



22 OTTOBRE 2024

SALA "20 MAGGIO 2012" TERZA TORRE
VIALE DELLA FIERA 8, BOLOGNA

La sorveglianza post polipectomia secondo le linee guida europee: recepimento in Emilia Romagna

Angelo De Padova
U.O. Gastroenterologia ed Endoscopia Digestiva
ospedale "Infermi" di Rimini
ASL della Romagna

2024
SEMINARI
REGIONALI



underutilization
(interval K)

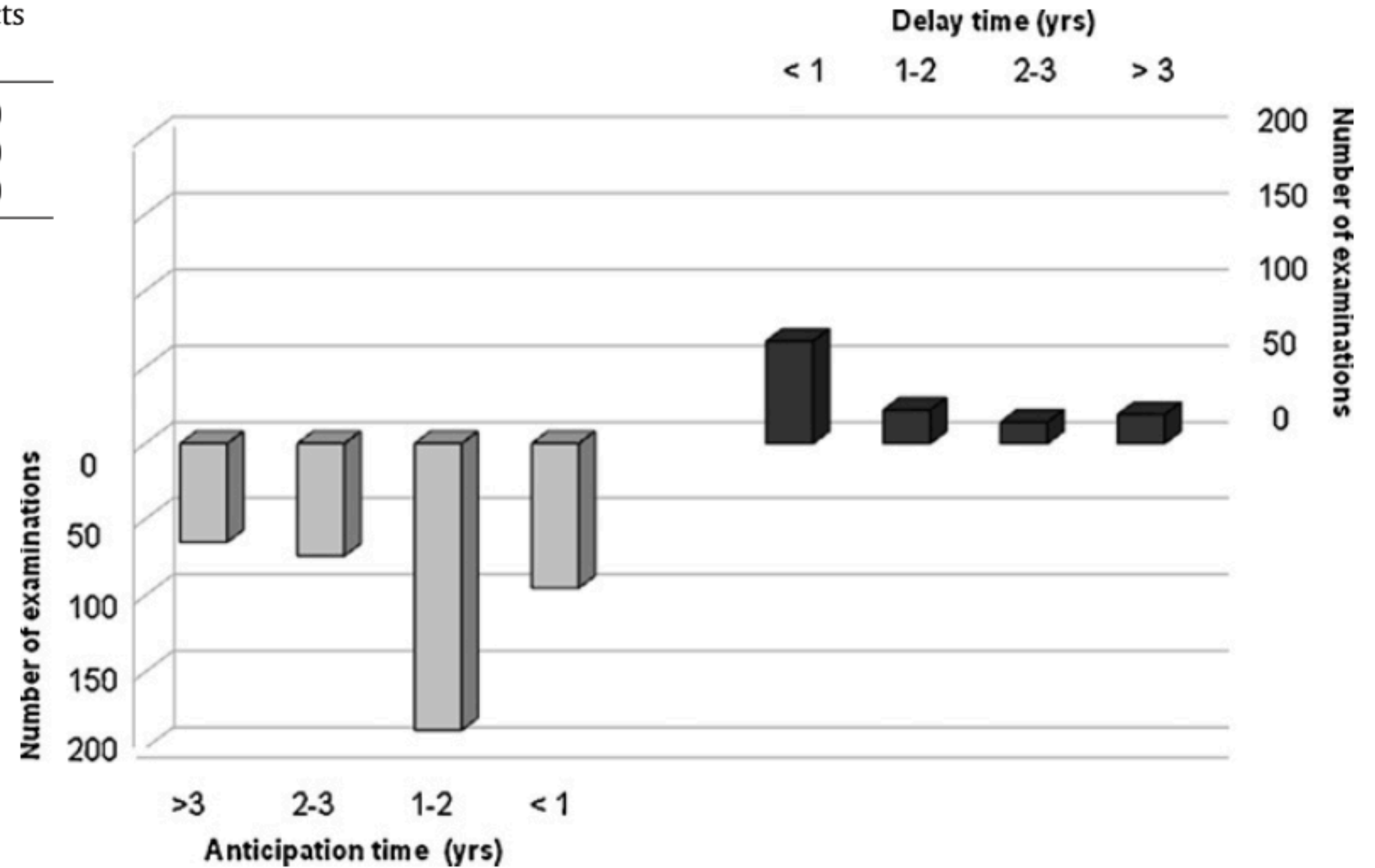
overutilization
(resources waste)

overutilization of post polypectomy surveillance colonoscopy



Appropriateness of timing of surveillance according to the risk group (LR: low risk, HR: high risk).

	Global cohort (n = 902)	LR subjects (n = 460)	HR subjects (n = 367)
Correct (%)	330 (36.6)	146 (31.7)	131 (35.7)
Anticipated (%)	490 (54.3)	310 (67.4)	180 (49.0)
Delayed (%)	82 (9.1)	4 (0.9)	56 (15.3)



predictors of appropriateness:

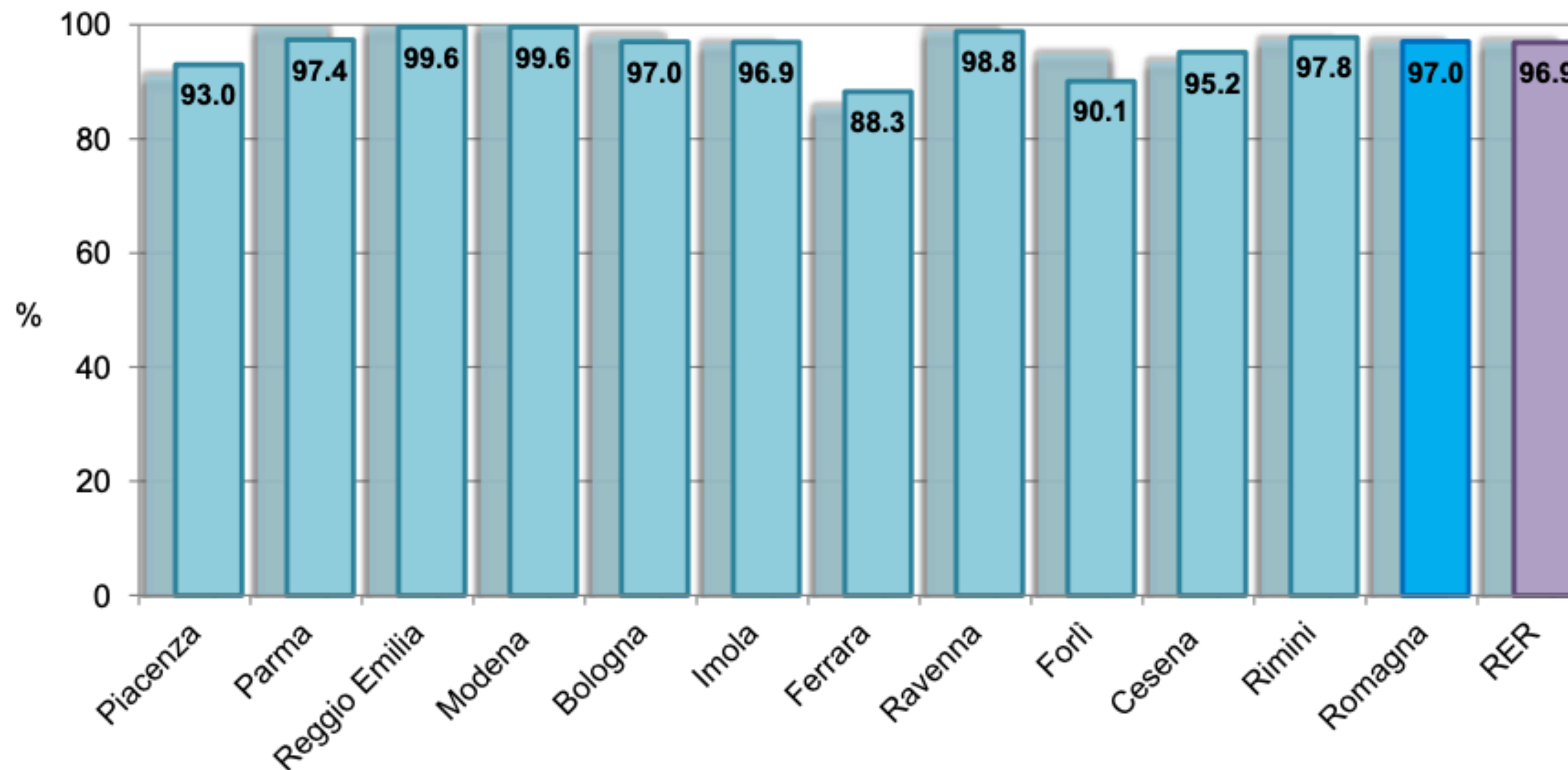
high-volume endoscopy workload (OR 1.92)

written recommendation (OR 1.70)

within screening program (OR 2.62)

Follow-up 2021-2022

Percentuale casi con raccomandazione "Fobt a 5 anni" sul totale dei casi con esito negativo (dopo clean colon), specifica per AUSL

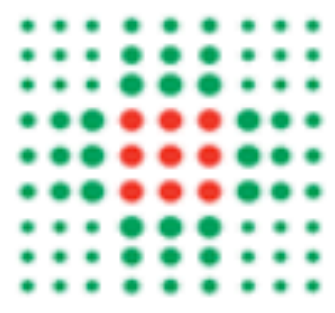


(N° casi con esito negativo e raccomandazione "Fobt a 5 anni" / N° casi con esito negativo)%

Italia 2021

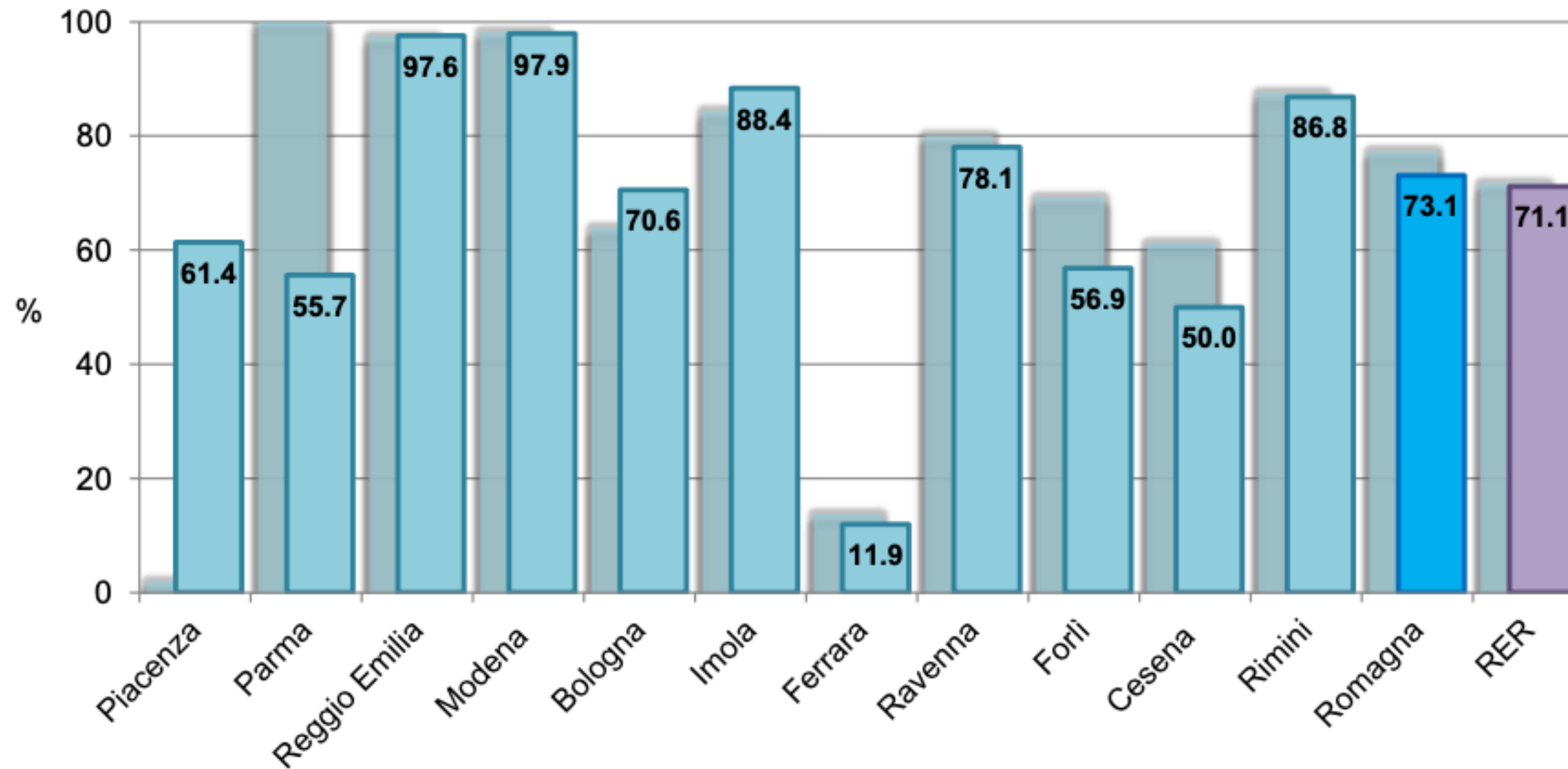
84%

21



Follow-up 2021-2022

Percentuale casi con raccomandazione "Fobt a 5 anni" sul totale dei casi con adenoma a basso rischio (dopo clean colon), specifica per AUSL



Italia 2021

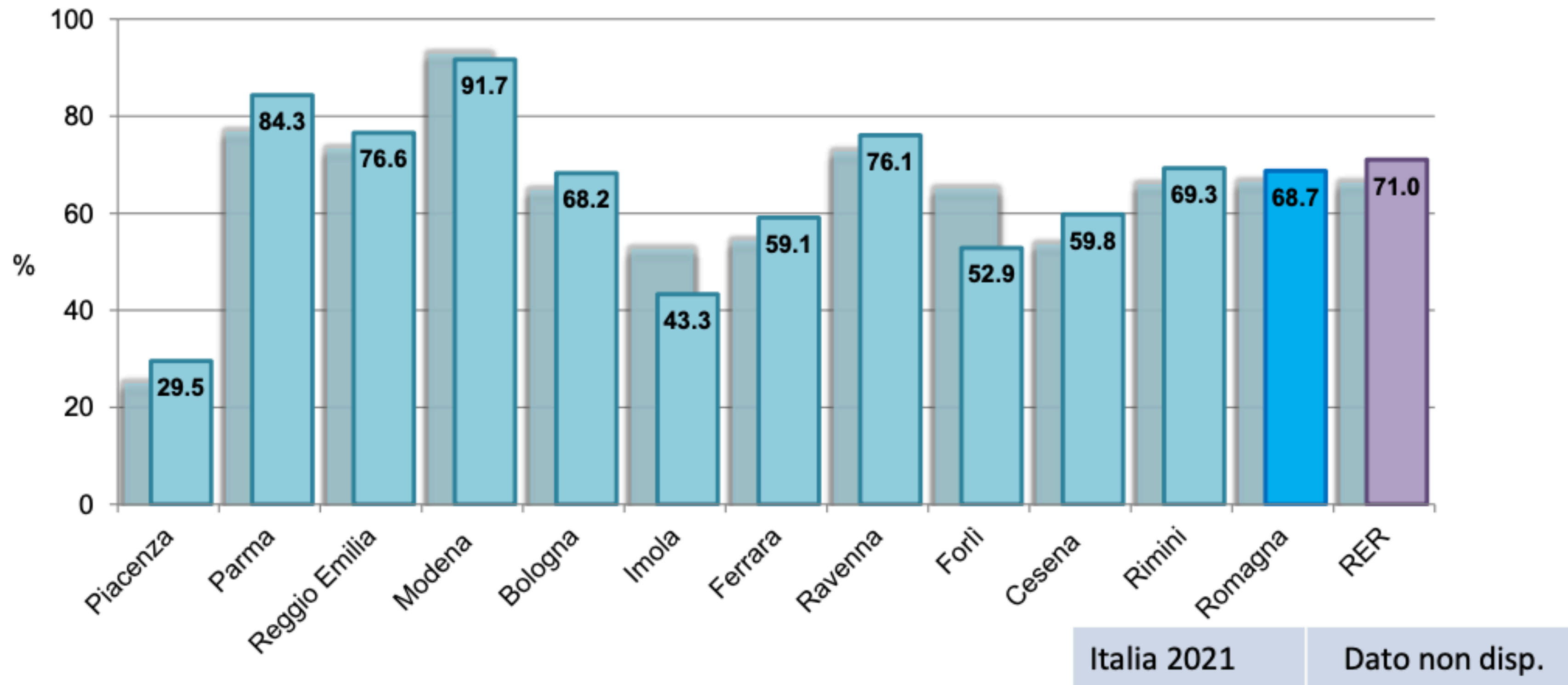
39%

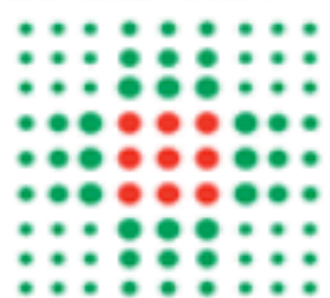
(N° casi con adenoma a basso rischio e raccomandazione "Fobt a 5 anni" / N° casi con adenoma a basso rischio)%

