

Valutazione e Trattamento Endoscopico delle Lesioni Neoplastiche Superficiali del Retto

Con il
Patrocinio di:

Alisa



Asi5



Lerici



Johann Gottfried Stefan, Lerici
1900, acquerello

GISCoR

gruppo italiano screening coloretale

XIII CONGRESSO NAZIONALE 2018

25-26 Ottobre 2018

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Training (CERTT)
European Endoscopy Training Centre (EETC)
Roma

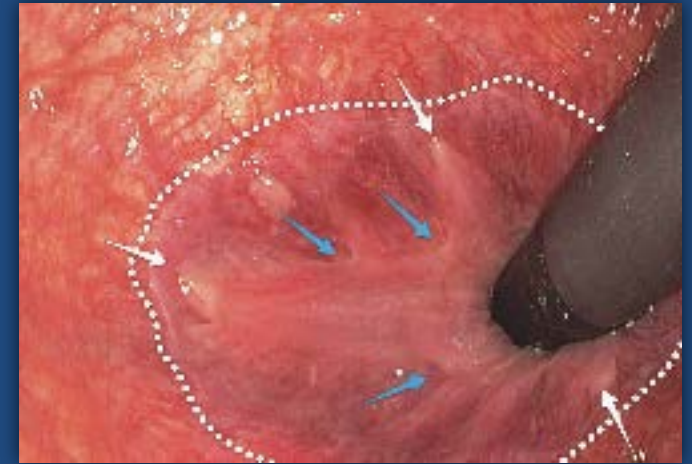
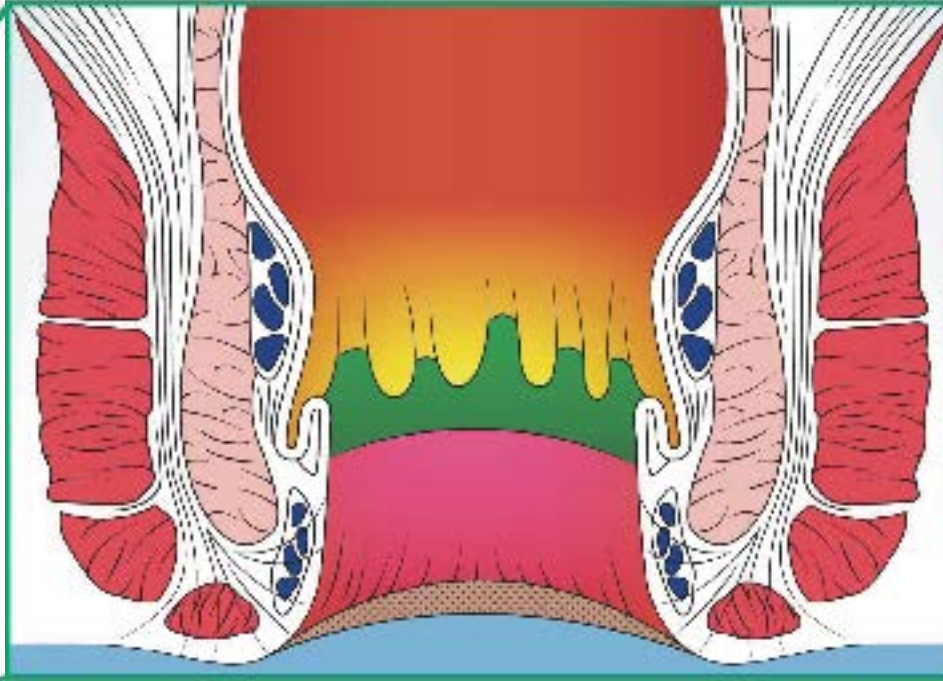
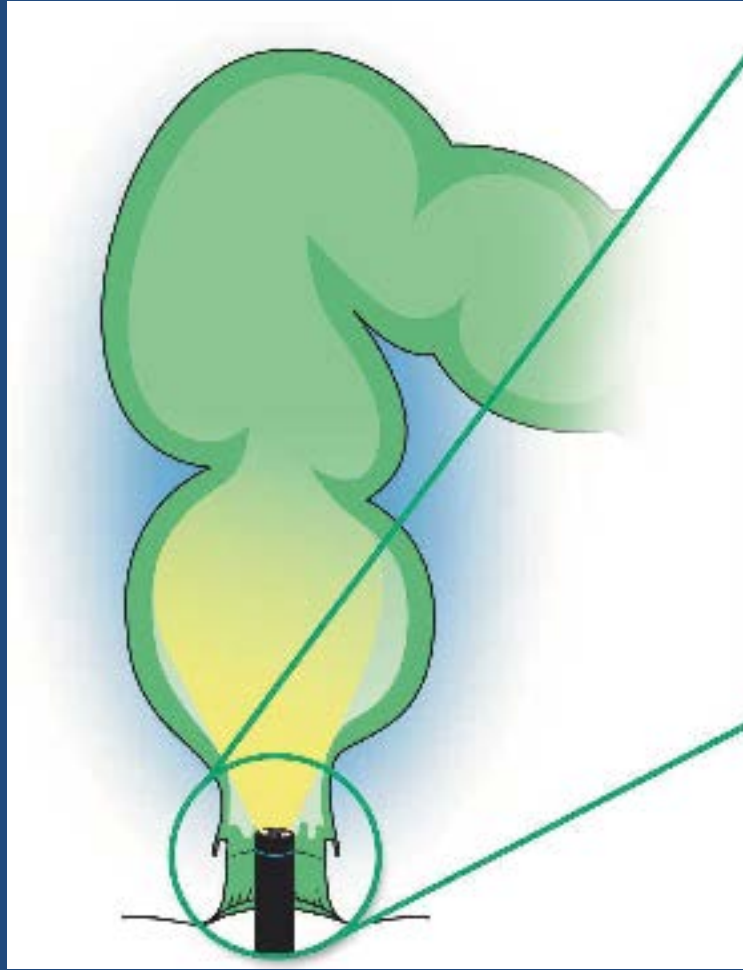


CORSO PRE-CONGRESSO
25 Ottobre 2018

Rectal Superficial Neoplastic Lesions: Endoscopy vs Surgery



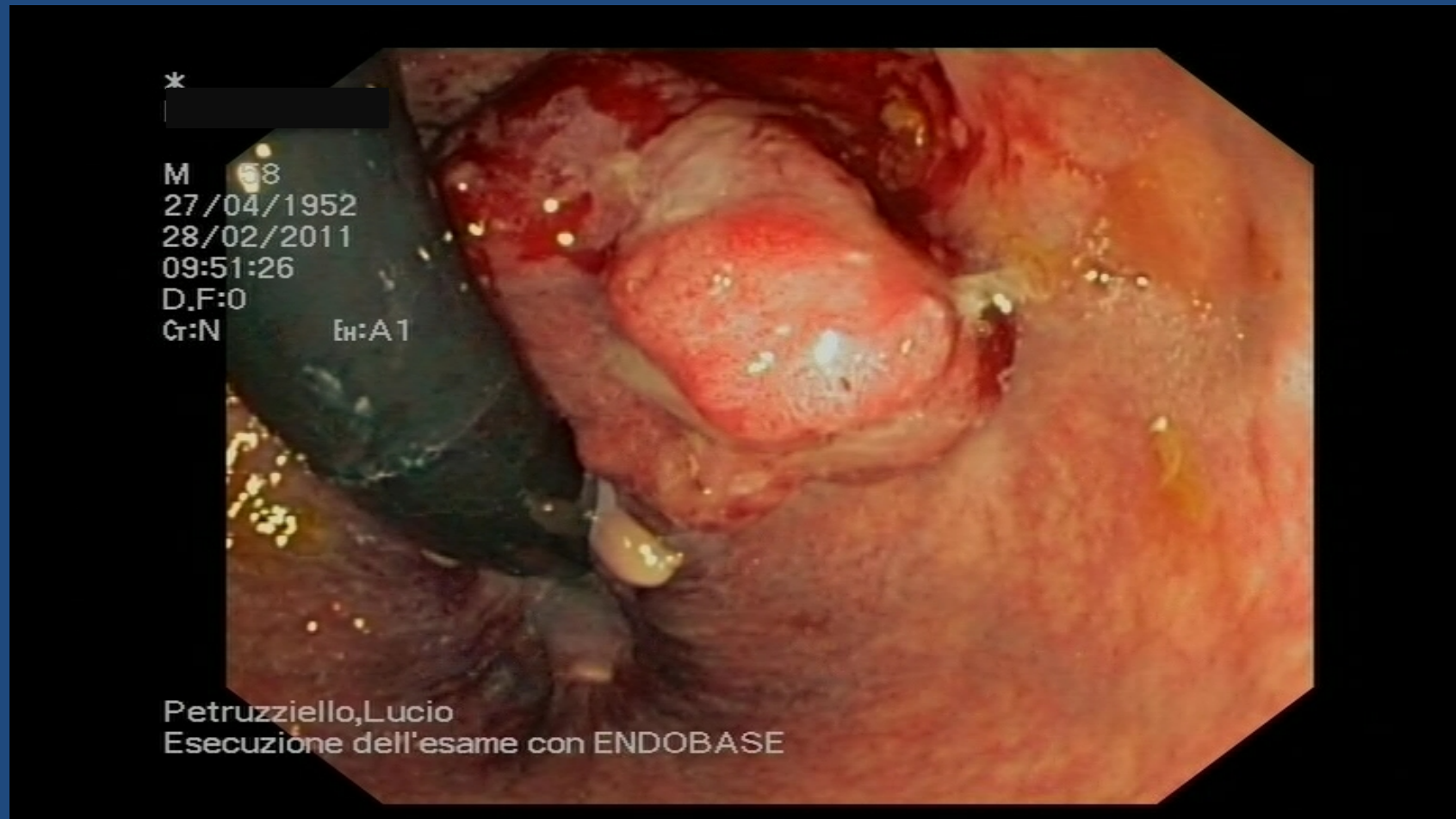
Distal rectum: Endoscopy Point of View



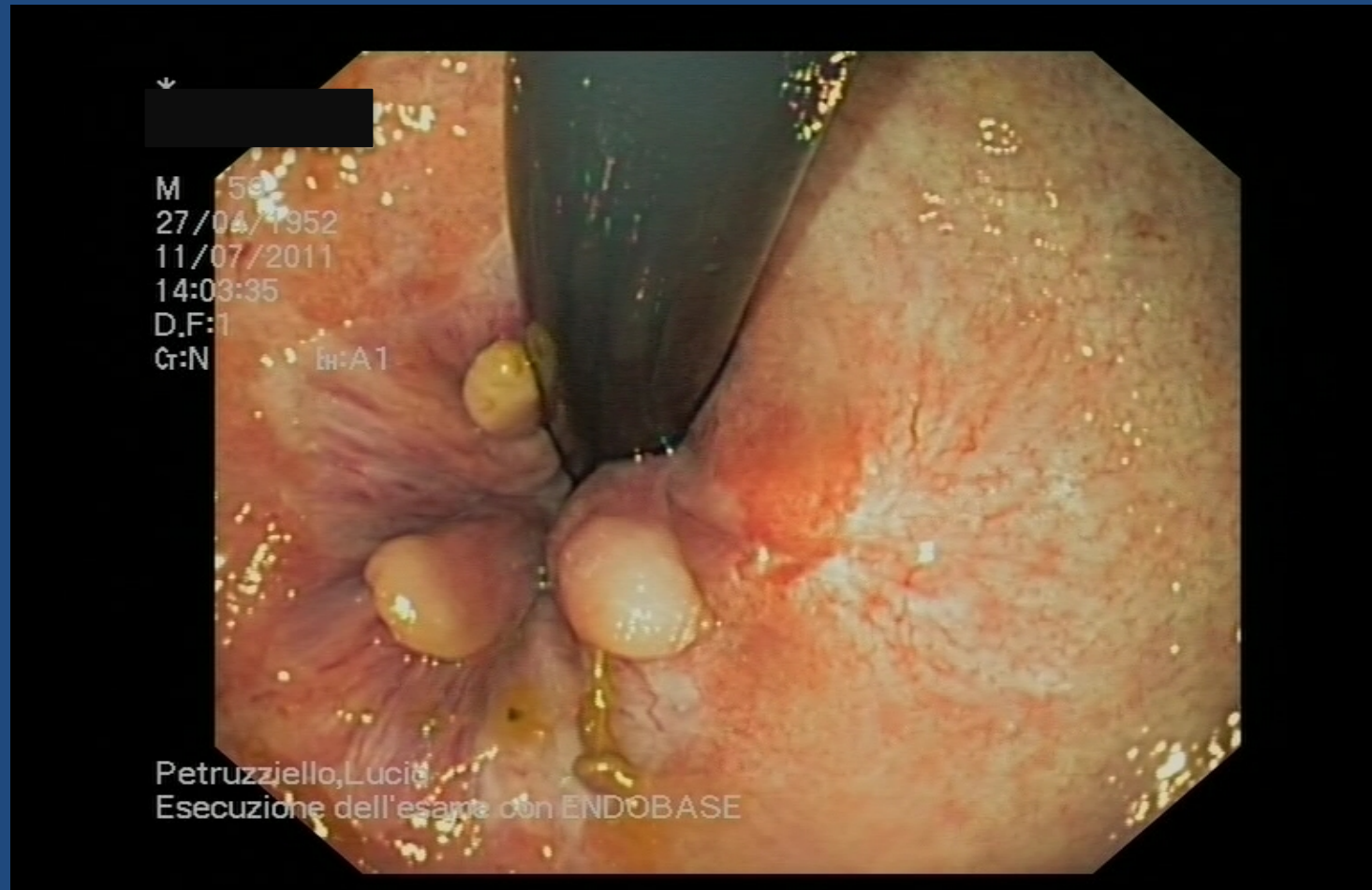
Endoscopist's point of view

- The **Endoscopist** is used to deal with **polyps** or “**Superficial Neoplastic Lesions**”
- The **Surgeon** is used to deal with **cancers** (sent by the endoscopist...)

T2 ADK at ARJ: Diagnosis



T2 ADK at ARJ: After NAD



T2 ADK at ARJ: After TAE



T2 ADK at ARJ 4 yrs FU



Non Granular – Pseudo Depressed LST



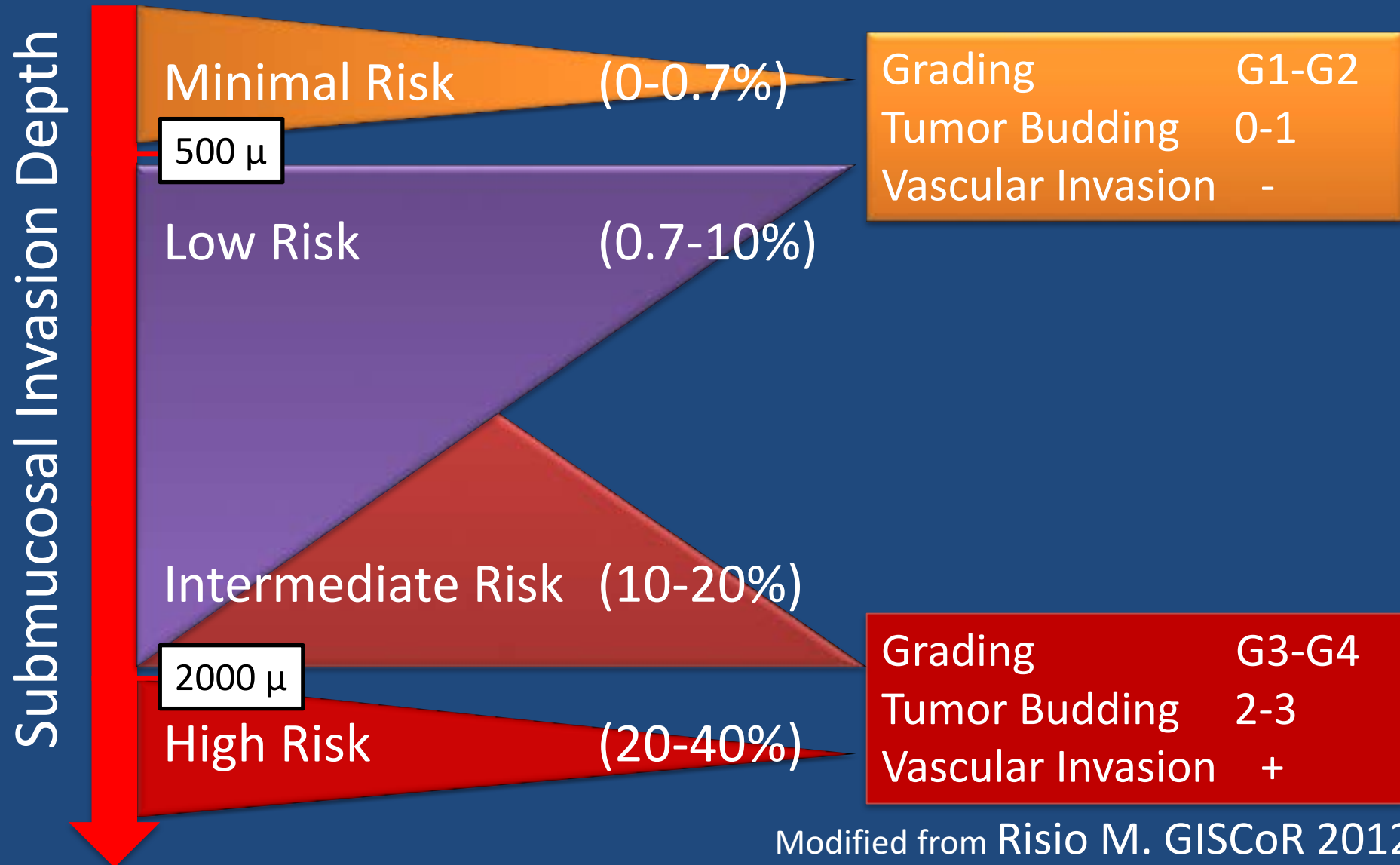
- ▶ Incomplete ER → Surgery
- ▶ Hystology: T1

