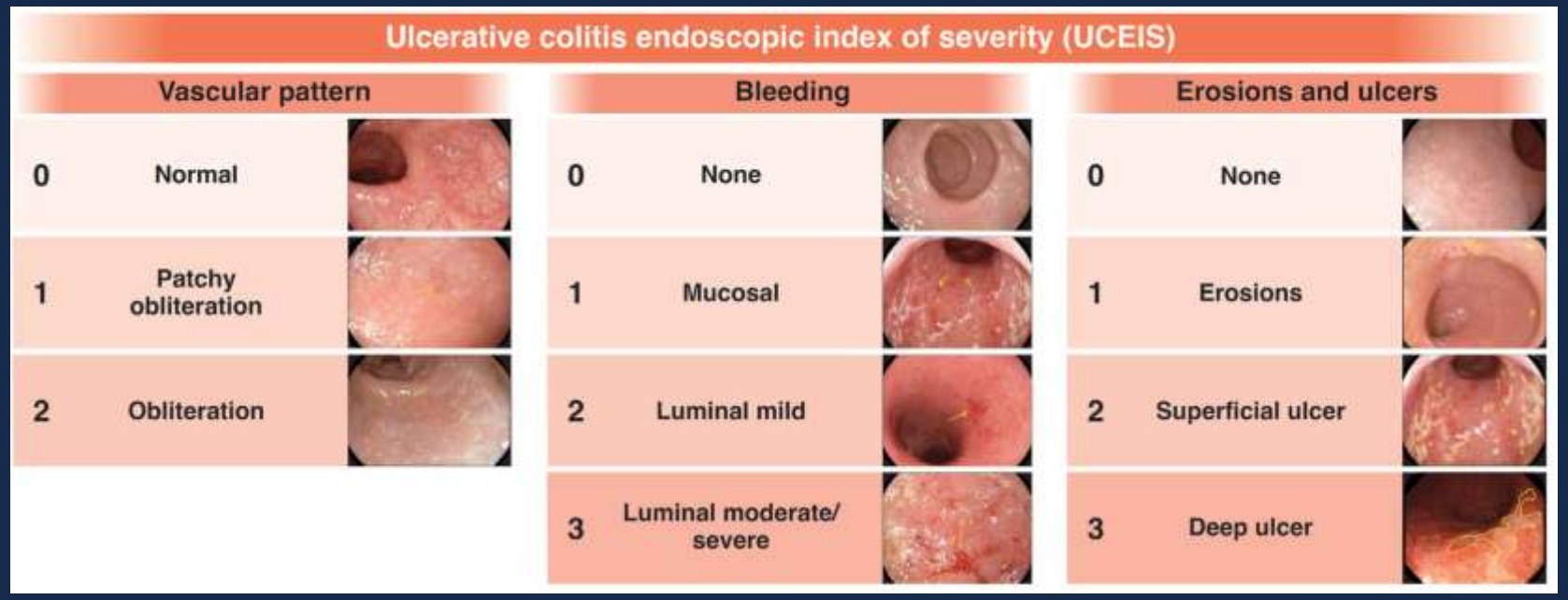


Kucharzik et al., J Crohns Colitis 2025; Maaser et al., ECCO-ESGAR guideline, J Crohns Colitis 2019

Scores: know they exist, use one

UC





Mayo

UC · 0-3

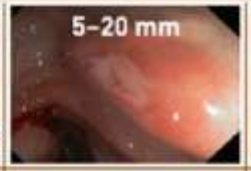
UCEIS

UC · 3 descriptors

Learn them: **ECCO e-learning**

Buchner et al., AGA Clinical Practice Update on endoscopic scoring systems in IBD, Clin Gastroenterol Hepatol 2024

Crohn

SES-CD activity index				
SES-CD	0	1	2	3
Presence and size of ulcers		 1–5 mm	 5–20 mm	 >20 mm
Extent of the ulcerated surface		<10%	<10–30%	>30%
Extent of the affected surface		<50%	<50–70%	>70%
Presence and type of stenosis		 Single passable	 Multiple passable	 Impassable
5 segments	Rectum Left colon Transverse colon Right colon Ileum	SES-CD	<Inactive 3–6 Mild activity 7–15 Moderate activity ≥16 Severe activity	