22

Follow-up 2021-2022

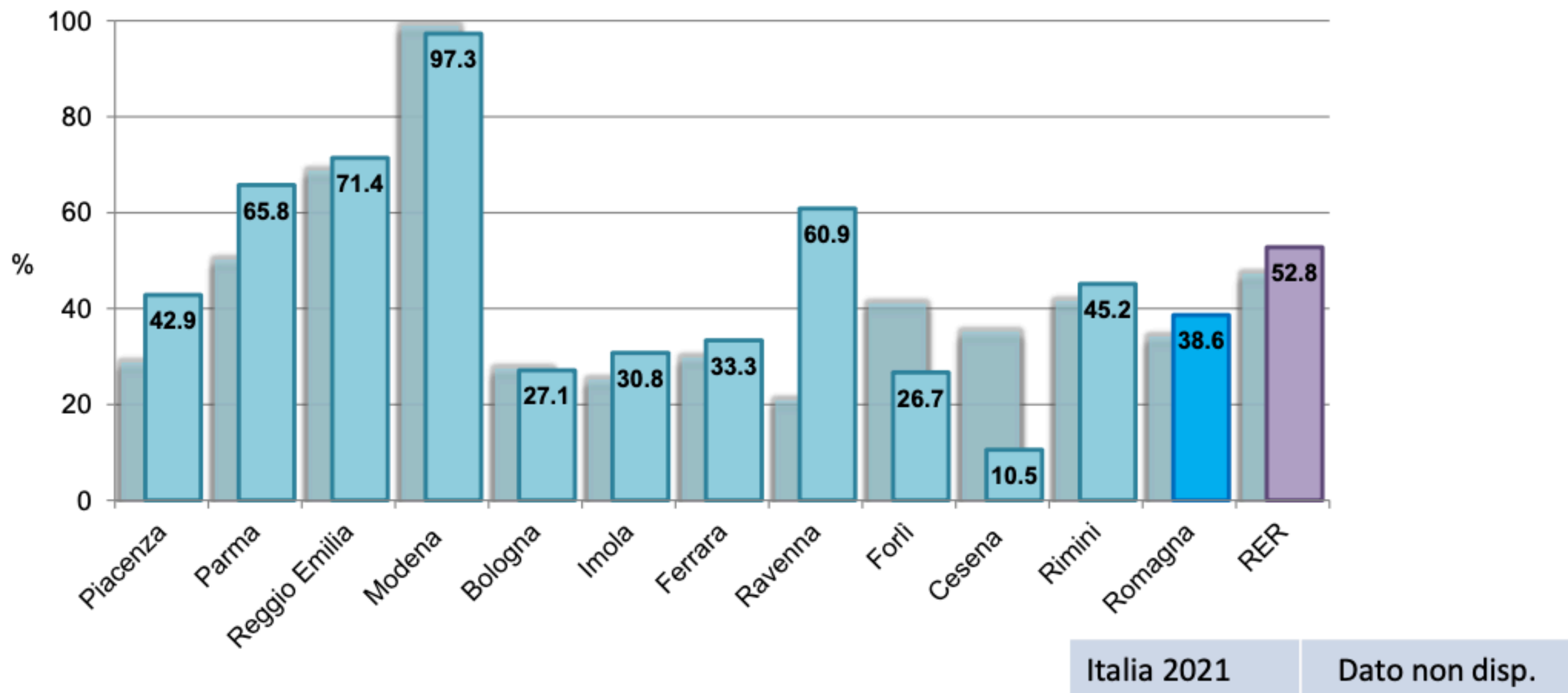
Percentuale casi con raccomandazione "Colonscopia a 3 anni" sul totale dei casi con adenoma a rischio intermedio (dopo clean colon), specifica per AUSL





Follow-up 2021-2022

Percentuale casi con raccomandazione "Colonscopia a 1 anno" sul totale dei casi con adenoma ad alto rischio (dopo clean colon), specifica per AUSL

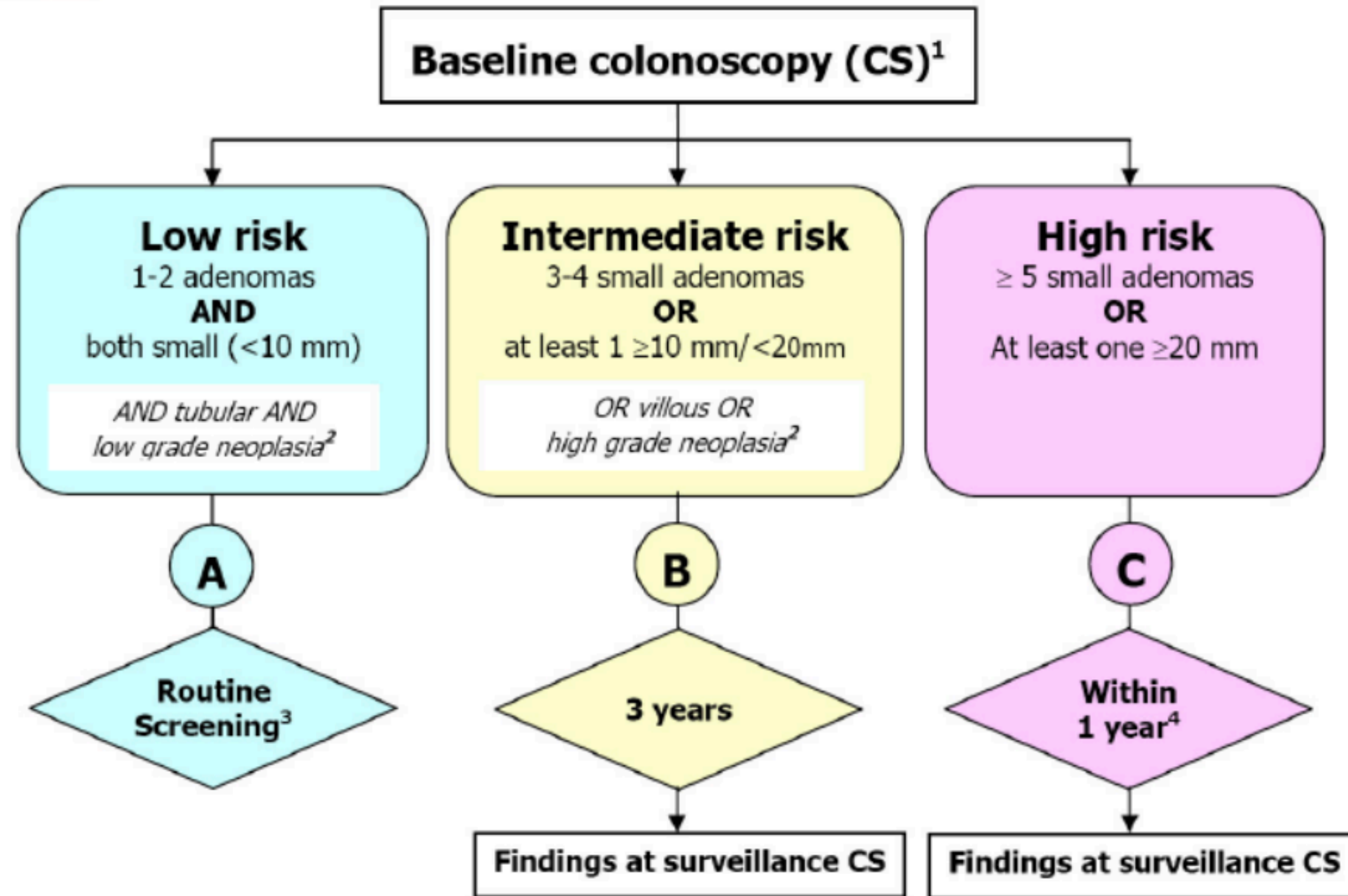


(N° casi con adenoma ad alto rischio e raccomandazione "Colonscopia a 1 anno" / N° casi con adenoma ad alto rischio)%

^includere le colonscopie a 6 mesi



COLONOSCOPIC SURVEILLANCE FOLLOWING ADENOMA REMOVAL (EU 2010)



Notes:

¹ Baseline colonoscopy must be complete in order to accurately assess risk.

² Optional additional criteria

³ Other consideration: age, family history, accuracy and completeness of examination

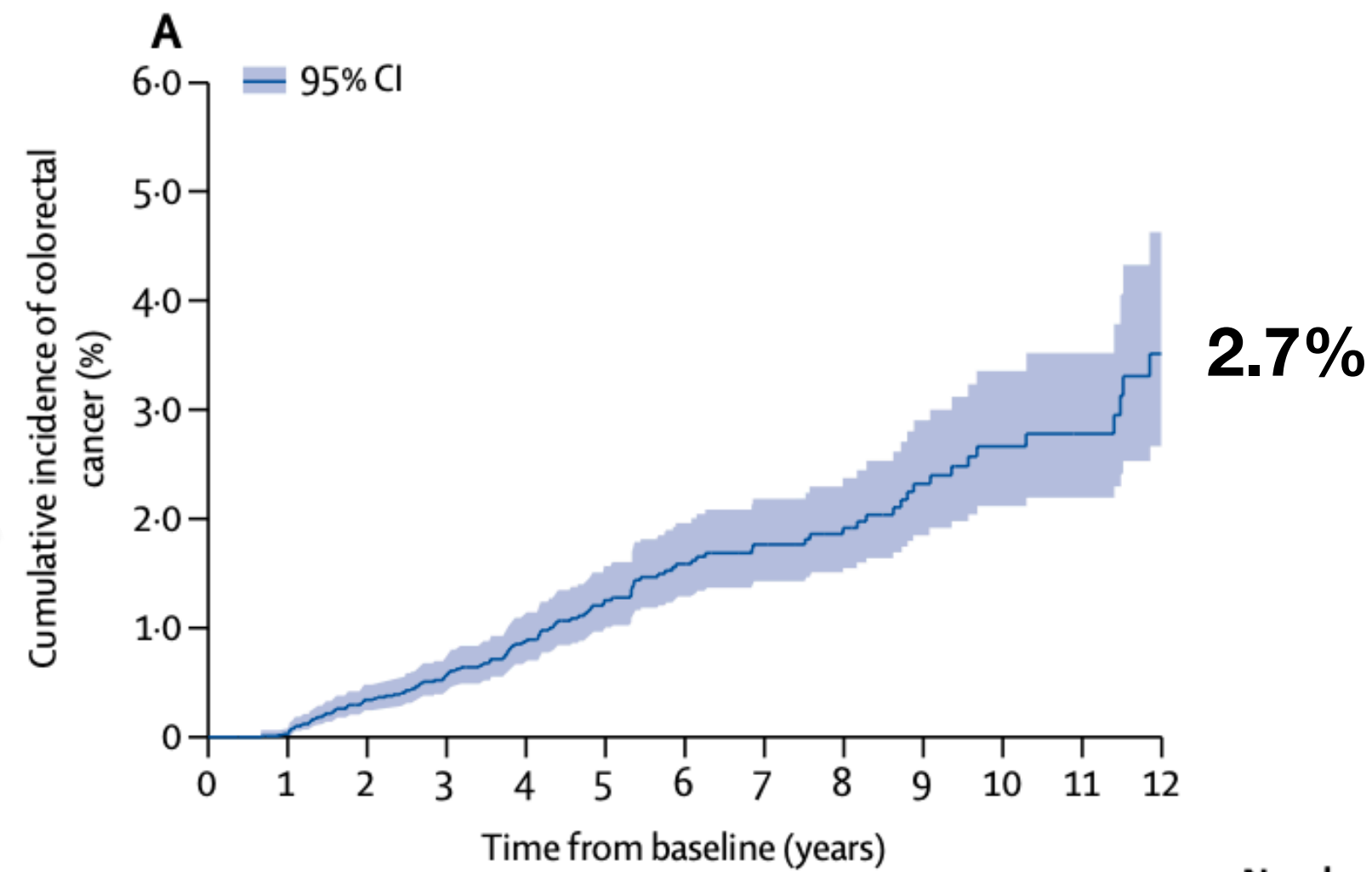
⁴ Clearing colonoscopy to check for missed lesions