Endoscopy: Primary clinical impact of staging rectal cancer

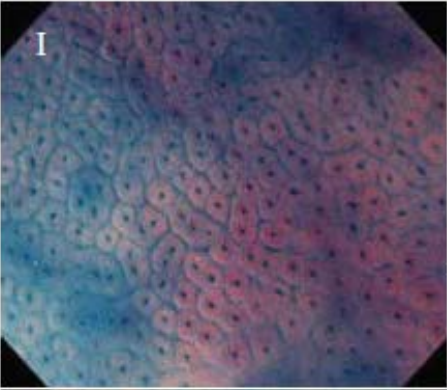
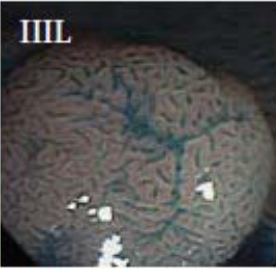
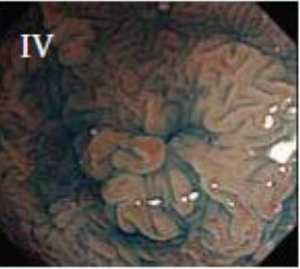
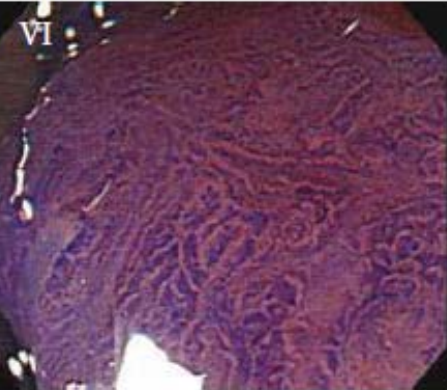
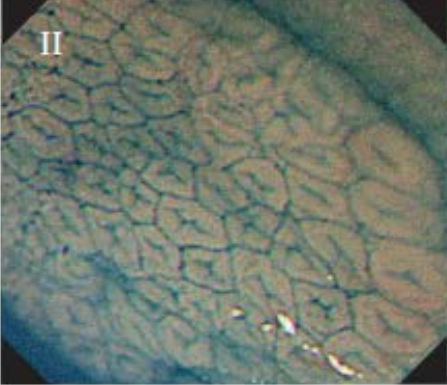
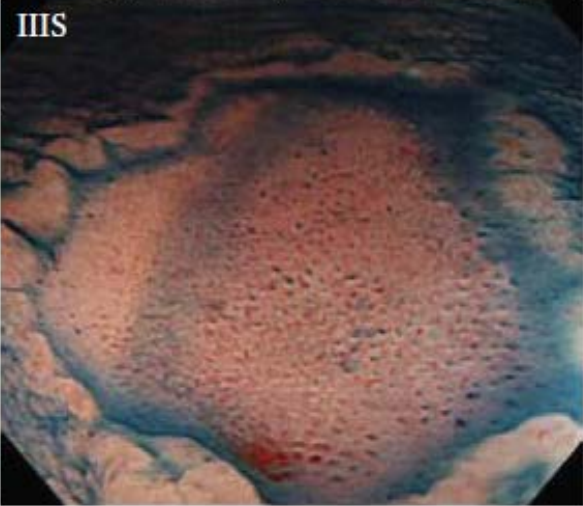
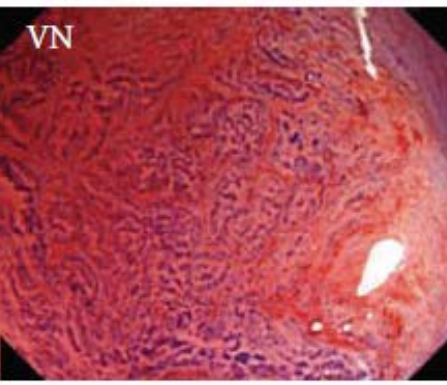
- To differentiate superficial from advanced lesions (T0-T1 sm1 disease from deeper T invasion disease)
- Superficial lesions with minimal risk of nodal metastases (<1%) can be treated Endoscopically

Stage	T	N	M	Dukes*	MAC*
0	Tis	N0	M0	—	—
I	T1	N0	M0	A	A
	T2	N0	M0	A	B1
IIA	T3	N0	M0	B	B2
IIB	T4a	N0	M0	B	B2
IIC	T4b	N0	M0	B	B3
IIIA	T1–T2	N1/N1c	M0	C	C1
	T1	N2a	M0	C	C1
IIIB	T3–T4a	N1/N1c	M0	C	C2
	T2–T3	N2a	M0	C	C1/C2
	T1–T2	N2b	M0	C	C1
IIIC	T4a	N2a	M0	C	C2
	T3–T4a	N2b	M0	C	C2
	T4b	N1–N2	M0	C	C3
IVA	Any T	Any N	M1a	—	—
IVB	Any T	Any N	M1b	—	—

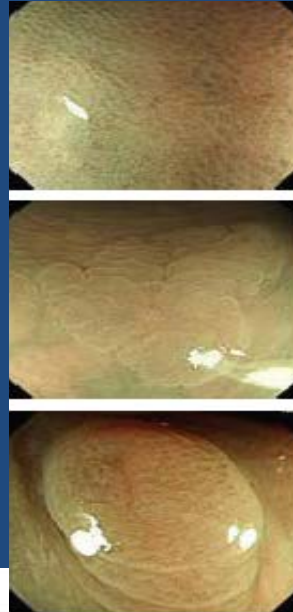
Cancerised Adenomas Micro-staging: Assessment of the Metastatic Risk



Pit Pattern Classification (Magnifying Chromoendoscopy)

Nonneoplastic pattern	Noninvasive pattern		Invasive pattern
I · II	III L · III S · IV · (part of VI)		VI · VN
 <p>I</p>	 <p>III L</p>	 <p>IV</p>	 <p>VI</p>
 <p>II</p>	 <p>III S</p>		 <p>VN</p>
Normal hyperplastic polyp	Adenoma * m ** sm-slight		#sm-deep

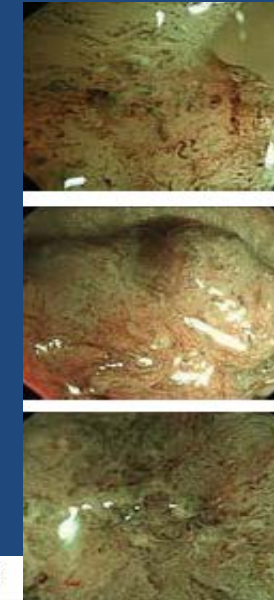
NICE (NBI International Colorectal Endoscopic) Classification



Type 1



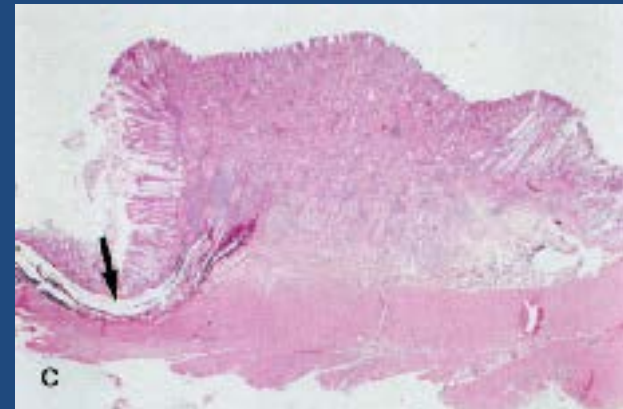
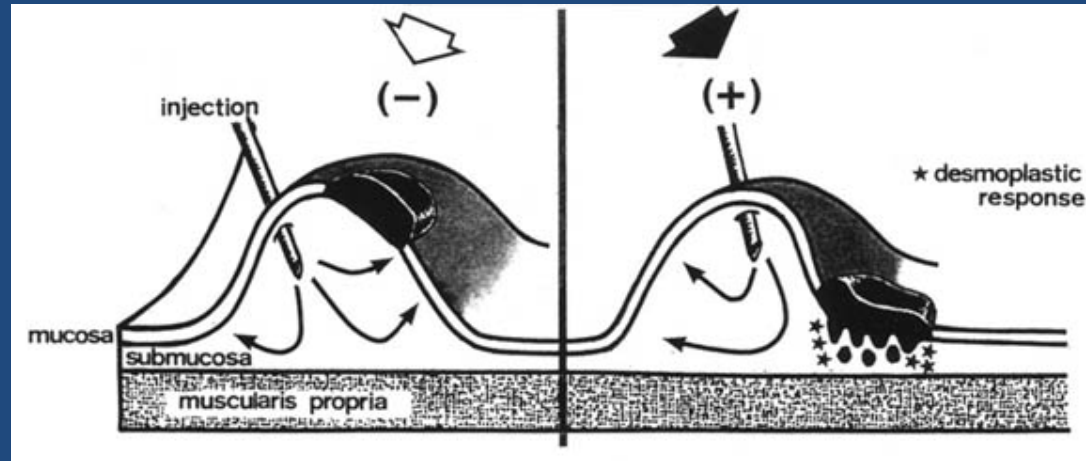
Type 2



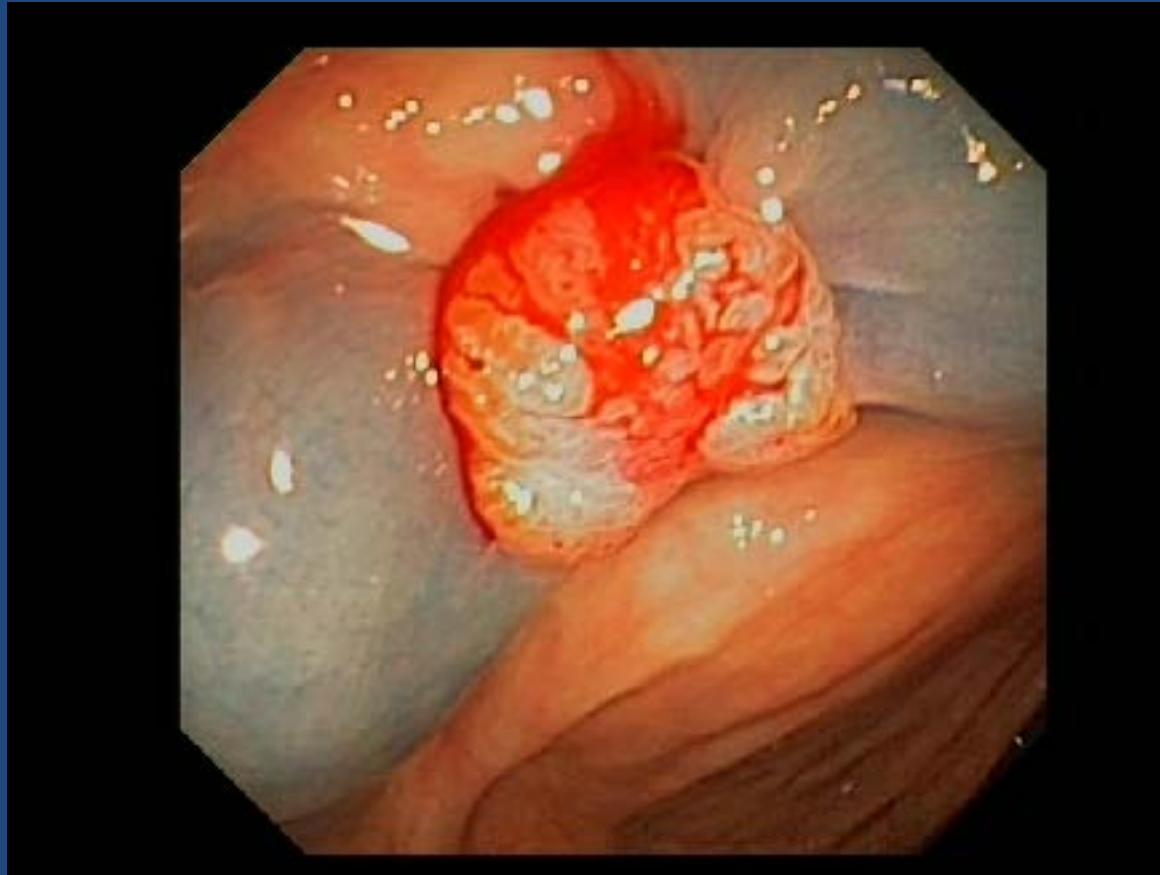
Type 3

	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 may be present 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 structures** surrounded by brown vessels	Amorphous or absent surface pattern
Most likely pathology	Hyperplastic	Adenoma***	Deep submucosal invasive cancer
Treatment	Followup	Polypectomy/EMR/ESD	Surgery

Non Lifting Sign



Non Lifting Sign

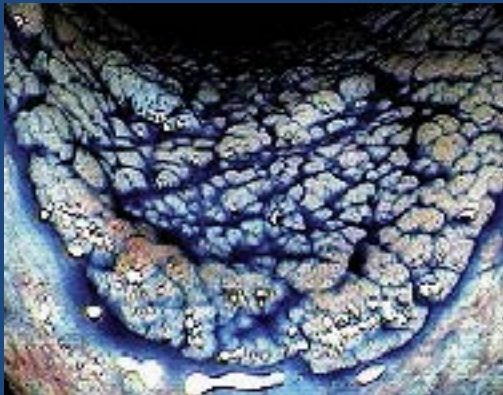


Comparison of Endoscopic Diagnosis of the depth of SM Cancer

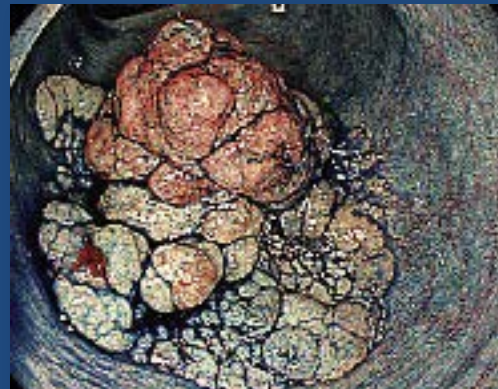
Diagnostic Method	Overall Accuracy	Sensitivity	Specificity	PPV	NPV
Magnifying Chromoendoscopy	98.8%	85.6%	99.4%	86.5%	99.4%
Non Lifting Sign	94.8%	61.5%	98.4%	80.0%	96.0%
NICE Classification	87.7%	84.8%	88.7%	71.8%	94.5%

Morphology and Size of LSTs and rate of Sm invasion

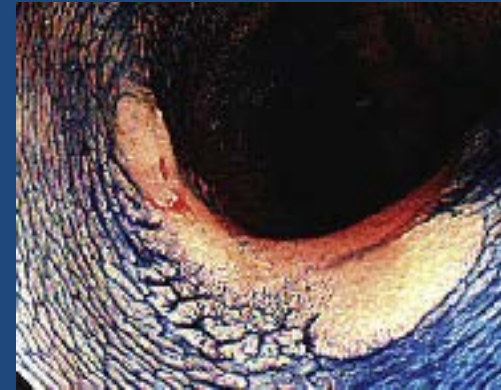
	10 mm	20 mm	30 mm	40 mm	Total
LST-G	0%	0%	6%	0%	0.6%
LST-G Mixed	5%	13%	6%	20%	11%
LST-NG	6%	29%	44%	50%	14%



