
GISCoR22

XV CONGRESSO NAZIONALE 2022

16-17 Giugno 2022

Reggio Emilia

Disclosure ok

XV CONGRESSO NAZIONALE 2022

GISCoR
gruppo italiano screening colorettale

Tecniche avanzate di trattamento endoscopico delle lesioni colo-rettali

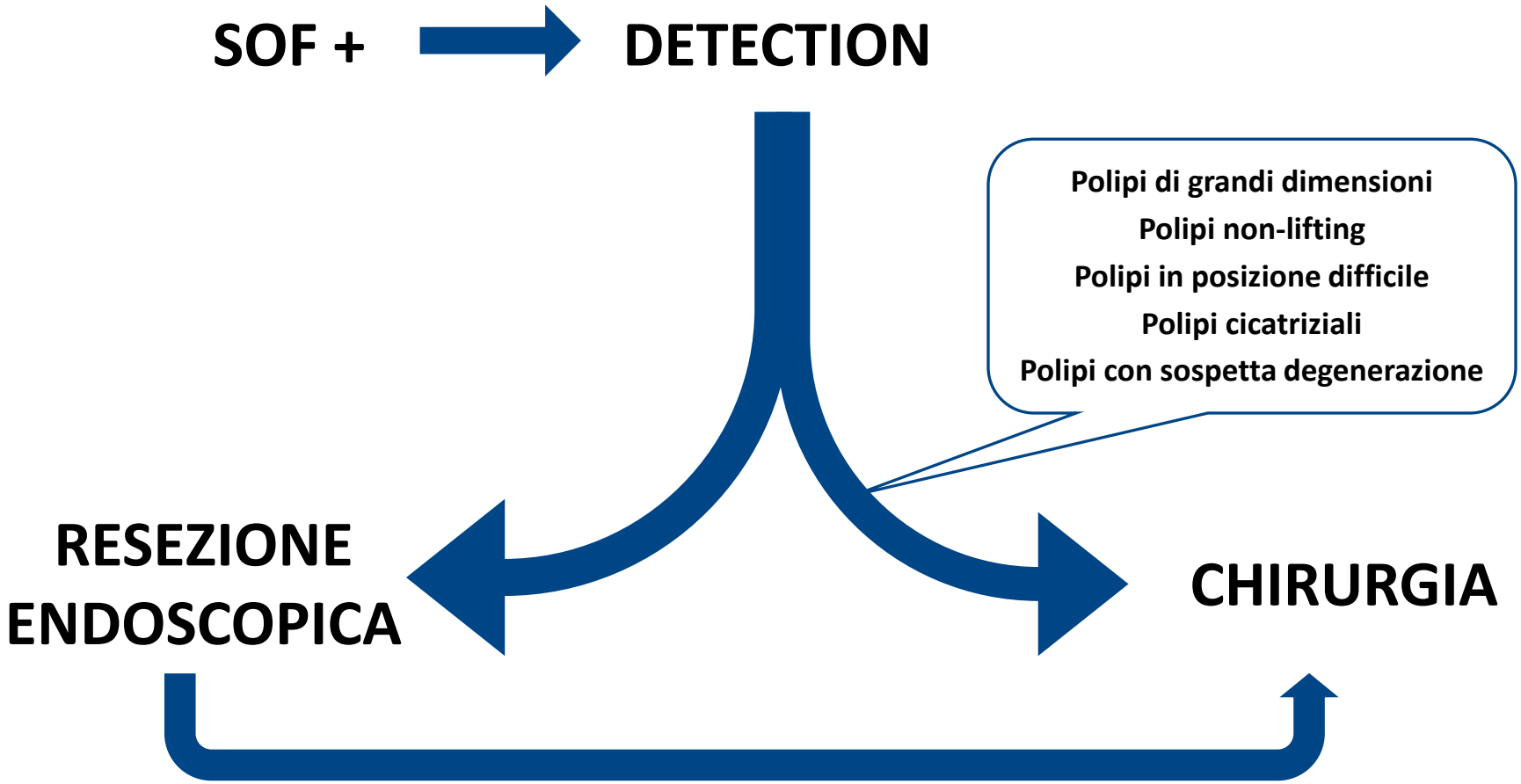
una mediazione culturale

R. Sassatelli

Gastroenterologia endoscopia Digestiva IRCCS AUSL Reggio Emilia

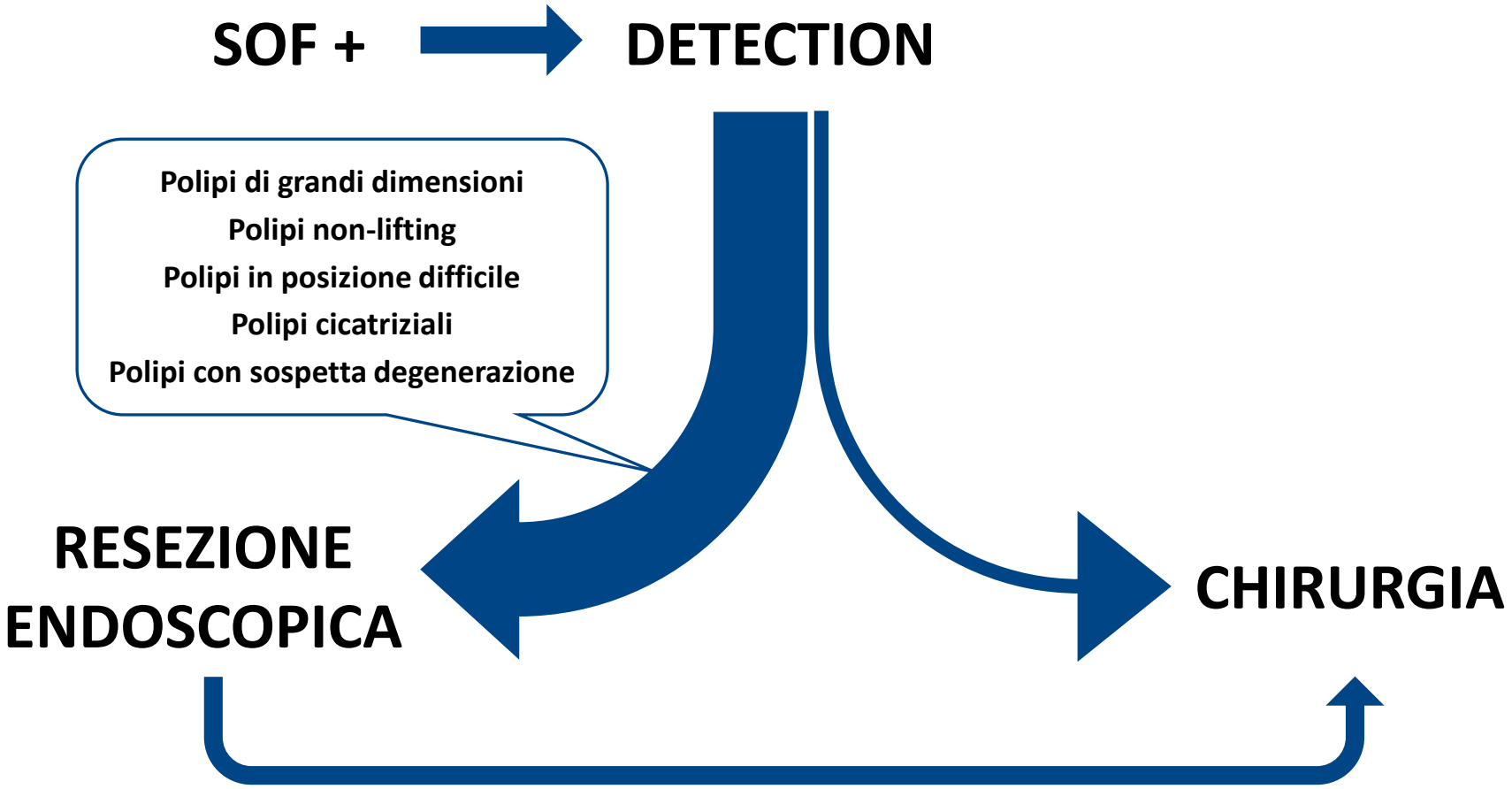
Un approccio in evoluzione…

Fino a 15 anni fa



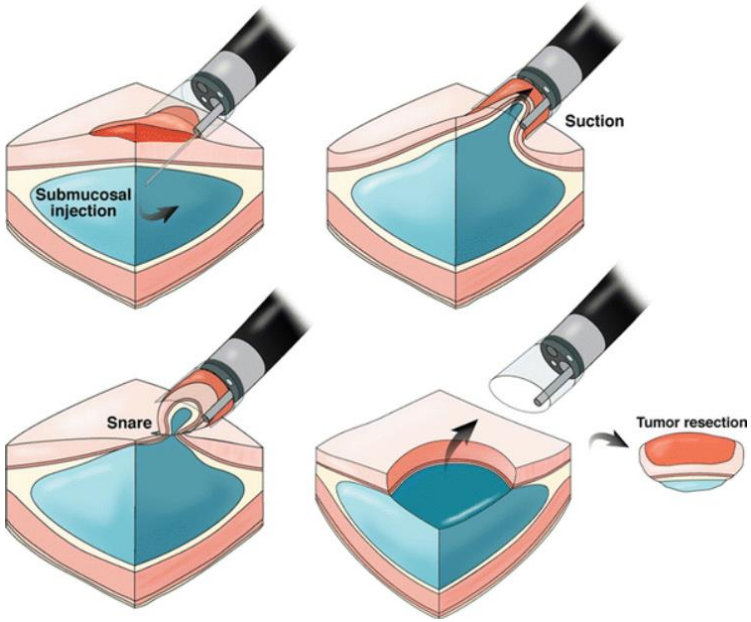
Un approccio in evoluzione…

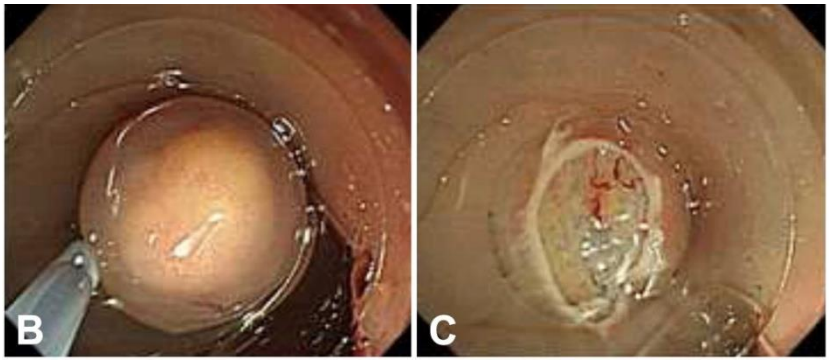
Oggi



Non solo polipectomie…

CAP-ASSISTED EMR





Resection of mucosal lesion using C-EMR. With permission from Chandrasekhara V, Ginsberg GG. Endoscopic mucosal resection: not your father's polypectomy anymore. Gastroenterology. 2011;141:42–9© Elsevier

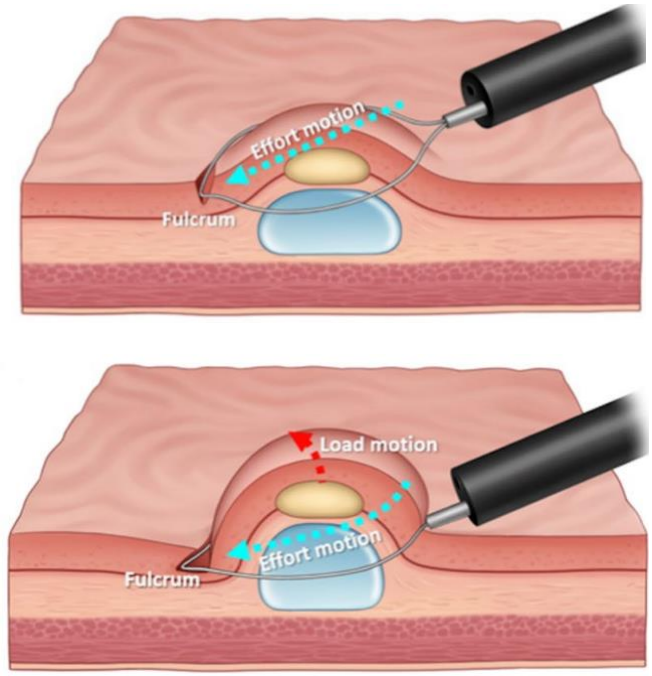
Yang, Dong-Hoon, et al. "Cap-assisted EMR for rectal neuroendocrine tumors: comparisons with conventional EMR and endoscopic submucosal dissection (with videos)." Gastrointestinal Endoscopy 83.5 (2016): 1015-1022.

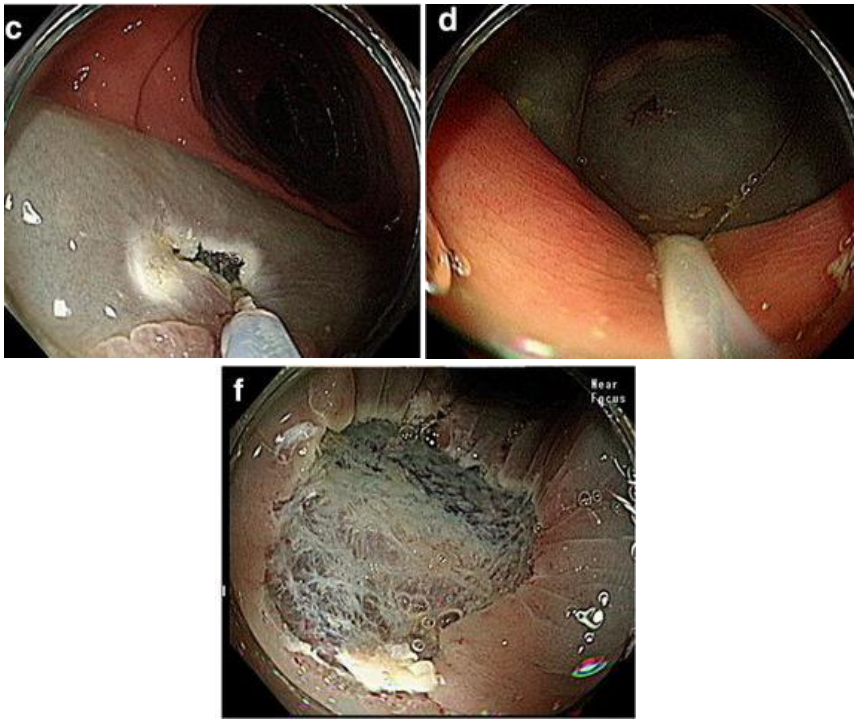
CAP-ASSISTED EMR

- Minor tempo di esecuzione
- Utile in caso di nonlifting polyps

Park, Seon-Young, et al. "Usefulness of cap-assisted colonoscopy during colonoscopic EMR: a randomized, controlled trial." Gastrointestinal endoscopy 74.4 (2011): 869-875.