Adenoma surveillance and colorectal cancer incidence: a retrospective, multicentre, cohort study

retrospective, multicentric
255.000 pts → 12.000 interm risk,
f-u: 9 ys

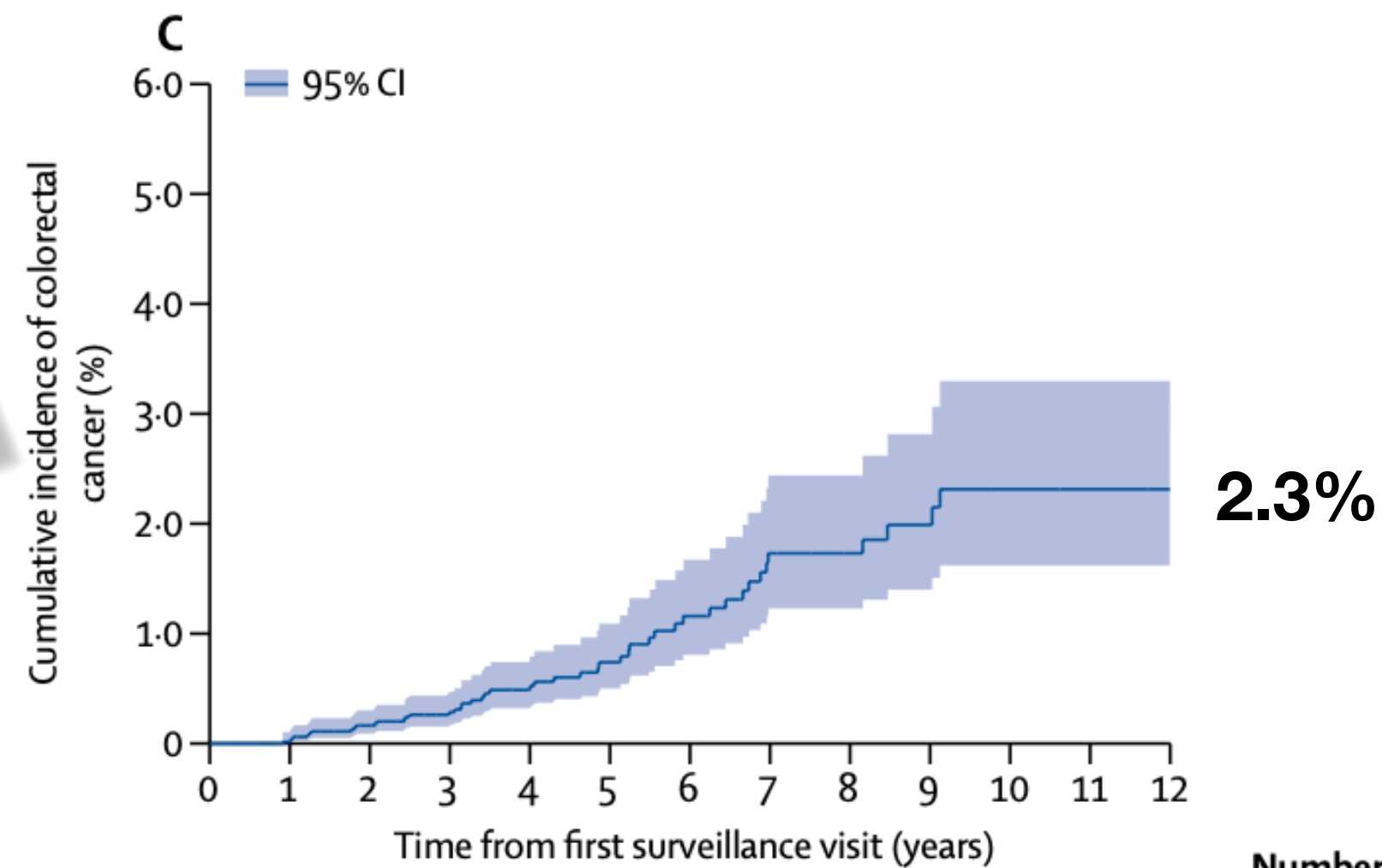
no surveillance



Number at risk	11944	8430	4820	3079	1752	936	442
----------------	-------	------	------	------	------	-----	-----

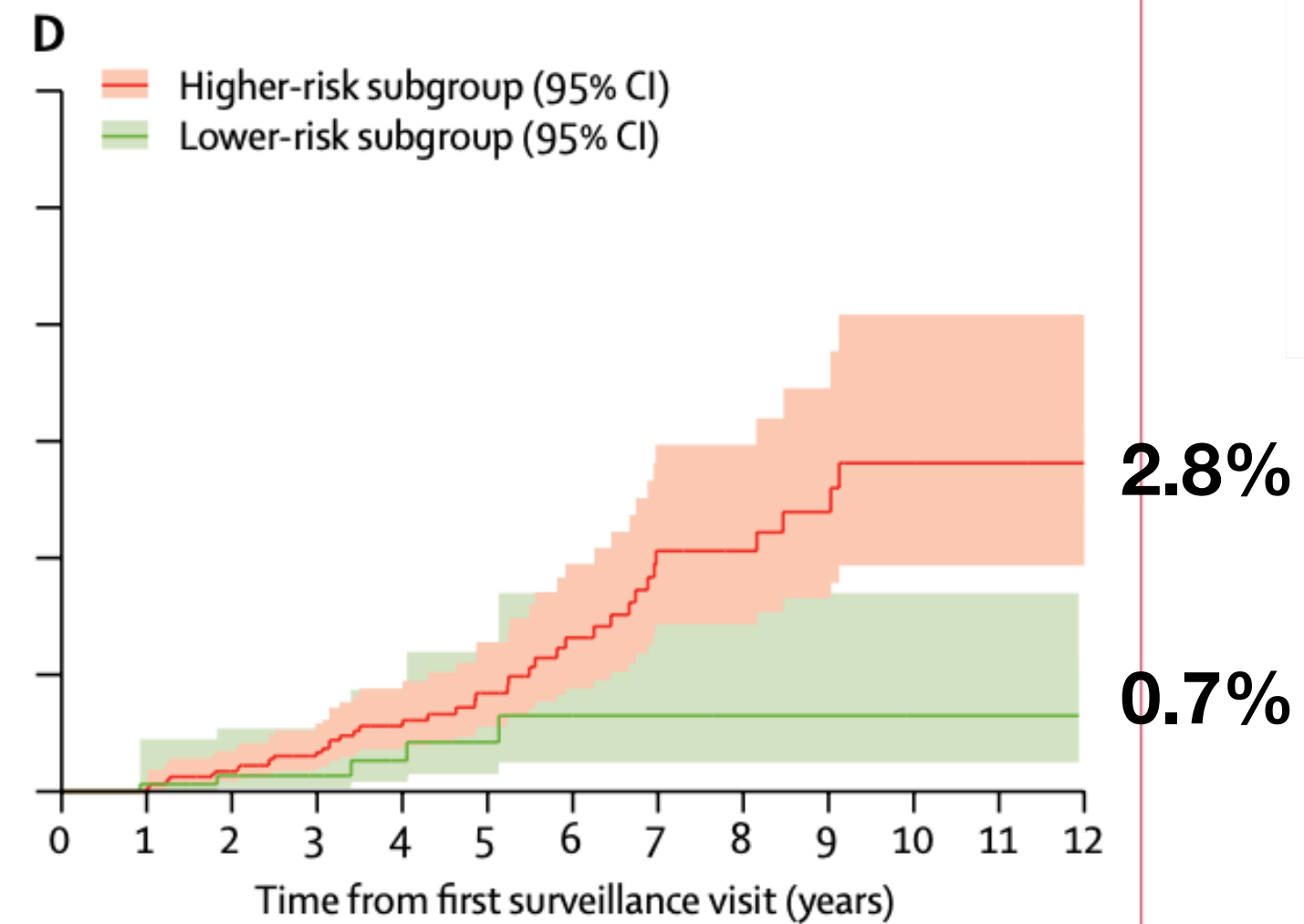
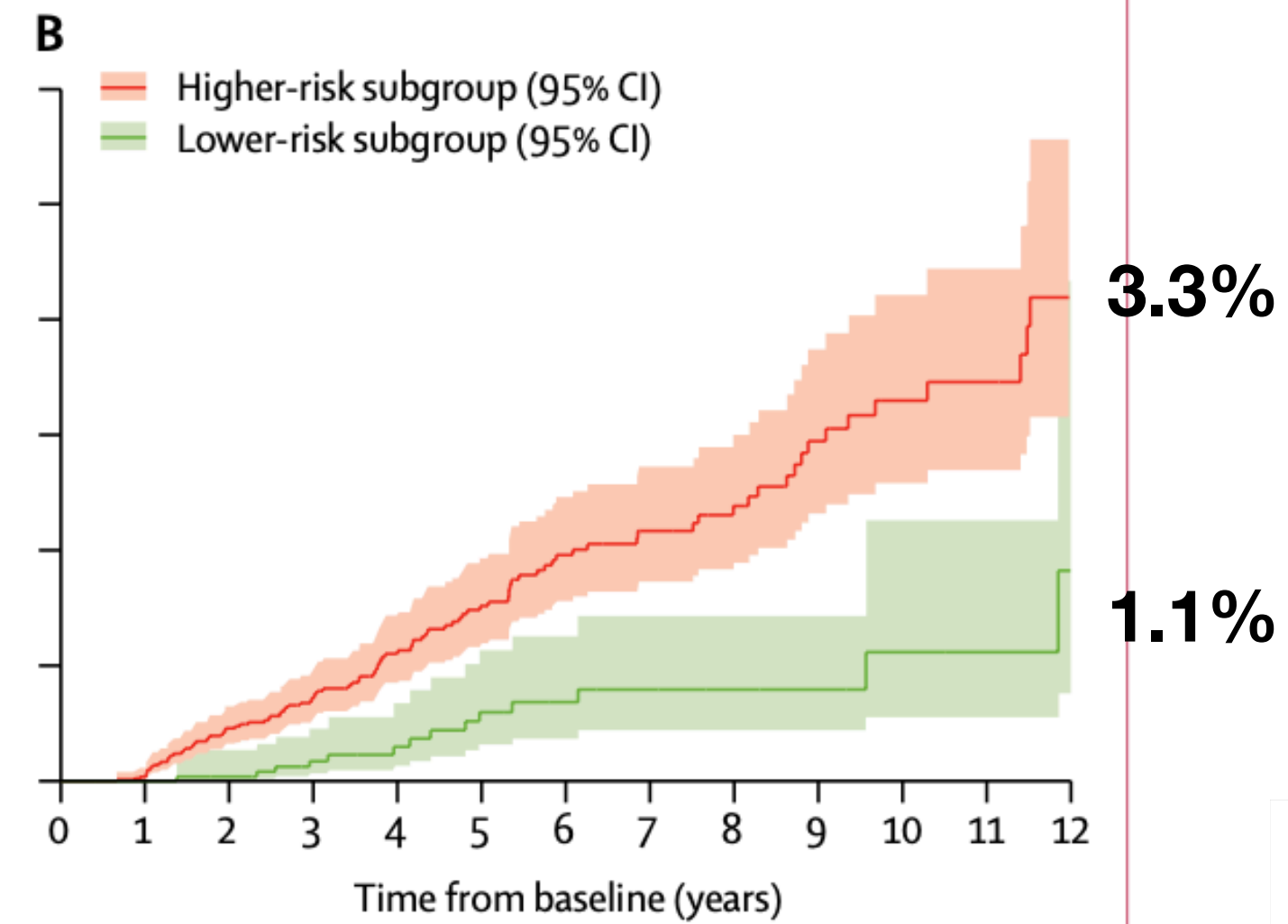
Number at risk							
Higher-risk	8865	5998	3388	2131	1238	673	312
Lower-risk	3079	2432	1432	948	514	263	130

after 1 visit of surveillance



Number at risk	6925	5430	2695	1429	836	452	213
----------------	------	------	------	------	-----	-----	-----

Number at risk							
Higher-risk	5257	4082	2056	1107	645	341	161
Lower-risk	1668	1348	639	322	191	111	52

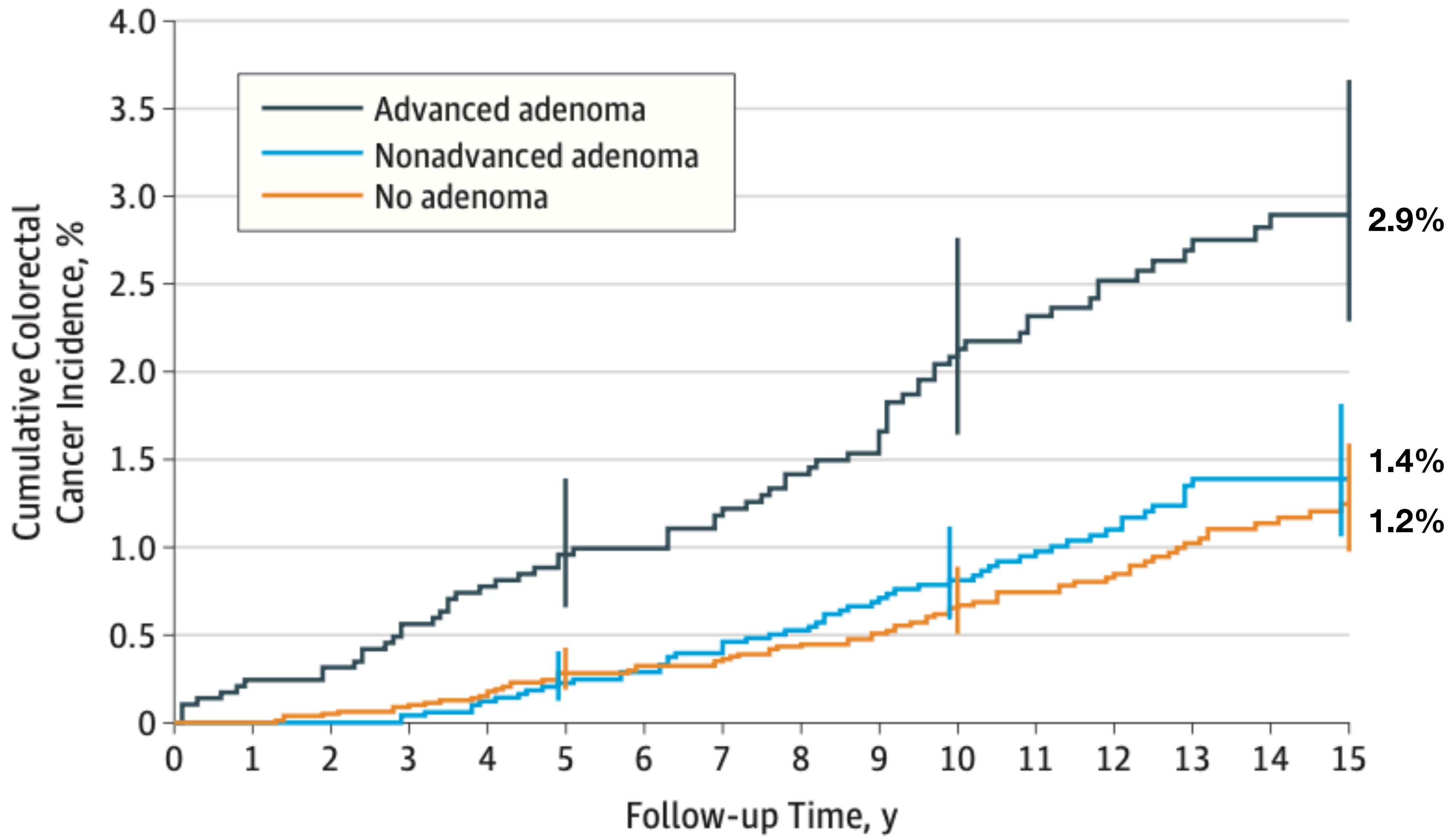


high-risk subgroup:
poor quality colonoscopy
adenoma > 20 mm
HGD
proximal polyps



Association of Colonoscopy Adenoma Findings With Long-term Colorectal Cancer Incidence

multicentric; PLCO
155.000 pts
sigmoidoscopy
outcome: CRC incidence
and mortality
15 y





Association of Colonoscopy Adenoma Findings With Long-term Colorectal Cancer Incidence

*multicentric; PLCO
155.000 pts
sigmoidoscopy
outcome: CRC incidence
and mortality
15 y*

advanced adenoma
(> 1 cm, HGD, villous)

non-advanced adenomas

**no significant difference in incidence rate/100.000
between > 1 cm (19.2)
vs < 1 cm with HGD (22.4)**

**3 or more lesions not more risk
vs 1-2 adenomas (RR 1.01)**

**no significant difference in incidence rate/100.000
between HGD (28.6)
vs villous/tubulovillous (21.1)**

**no significant difference in 3/more
vs no adenoma (RR 1.4)**

59% of CRC were proximal



JAMA | **Original Investigation**

Association of Colonoscopy Adenoma Findings With Long-term Colorectal Cancer Incidence