LST-G

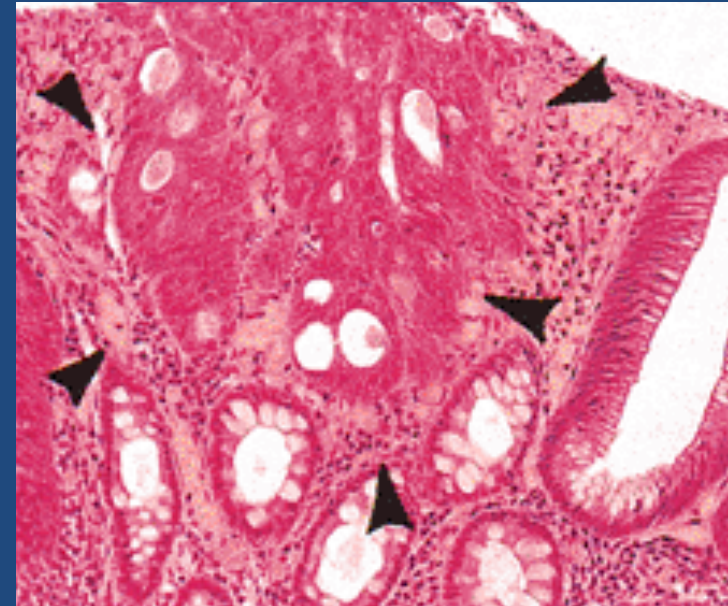
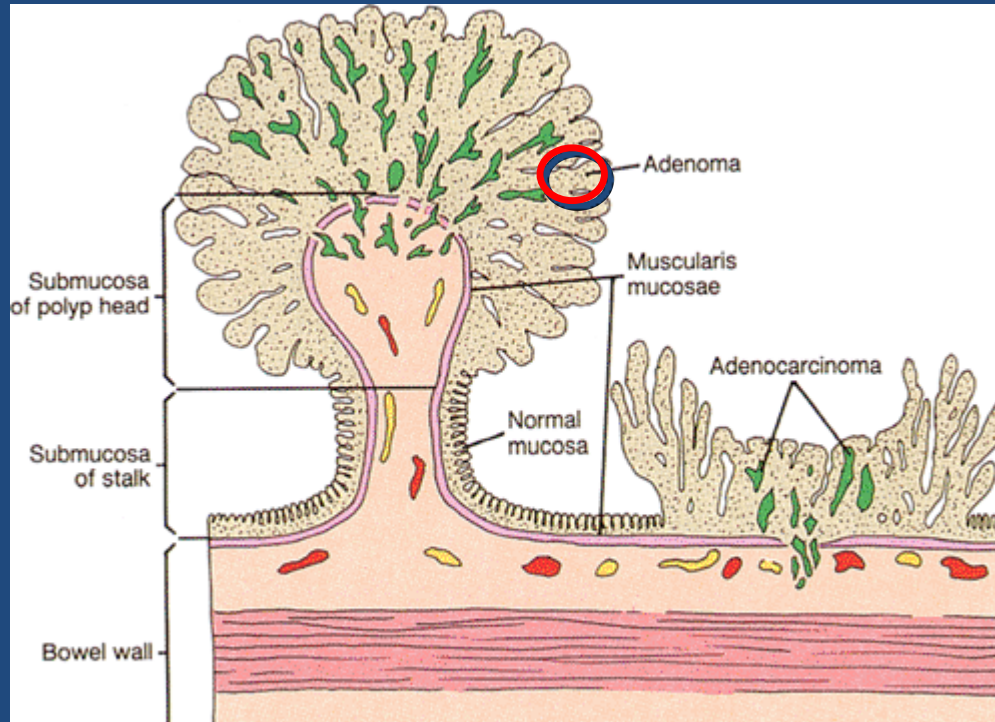


LST-GM (Is-IIa)



LST-NG

Biopsy



Sampling depth not deeper than Lamina Propria

Biopsy: False Positive Non Lifting Sign

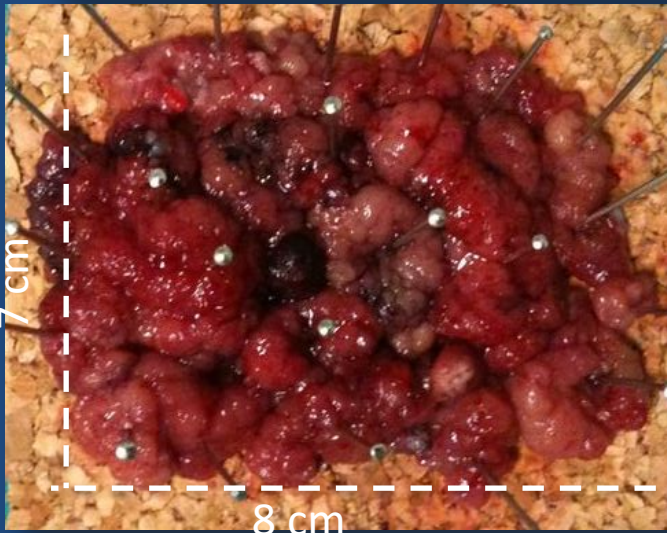
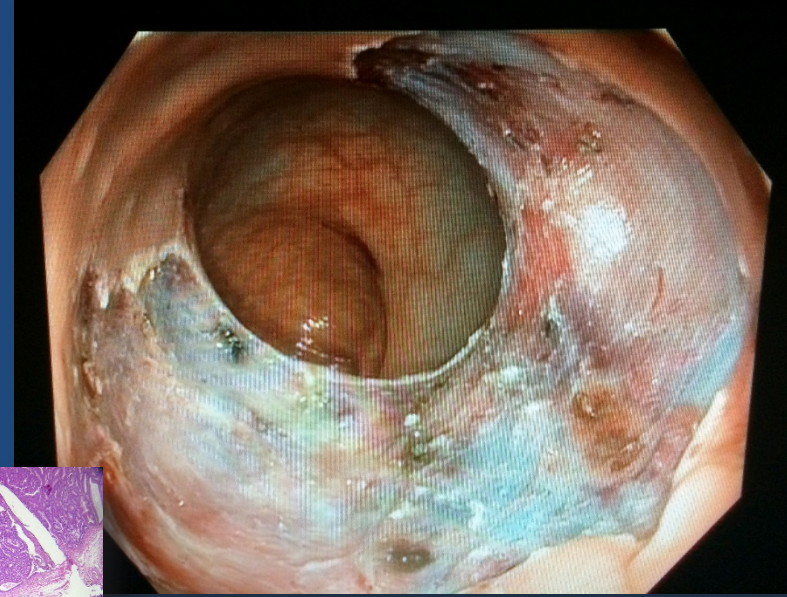


Biopsy



Only to confirm unresectability

84 M - ASA III - EUS T2, N0 - CT & MR T3, N0
Radical Surgery or Adjuvant RT+CT?



T1 (SM3)

G2

6000 μ width - 4000 μ depth

Vertical margin - (1000 μ)

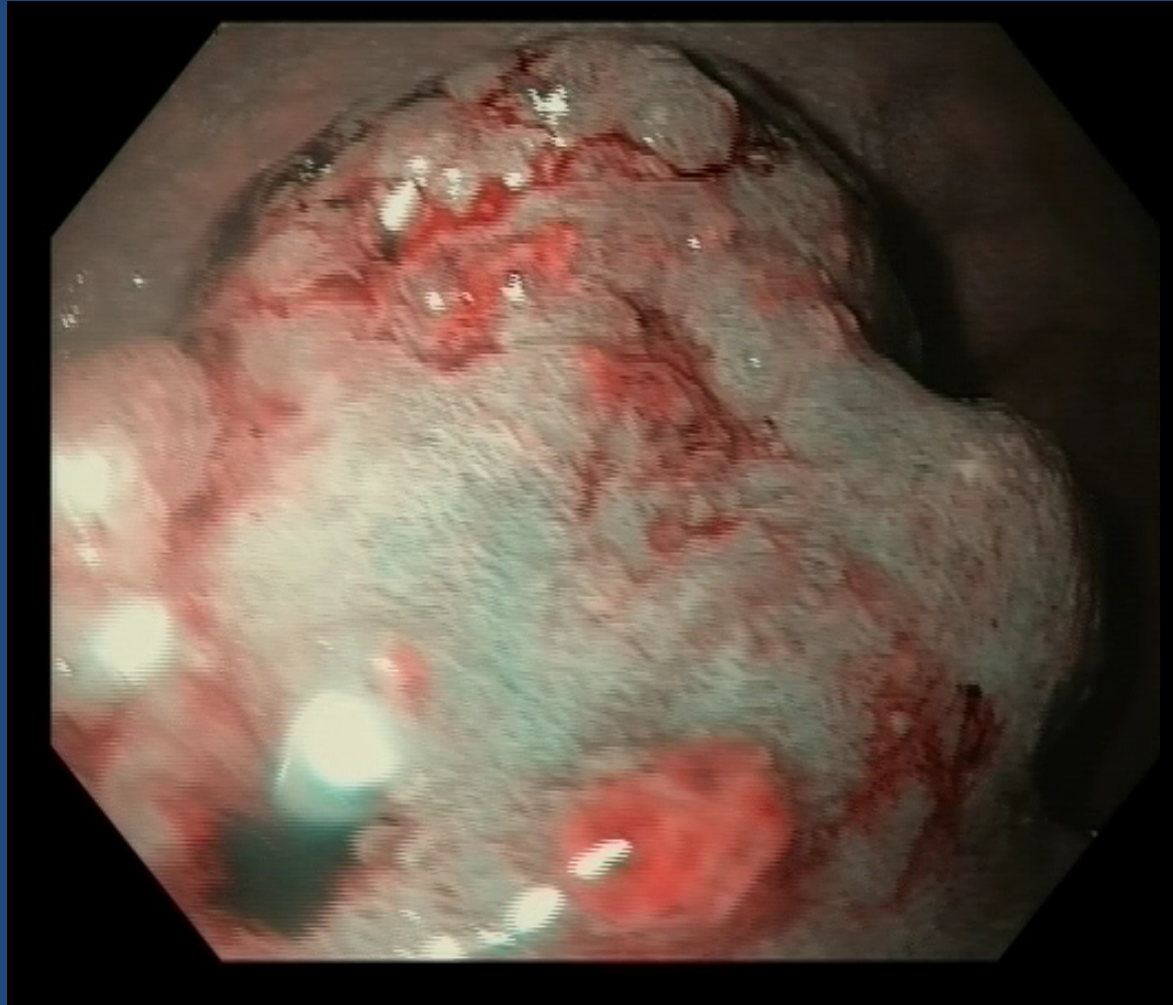
Budding +

LV+

Is, Mid Rectum

Endoscopy: suspect T1 (Pit Pattern V)

CT and MRI: T2-3 N+



Is, Mid Rectum

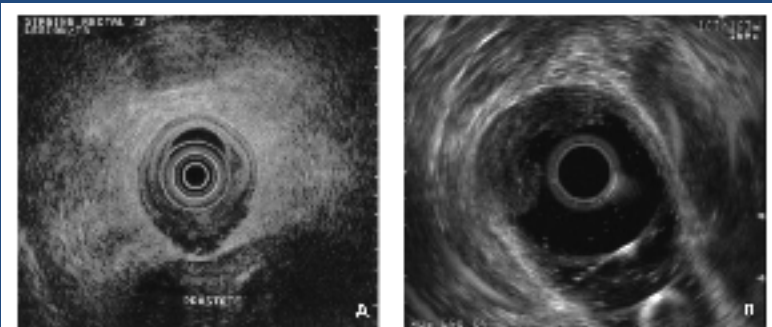
Endoscopy: suspect T1 (Pit Pattern V)

CT and MRI: T2-T3 N+

- RXT + CHT
- Low Anterior Resection
- **ypT0, N0**

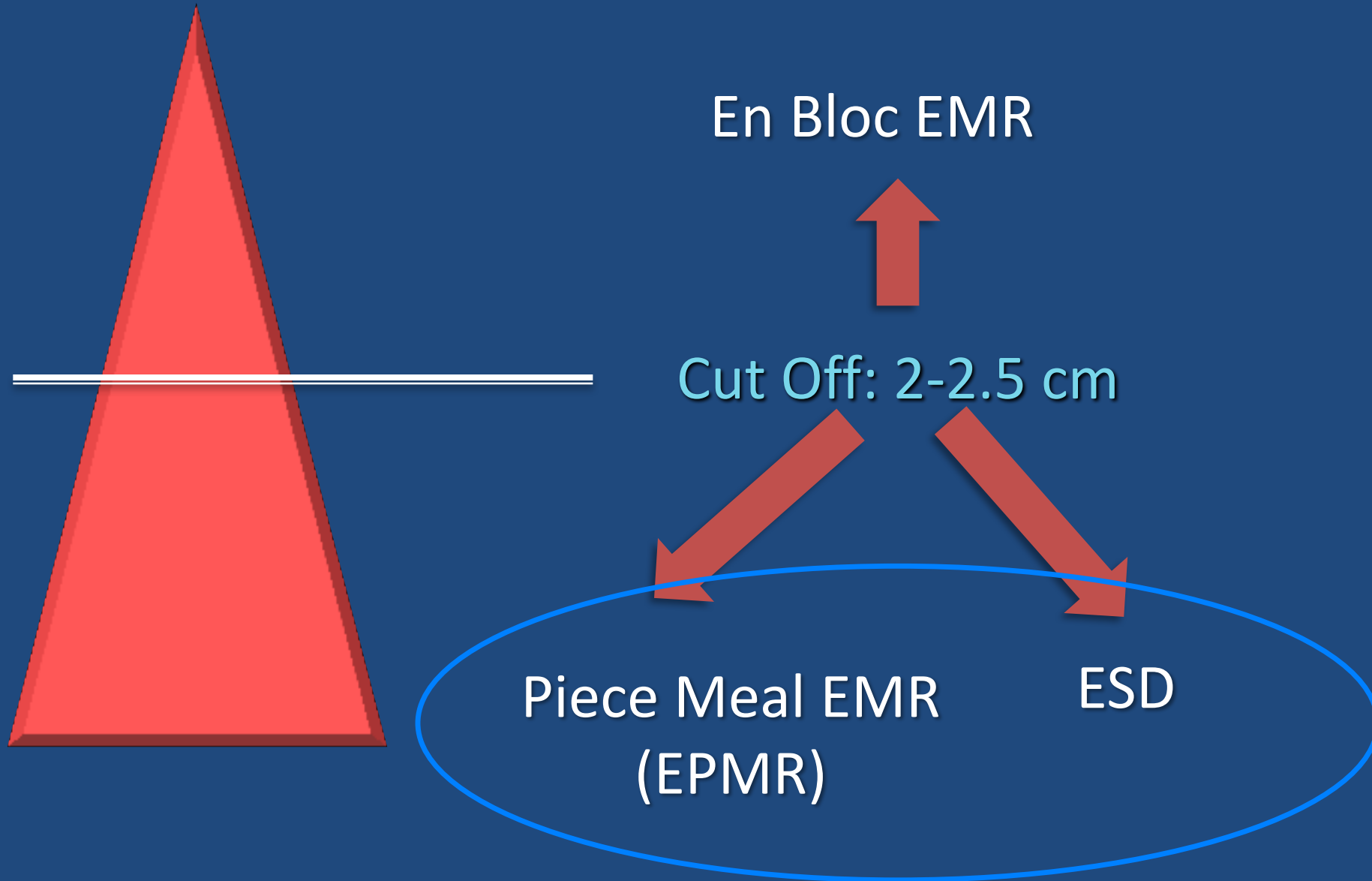
EUS in Staging Rectal Cancer

- The sensitivity of EUS is higher for advanced disease (>T2) than for early disease (T0-T1)
 - Pooled sensitivity 87.8%
 - Pooled specificity 98.3%
- Nodal staging accuracy was found to be modest for EUS (67% sensitivity, 78% specificity) and not statistically different over MRI ant CT



Bipat S. Radiology 2004
Lahaye MJ. Semin Ultrasound CT MR 2005
Puli SR. Ann Surg Oncol 2009
Puli SR. Dig Dis Sci 2010