SES-CD

Crohn's · per segment

Rutgeerts score		
i0	No lesions	
i1	≤ 5 aphthous ulcers	
i2	> 5 aphthous lesions with normal mucosa between the lesions, or skip area of large lesions, or lesions confined to ileocolonic anastomosis	
i2a	Lesions confined to anastomosis (including anastomotic stenosis)	
i2b	> 5 aphthous ulcers or larger lesions, with normal mucosa in-between, in the neoterminal ileum (with or without anastomotic lesions)	
i3	Diffuse aphthous ileitis with diffusely inflamed mucosa	
i4	Diffuse inflammation with large ulcers, nodules, and/or narrowing	

Rutgeerts

post-op neo-TI · i0-i4

Learn them: **ECCO e-learning**

Buchner et al., AGA Clinical Practice Update on endoscopic scoring systems in IBD, Clin Gastroenterol Hepatol 2024

Long-standing colitis: a different exam

Start **~8 years** after onset (at diagnosis if **PSC**)

Conditions:

- Disease in **remission**
- Excellent prep
- Take enough time!

→ **HD-WLI + chromoendoscopy** (dye or virtual)
(see other lecture)

Lesions: Paris + SCENIC (border, ulceration)

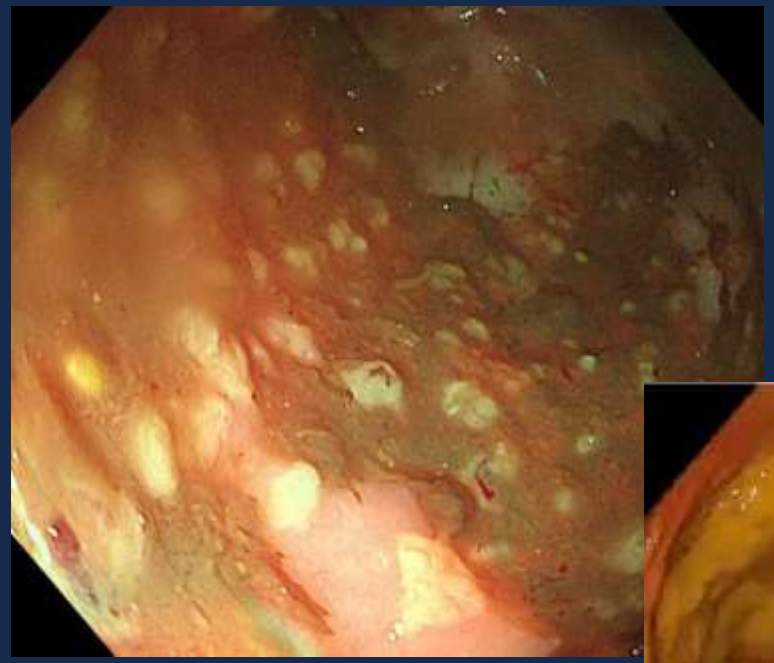
Post-inflammatory polyps: past severe inflammation