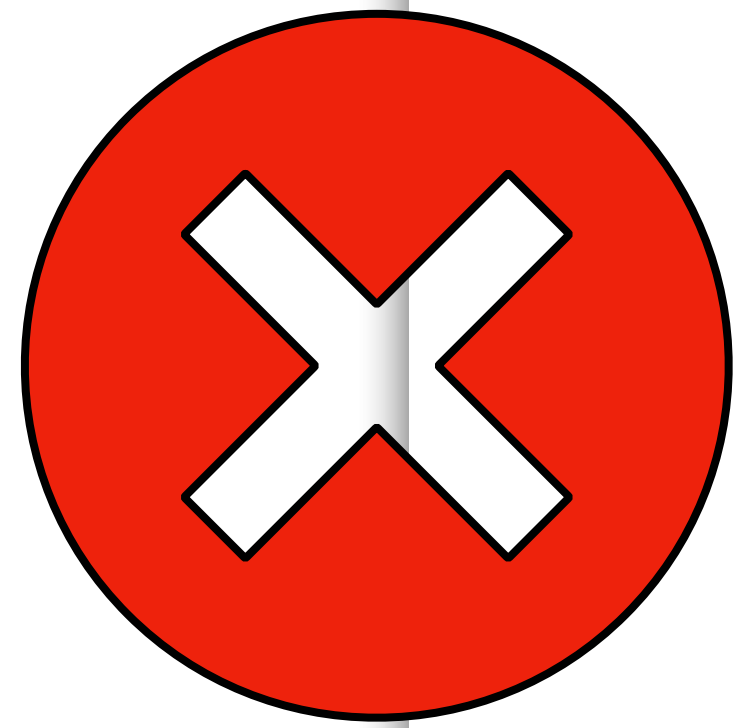
*multicentric; PLCO
155.000 pts
sigmoidoscopy
outcome: CRC incidence
and mortality
15 y*

compared to no adenoma, advanced adenomas confer significantly increased risk of cancer death (RR 2.06)





COLONOSCOPIC SURVEILLANCE FOLLOWING ADENOMA REMOVAL (EU 2010)



Baseline colonoscopy (CS)¹

Low risk
1-2 adenomas
AND
both small (<10 mm)

*AND tubular AND
low grade neoplasia²*

A

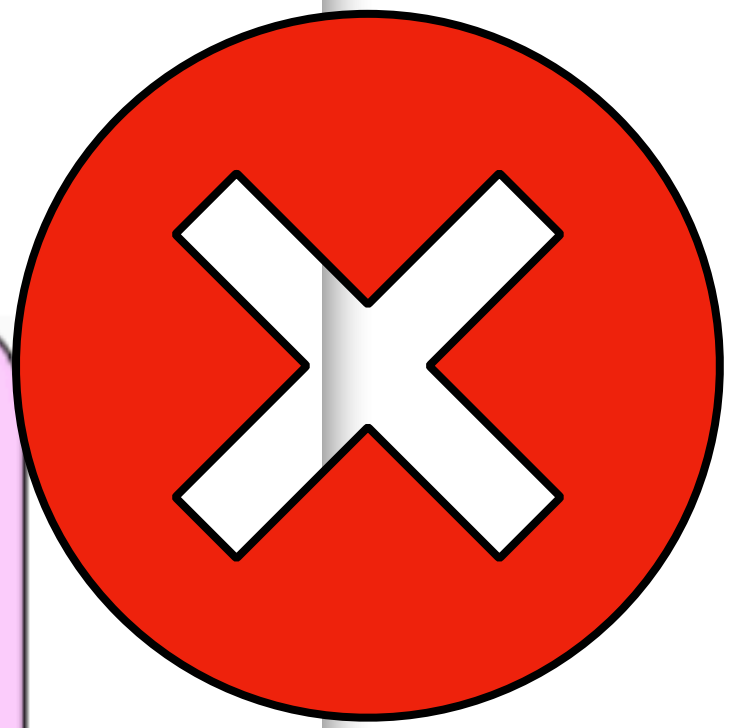
Intermediate risk
3-4 small adenomas
OR
at least 1 ≥10 mm/<20mm

*OR villous OR
high grade neoplasia²*

B

High risk
≥ 5 small adenomas
OR
At least one ≥20 mm

C





COLONOSCOPIC SURVEILLANCE FOLLOWING ADENOMA REMOVAL (EU 2010)

Baseline colonoscopy (CS)¹

Low risk
1-2 adenomas
AND
both small (<10 mm)
AND tubular AND low grade neoplasia²

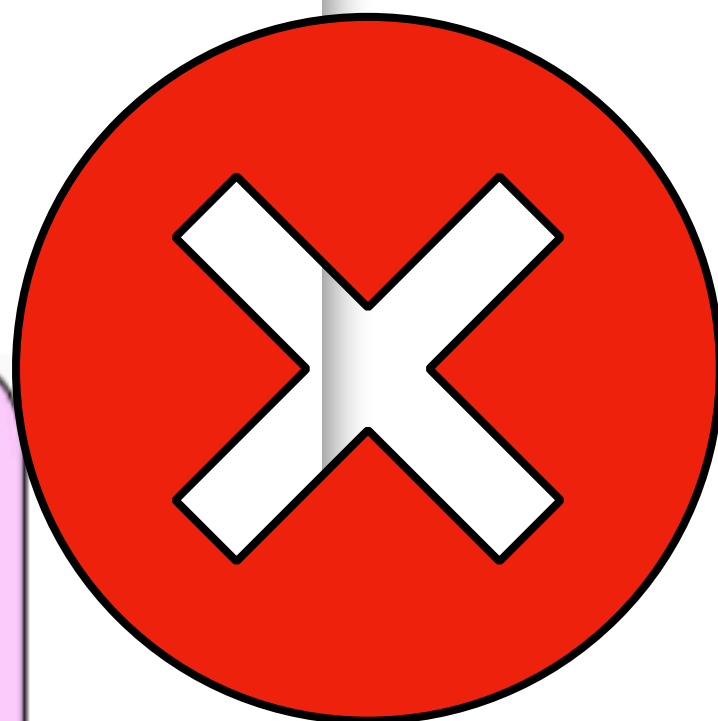
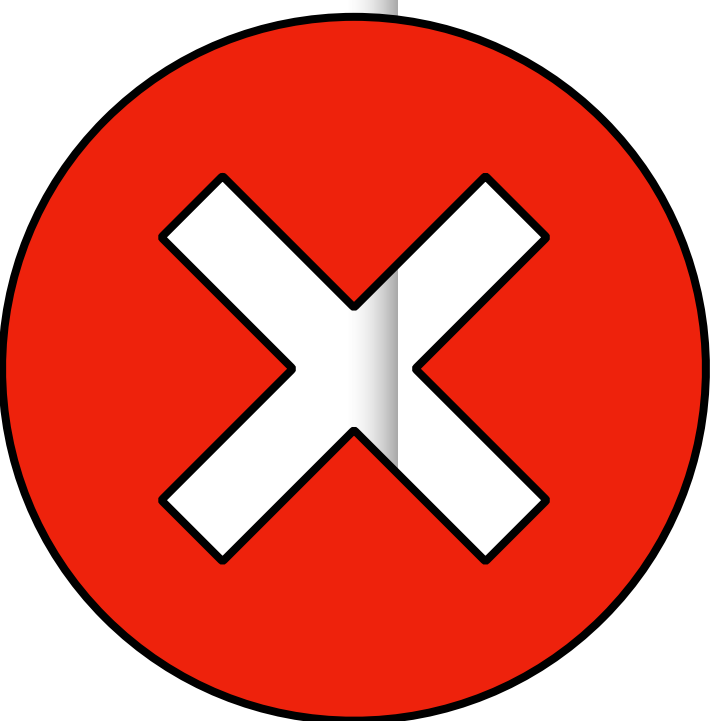
Intermediate risk
3-4 small adenomas
OR
at least 1 ≥10 mm / <20mm
OR villous OR high grade neoplasia²

High risk
≥ 5 small adenomas
OR
At least one ≥20 mm

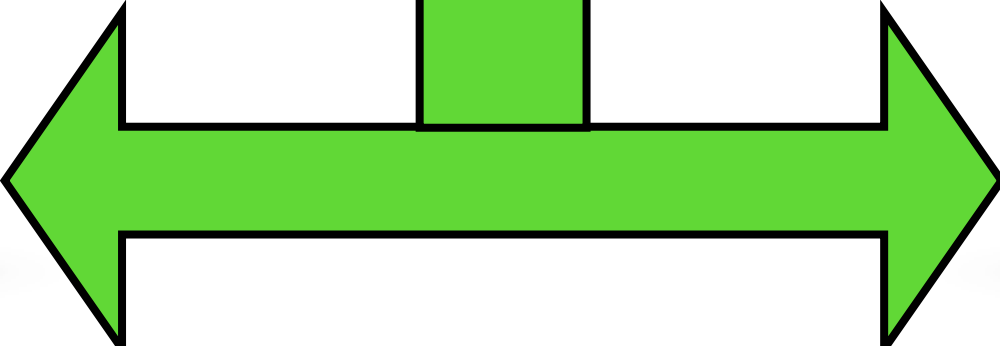
A

B

C



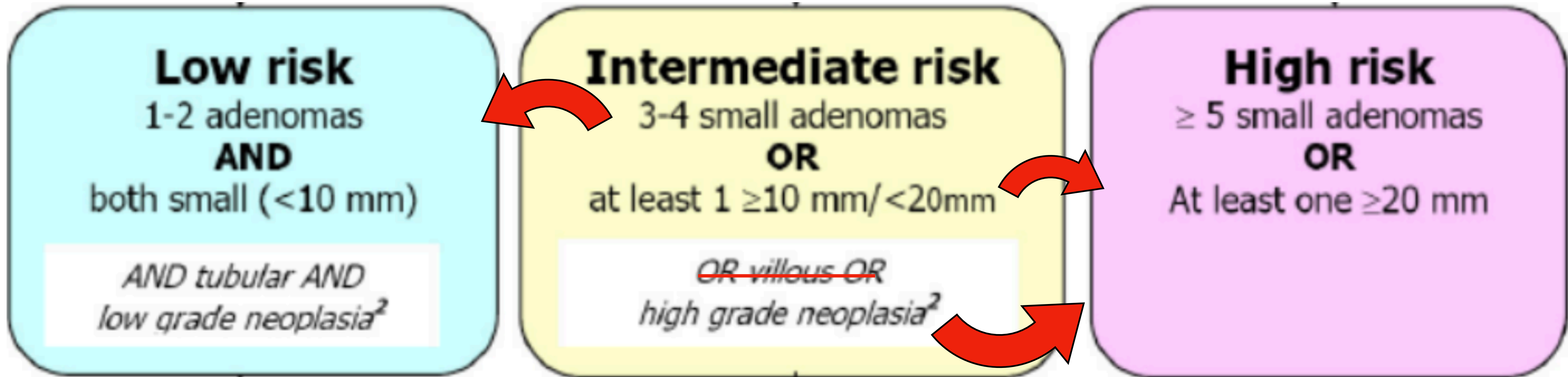
requiring surveillance



not requiring surveillance

complete removal of
at least 1 adenoma > 10 mm
HGD
> 5 adenomas
any serrated polyp > 10 mm or dysplastic

complete removal of
1-4 < 10 mm LGD adenomas
(irrespective of villous histology)
any serrated polyps < 10 mm without dysplasia



RECOMMENDATION

2020 statement

The following recommendations for post-polypectomy colonoscopic surveillance apply to all patients who had one or more polyps that were completely removed during a high quality baseline colonoscopy.

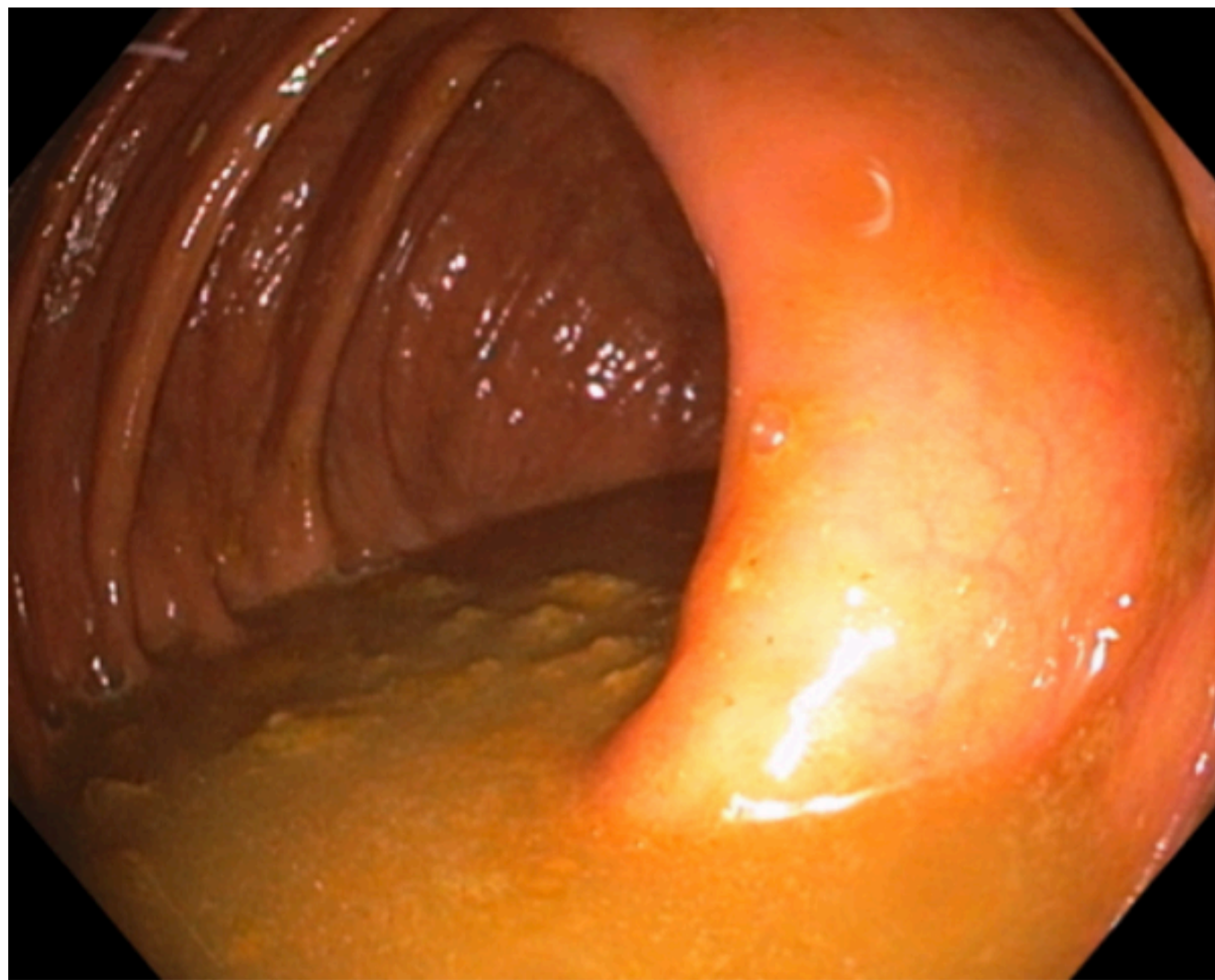
Strong recommendation, moderate quality evidence.

RECOMMENDATION

2020 statement

The following recommendations for post-polypectomy colonoscopic surveillance apply to all patients who had one or more polyps that were completely removed during a high quality baseline colonoscopy.