TIP-IN EMR





Kim, Jeongseok, et al. "Anchoring the snare tip is a feasible endoscopic mucosal resection method for small rectal neuroendocrine tumors." Scientific reports 11.1 (2021): 1-9.

Noh, Soo Min, et al. "Tip-in versus conventional endoscopic mucosal resection for flat colorectal neoplasia 10 mm or larger in size." International Journal of Colorectal Disease 35.7 (2020): 1283-1290.

TIP-IN EMR

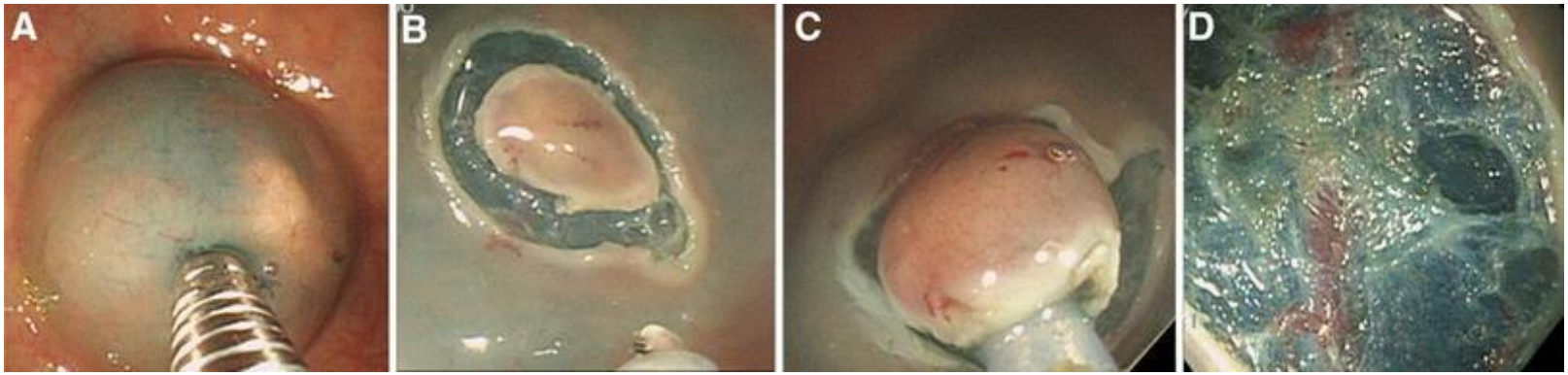
- Maggior tasso resezione en bloc (<25-30mm)
- Minor tasso di recidiva

Noh, Soo Min, et al. "Tip-in versus conventional endoscopic mucosal resection for flat colorectal neoplasia 10 mm or larger in size." International Journal of Colorectal Disease 35.7 (2020): 1283-1290.

Imai, Kenichiro, et al. "Tip-in endoscopic mucosal resection for 15-to 25-mm colorectal adenomas: a single-center, randomized controlled trial (STAR trial)." Official journal of the American College of Gastroenterology| ACG 116.7 (2021): 1398-1405.

Sato, Yoshinori, et al. "Tip-in endoscopic mucosal resection for large colorectal sessile polyps." Surgical Endoscopy 35.4 (2021): 1820-1826.

PRECUTTING EMR



Lee, Hyun Joo, et al. "A comparison of endoscopic treatments in rectal carcinoid tumors." Surgical endoscopy 30.8 (2016): 3491-3498.