Endoscopic Treatment



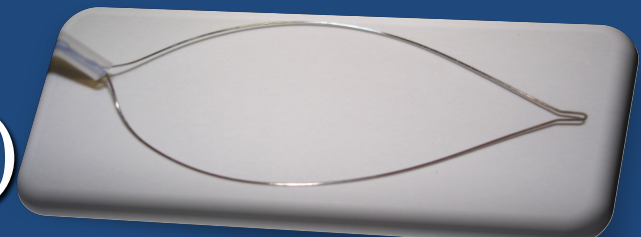
Rectal Polypoid lesions



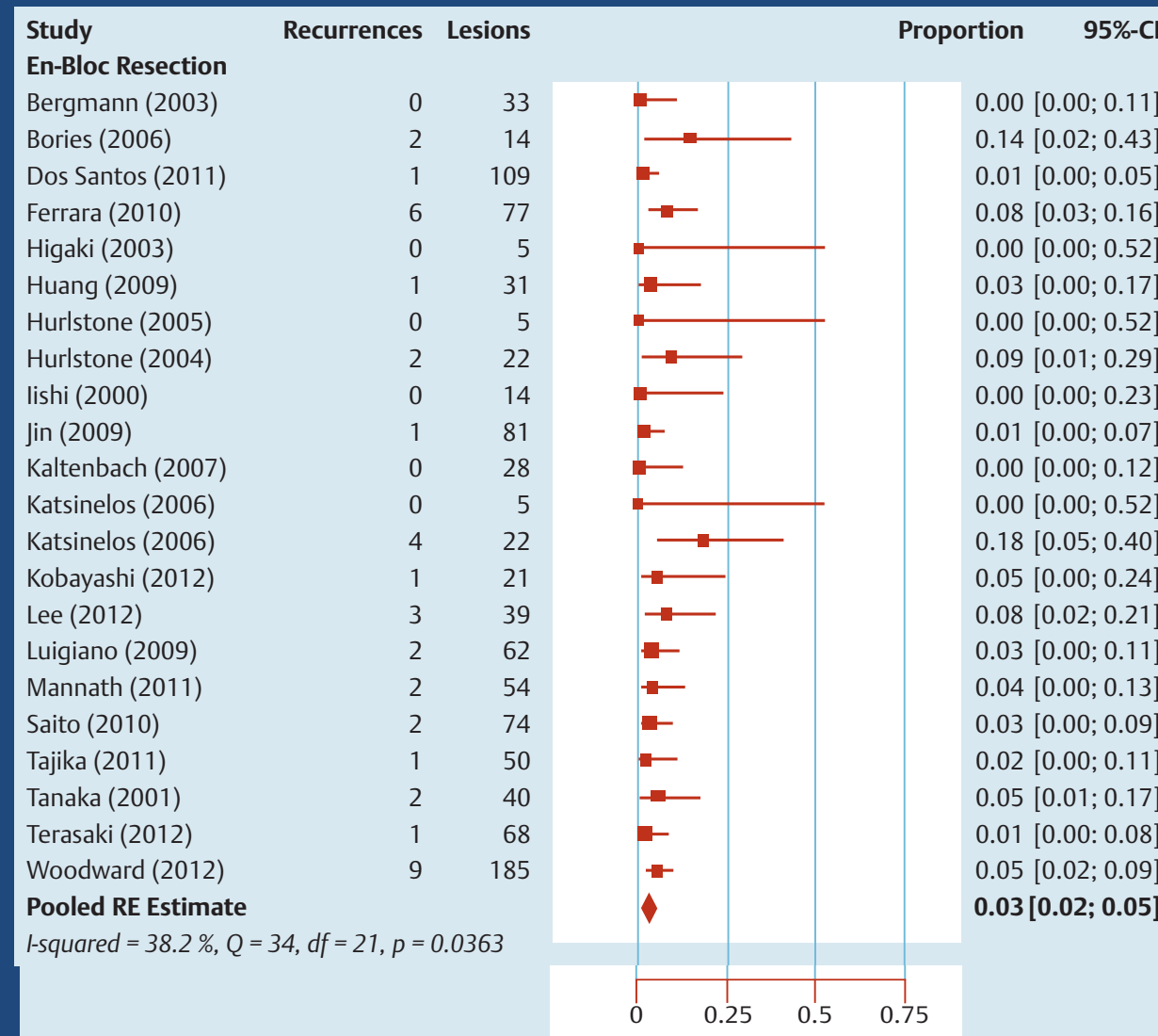
LST-G > 2.5 cm: EPMR



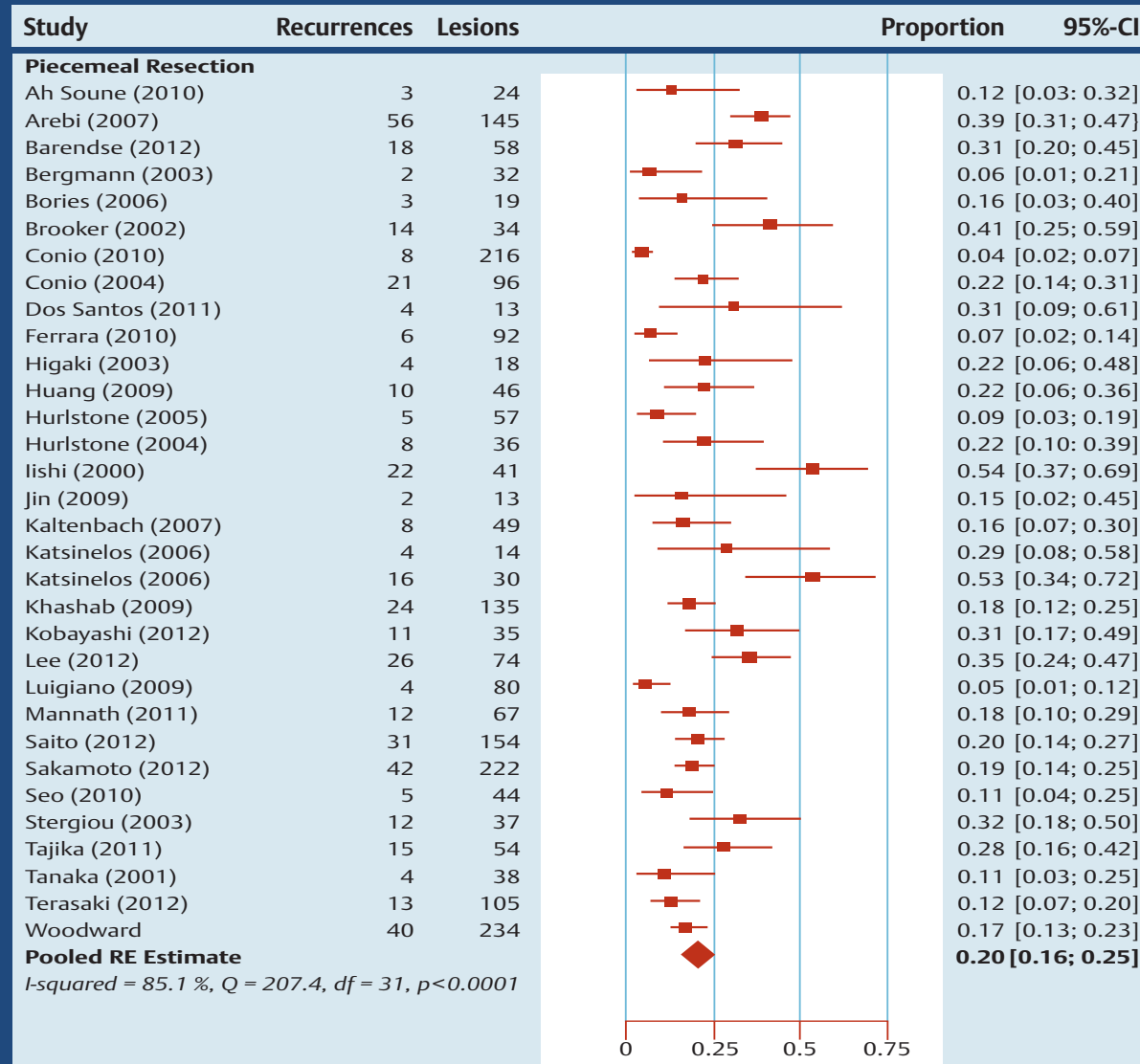
EPMR
(Monofilament Snare)



En Bloc EMR in CR lesions >2 cm: Recurrence



PM-EMR in CR lesions >2 cm: Recurrence

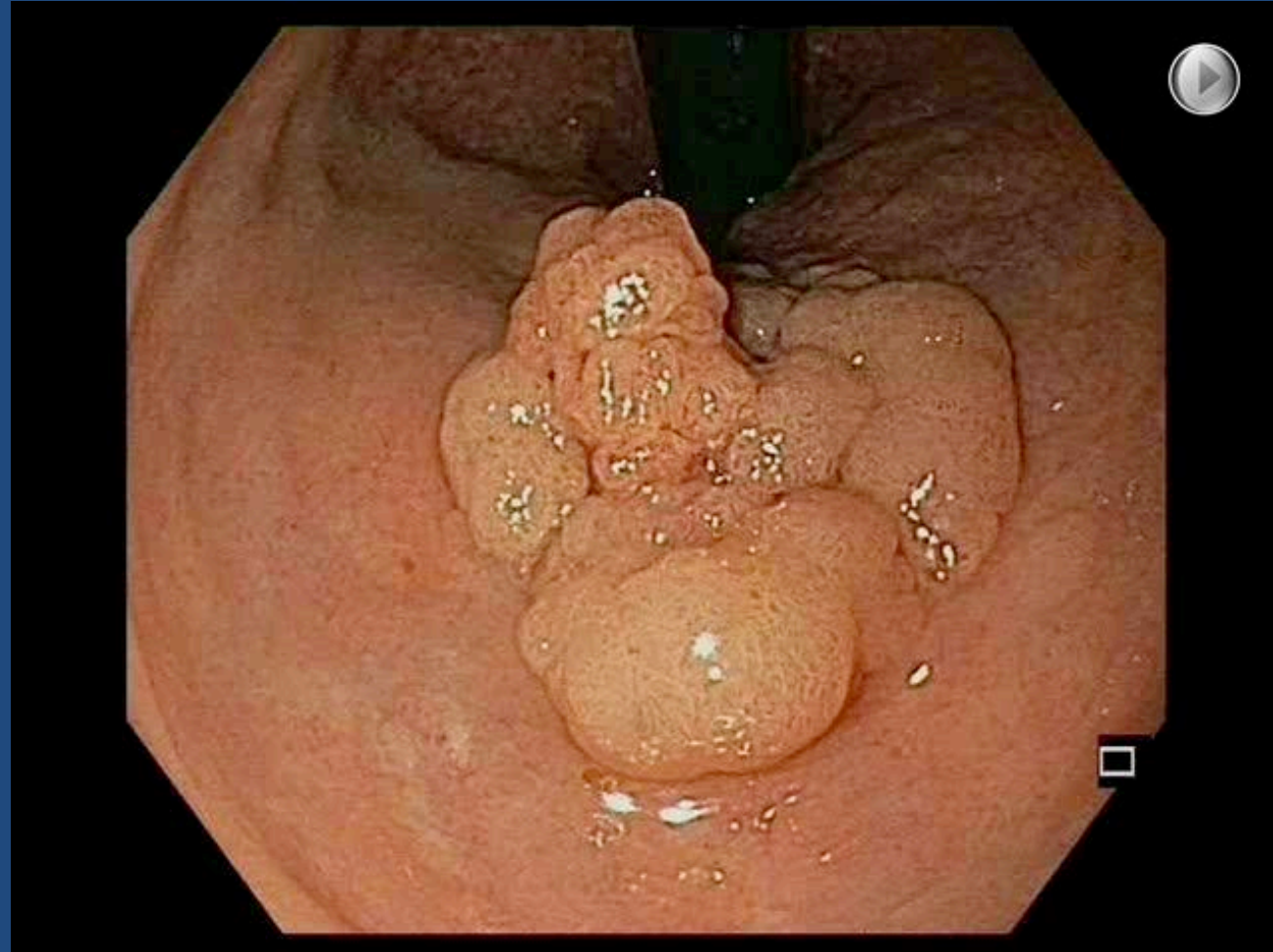


Problem with EPMR:

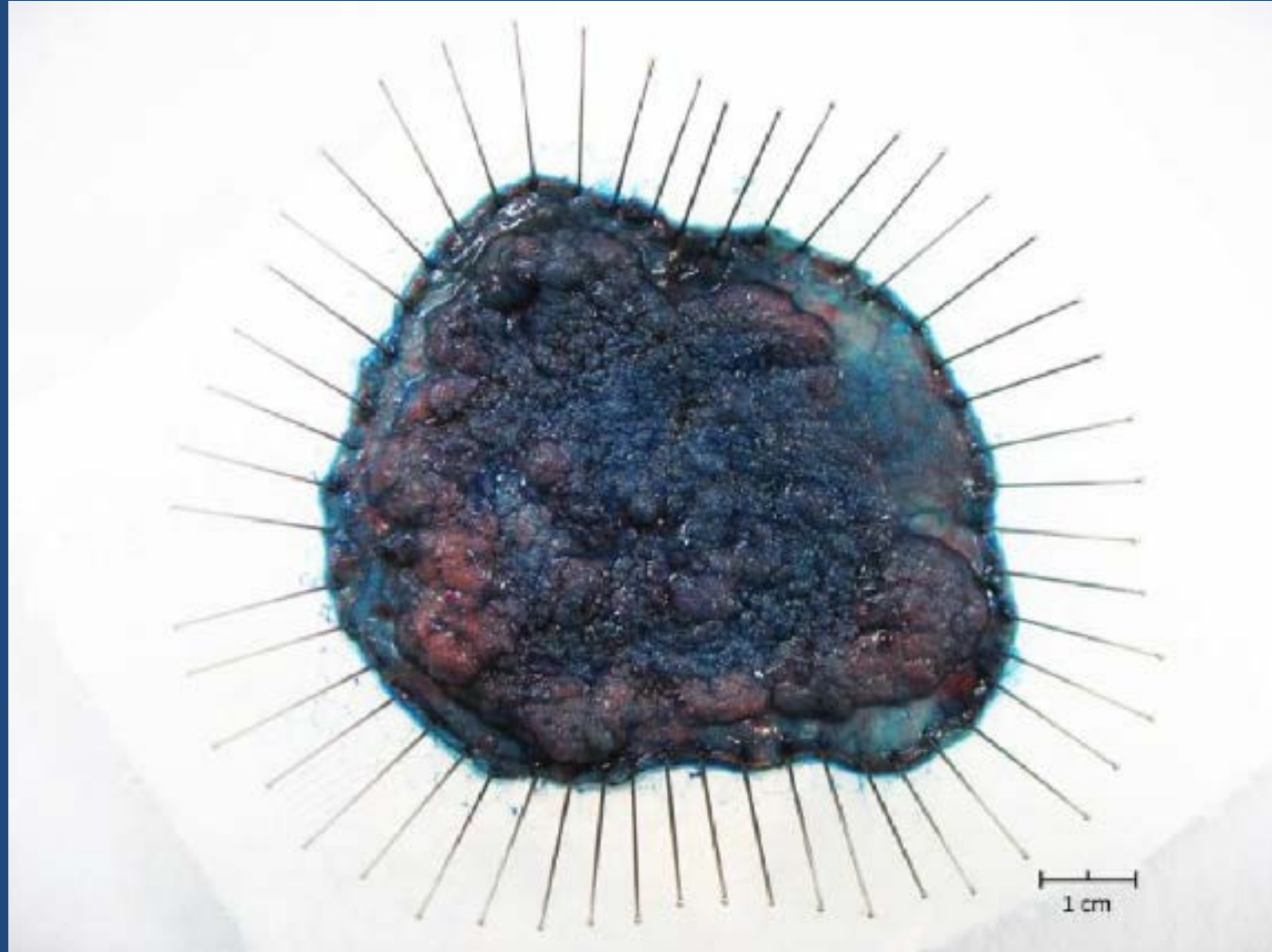


Difficult hystologic assessment

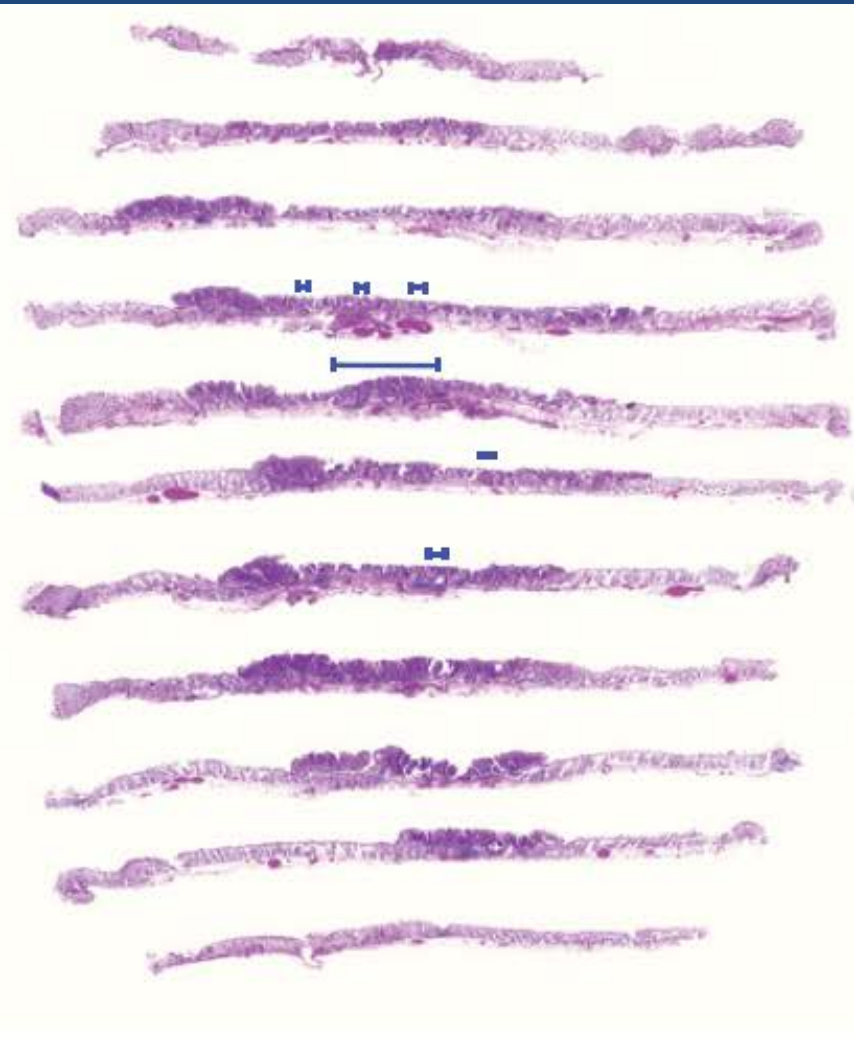
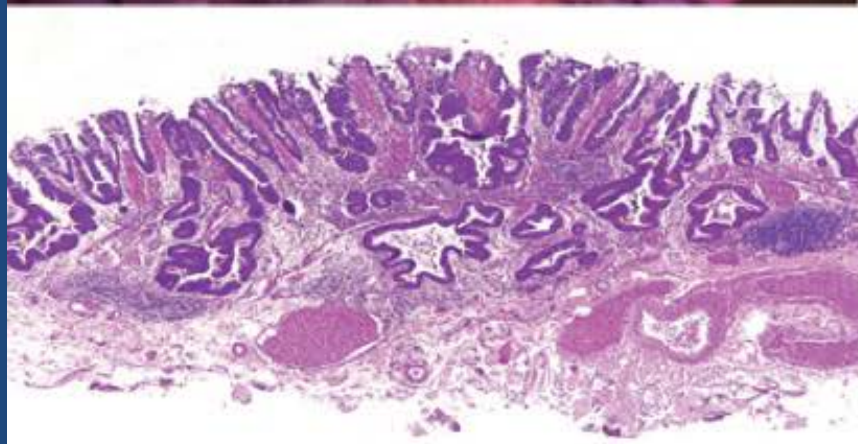
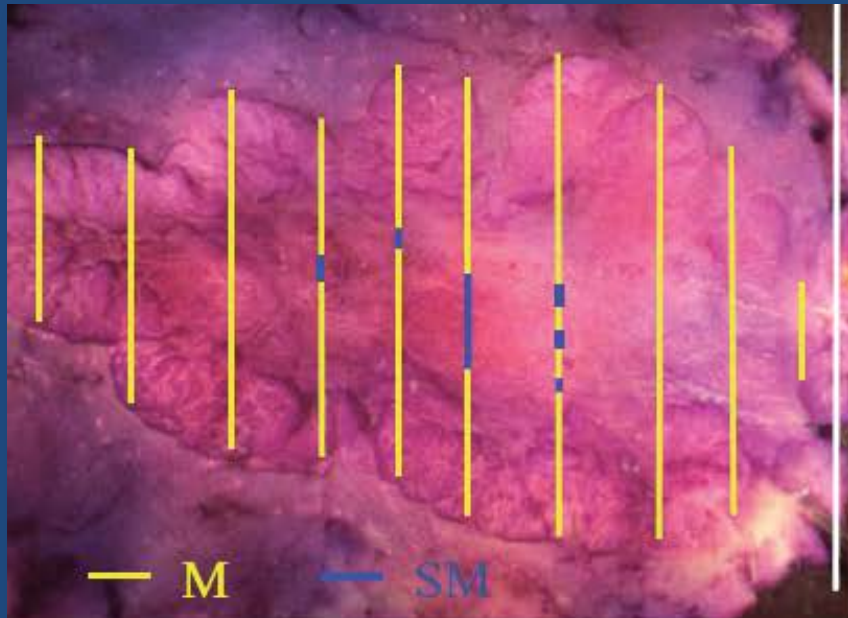
Endoscopic Submucosal Dissection (ESD)