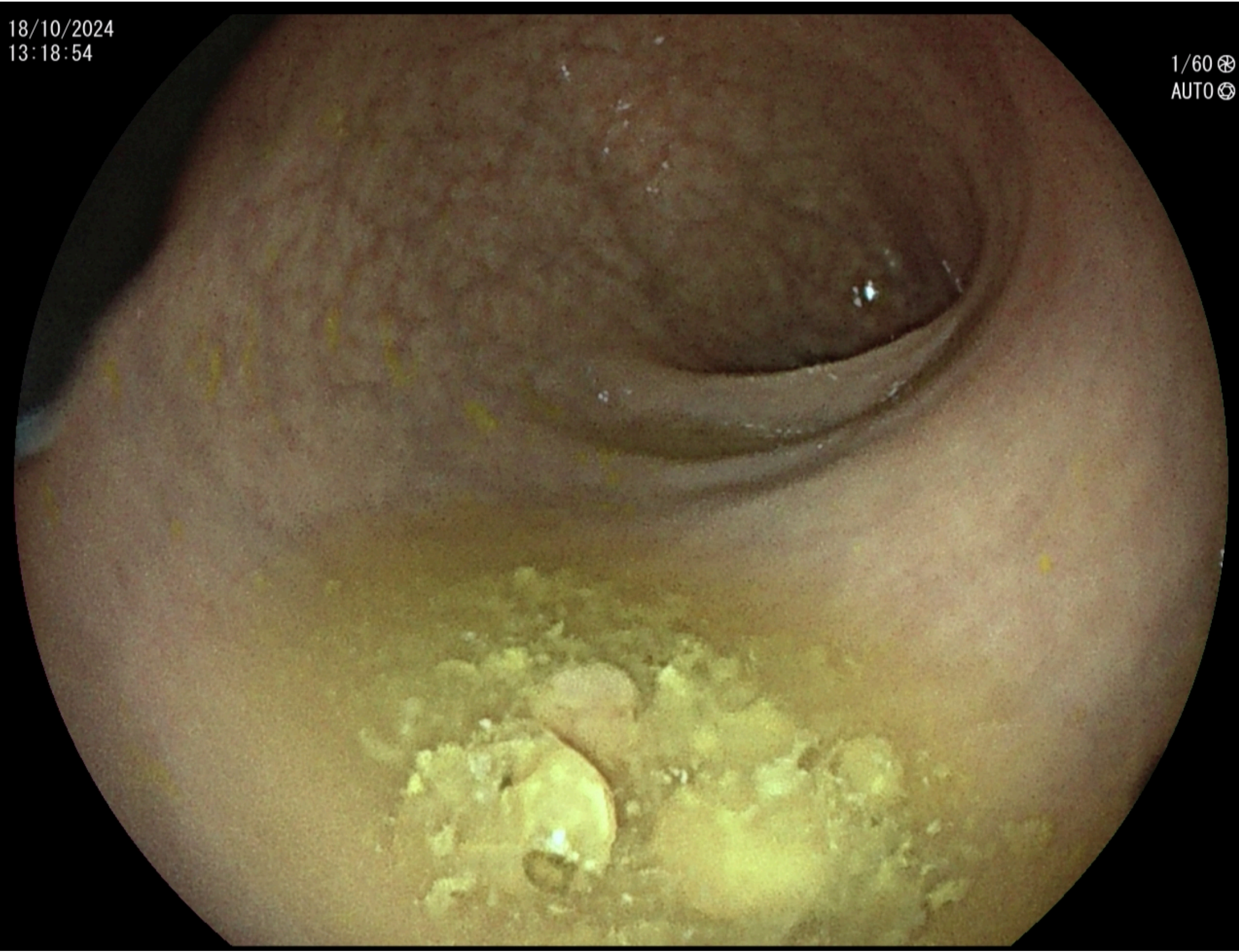
Strong recommendation, moderate quality evidence.



poor bowel prep: HR 2.09
(incomplete examination: HR 1.81)