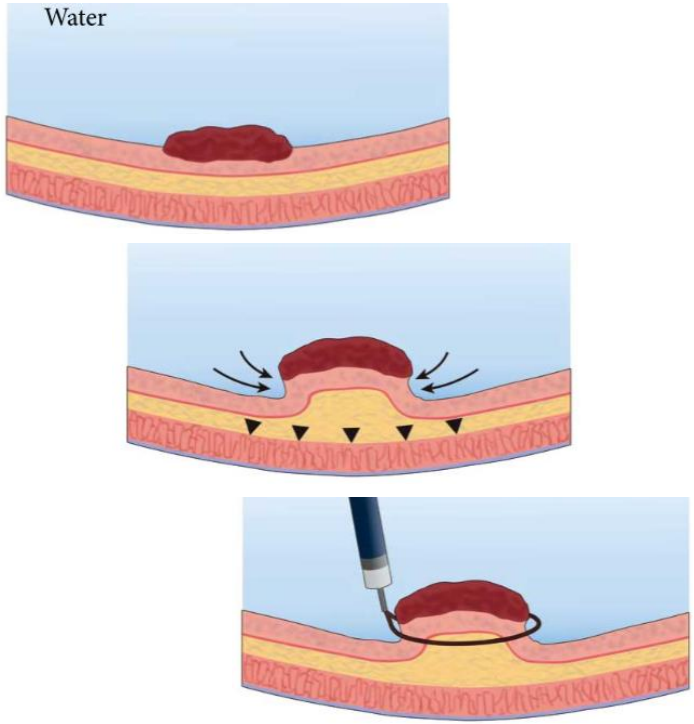
PRECUTTING EMR

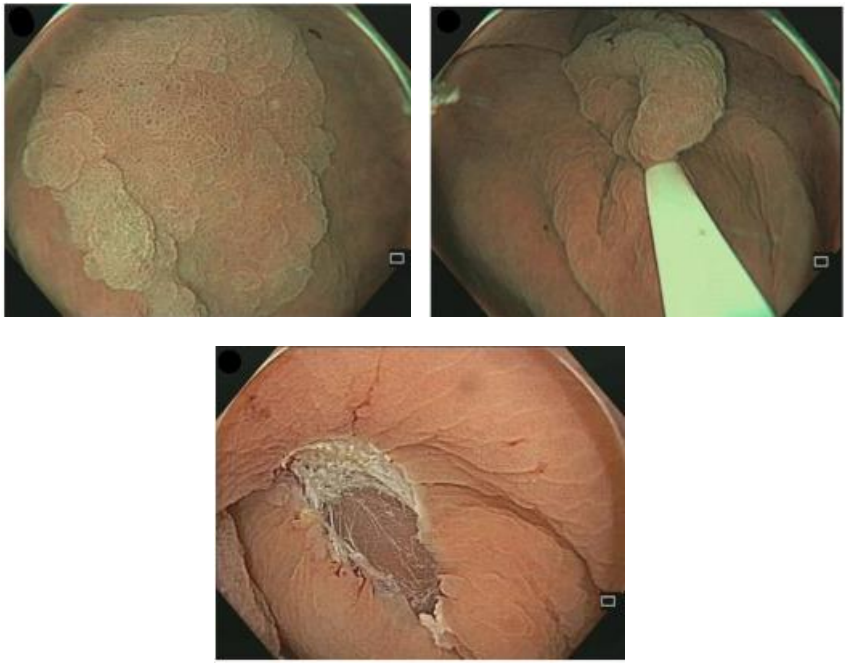
- Maggior tasso di resezione en bloc
- Maggior tasso di resezioni complete
- Minor rischio di recidiva

Yoshida, Naohisa, et al. "Efficacy of precutting endoscopic mucosal resection with full or partial circumferential incision using a snare tip for difficult colorectal lesions." Endoscopy 51.09 (2019): 871-876.

Oh, C. K., et al. "Conventional endoscopic mucosal resection vs. precut-endoscopic mucosal resection for large (≥ 1 cm) colorectal lesions with endoscopic features of sessile serrated adenoma/polyp." Endoscopy 52.s 01 (2020): epp382.

UNDERWATER EMR





Shibukawa, Goro, et al. "Endoscopic mucosal resection performed underwater for nonampullary duodenal epithelial tumor: evaluation of feasibility and safety." Gastroenterology Research and Practice 2018 (2018).Rodriguez-Sanchez, Joaquin, et al.

Nagl, Sandra, et al. "Underwater vs conventional endoscopic mucosal resection of large sessile or flat colorectal polyps: a prospective randomized controlled trial." Gastroenterology 161.5 (2021): 1460-1474.

UNDERWATER EMR

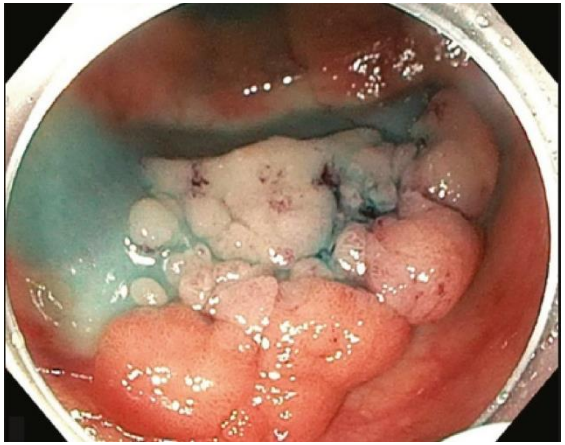
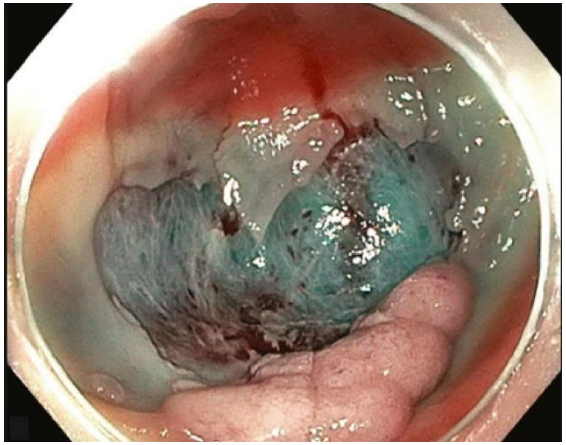
- Maggior tasso di resezion en bloc
- Minor rischio di recidiva
- Minor rischio perforativo
- Minor rischio di sindrome post-polipectomia

Spadaccini, Marco, et al. "Underwater EMR for colorectal lesions: a systematic review with meta-analysis" Gastrointestinal Endoscopy 89.6 (2019): 1109-1116.

Choi, Alyssa Y., et al. "Underwater versus conventional EMR for colorectal polyps: systematic review and meta-analysis." Gastrointestinal Endoscopy 93.2 (2021): 378-389.

Rodriguez-Sanchez, Joaquin, et al. "Short and long-term outcomes of underwater EMR compared to the traditional procedure in the real clinical practice." Revista Espanola de Enfermadades Digestivas (REED) 111.7 (2019): 543-550.

COLD SNARE RESECTION


Ortigão, Raquel, et al. "Cold versus hot polypectomy/endoscopic mucosal resection–A review of current evidence." UEG Journal 9.8 (2021): 938-946.

COLD SNARE RESECTION

- Minor sanguinamento ritardato
- Minor rischio perforativo
- Minor tempo
- (Soprattutto per lesioni serrate)

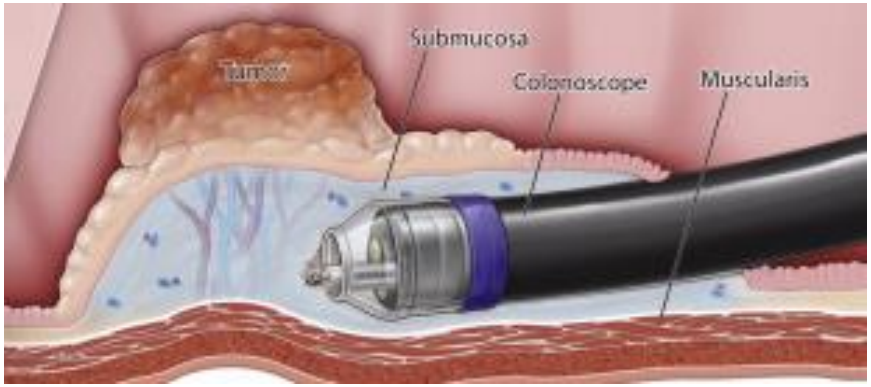
van Hattem, W. Arnout, et al. "Piecemeal cold snare polypectomy versus conventional endoscopic mucosal resection for large sessile serrated lesions: a retrospective comparison across two successive periods." Gut 70.9 (2021): 1691-1697.