Correct specimen arrangement



Correct hystopathologic assessment

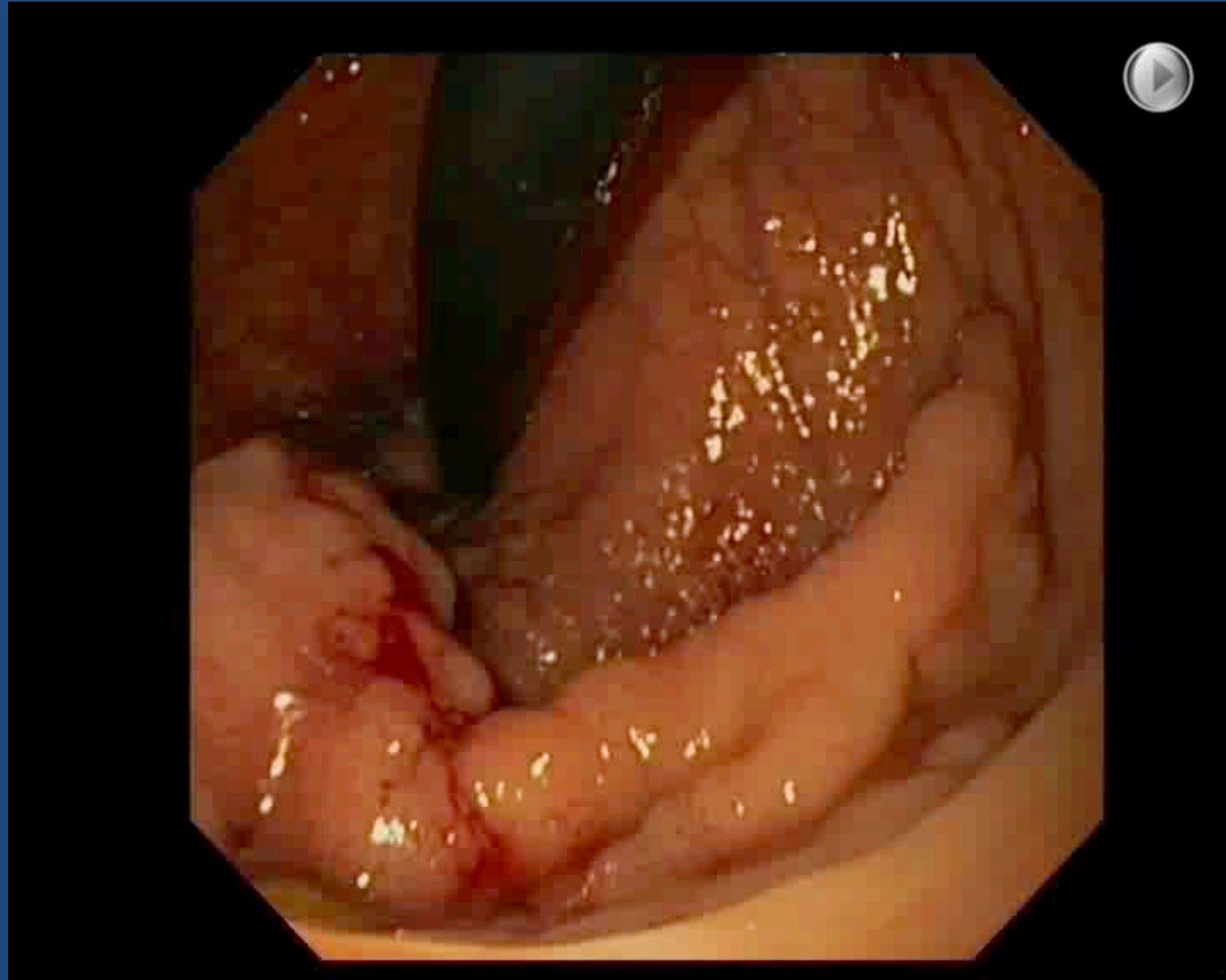


Efficacy and safety of endoscopic submucosal dissection for colorectal neoplasia: a systematic review

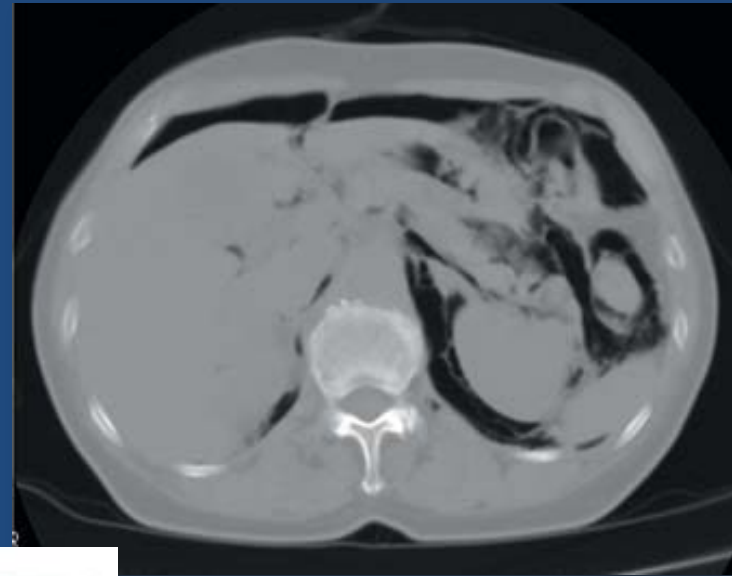
A. Repici¹, C. Hassan¹, D. De Paula Pessoa¹, N. Pagano¹, A. Arezzo², A. Zullo¹, R. Lorenzetti¹, R. Marmo³

- Complete resection 96%
- Post-ESD surgery 2%
- Bleeding 2%
- Perforations 4%
- Mortality 0%

ESD Perforation



ESD Perforation



Problems with ESD

Higher rate of complications than EMR

Difficult and long procedure

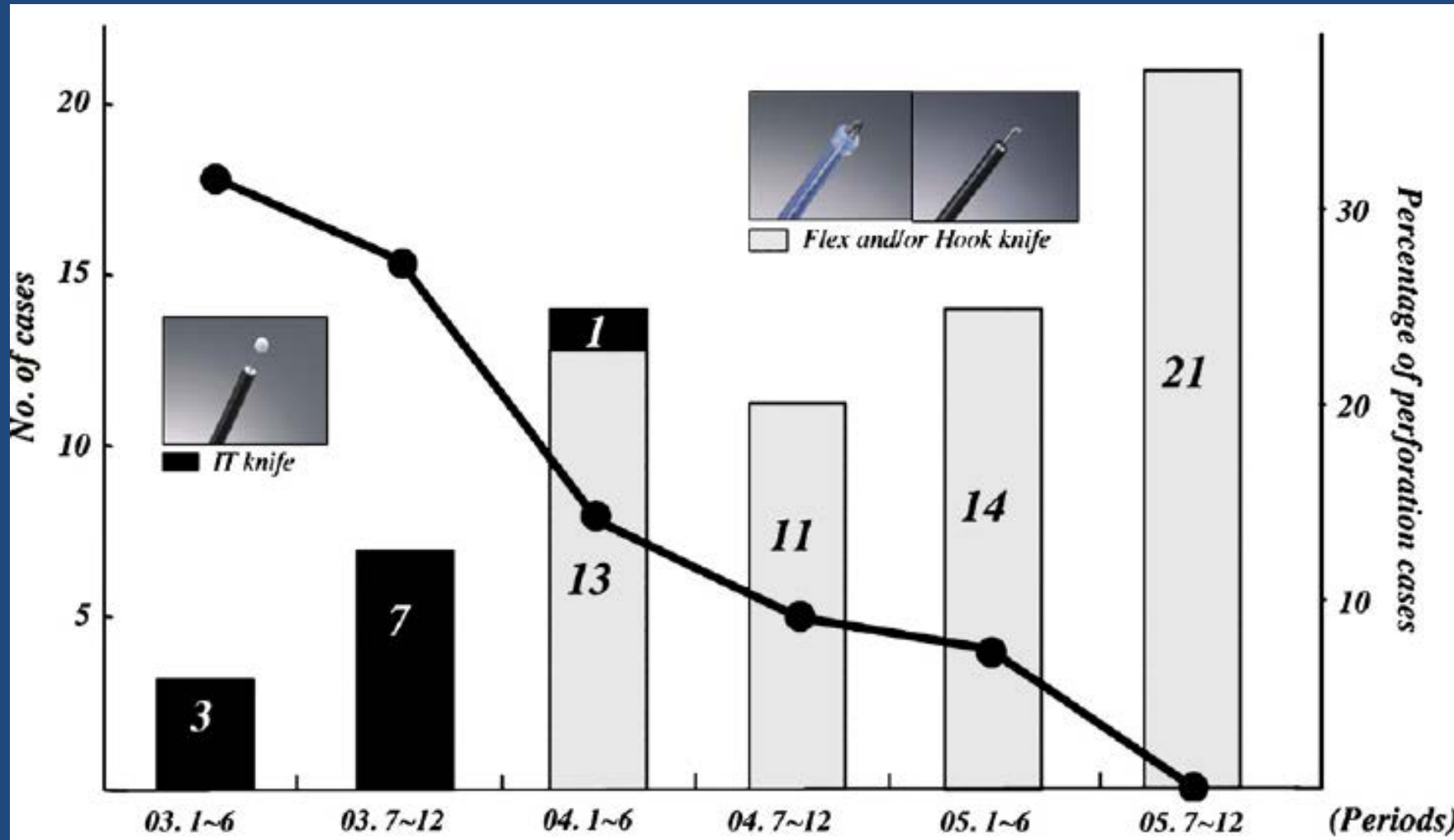
Compliance of patients (CO₂)

General Anesthesia

Very expert Pathologist

Very, very skilled Endoscopist

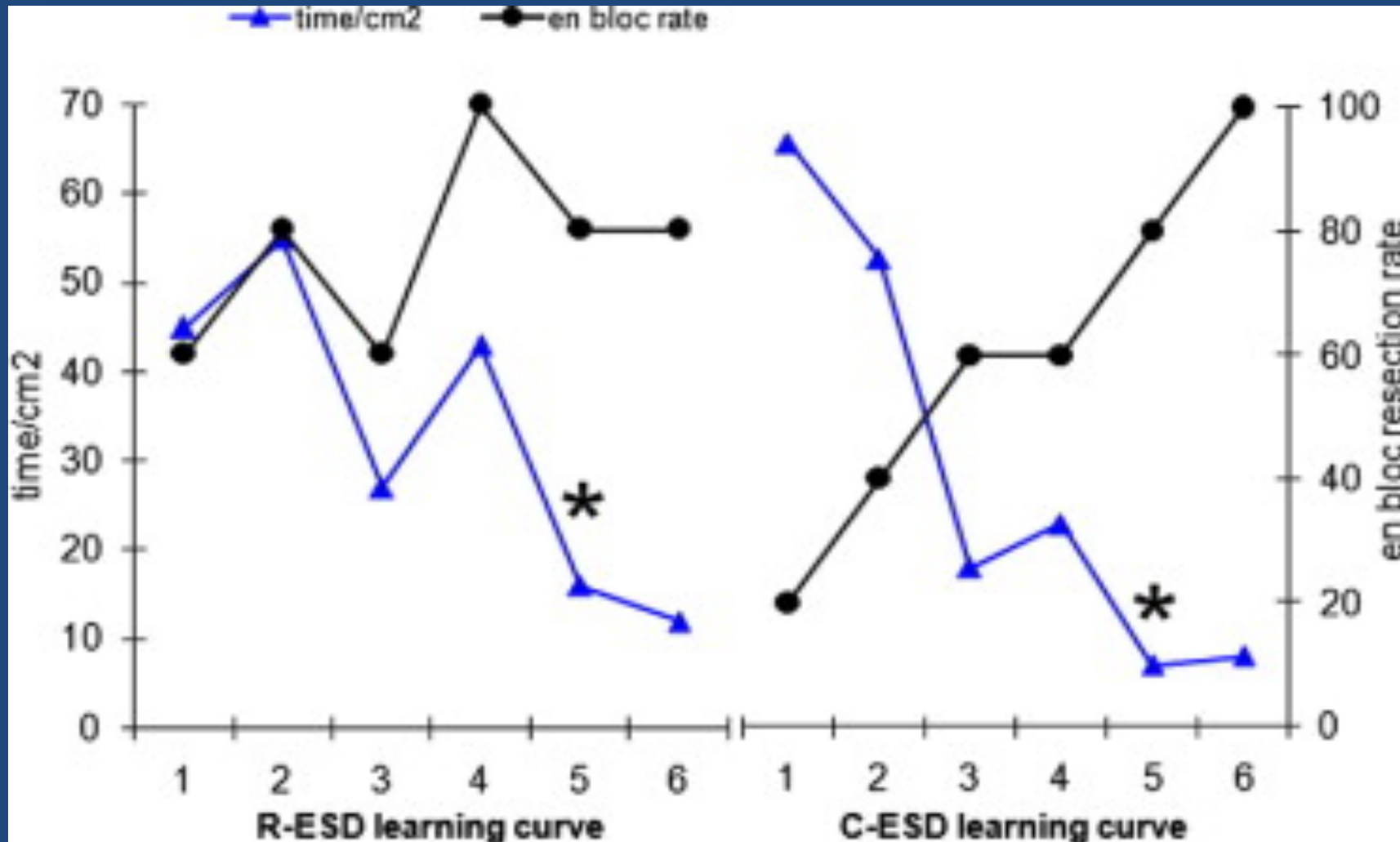
ESD Learning Curve



Training for ESD?