18/10/2024
13:18:54

1/60 ⊕
AUTO ⊕



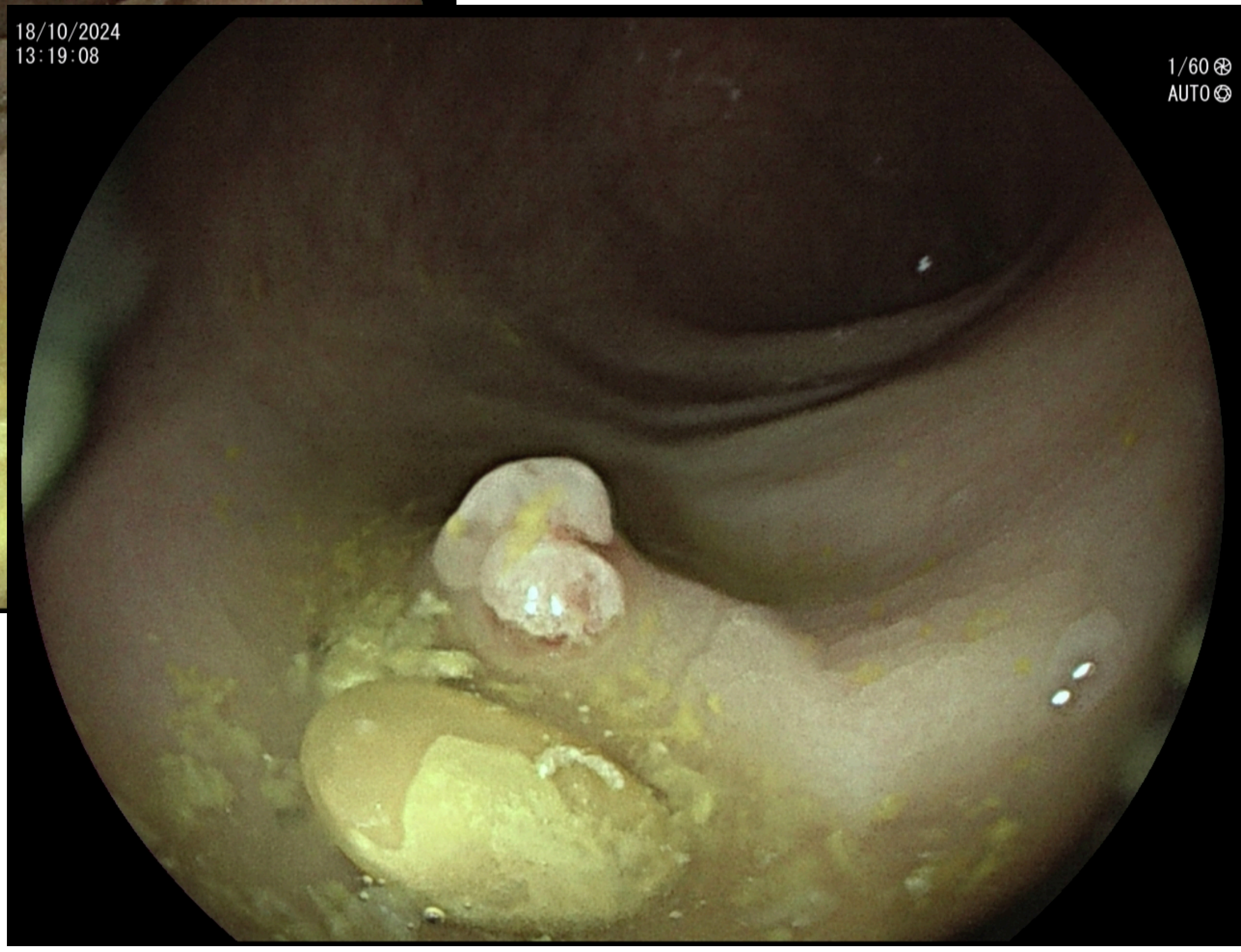
18/10/2024
13:18:54

1/60 ⊕
AUTO ⊕



18/10/2024
13:19:08

1/60 ⊕
AUTO ⊕



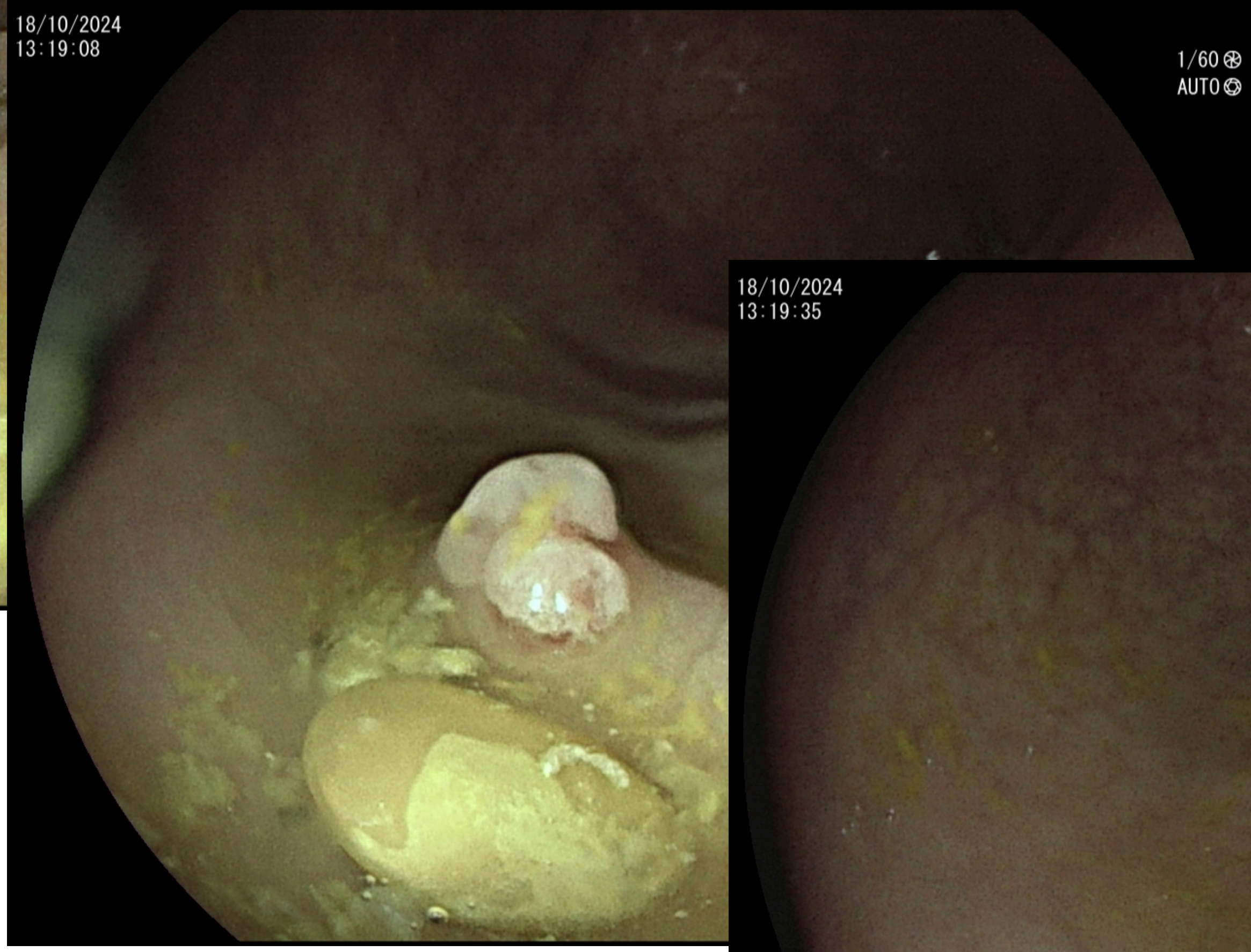
18/10/2024
13:18:54

1/60 ⊕
AUTO ⊕



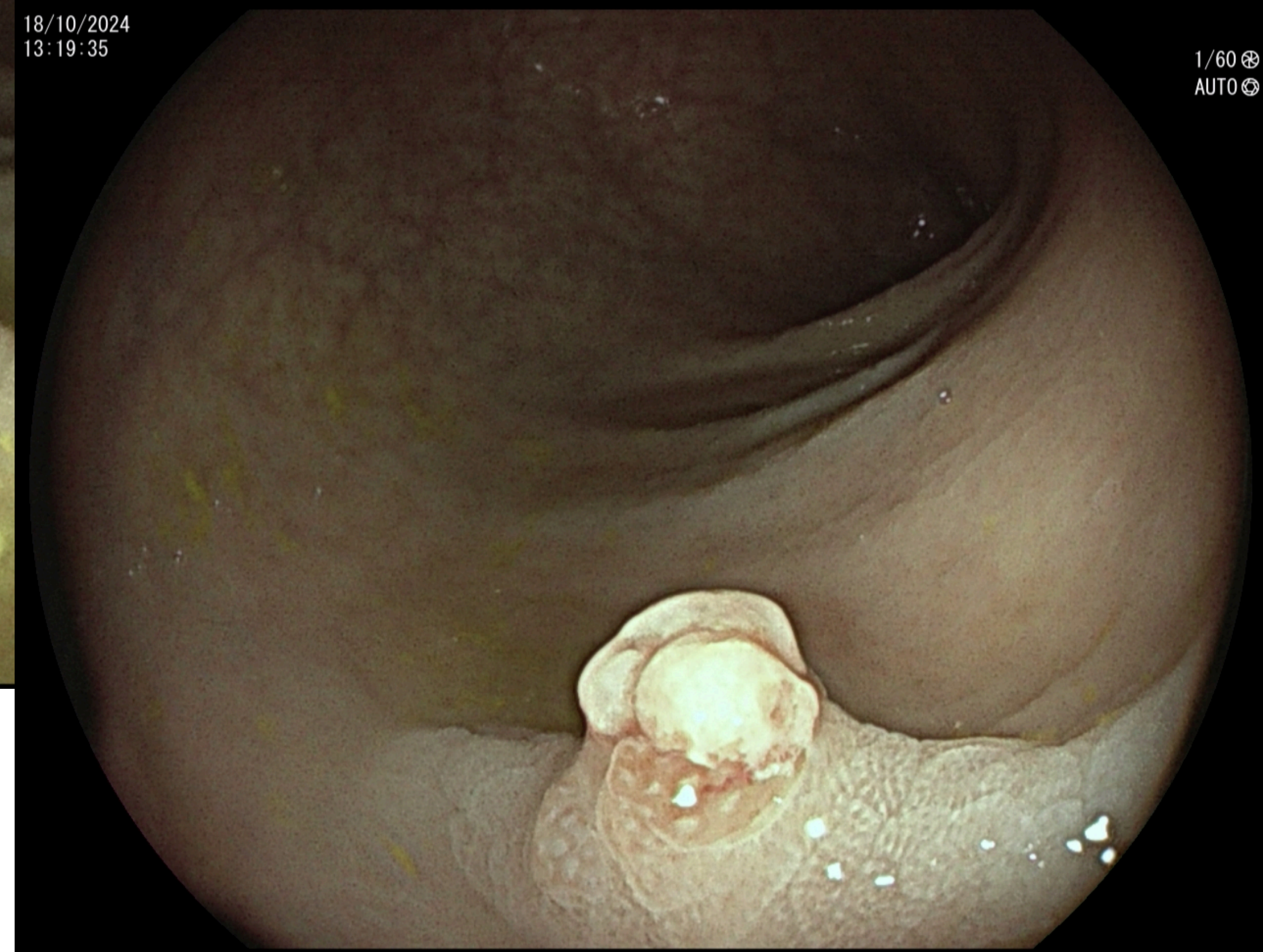
18/10/2024
13:19:08

1/60 ⊕
AUTO ⊕



18/10/2024
13:19:35

1/60 ⊕
AUTO ⊕

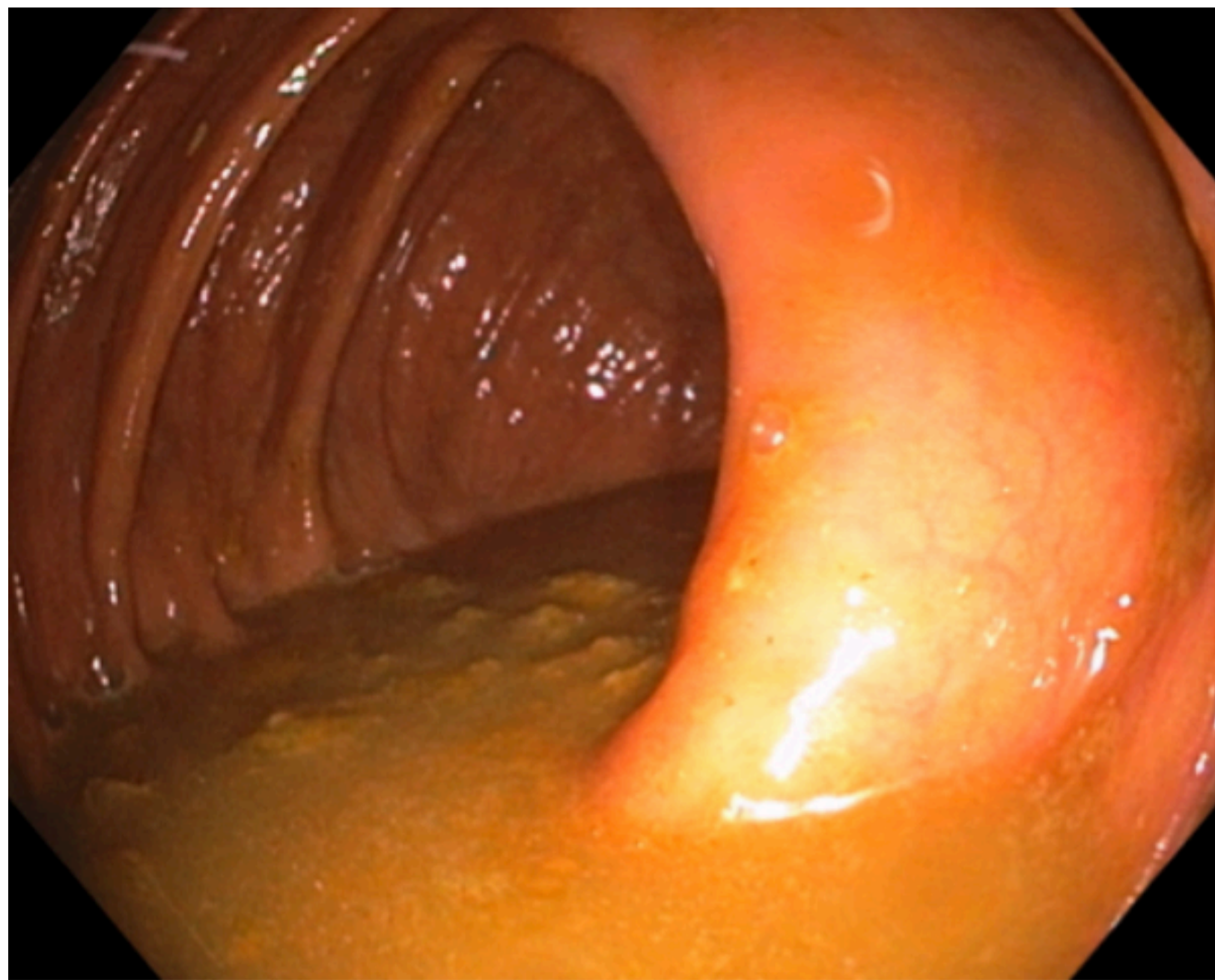


RECOMMENDATION

2020 statement

The following recommendations for post-polypectomy colonoscopic surveillance apply to all patients who had one or more polyps that were completely removed during a high quality baseline colonoscopy.

Strong recommendation, moderate quality evidence.



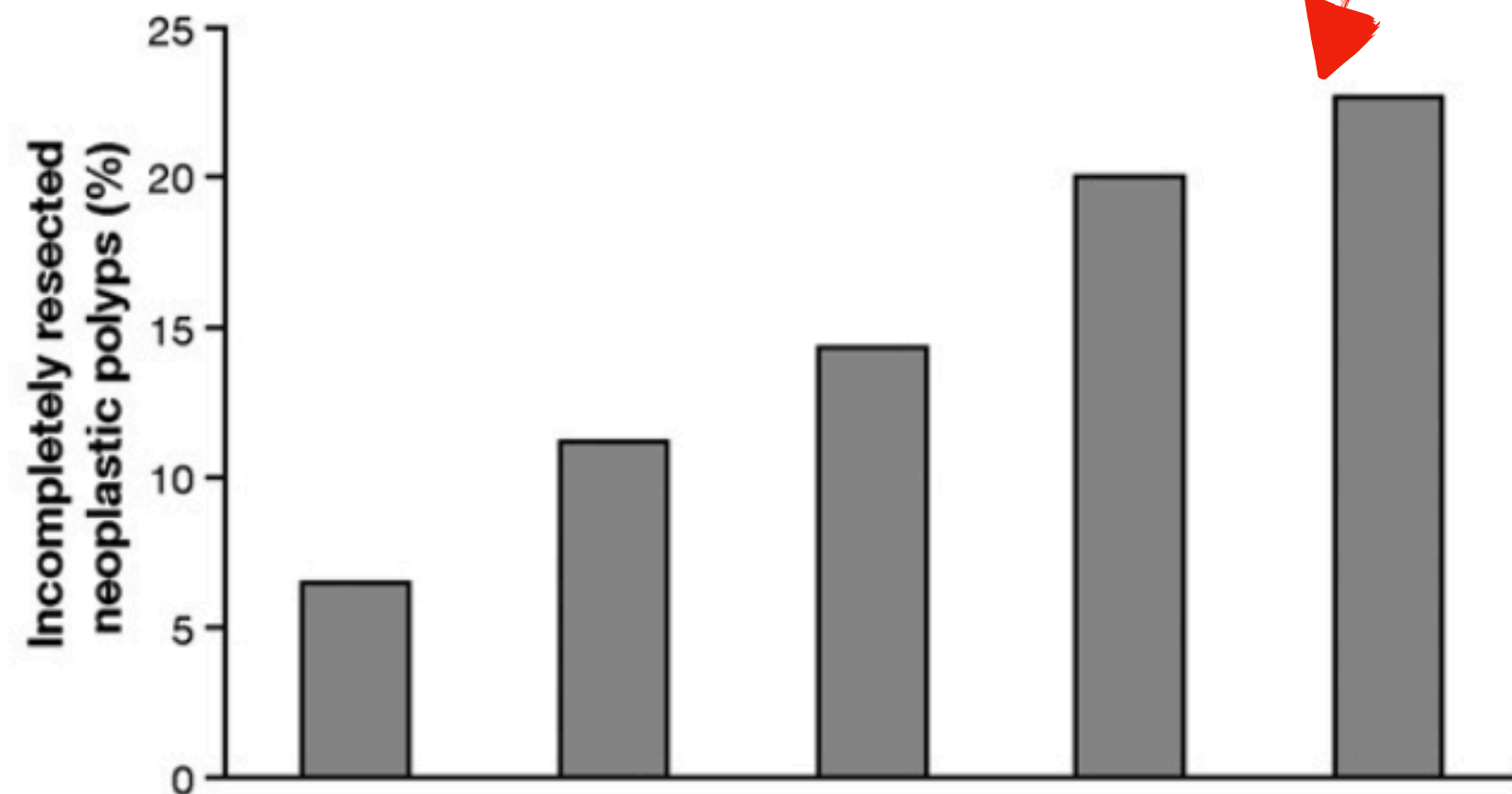
**overutilization of surveillance
cannot compensate
for an initial
suboptimal colonoscopy**

RECOMMENDATION

2020 statement

The following recommendations for post-polypectomy colonoscopic surveillance apply to all patients who had one or more polyps that were **completely removed** during a high quality baseline colonoscopy.

Strong recommendation, moderate quality evidence.



Endoscopist

Polyps resected, n = 418

Neoplastic polyps resected, n = 346

Incompletely resected neoplastic polyps, n = 35

Univariate analysis, RR (95% CI)

Multivariate analysis, RR (95% CI)

	A	B	C	D	E
Polyps resected, n = 418	241 (57.7%)	28 (6.7%)	29 (6.9%)	24 (5.7%)	26 (6.2%)
Neoplastic polyps resected, n = 346	201 (58.1%)	18 (5.2%)	28 (8.1%)	20 (5.8%)	22 (6.4%)
Incompletely resected neoplastic polyps, n = 35	13 (6.5%)	2 (11.1%)	4 (14.3%)	4 (20.0%)	5 (22.7%)
Univariate analysis, RR (95% CI)	1.00 (referent)	1.72 (0.42-7.05)	2.21 (0.77-6.32)	3.09 (1.11-8.61)	3.51 (1.38-8.95)
Multivariate analysis, RR (95% CI)	1.00 (referent)	1.98 (0.51-7.75)	2.87 (1.02-8.03)	2.04 (0.71-5.93)	3.45 (1.35-8.81)



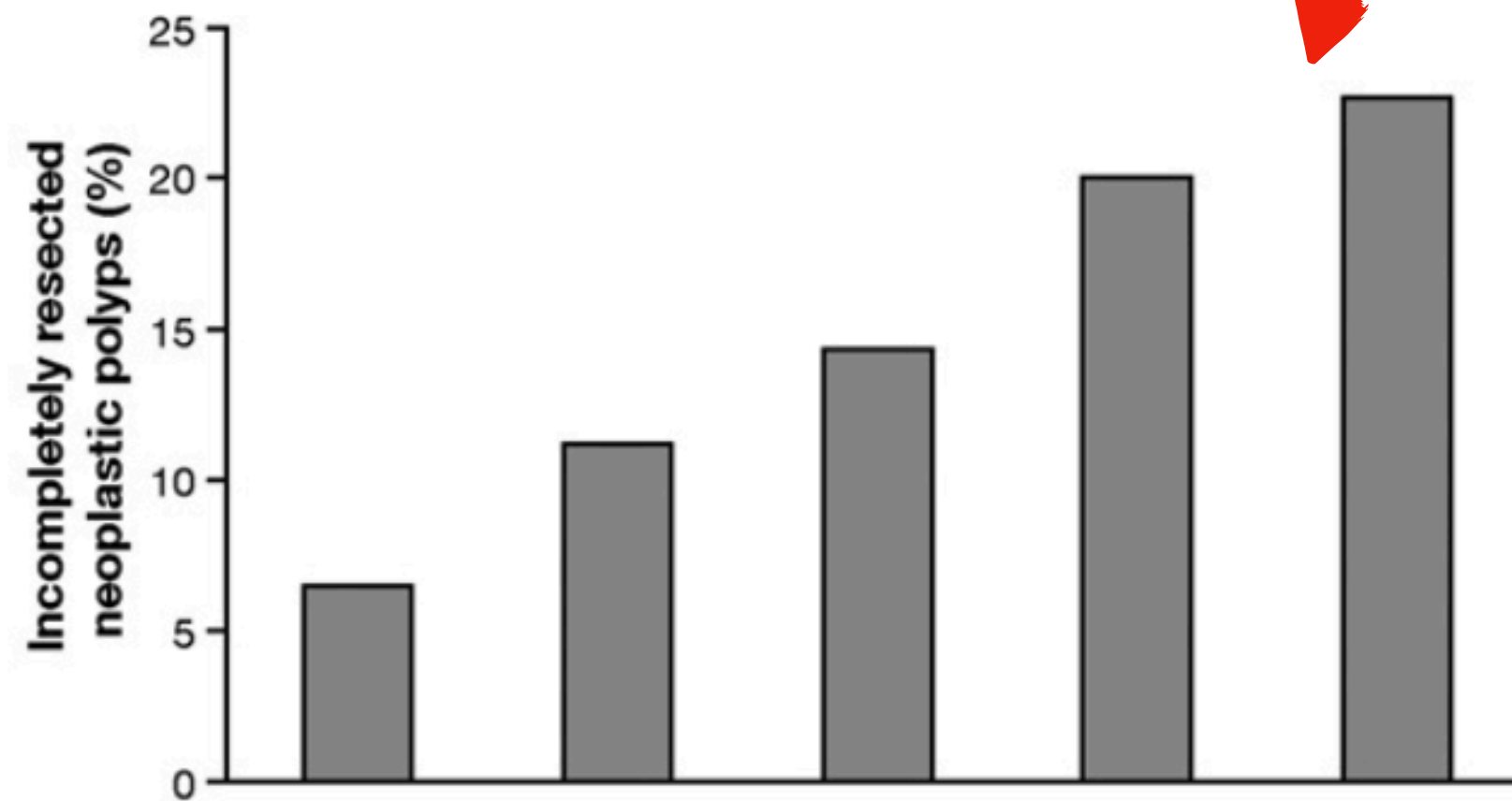


RECOMMENDATION

2020 statement

The following recommendations for post-polypectomy colonoscopic surveillance apply to all patients who had one or more polyps that were **completely removed** during a high quality baseline colonoscopy.

Strong recommendation, moderate quality evidence.



Endoscopist

Polyps resected, n = 418

Neoplastic polyps resected, n = 346

Incompletely resected neoplastic polyps, n = 35

Univariate analysis, RR (95% CI)

Multivariate analysis, RR (95% CI)

	A	B	C	D	E
Polyps resected, n = 418	241 (57.7%)	28 (6.7%)	29 (6.9%)	24 (5.7%)	26 (6.2%)
Neoplastic polyps resected, n = 346	201 (58.1%)	18 (5.2%)	28 (8.1%)	20 (5.8%)	22 (6.4%)
Incompletely resected neoplastic polyps, n = 35	13 (6.5%)	2 (11.1%)	4 (14.3%)	4 (20.0%)	5 (22.7%)
Univariate analysis, RR (95% CI)	1.00 (referent)	1.72 (0.42-7.05)	2.21 (0.77-6.32)	3.09 (1.11-8.61)	3.51 (1.38-8.95)
Multivariate analysis, RR (95% CI)	1.00 (referent)	1.98 (0.51-7.75)	2.87 (1.02-8.03)	2.04 (0.71-5.93)	3.45 (1.35-8.81)

Table 2. Snare Incomplete Resection Rate Stratified by Subgroups, Polyp Margin Assessment

Subgroups	IRR, % (95% CI)	I ² , %
Study type		
Expert	8.0 (4.8–11.3)	86.5
Nonexpert	18.0 (11.8–24.3)	96.1
Geographic origin		
Asian	14.1 (10.1–18.2)	94.9
Non-Asian	4.8 (3.3–6.3)	^a
Histology		
Adenoma	13.3 (8.9–17.8)	95.9
SSA	28.5 (15.7–41.3)	^a
1–10 mm		
Submucosal injection	14.2 (5.2–23.2)	95.9
No submucosal injection	17.6 (13.1–22.1)	54.1
Total 1–10 mm	15.9 (9.6–22.1)	94.4
10–20 mm		
Submucosal injection	20.4 (11.6–29.2)	80.0
No submucosal injection	^a	^a
Hot snare	20.8 (12.9–28.8)	76.9
Cold snare	^a	^a
Total 10–20 mm	20.8 (12.9–28.8)	76.9