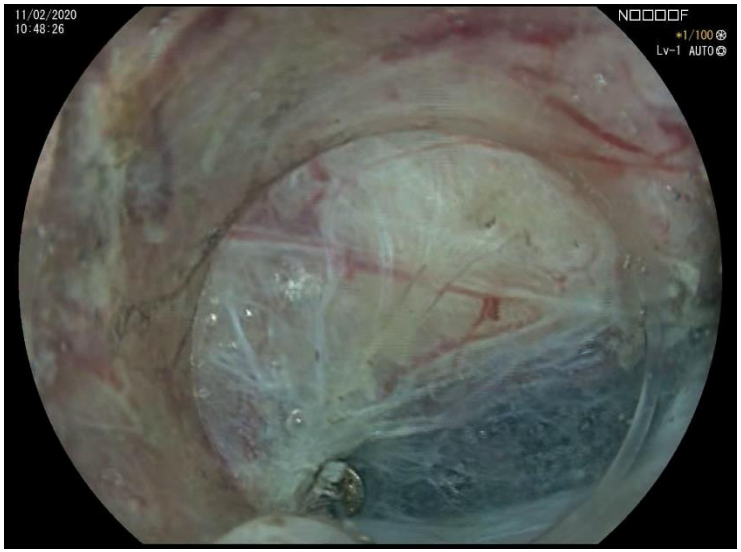
Chandrasekar, Viveksandeep Thoguluva, et al. "Cold snare endoscopic resection of nonpedunculated colorectal polyps larger than 10 mm: a systematic review and pooled-analysis." Gastrointestinal endoscopy 89.5 (2019): 929-936.

Suzuki, Sho, et al. "Width and depth of resection for small colorectal polyps: hot versus cold snare polypectomy." Gastrointestinal endoscopy 87.4 (2018): 1095-1103.

Un nuovo paradigma spaziale

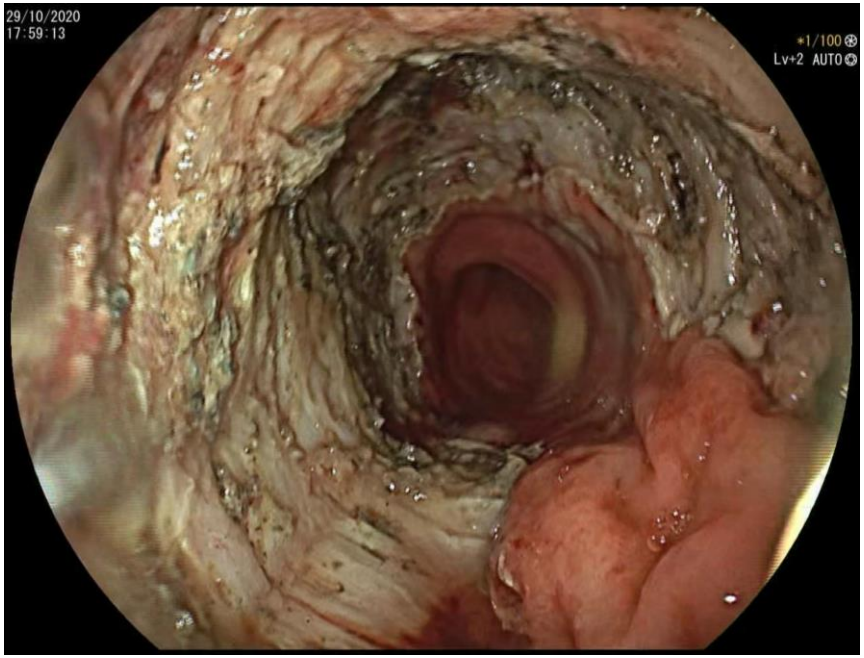
DISSEZIONE SOTTOMUCOSA ENDOSCOPICA (ESD)

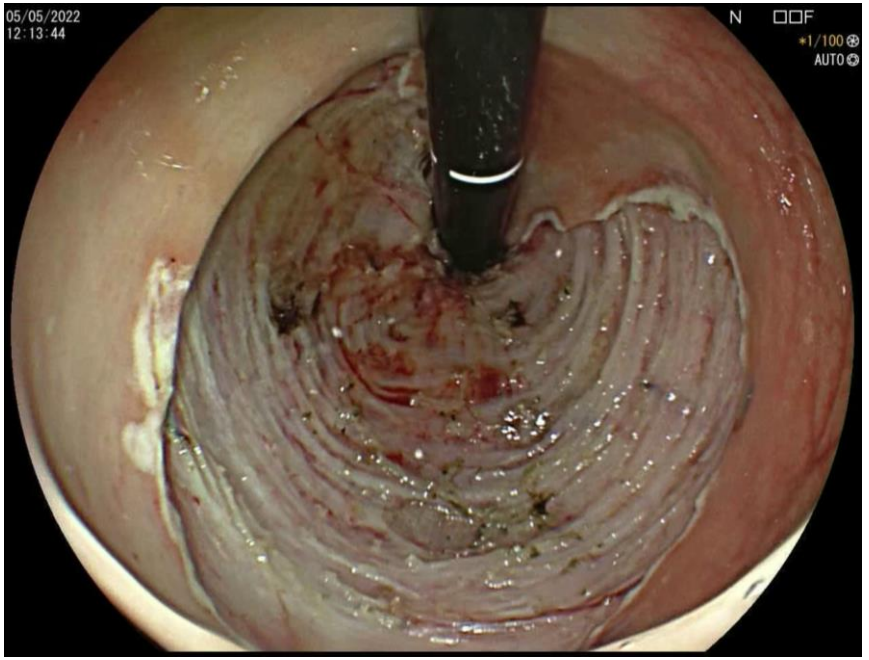




Takezawa, Takahito, et al. "The pocket-creation method facilitates colonic endoscopic submucosal dissection (with video)." Gastrointestinal Endoscopy 89.5 (2019): 1045-1053.

DISSEZIONE SOTTOMUCOSA ENDOSCOPICA (ESD)





Con ganci, palline, waterjet, clip, antigravitazione…

DISSEZIONE SOTTOMUCOSA (ESD)

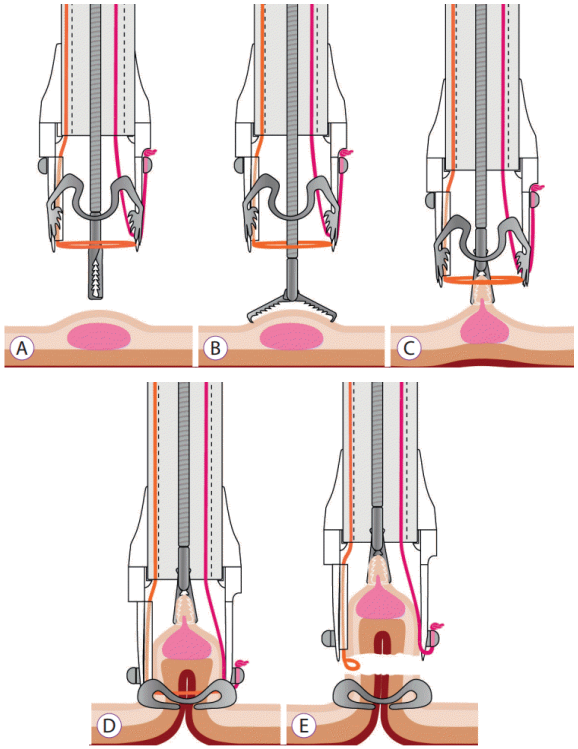
- Maggior tasso di resezione en bloc (lesioni di qualsiasi dimensione)
- Maggior tasso di resezioni complete
- Minor rischio di recidiva

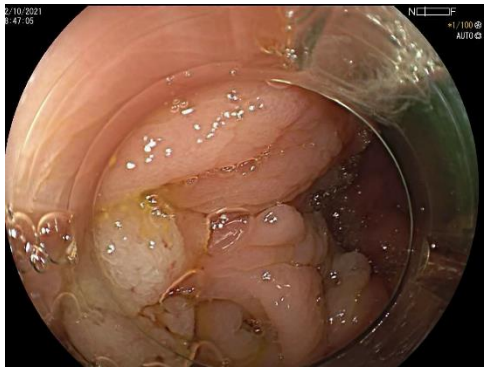
Arezzo, Alberto, et al. "Systematic review and meta-analysis of endoscopic submucosal dissection vs endoscopic mucosal resection for colorectal lesions." UEG Journal 4.1 (2016): 18-29.

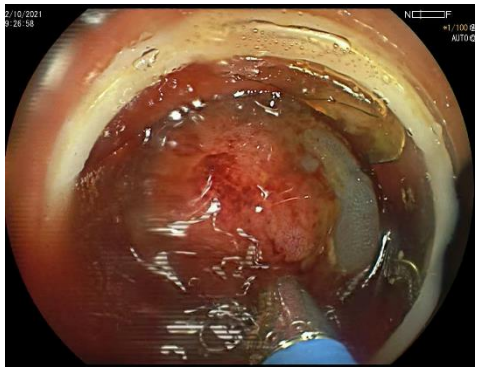
Lim, Xiong Chang, et al. "Endoscopic submucosal dissection vs endoscopic mucosal resection for colorectal polyps: A meta-analysis and meta-regression with single arm analysis." World Journal of Gastroenterology 27.25 (2021): 3925.

Tutta la parete

RESEZIONE A TUTTO SPESSORE (EFTR)







Wedi, Edris, et al. "Full-thickness resection device for complex colorectal lesions in high-risk patients as a last-resort endoscopic treatment: initial clinical experience and review of the current literature." Clinical Endoscopy 51.1 (2018): 103

Ichkhanian, Y., et al. "A large multicenter cohort on the use of full-thickness resection device for difficult colonic lesions." Surgical endoscopy 35.3 (2021): 1296-1306.