Only endoscopists who have mastered the
ESD technique
for gastric tumors
should be allowed to perform ESD
on esophageal or colorectal tumors

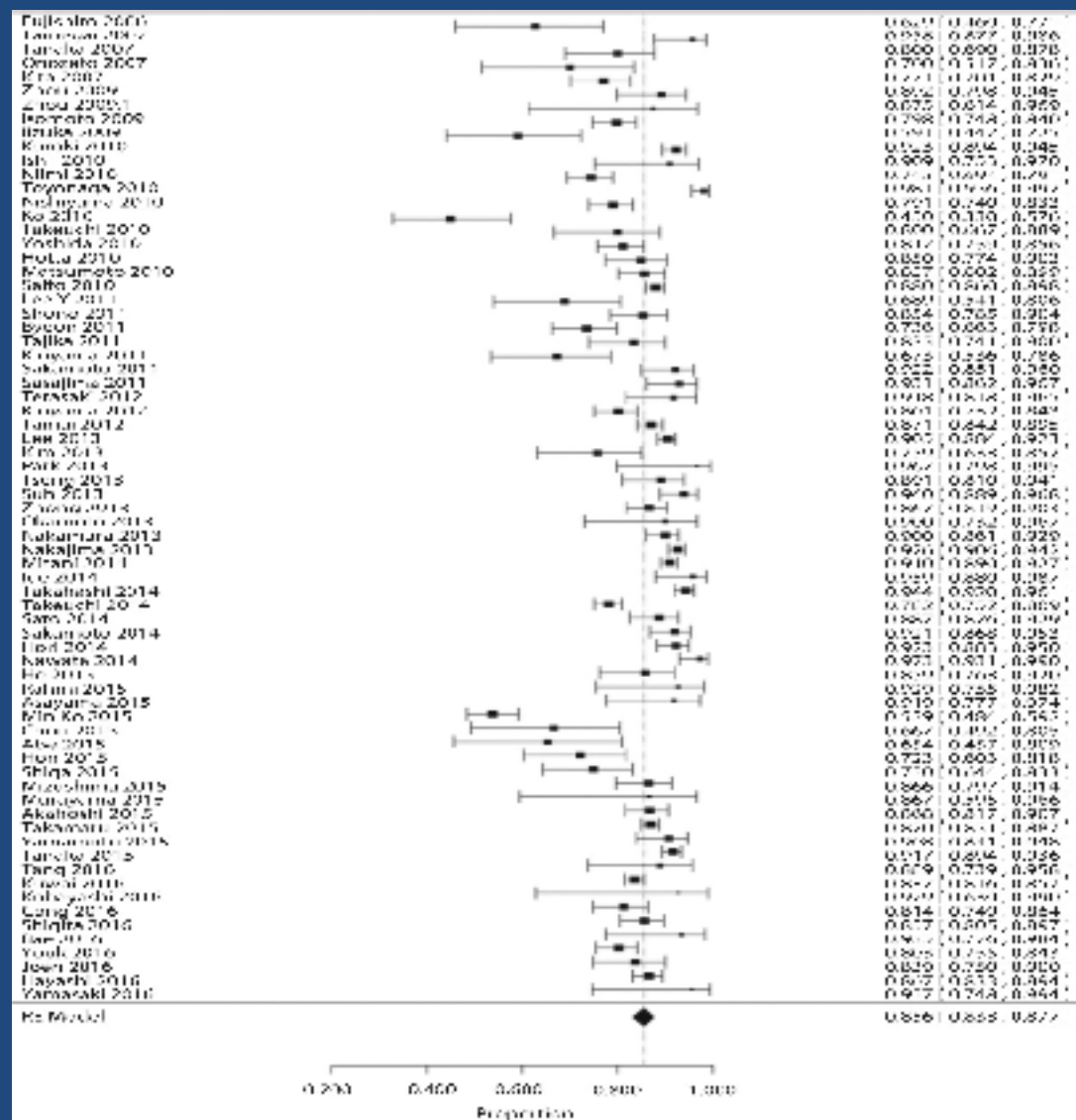
ESD Learning Curve in Italy



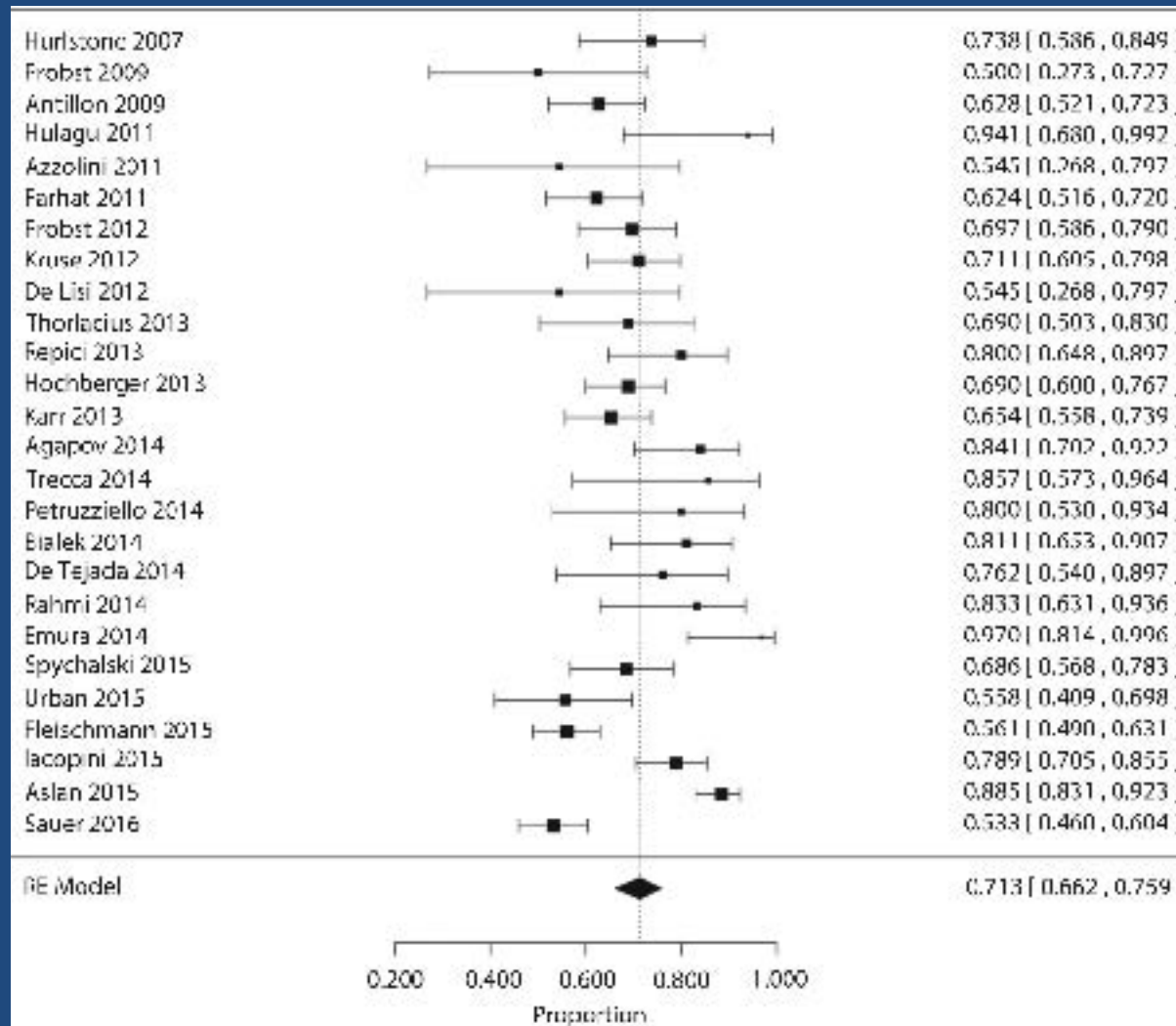
Large series of CR ESD: EAST vs WEST

Author/Year	Country	Pts	En Bloc	R0	Perf
Saito GIE 2010	Japan	1,111	88%	89%	4.9%
Probst Endoscopy 2012	Germany	82	81%	69%	1.3%
Repici GIE 2013	Italy	40	90%	80%	2.5%
Rahmi Endoscopy 2014	France	45	64%	53%	17.7%

R0 resection rates of endoscopic submucosal dissection performed with the standard technique in Asian countries



R0 resection rates of endoscopic submucosal dissection performed with the standard technique in non-Asian countries



EAST vs WEST

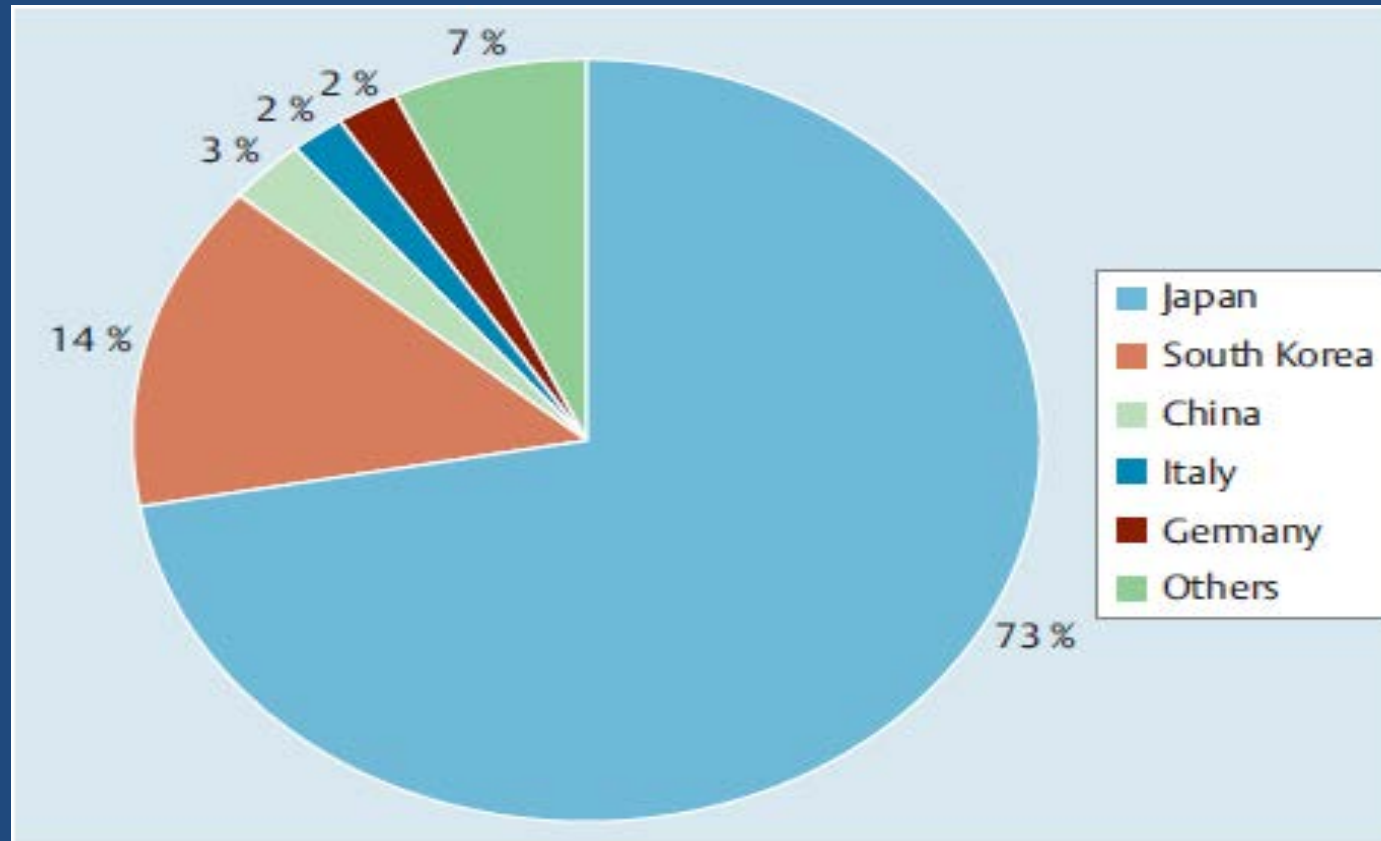


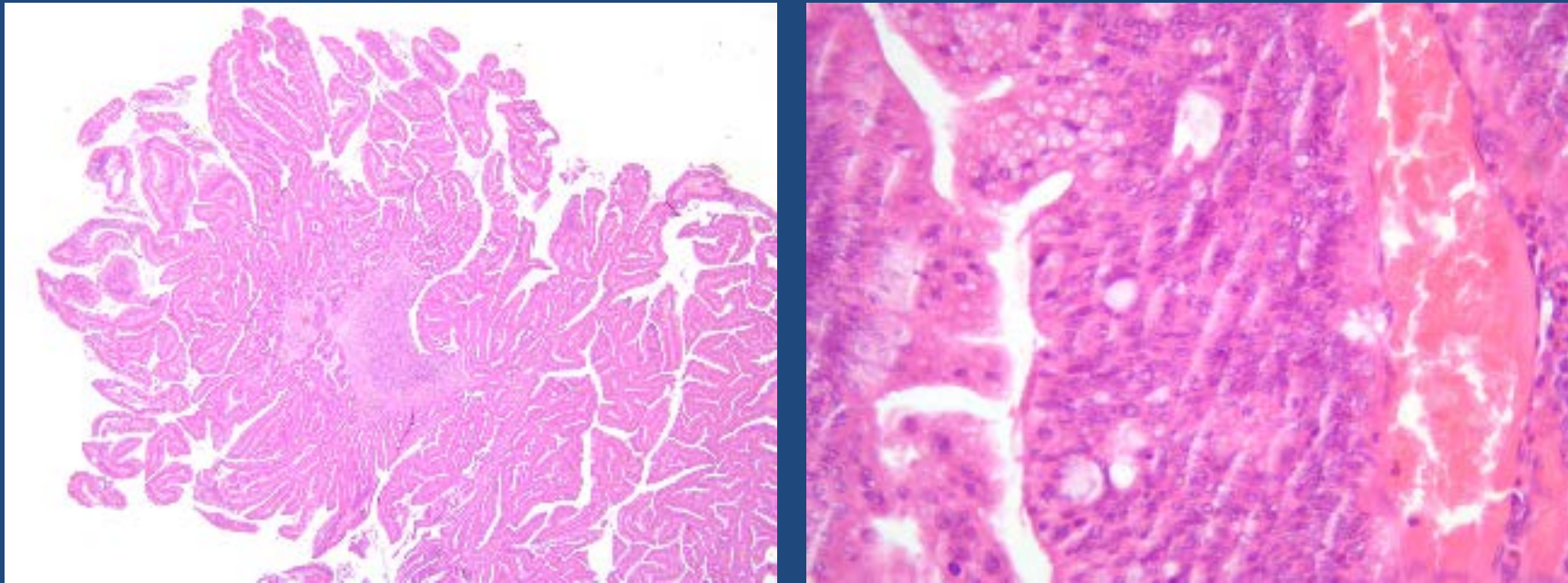
Fig. 2 Percentage distribution of 13 603 patients who underwent colorectal endoscopic submucosal dissection between 1998 and 2014 in 15 countries. Others include Taiwan, Australia, France, Poland, Sweden, Turkey, UK, Brazil, Colombia, and USA that contributed $\leq 1\%$ each.