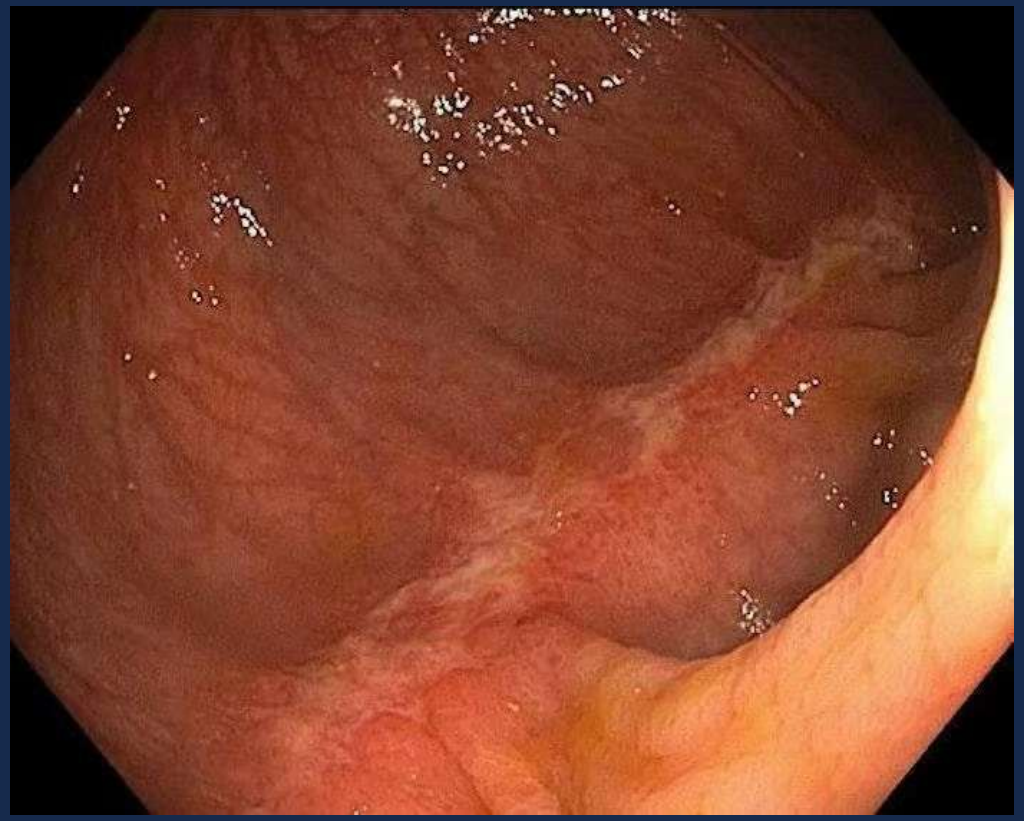
Gordon et al., ECCO guidelines on IBD and malignancies, J Crohns Colitis 2023; East et al., BSG IBD surveillance guideline, Gut 2025

Inflammation is not always IBD



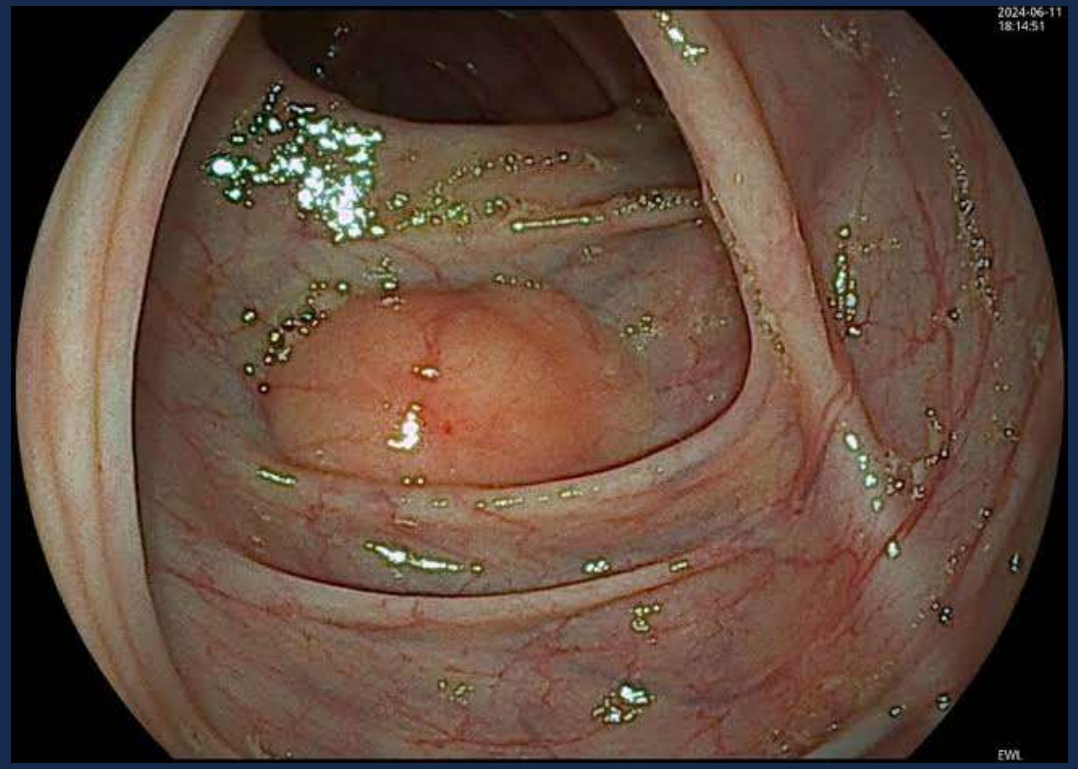
Infectious
eg. C. Difficile –
pseudomembranous colitis