RESEZIONE A TUTTO SPESSORE (EFTR)

- Rimozione di lesioni cicatriziali/non-lifting
- Rimozione di lesioni del forame appendicolare
- Rimozione di lesioni coinvolgenti diverticoli

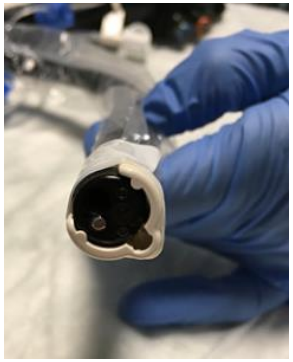
Schmidt, Arthur, Benjamin Meier, and Karel Caca. "Endoscopic full-thickness resection: current status." World journal of gastroenterology: WJG 21.31 (2015): 9273.

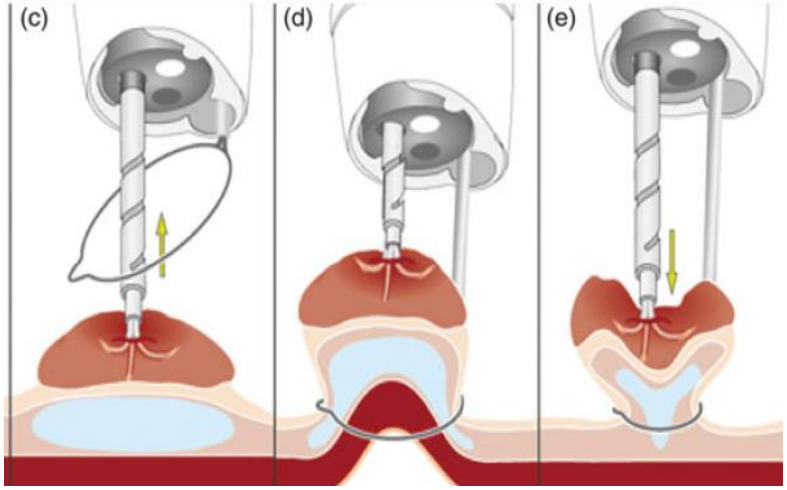
Aepli, Patrick, et al. "Endoscopic full thickness resection (EFTR) of colorectal neoplasms with the Full Thickness Resection Device (FTRD): Clinical experience from two tertiary referral centers in Switzerland." United European Gastroenterology Journal 6.3 (2018): 463-470.

EMR +

- Wide field EMR
- Band-ligation (+ autoamputation)
- Hybrid APC assisted
- Cap-assisted for non-lifting / Cap-fitted EMR
- Margins!
- Additional working channel
- Snare tip soft coagulation (STSC) and Cold-snare avulsion

Bilel Jideh, Michael J. Bourke, MBBS Gastrointest Endoscopy Clin N Am 29 (2019) 629–646 / Stephanie Romutis et al and Asif Khalid Ther Adv Gastrointest Endosc 2021, Vol. 14: 1–11 / Gottumukkala S. Raju.. John Stroehlein Endoscopy International Open 2020; 08: E115–E121 / Victoria L. Motz… John M. Levenick Endoscopy 2022; 54: 580–584 / Gijs Kemper.. Erwin J. M. van Geenen the ENDOCARE Study Group Surgical Endoscopy (2021) 35:5422–5429 5423 / Edris Wedi.. & Peter Koehler / https://doi.org/10.1080/13645706.2019.1673778 / Veronique R. H. Van der Voort… Paul Didden Endoscopy 2022; 54: 509–514 / Vincent Zimmer, Elke Eltze GE Port J Gastroenterol 2022;29:148–150




(c)
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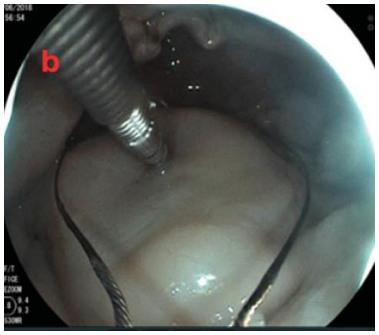
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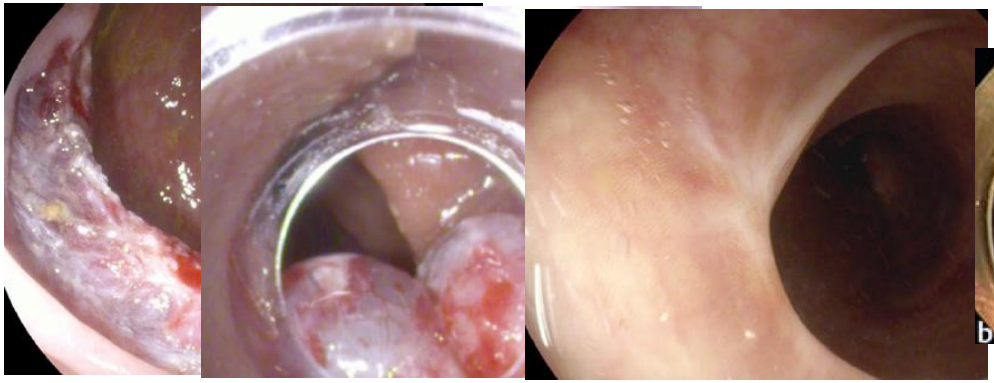


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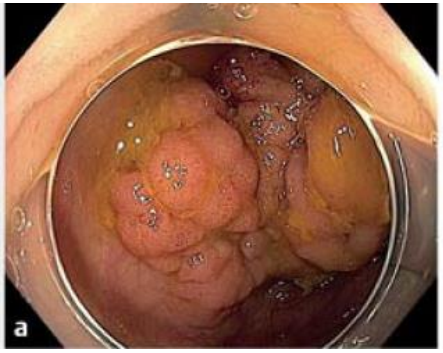
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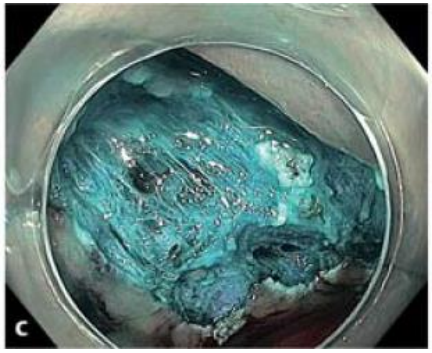
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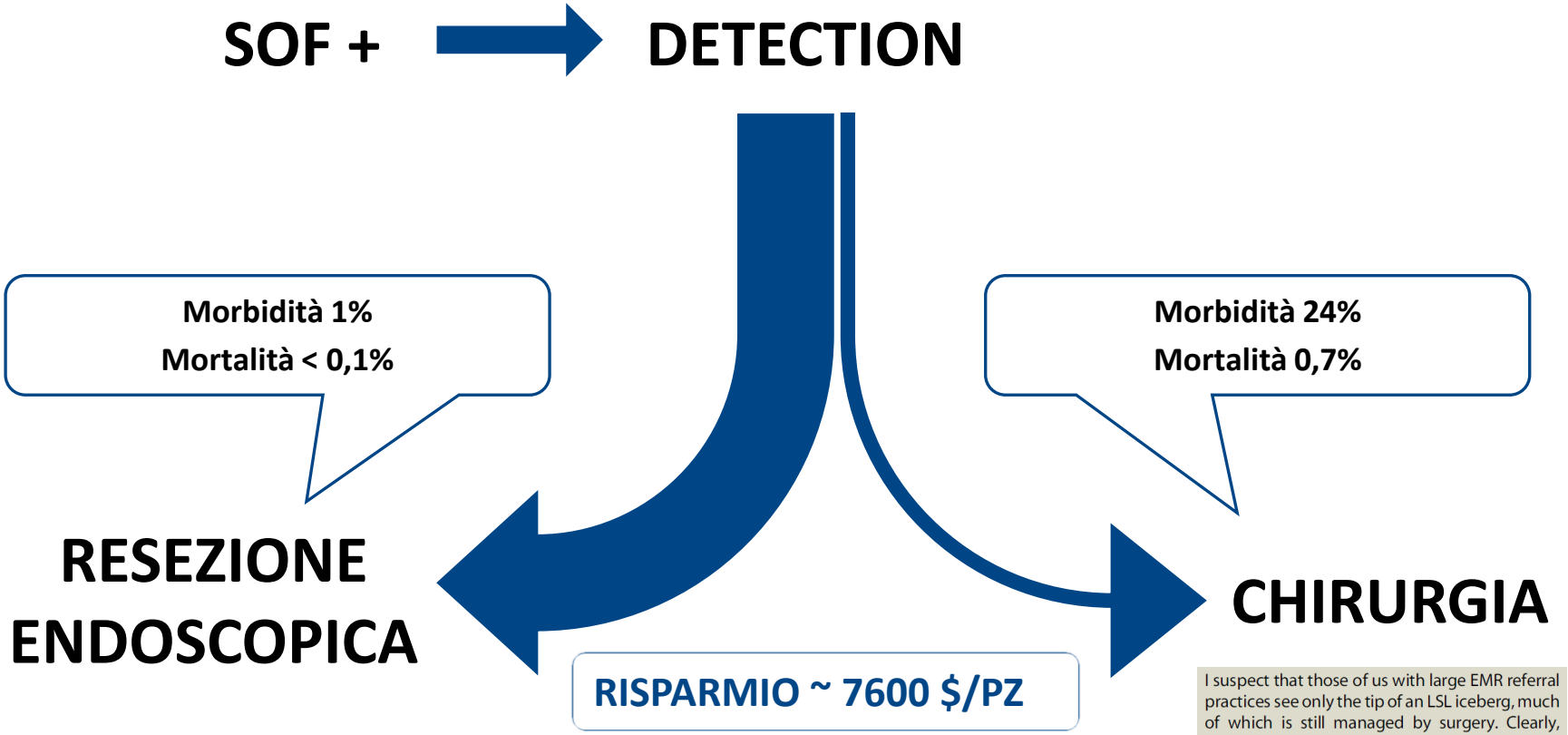
d

Follow-up (mostly EMR..?)