R Djinbachian, Gastroenterol 2020

CARE study, Gastroenterol 2013

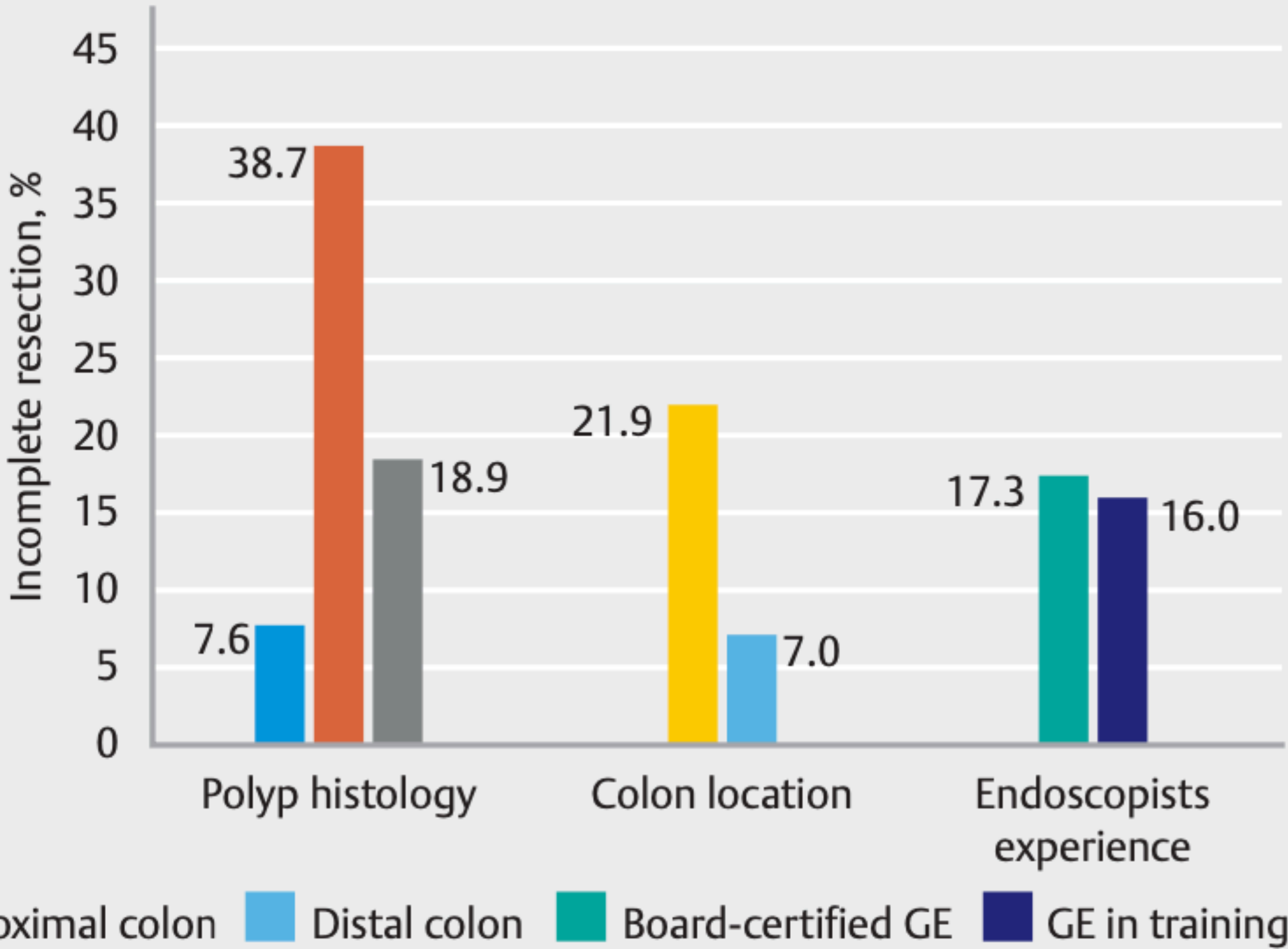
C Hassan, Endoscopy 2020

Incomplete endoscopic resection of colorectal polyps: a prospective quality assurance study

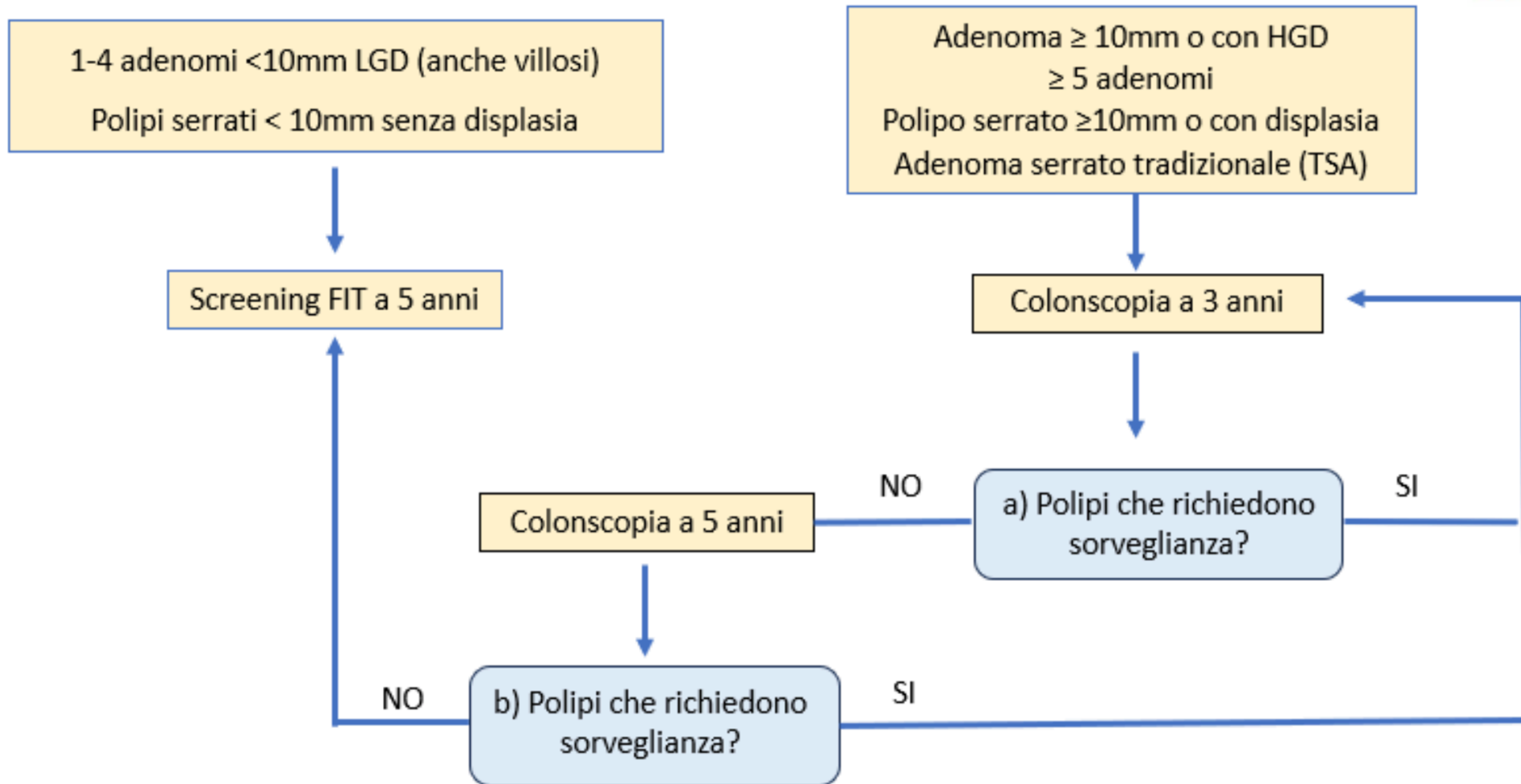
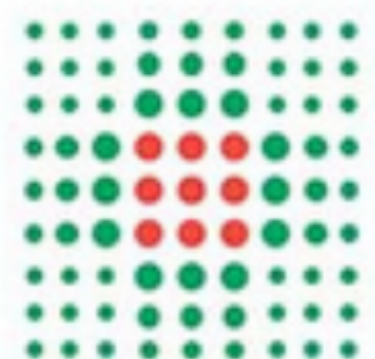
GRAPHICAL ABSTRACT

Question: What is the risk of incomplete polypectomy, and what factors can explain the incomplete resection rate?

Answer: Polyps located in the proximal colon and polyps with sessile serrated histology were at much higher risk of being incompletely resected compared with polyps located in the distal colon and polyps with adenomatous histology. There was no difference in polypectomy performance between board-certified gastroenterologists and trainees.



“it seems reasonable to recommend an early repeat of colonoscopy only in those few cases where the number or complexity of multiple endoscopic resections have affected, according to endoscopist judgement, the quality of baseline colonoscopy”



RECOMMENDATION

2020 statement

ESGE recommends a 3–6-month early repeat colonoscopy following piecemeal endoscopic resection of polyps ≥ 20 mm.

Strong recommendation, moderate quality evidence.



screening
tumore
colon retto

Polipo ≥ 20 mm resecato
con tecnica piecemeal

Colonscopia a 3-6 mesi

Colonscopia a 12 mesi

a) Polipi che richiedono
sorveglianza?

recurrence after piecemeal polypectomy

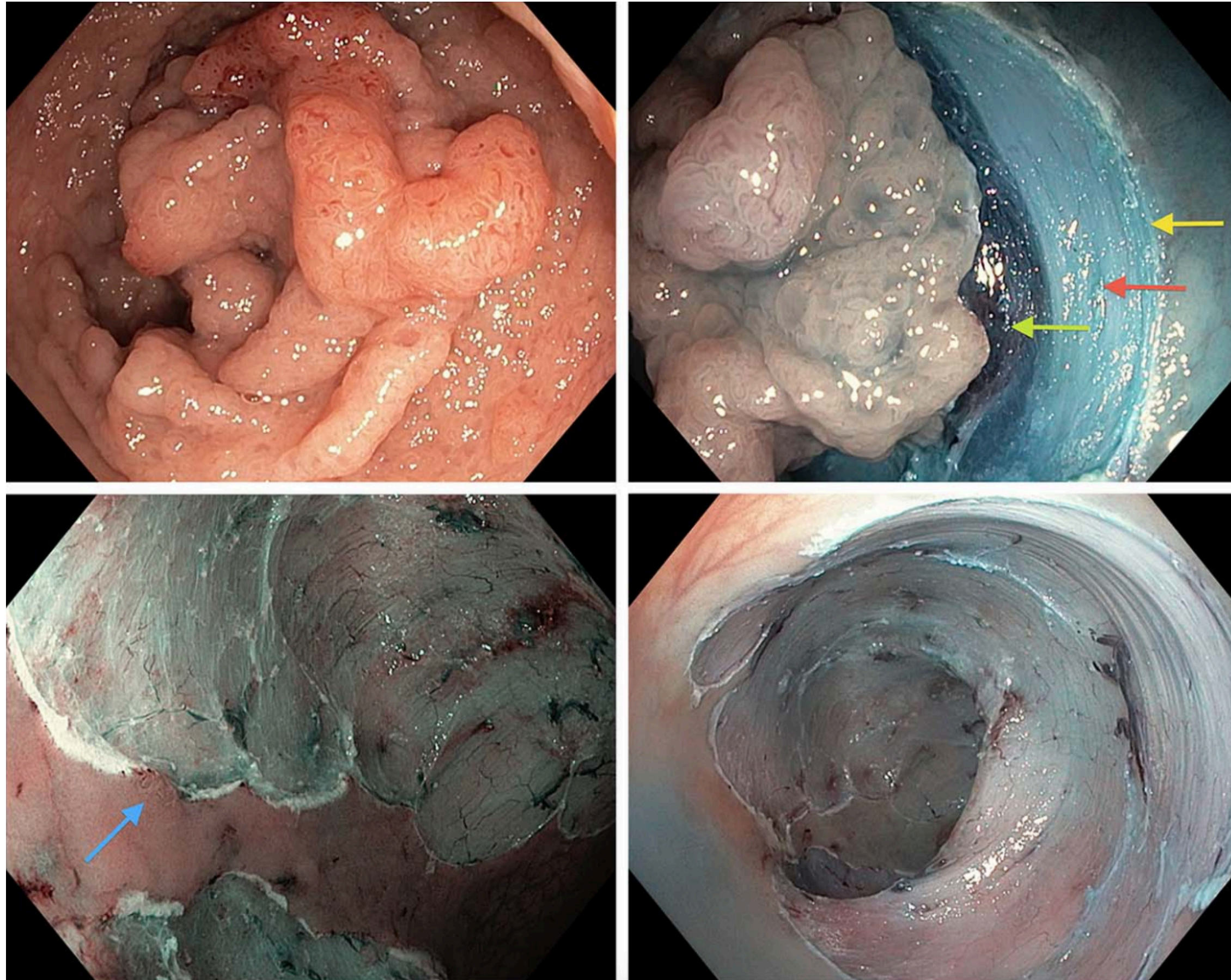
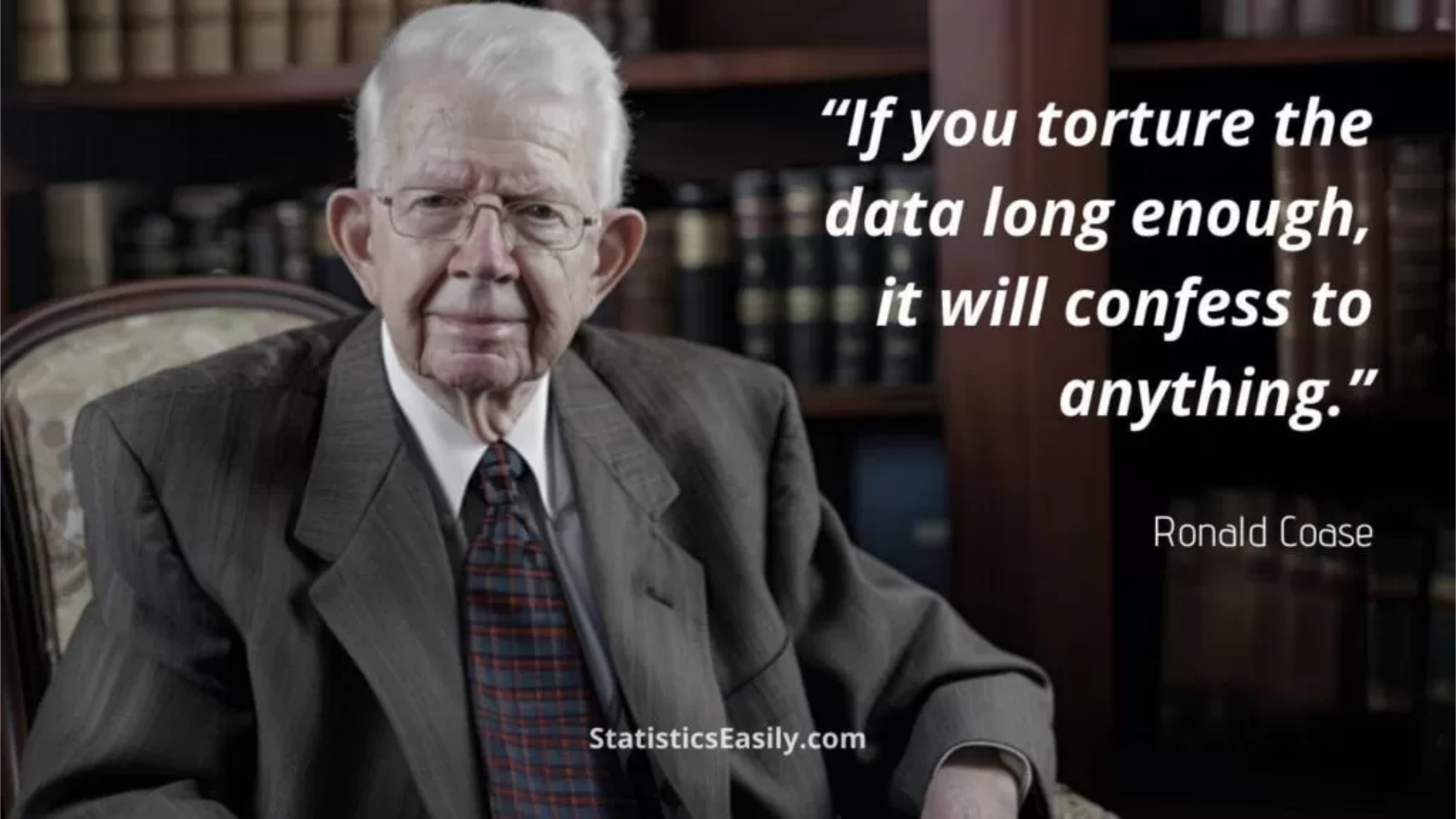


Table 3 Multivariable analysis and best-fitting multiple logistic regression model for factors associated with recurrence at first surveillance colonoscopy (SC1)

Risk factor for recurrent/residual adenoma	OR	p Value
Lesion size		
20 mm	1	
21–30 mm	2.07 (0.93–4.57)	0.073
31–40 mm	3.44 (1.56–7.60)	0.002
>40 mm	8.22 (3.90–17.3)	<0.001
Use of argon plasma coagulation (APC)	2.42 (1.55–3.80)	<0.001
Bleeding during EMR	1.66 (1.03–2.67)	0.038

EMR, endoscopic mucosal resection.