Ischaemic
segmental, watershed, rectum spared

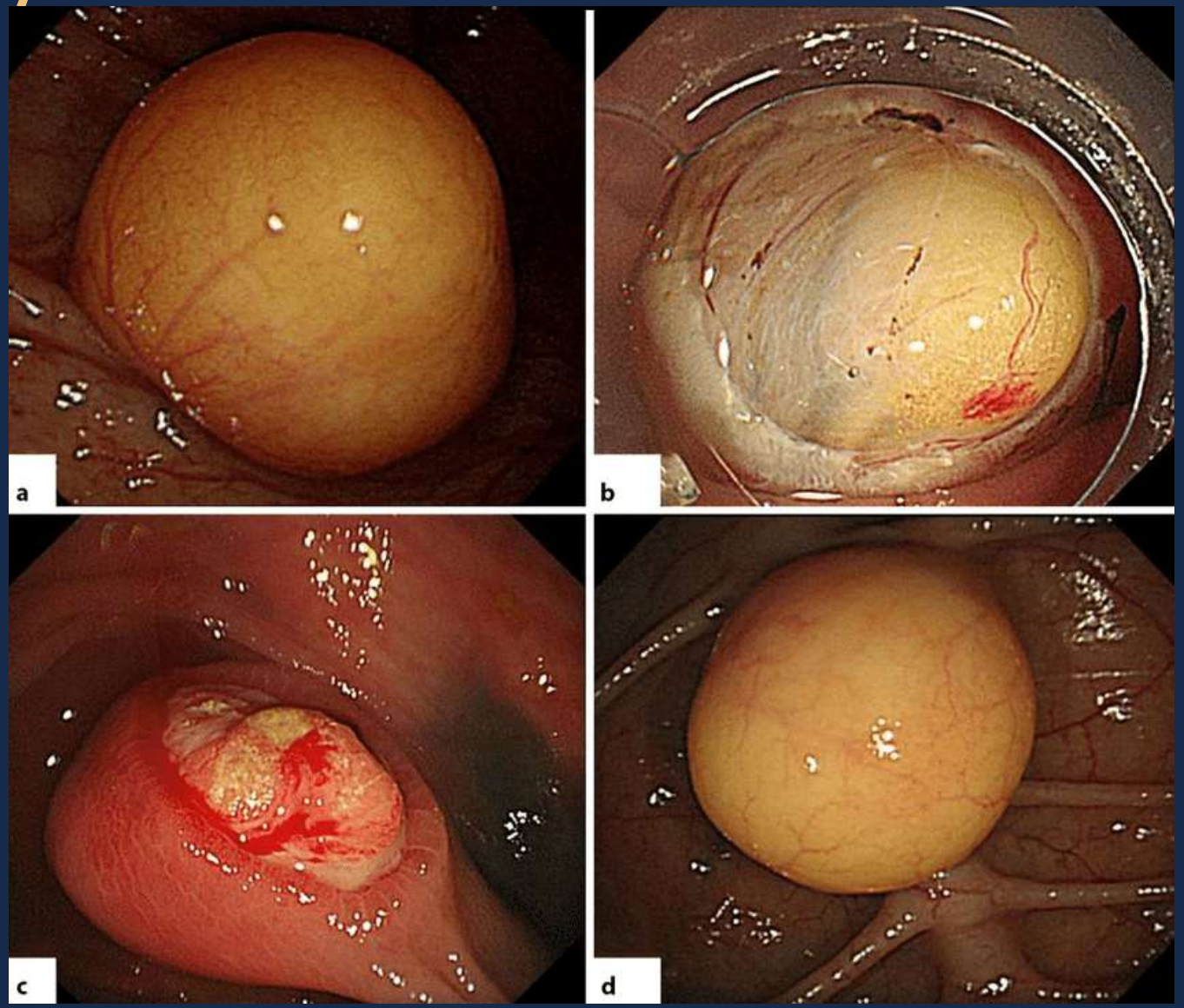
… and more: things you will meet



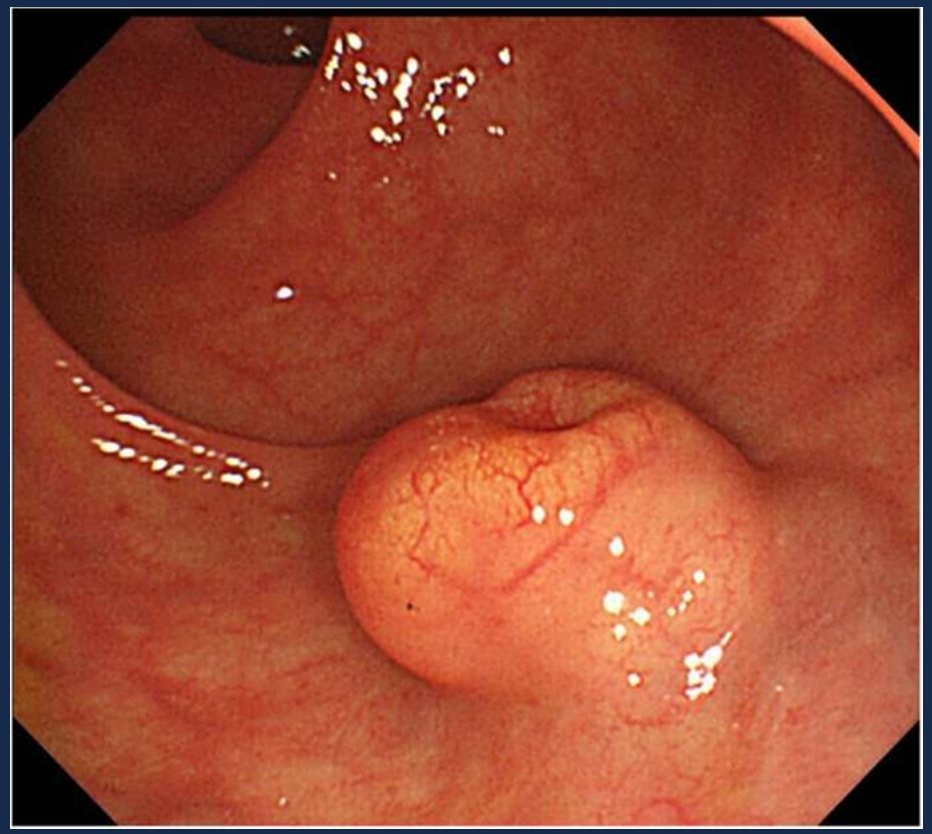
Lipoma

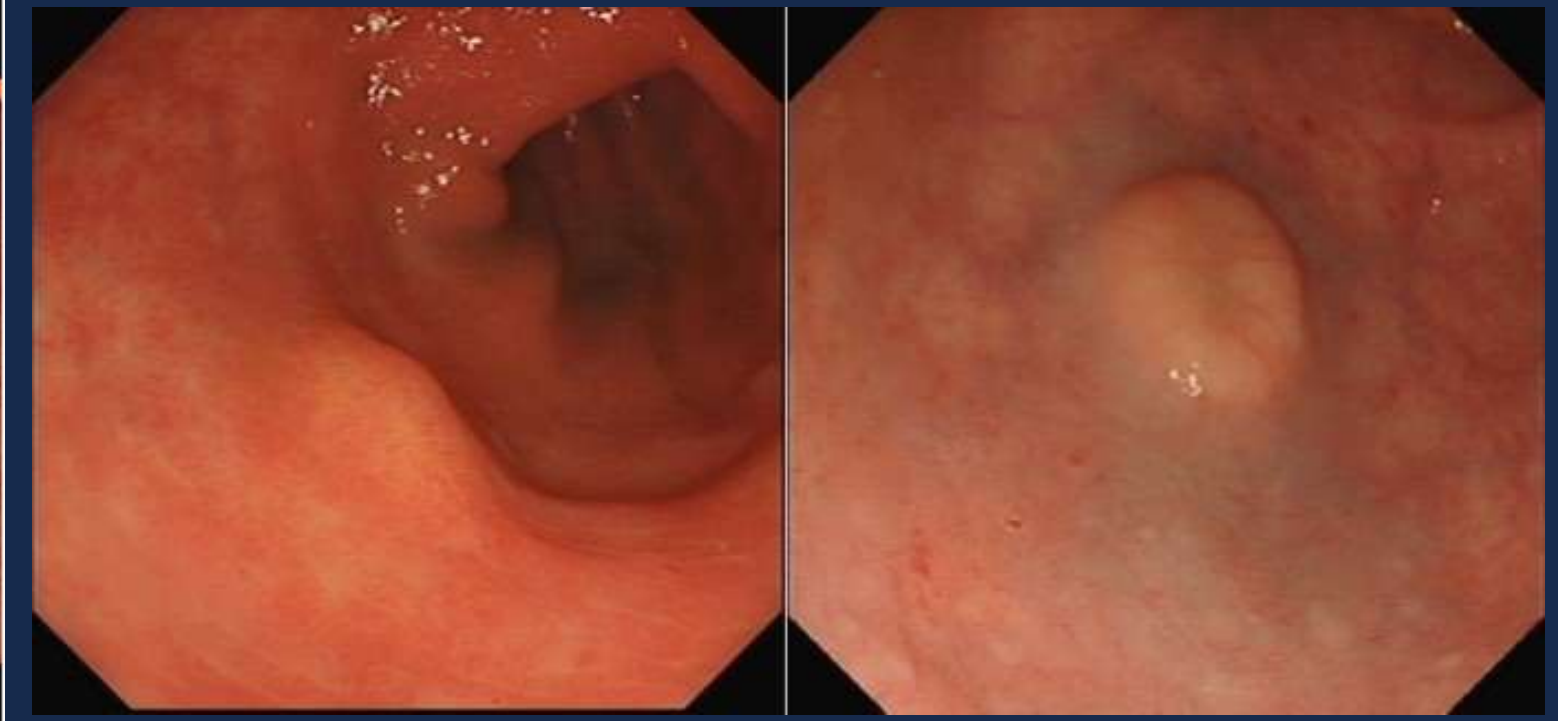
yellow, soft, anywhere in GI tract

Unsure? pillow sign