- Maggiore recurrence attesa per EMR
- ESD tecnologia più nuova: bias di osservazione?
- Evidenza di residuo microscopico su EMR-LST > 2 cm
- Accuratezza della «simple optical evaluation» sulle stesse lesioni…
- Score di recurrence dopo EMR (Sidney) *

Andrew Emmanuel … Amin Haji Gastrointest Endosc 2021;94: 368-75
Neal Shaidi … Michael J Bourke Endoscopy 2022;54:173-177
David J Tate… Michael J Bourke Gastrointest Endosc 2017 Mar;85(3):647-656

…un approccio in evoluzione



Babberich, Michael PM de Neree, et al. "Outcomes of surgical resections for benign colon polyps: a systematic review." Endoscopy 51.10 (2019): 961-972. / Jayanna, Mahesh, et al. "Cost analysis of endoscopic mucosal resection vs surgery for large laterally spreading colorectal lesions." Clinical Gastroenterology and Hepatology 14.2 (2016): 271-278. / Hassan, C., et al. "Efficacy and safety of endoscopic resection of large colorectal polyps: a systematic review and meta-analysis." Gut 65.5 (2016): 806-820. / DK Rex Gastrointestinal Endoscopy 2020

Quale tecnica scegliere?

ESD vs EMR

ESD	EMR
COMPARAZIONE DI EFFICACIA [1,2]	
Maggior tasso di resezione en bloc Minor rischio di sanguinamento Minor rischio di recidiva Maggior tasso di resezioni curative	Minor tempo procedurale Minor rischio di perforazione Maggiore rischio di chirurgia aggiuntiva
COMPARAZIONE DI COSTO[3]*	
US$6.91 milioni /1000 casi	US$4.33 milioni/ 1000 casi
L'ESD selettiva (nel sospetto endoscopico di infiltrazione sottomucosa) è la strategia migliore dal punto di vista del costo/efficacia: US$4.22 million/1000 casi	
INVIO A CHIRURGIA (per istologia, recidiva o complicanze)[3]	
62/1000 casi	94/1000 casi

1. *Fujiya, Mikihiro, et al. "Efficacy and adverse events of EMR and endoscopic submucosal dissection for the treatment of colon neoplasms: a meta-analysis of studies comparing EMR and endoscopic submucosal dissection." Gastrointestinal endoscopy 81.3 (2015): 583-595.*

2. *Russo, Pedro, et al. "Management of colorectal laterally spreading tumors: a systematic review and meta-analysis." Endoscopy International Open 7.02 (2019): E239-E259.*

3. *Bahin, Farzan F., et al. "Wide-field endoscopic mucosal resection versus endoscopic submucosal dissection for laterally spreading colorectal lesions: a cost-effectiveness analysis." Gut 67.11 (2018): 1965-1973.*

**nel calcolo del costo EMR è stata considerata in regime di day service e in sedoanalgesia, ESD in regime di ricovero (2 notti) e in sedazione profonda*

Mondo reale?

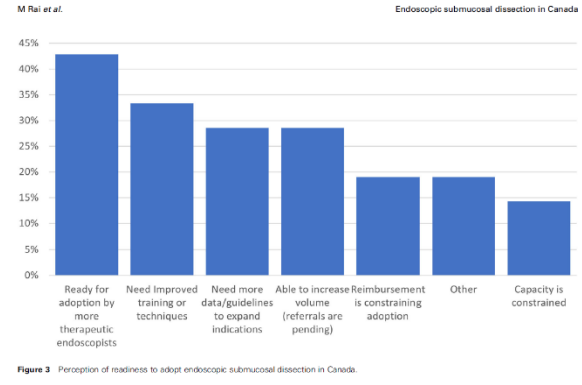
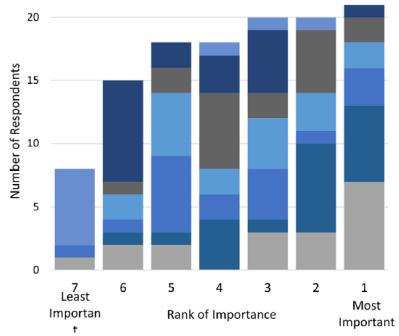


Figure 3 Perception of readiness to adopt endoscopic submucosal dissection in Canada.



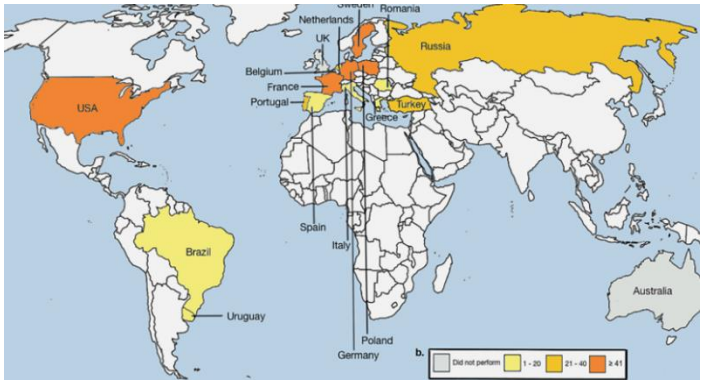


Figure 5 Ranking of perceived barriers to adopting endoscopic submucosal dissection in Canada. ■, Other; ■, lack of society guidelines; ■, low procedure volume; ■, lack of endoscopic diagnosis; ■, lack of reimbursement; ■, long procedural times; ■, lack of training.

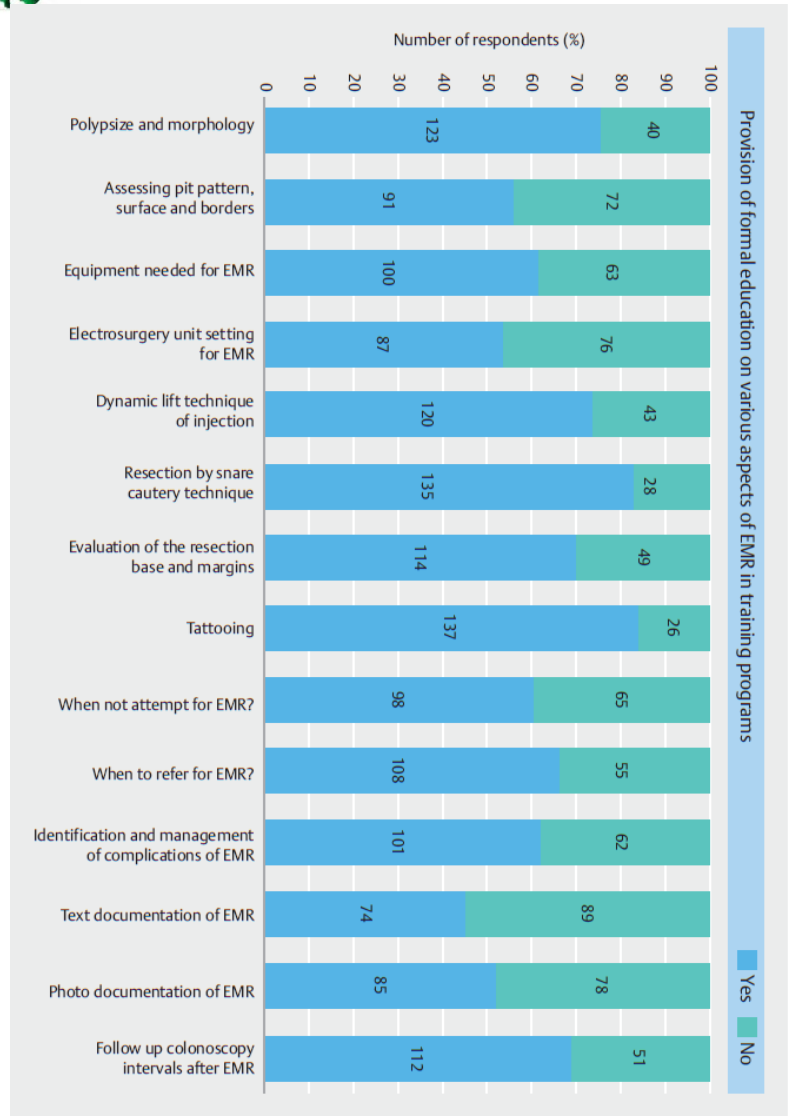
	Rectum	
	2016	2017
N	383	353
Age, mean (±SD)	68.9 ± 5	68.7 ± 4.2
Female sex, n (%)	123 (32.1)	103 (29.2)
Total en-bloc, n (%)	331 (86.4)	292 (82.7)
ESD en-bloc	262	232
Hybrid ESD en-bloc	69	60
Piecemeal complete resection	47	59
Incomplete resection	5	2
Total R0, n (%)	314 (81.9)	266 (75.3)
ESD R0	252	211
Hybrid ESD R0	62	55
Total Curative resection, n (%)	276 (72)	241 (68.2)
ESD curative resection, n (%)[a]	236 (71.3)	201 (68.8)
Piecemeal curative resection, n (%)[a]	40 (85.1)	40 (67.8)