75 yo - LST-GM (Is+IIa) 14 x 14 cm



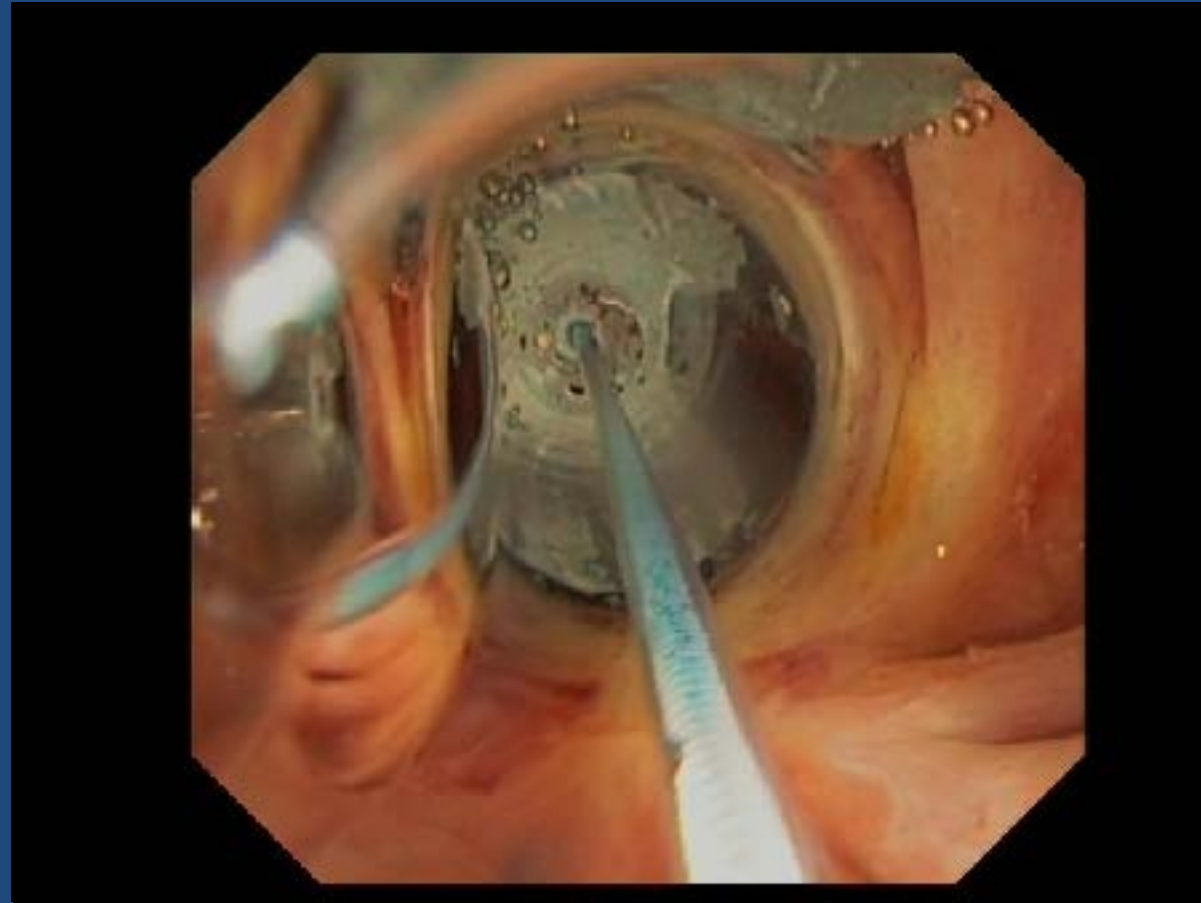
EPMR

LST-GM (Is+IIa) 14 x 14 cm



TV Adenoma – HGD

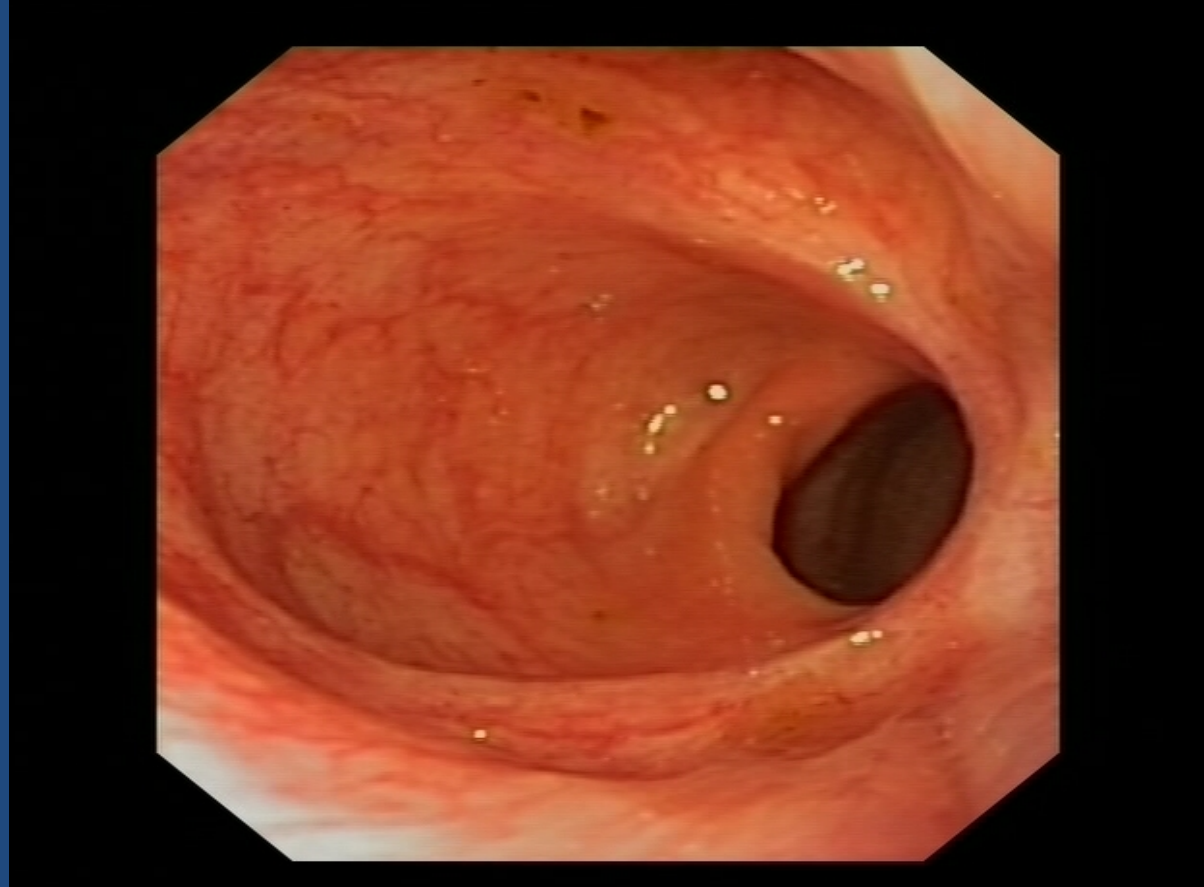
LST-GM (Is+IIa) 14 x 14 cm



3 months later ...

...stricture (balloon dilation)

LST-GM (Is+IIa) 14 x 14 cm



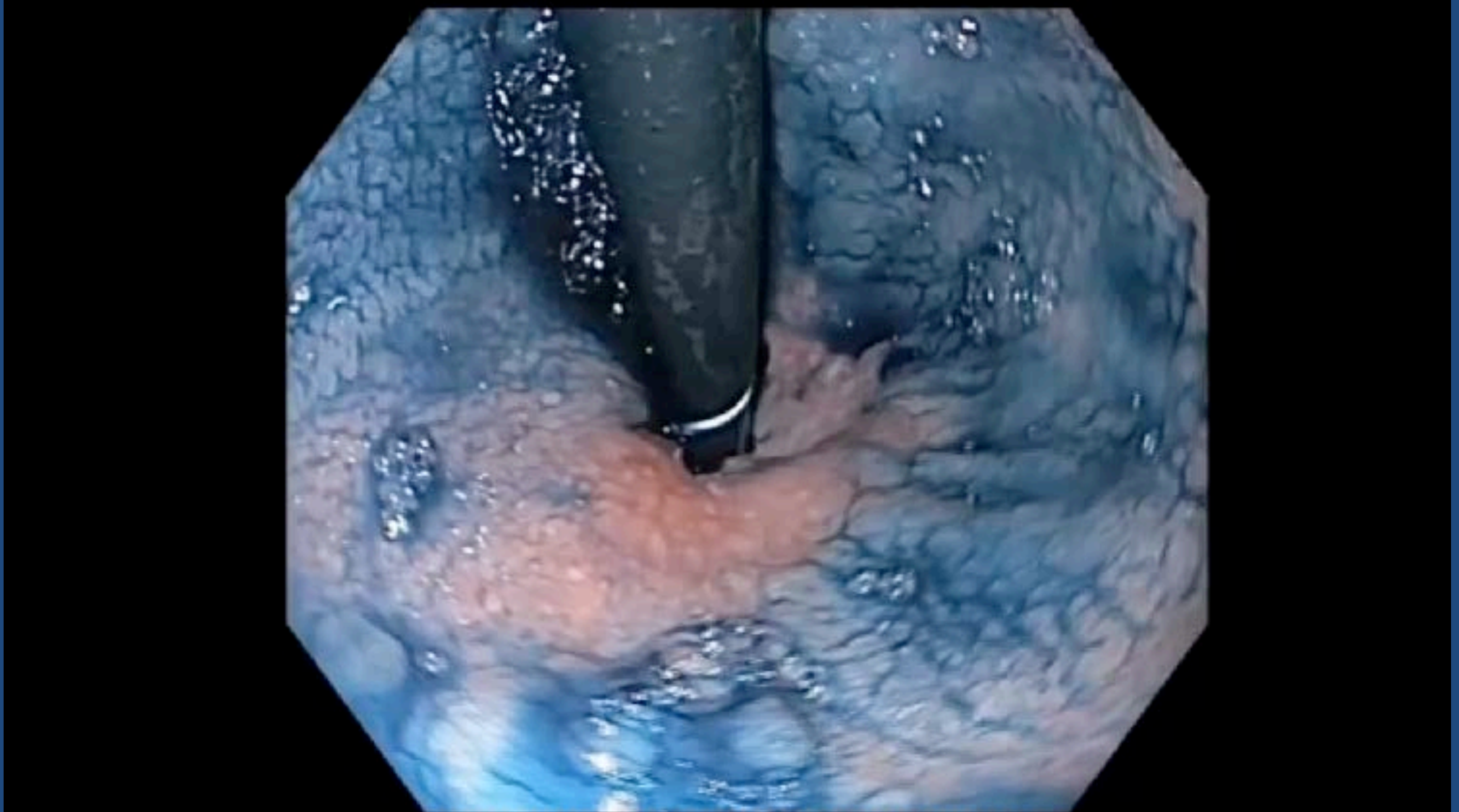
after 1 year ...

LST-GM (Is+IIa) 14 x 14 cm



after 18 months

ESD with tunnelling technique for large lesions



Courtesy Fathi Aslan, MD – Istanbul (Turkey)

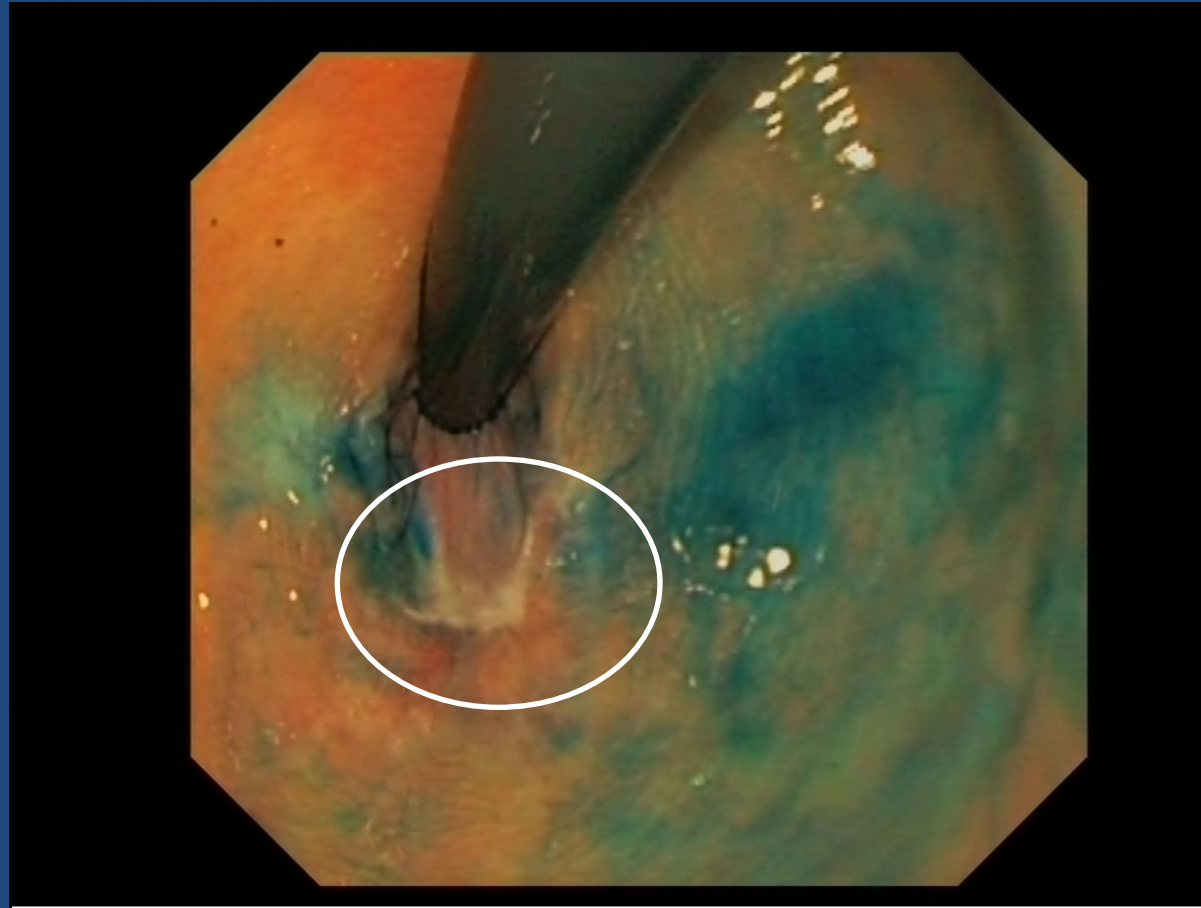
Fibrosis: recurrence after EMR



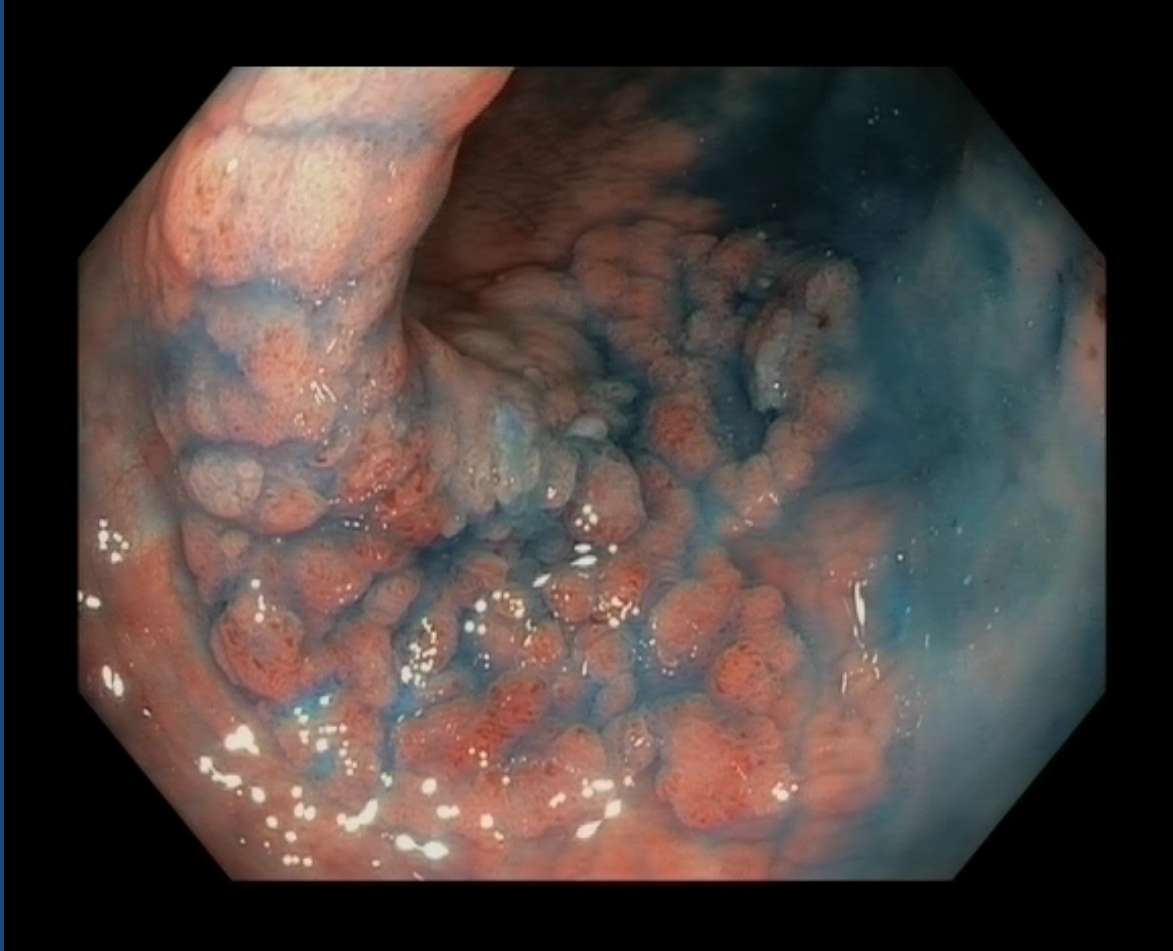
Fibrosis: recurrence after TEM



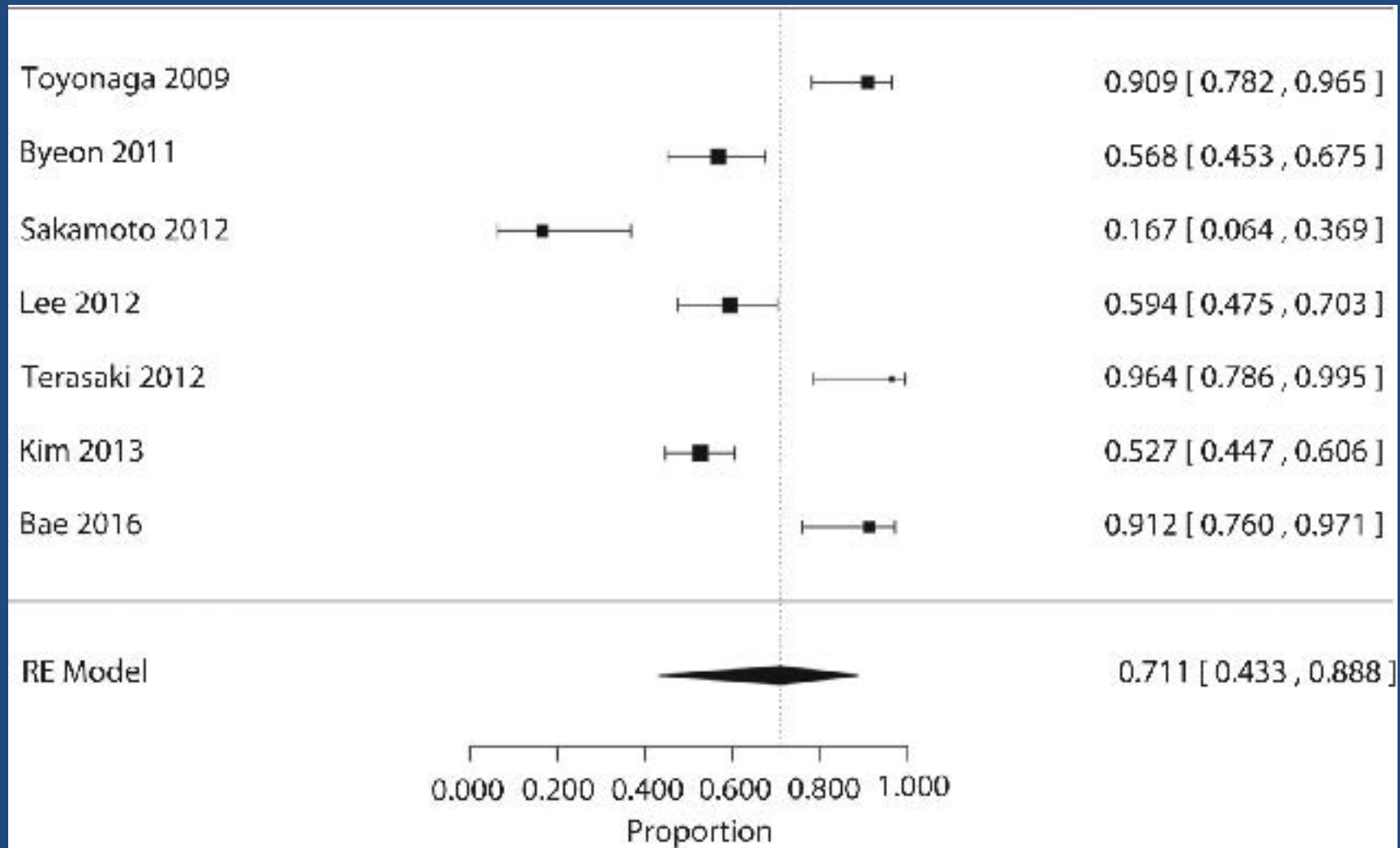
Partial ESD (Incision-Assisted EMR)