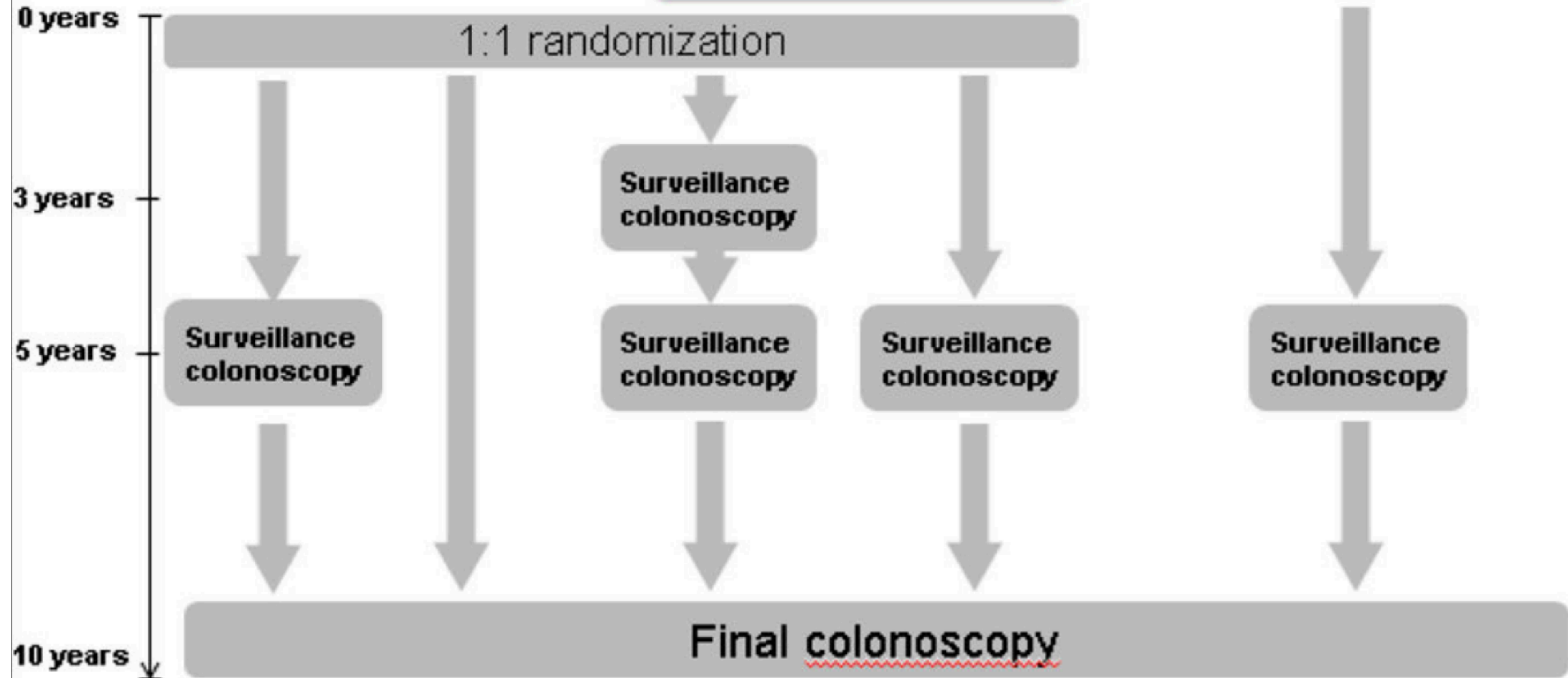
A photograph of Ronald Coase, an elderly man with white hair and glasses, wearing a dark suit, white shirt, and a patterned tie. He is seated in a wooden chair with a patterned backrest. The background is a dark wooden bookshelf filled with books.

“If you torture the data long enough, it will confess to anything.”

Ronald Coase



European Polyp Surveillance Trial



Detection of colorectal cancer and advanced neoplasia during first surveillance interval after detection of adenomas in fecal immunochemical test cancer screening: a nationwide study

*retrospective, nationwide
18.000 FIT +ve under surveillance,
2014 - 2017*

CRC

0.59% in high-risk group

1.11% in intermediate-risk group

Detection of colorectal cancer and advanced neoplasia during first surveillance interval after detection of adenomas in fecal immunochemical test cancer screening: a nationwide study

*retrospective, nationwide
18.000 FIT +ve under surveillance,
2014 - 2017*

CRC

0.59% in high-risk group

1.11% in intermediate-risk group

if ESGE 2020 applied:

CRC in 1.69% of intermediate - non surveilled pts

CRC in 0.87% of intermediate - surveilled pts

Detection of colorectal cancer and advanced neoplasia during first surveillance interval after detection of adenomas in fecal immunochemical test cancer screening: a nationwide study

*retrospective, nationwide
18.000 FIT +ve under surveillance,
2014 - 2017*

CRC

0.59% in high-risk group

1.11% in intermediate-risk group

if ESGE 2020 applied:

CRC in 1.69% of intermediate - non surveilled pts

CRC in 0.87% of intermediate - surveilled pts

**up to 4 small adenomas
villous histology**

Detection of colorectal cancer and advanced neoplasia during first surveillance interval after detection of adenomas in fecal immunochemical test cancer screening: a nationwide study

*retrospective, nationwide
18.000 FIT +ve under surveillance,
2014 - 2017*

CRC

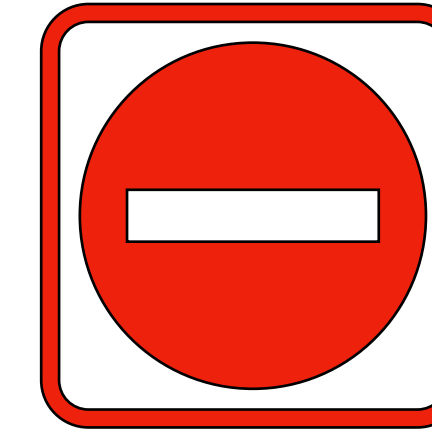
0.59% in high-risk group

1.11% in intermediate-risk group

if ESGE 2020 applied:

CRC in 1.69% of intermediate - non surveilled pts

CRC in 0.87% of intermediate - surveilled pts




colonoscopy completeness
bowel prep
excluded piecemeal resection
ADR not reported

up to 4 small adenomas
villous histology

Surveillance after polyp removal: quality really matters

Referring to Larsen PT et al. doi: 10.1055/a-2343-5700

Rodrigo Jover 

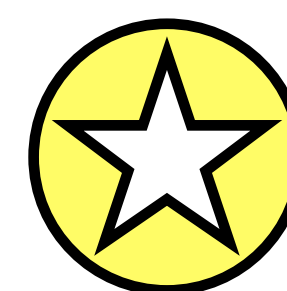
“Taken together, these results highlight one of the possible reasons that could explain the findings of this study, namely the quality of the baseline colonoscopy.”

Surveillance after polyp removal: quality really matters

Referring to Larsen PT et al. doi: 10.1055/a-2343-5700

Rodrigo Jover 

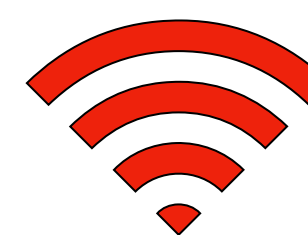
“Taken together, these results highlight one of the possible reasons that could explain the findings of this study, namely the quality of the baseline colonoscopy.”



**importance of quality metrics
in screening colonoscopy**



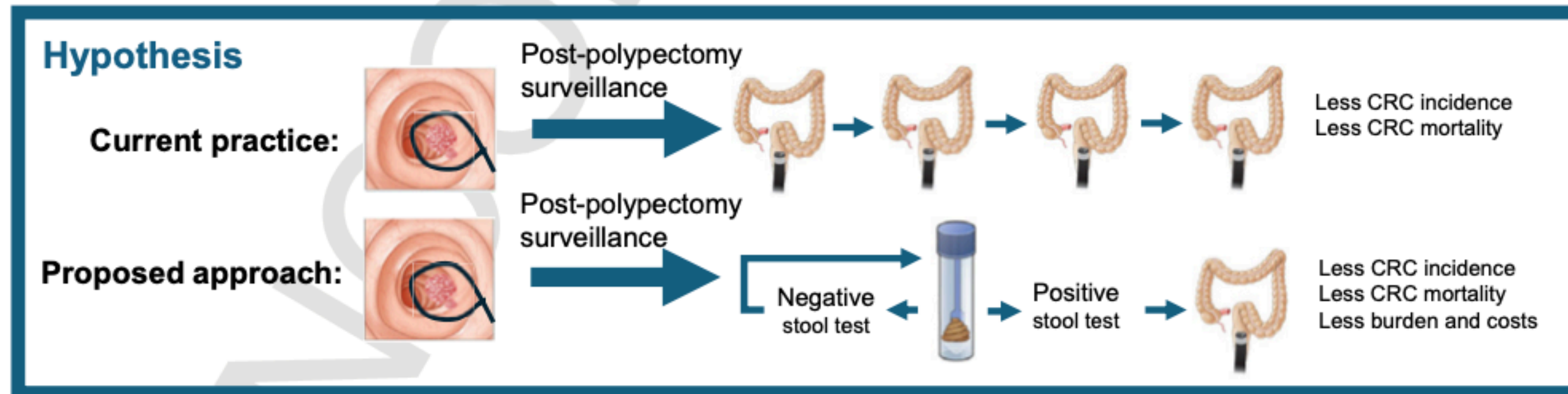
**only certified endoscopists
should participate in screening**



**guidelines have to include these
quality metrics in recommendations**

Stool-Based Testing for Post-Polypectomy Colorectal Cancer Surveillance Safely Reduces Colonoscopies: The Molecular Stool Testing for Colorectal Cancer Surveillance Study

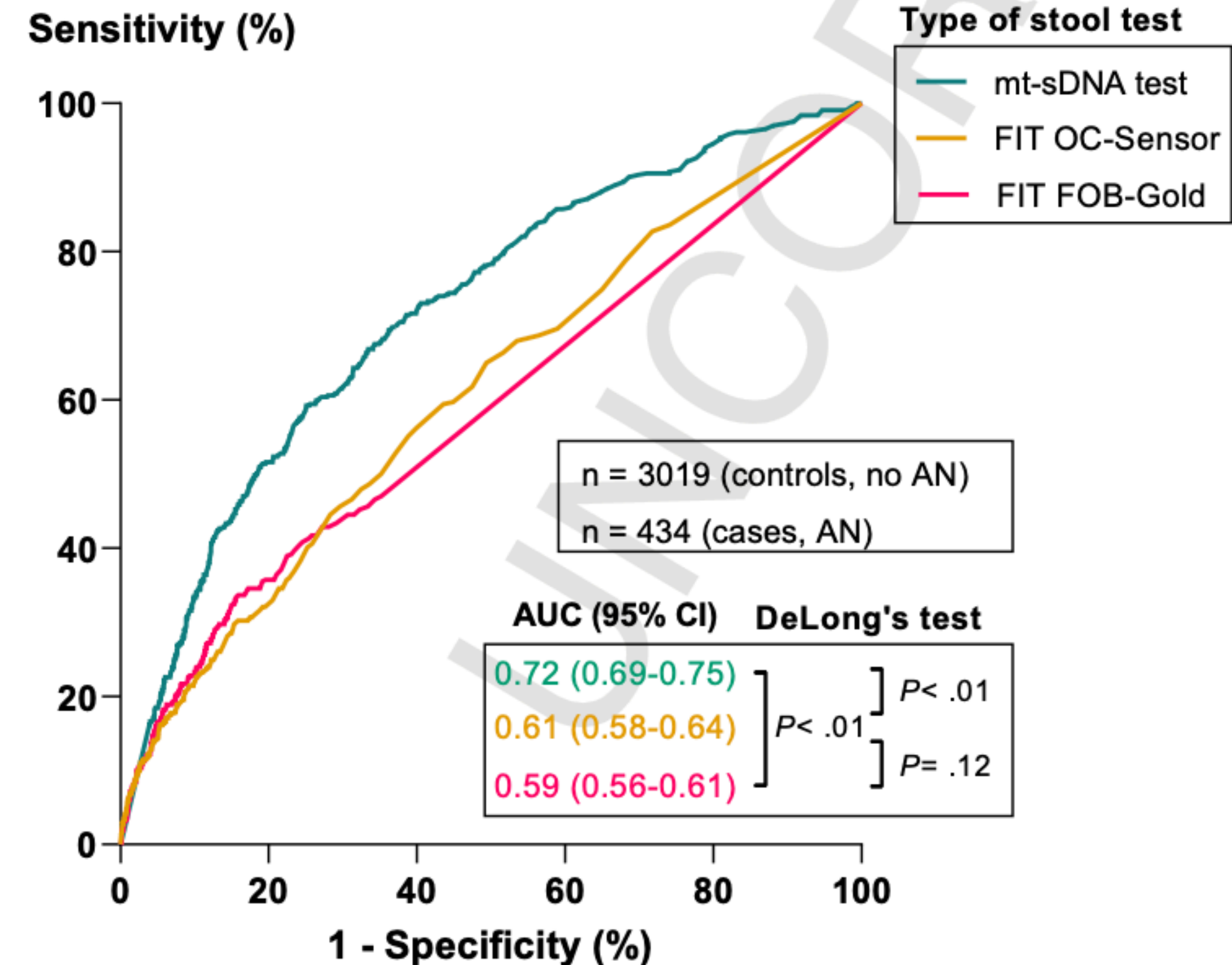
The MOCCAS study:



Outcome

Microsimulation modeling comparing stool-based surveillance with current colonoscopy surveillance using MOCCAS study findings as input

Stool test	Testing interval	Compared to current colonoscopy surveillance		
		CRC incidence and mortality	Nr. of colonoscopies	Costs
Mt-sDNA test	Biennial	=	↓	↑
FIT FOB-Gold	Annual	=	↓	↓
FIT OC-Sensor	Annual	=	↓	↓



RECOMMENDATION

2020 statement

When planning post-polypectomy surveillance, ESGE suggests to use a standardized measurement of polyp size evaluated at either endoscopy or pathology.

Weak recommendation, low quality evidence.