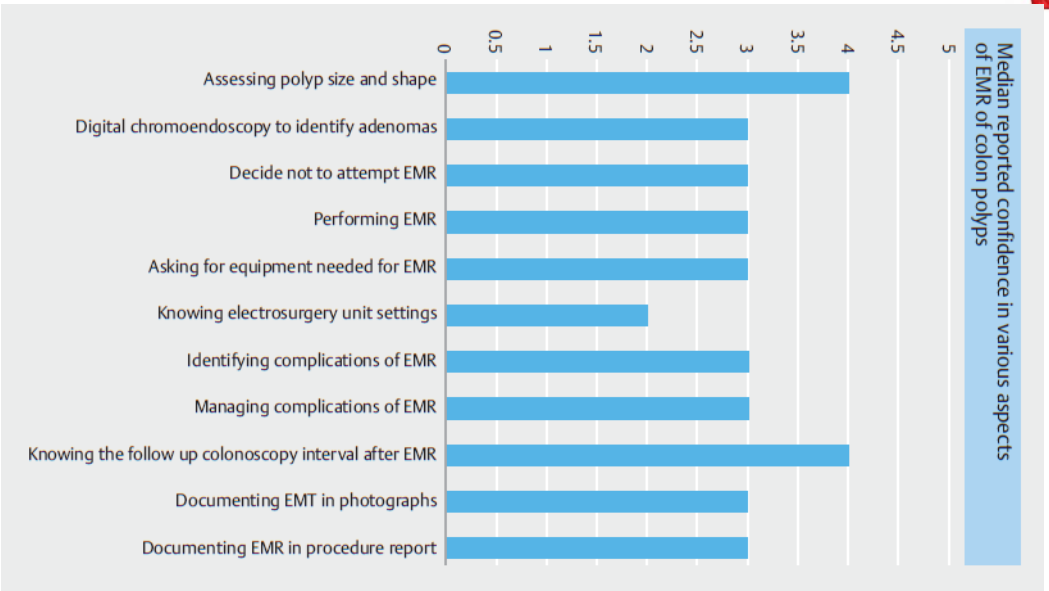
Table 3. Endoscopic Submucosal Dissection Resection Outcomes

Outcomes	All sites (n = 692)	Esophagus (n = 181)	Stomach (n = 101)	Duodenum (n = 11)	Colon (n = 211)	Rectum (n = 188)
Resection outcomes						
En bloc resection, n (%)	633 (91.5)	175 (96.7)	99 (98)	10 (91)	181 (85.8)	167 (88.8)
R0 resection, n (%)	583 (84.2)	156 (86.2)	83 (82.2)	8 (72.7)	176 (83.4)	161 (85.6)
R1 resection, n	109	25	18	3	35	27
Positive lateral resection margins, n (%)	45 (41.3)	5 (20)	5 (27.8)	1 (33.3)	20 (57.1)	14 (51.9)
Positive deep resection margins, n (%)	24 (22)	8 (32)	9 (50)	2 (66.7)	0	5 (18.5)
Positive lateral and deep resection margins, n (%)	15 (13.8)	8 (32)	3 (16.7)	0	1 (2.9)	3 (11.1)
Not specified, n (%)	25 (22.9)	4 (16)	1 (5.5)	0	14 (40)	5 (18.5)
Curative resection, n (%)	542 (78.3)	129 (71.3)	78 (77.2)	8 (72.7)	177 (83.9)	150 (79.8)

Mandip Rai… Robert Bechara JGH Open: An open access journal of gastroenterology and hepatology 5 (2021) 734–739R. / Maselli et al. / Digestive and Liver Disease 52 (2020) 64–71 / Peter V. Draganov Gastroenterology. 2021 June ; 160(7): 2317–2327

Competence…





Median confidence reported by fellows in individual steps of EMR of large colon polyps.
1. I am not familiar with this topic; 2.Not confident at all e. g. attending does most of the assessment and procedure; 3.Somewhat confident e. g. attending takes the scope often; 4.Confident e. g. attending takes the scope in difficult scenarios; and 5.Very confident e. g. attending rarely takes the scope.

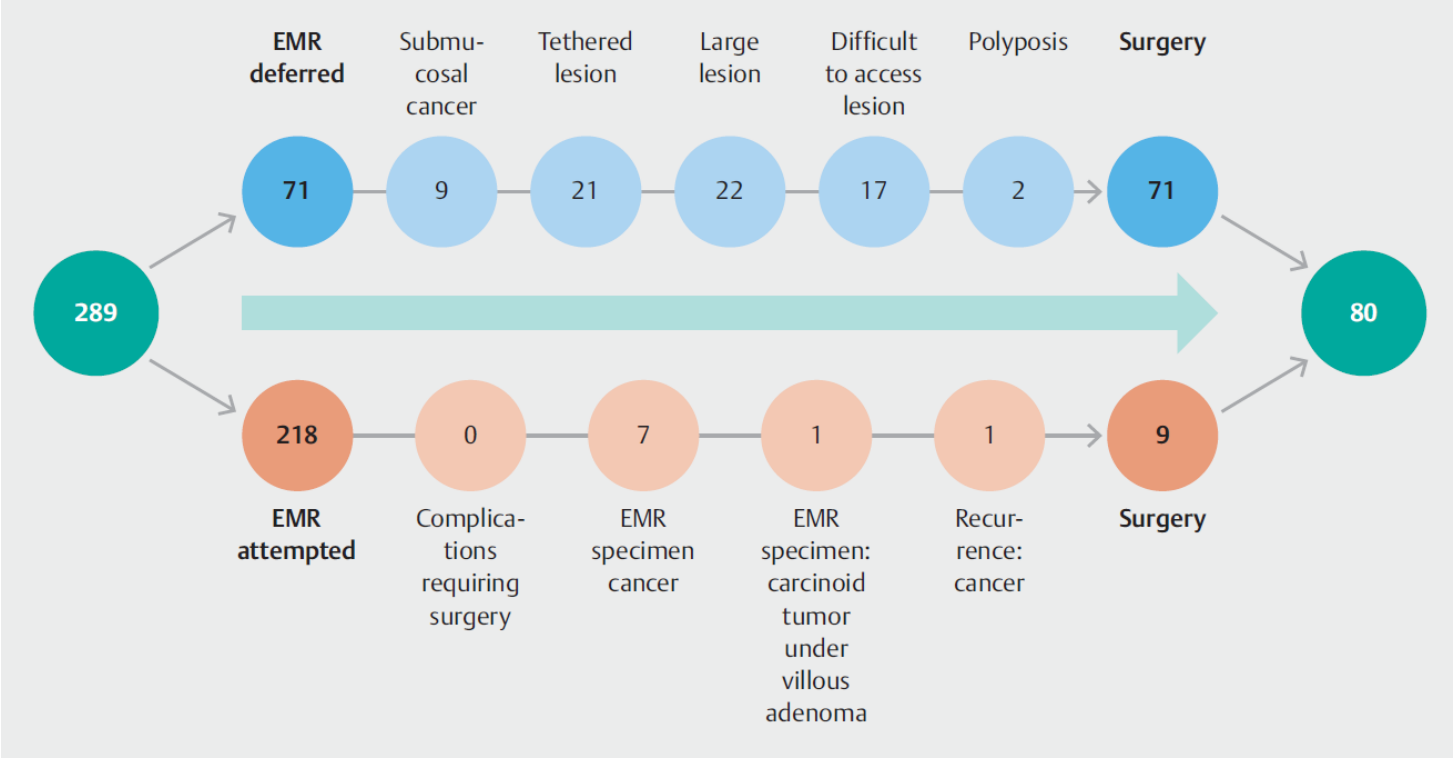
Conclusions

In conclusion, we found that nearly half the fellows had no formal education and the survey identified prominent knowledge deficiencies in EMR. We identified that educational efforts should emphasize on overview of the skills, techniques needed to perform EMR including electrosurgery unit settings, and assessment of polyp morphology. Incorporation of standardized formal training with the inclusion of participation in advanced endoscopy rotations could be a key strategy to enhance EMR skills among gastroenterology fellows.