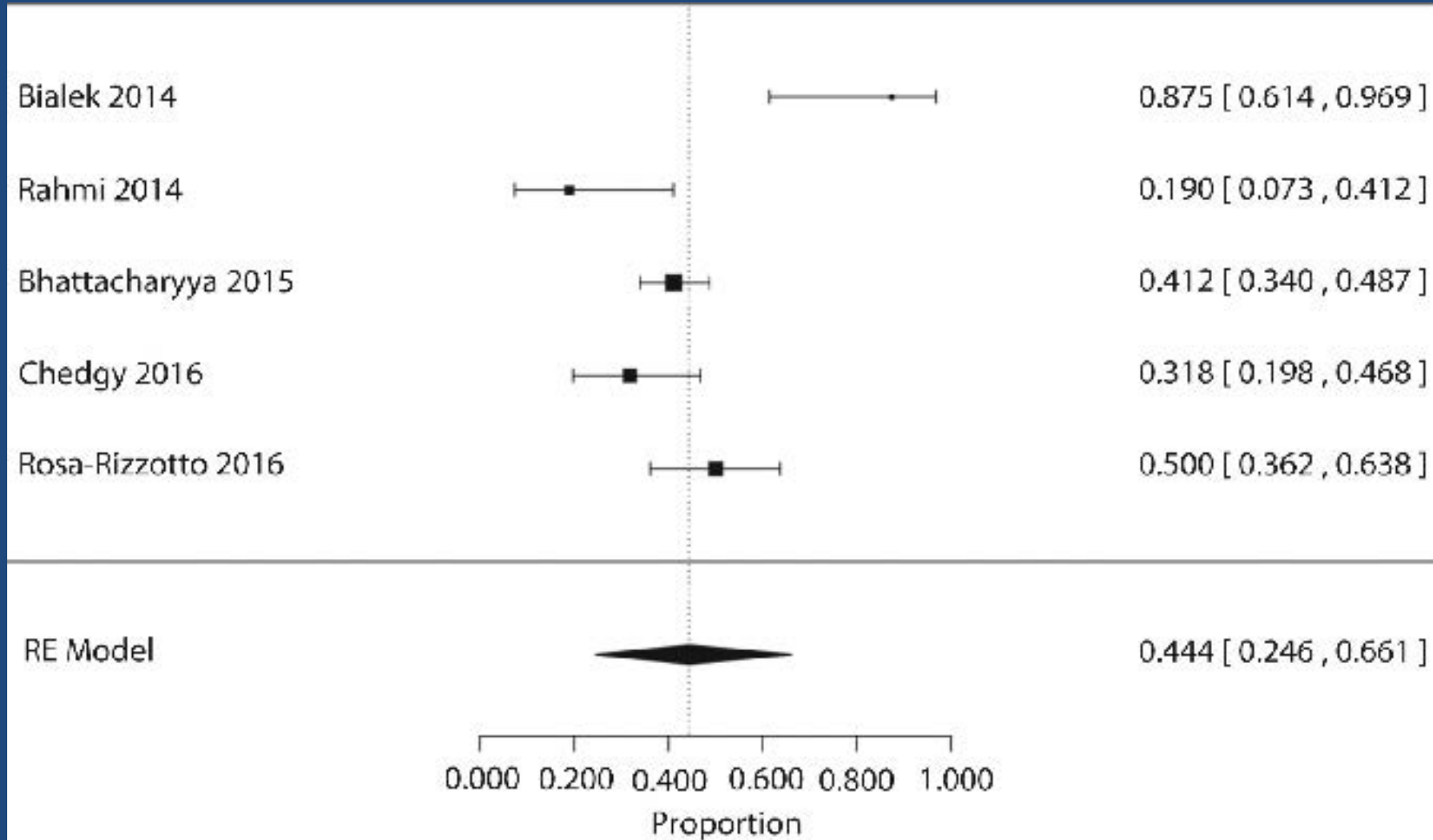
LST in UC: Hybrid ESD



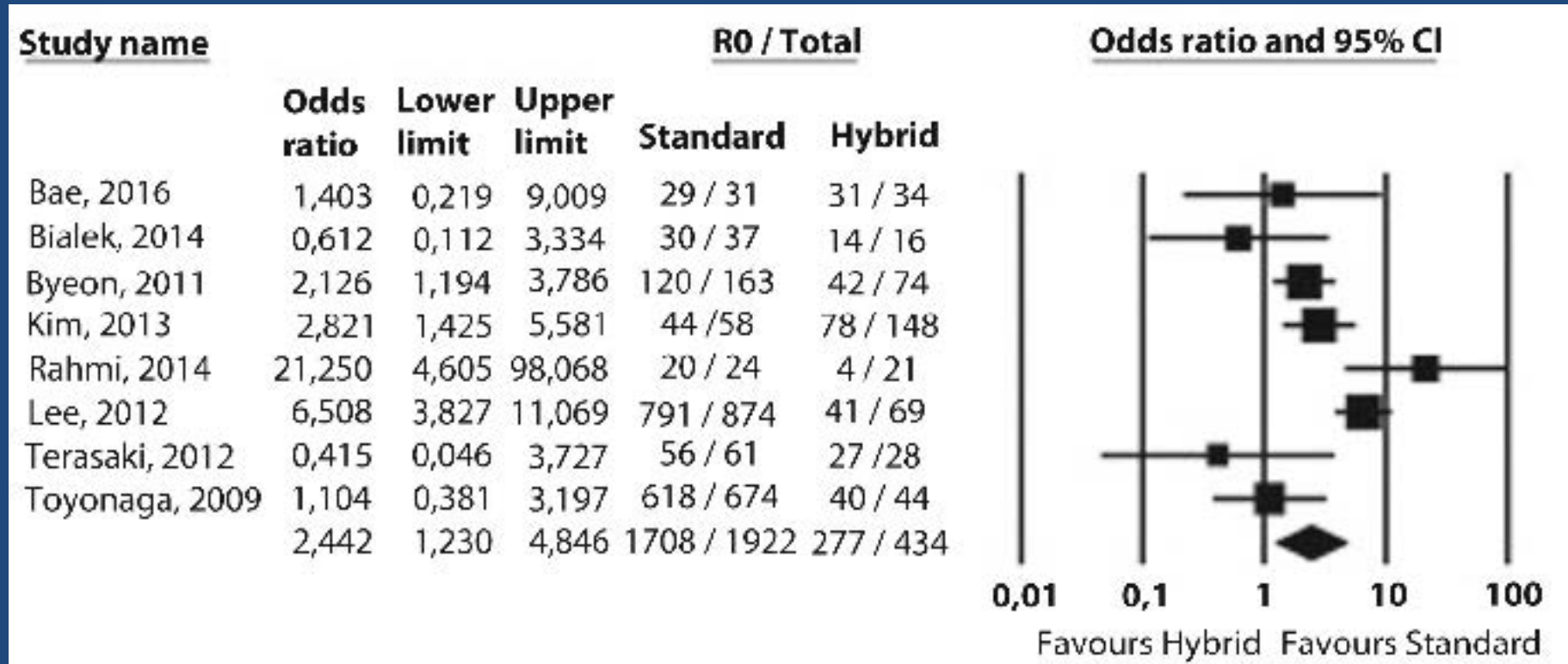
R0 resection rates of endoscopic submucosal dissection performed with the hybrid technique in Asian countries



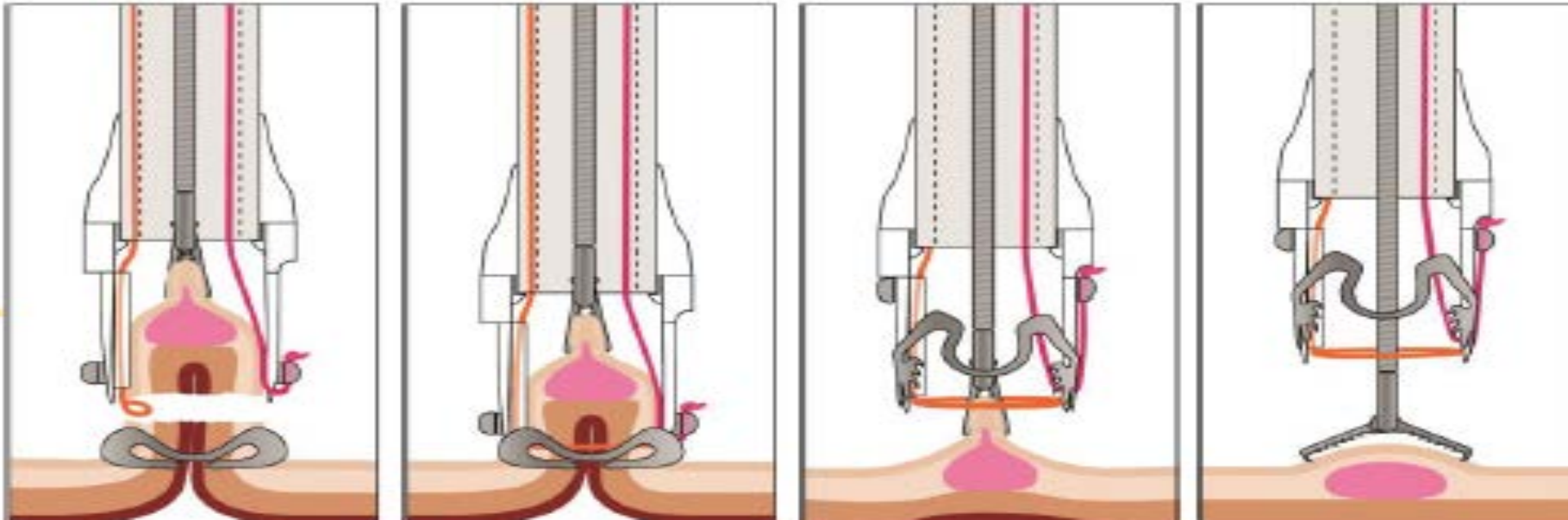
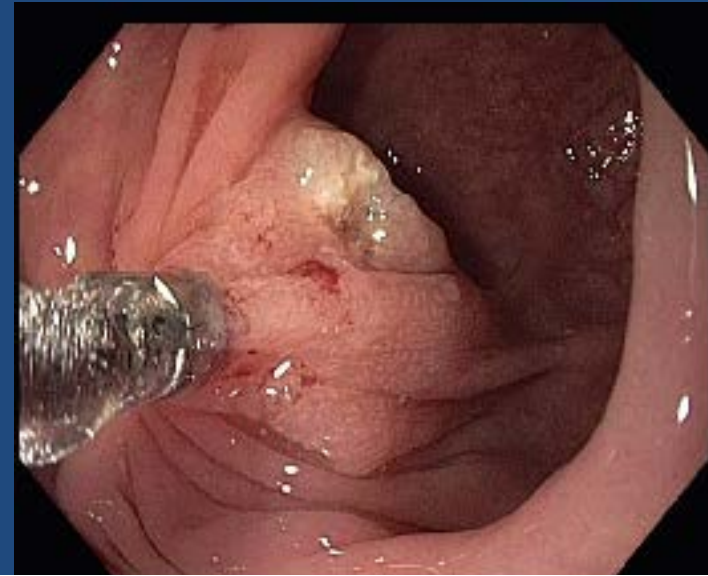
R0 resection rates of endoscopic submucosal dissection performed with the hybrid technique in non-Asian countries



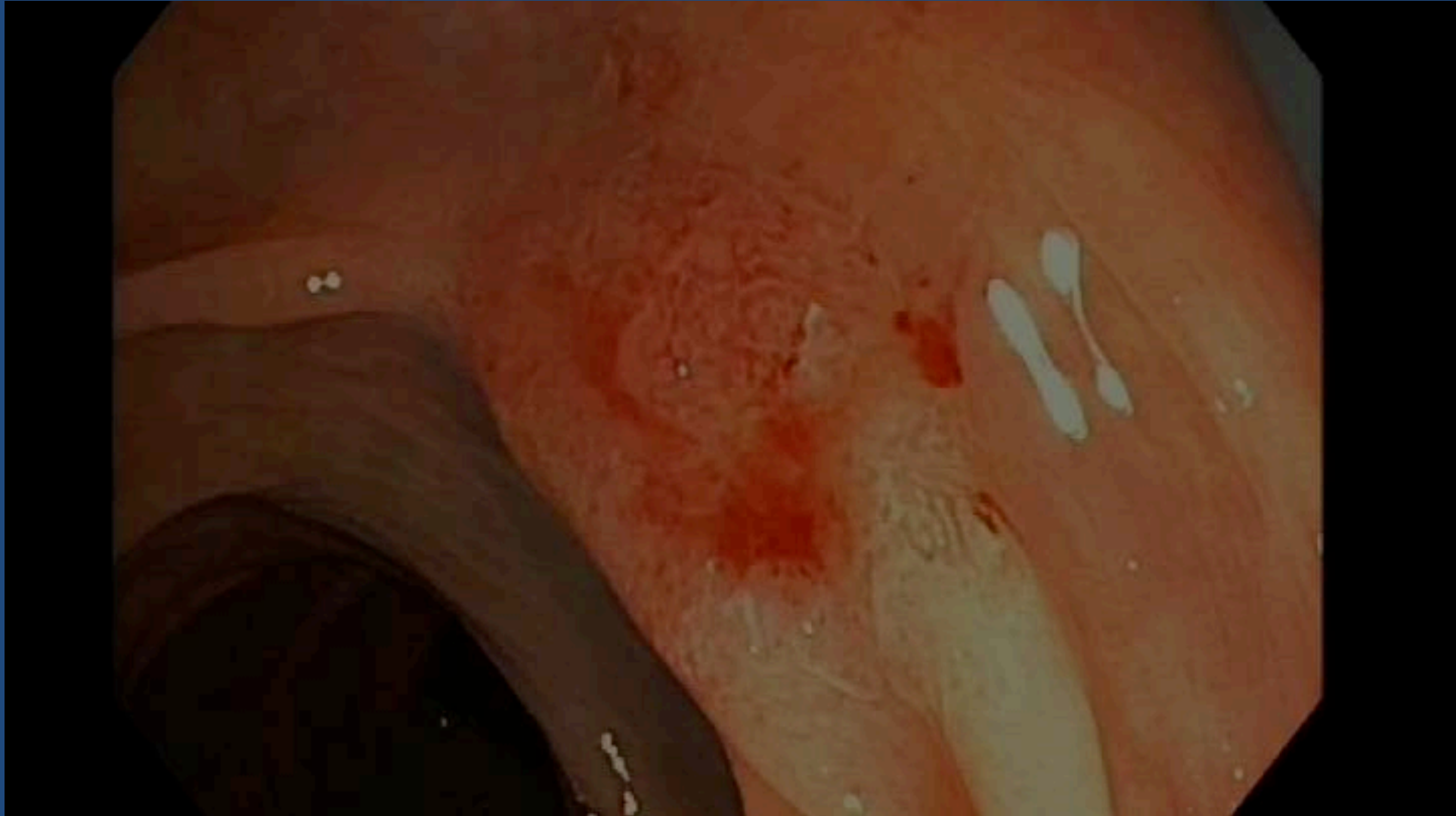
Studies comparing the standard versus hybrid technique



EFTR with OTSC FTR Device (FTRD)



OTSC FTRD – Procedure (Video)



2015 ESGE Guidelines on CR ESD

- The majority of colonic and rectal superficial lesions can be effectively removed in a curative way by standard **polypectomy** and/or by **EMR**
(strong recommendation, moderate quality evidence)
- **ESD** can be considered for removal of colonic and rectal lesions with high suspicion of limited submucosal invasion that is based on two main criteria of depressed morphology and irregular or nongranular surface pattern, particularly if the lesions are larger than 20 mm
- **ESD** can be considered for colorectal lesions that otherwise cannot be optimally and radically removed by snare-based techniques
(strong recommendation, moderate quality evidence)

2015 “Western” Indications to ESD

- From an ethical and clinical point of view, colorectal ESD should be primarily limited to:
 - Lesions with an increased probability of early submucosal invasion
 - Selected EMR failures
 - Distal & Mid Rectum
- Patients can be centralized to institutions that are specialized in advanced diagnostic and therapeutic endoscopy of early neoplasia in the upper and lower gastrointestinal tract

Take Home Messages

1. Each rectal lesion suspected for SM invasion should be evaluated with diagnostic endoscopic and imaging modalities
2. MDB to discuss the case
3. HQ EMR to remove most of prox rectum LST-G & GM
4. HQ ESD to remove most of distal-mid rectum Lesions
5. Expert Endoscopists should master the ESD technique and use it appropriately, when indicated
6. Rectal ESD should be performed in few referral Centers, by dedicated endoscopists and mainly for lesions:
 - Distal & Mid Rectum lesions
 - Suspected SM1
 - Scars/recurrences

Thank you!