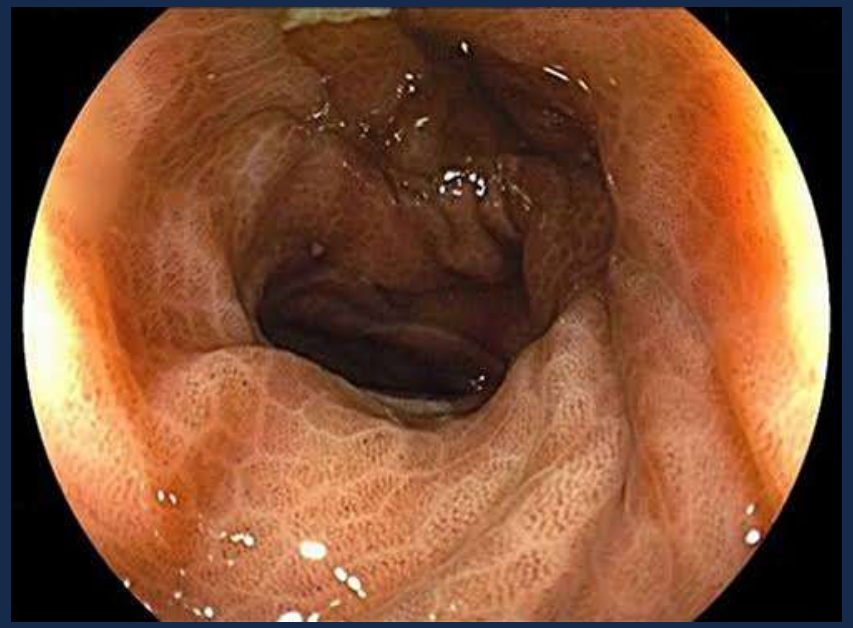
… and more: things you will meet

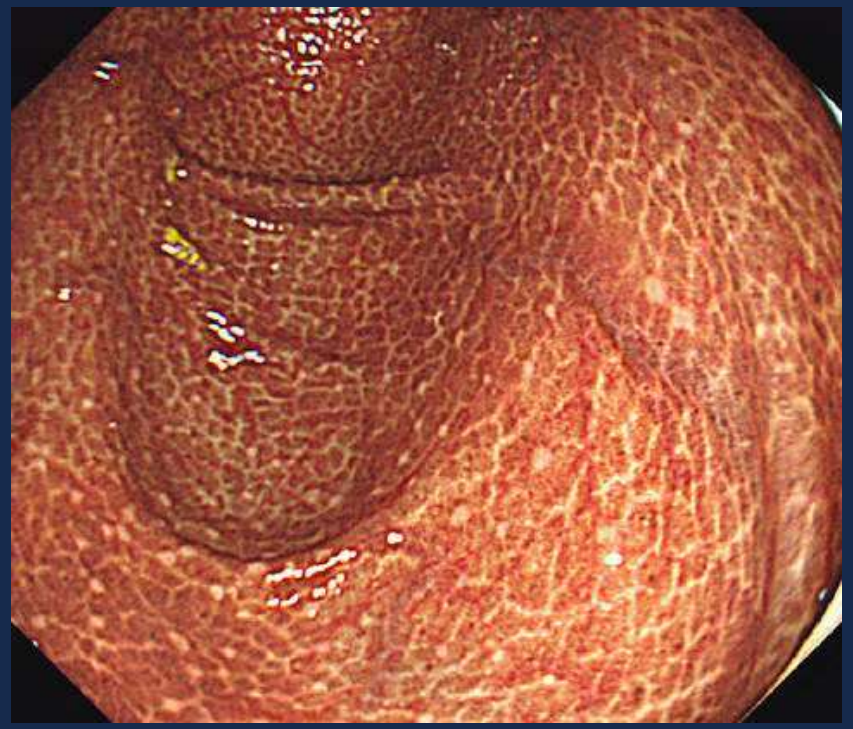




Rectal NET

yellowish submucosal, sometimes with dimple -
don't snare

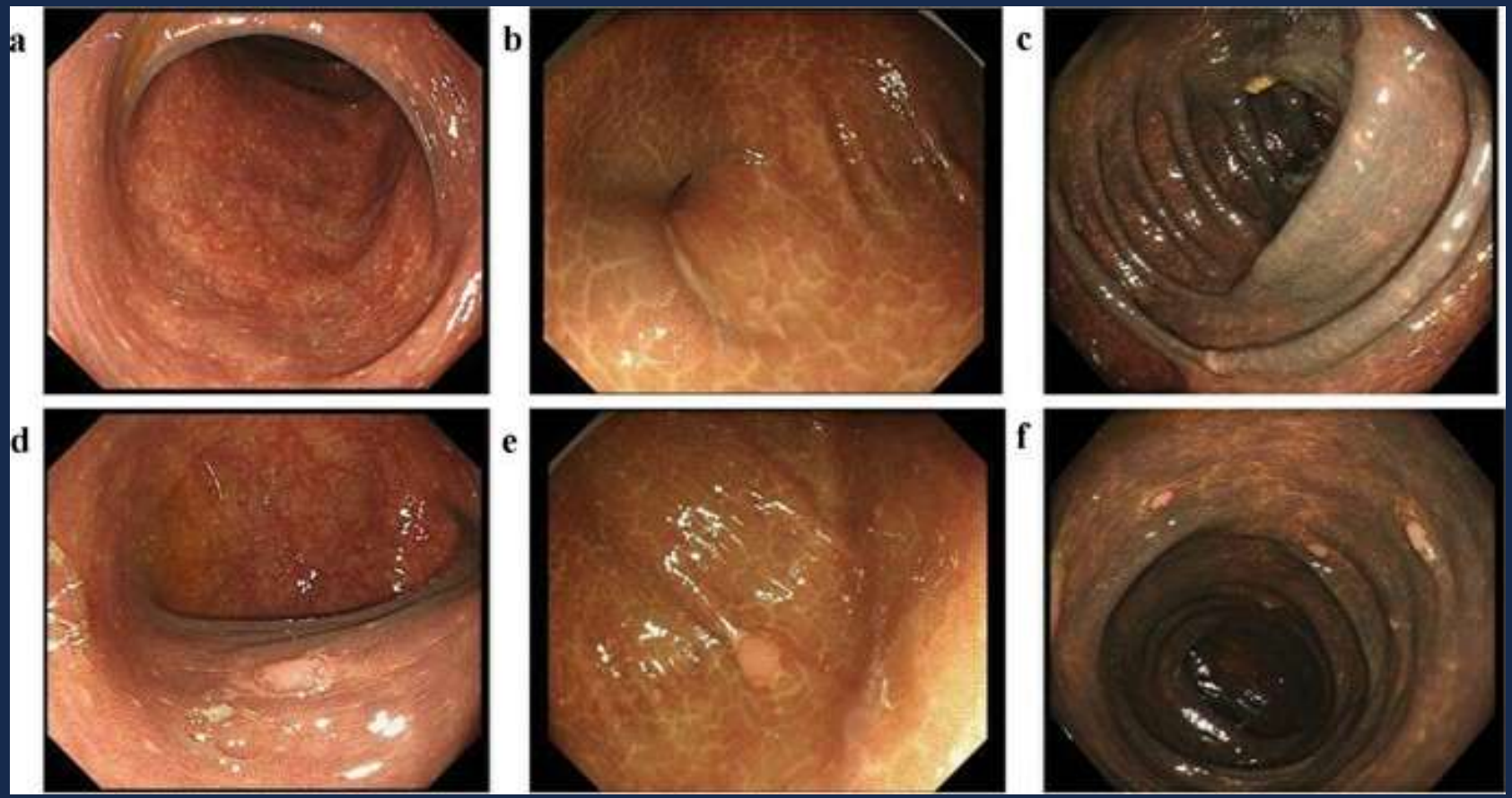




Melanosis coli

Brown discoloration, after use of laxatives, benign

Advantage: adenomas stand out



Take-home messages

- **Quality first:** clean, complete, careful - you cannot describe what you did not see
- **One sentence for every finding:** **where · size · shape · surface · photo**
- **Polyps:** your description is a cancer-risk estimate – look for red flags ⚑ → don't snare, document, refer
- **Diverticula, angiodysplasia & radiation proctitis:** mostly incidental - know the pitfalls and the mimics
- **Inflammation:** read the pattern, think of mimics, photodocument, biopsy, use a score

Just try to have fun!



Want more?

GIEQs Online

Optical diagnosis, polyp assessment - hours of cases

ESGE Academy

Guidelines, curricula, e-learning

ECCO e-learning

IBD endoscopic scores and surveillance

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