Shashank Garg… Harry R. Aslanian Endosc Int Open 2021; 09: E1227–E1233 Yale University

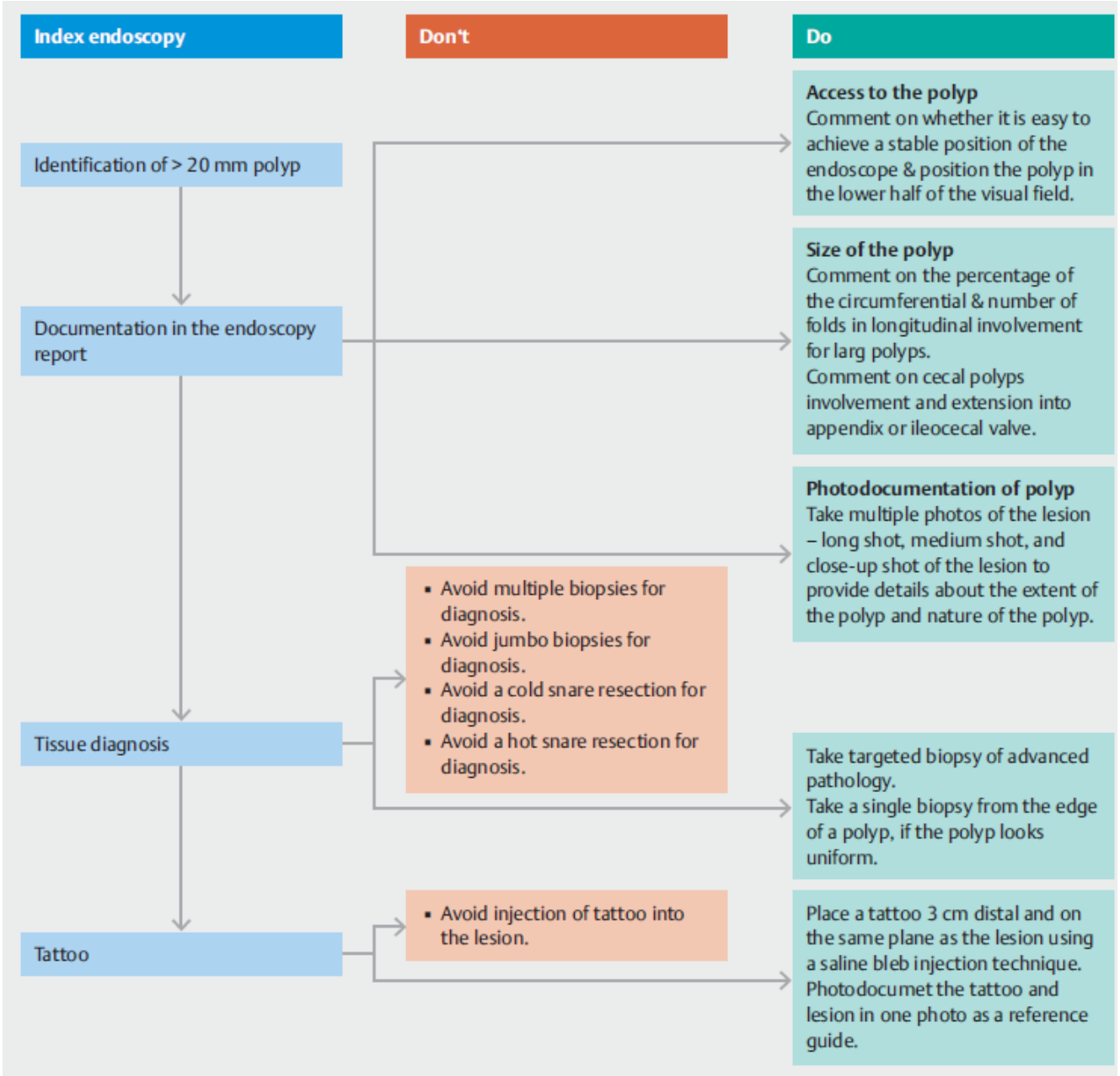
A total of 163 fellows (9.4 %) completed the survey. Only 85 fellows (52.1%) reported receiving formal education in EMR

Network 1

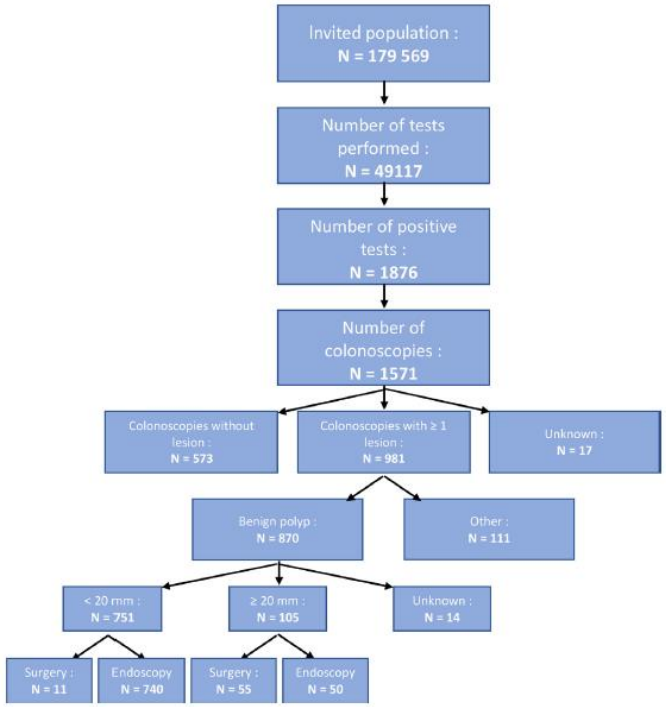


Conclusions In our practice, one in four EMR attempts were abandoned as a result of inadequate diagnosis or management by the referring endoscopist, which could be improved by education on optical diagnosis of polyps, comprehensive documentation of the procedure and avoidance of interventions that preclude resection.

Raju Gottumukkala et al. Quality of endoscopy reporting at index Colonoscopy Endoscopy International Open 2019; 07: E361–E366 MD Anderson Cancer Center


Index endoscopy
Don't
Do
Identification of > 20 mm polyp
Documentation in the endoscopy report
Tissue diagnosis
Tattoo
Access to the polyp
Comment on whether it is easy to achieve a stable position of the endoscope & position the polyp in the lower half of the visual field.
Size of the polyp
Comment on the percentage of the circumferential & number of folds in longitudinal involvement for larg polyps.
Comment on cecal polyps involvement and extension into appendix or ileocecal valve.
Photodocumentation of polyp
Take multiple photos of the lesion – long shot, medium shot, and close-up shot of the lesion to provide details about the extent of the polyp and nature of the polyp.
Avoid multiple biopsies for diagnosis.
Avoid jumbo biopsies for diagnosis.
Avoid a cold snare resection for diagnosis.
Avoid a hot snare resection for diagnosis.
Take targeted biopsy of advanced pathology.
Take a single biopsy from the edge of a polyp, if the polyp looks uniform.
Avoid injection of tattoo into the lesion.
Place a tattoo 3 cm distal and on the same plane as the lesion using a saline bleb injection technique.
Photodocumet the tattoo and lesion in one photo as a reference guide.

Network 2



Two physicians specialising in interventional endoscopy completed their training and introduced piecemeal colonicEMR and rectal ESD for large superficial.
Becauseof the satisfactory results by the expert team, a regional care network was set up in 2015 with direct access byphone and e-mail to all gastroenterologists in the department, whether to send patients or to request advice on photographs and videos on the resectability of superficial lesions detected. Regular meetings (at least twice a year)with all physicians of the department about characterisation, indications, pre-therapeutic evaluation, and results have been held since the end of 2015.
This period also corresponded to a modification in faecaloccult blood testing in France with the FIT that replaced theguaiac-based test national screening program for colorectalcancer

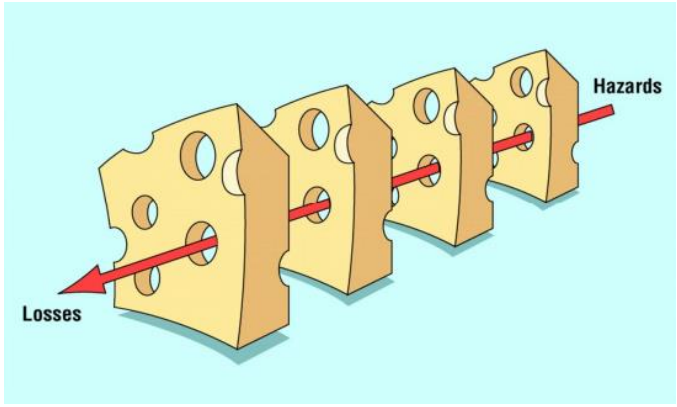
Table 2 Management of benign lesions according to the years.

	Global	2012	2016	2017	*P*-value
Surgery rate for benign polyp	66/(870-14NA) (7.71%)	13/(94-5NA) (14.61%)	41/(538-6NA) (7.71%)	12/(238-3NA) (5.11%)	0.017
Surgery rate for benign polyp < 20 mm	11/751 (1.46%)	3/73 (4.11%)	4/463 (0.86%)	4/215 (1.86%)	0.075
Surgery rate for benign polyp ≥ 20 mm	55/105 (52.38%)	10/16 (62.5%)	37/69 (53.62%)	8/20 (40%)	0.381

Rodrigues R, et al. Effect of implementing a regional referral network on surgical referral rate of benign polyps found during a colorectal cancer screening program: A population-based study. Clin Res Hepatol Gastroenterol (2020) Limoges

Percorsi

- Il mio polipo non lo hanno valutato bene
- Me lo hanno tolto subito , forse era meglio aspettare
- Da noi non si fanno le tecniche avanzate EMR+
- Da noi non si fa la ESD
- Mi ha parlato solo un medico
- Da noi non si fa la chirurgia laparoscopica
- Ho la stomia



Incidenza
Mortalità

Con quale percorso, con quale prezzo

Riflessioni

- Significativa evoluzione tecnica con evidenze di efficacia
- Carico di attività per le endoscopie*
- Distribuzione territoriale delle tecnologie e delle competenze*
- Valutazione dei percorsi endoscopia/chirurgia*
- Formazione
- Connessioni tra professionisti:
  livello diagnostico / livello operativo
- Importanza dei network territoriali in ambito di screening*
- Dialogo intersocietario*