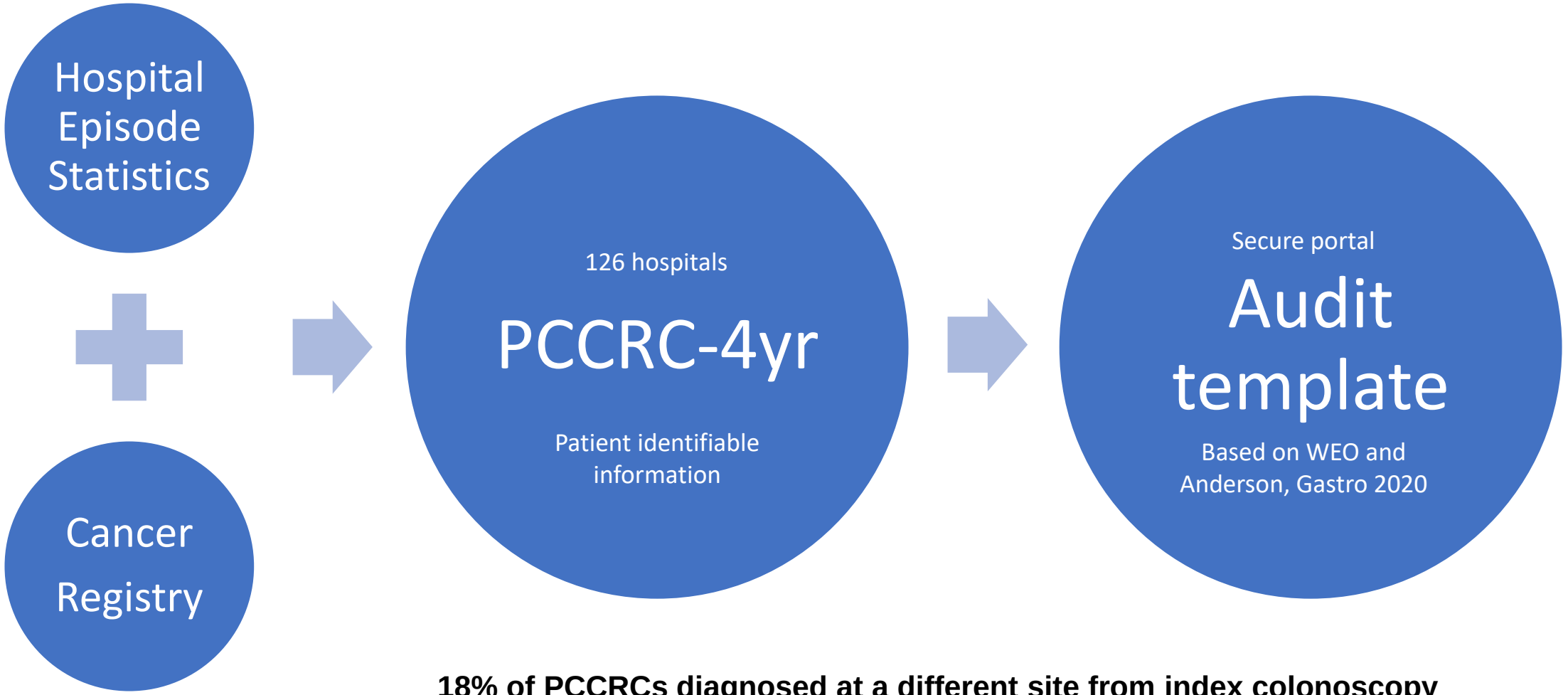
English National PCCRC audit data

Roland Valori

WEO Colorectal Cancer Screening Committee
5th May 2023, Chicago

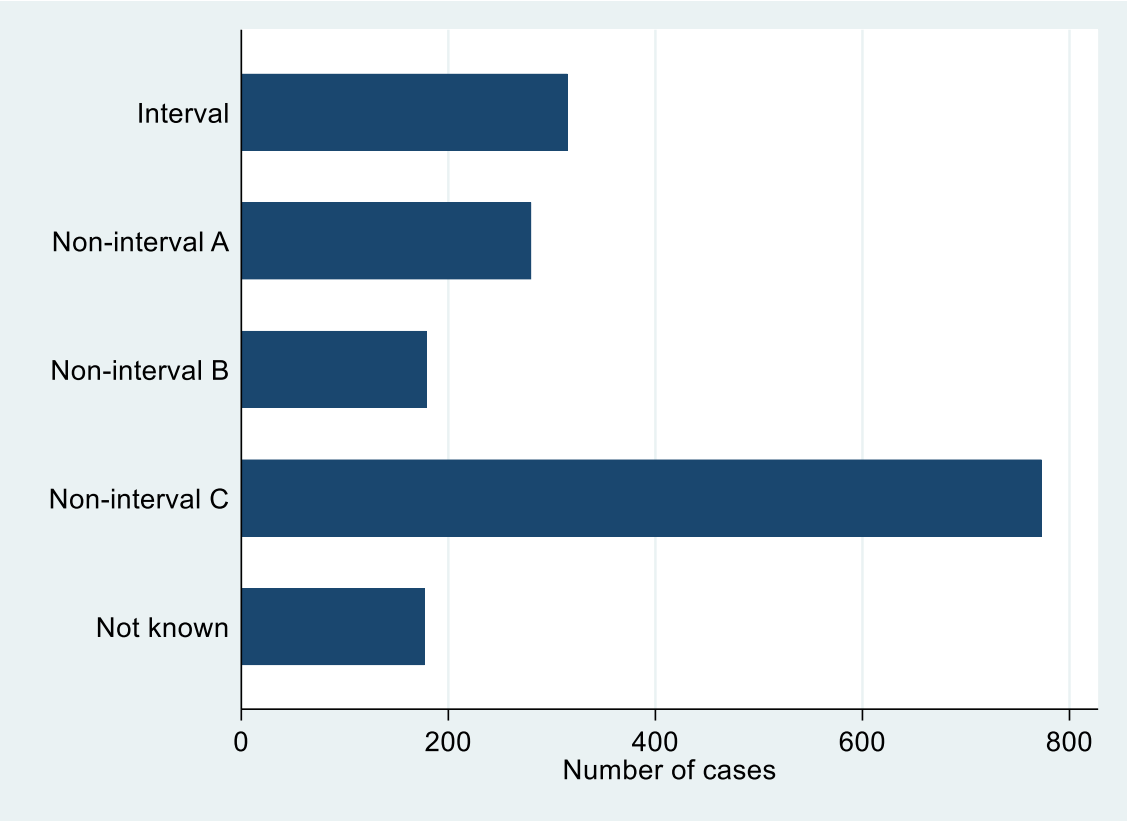
English National PCCRC audit



18% of PCCRCs diagnosed at a different site from index colonoscopy

Interval and non-interval types

PCCRC-4yr: four-year interval was chosen so as not to miss patients having a 3-year surveillance



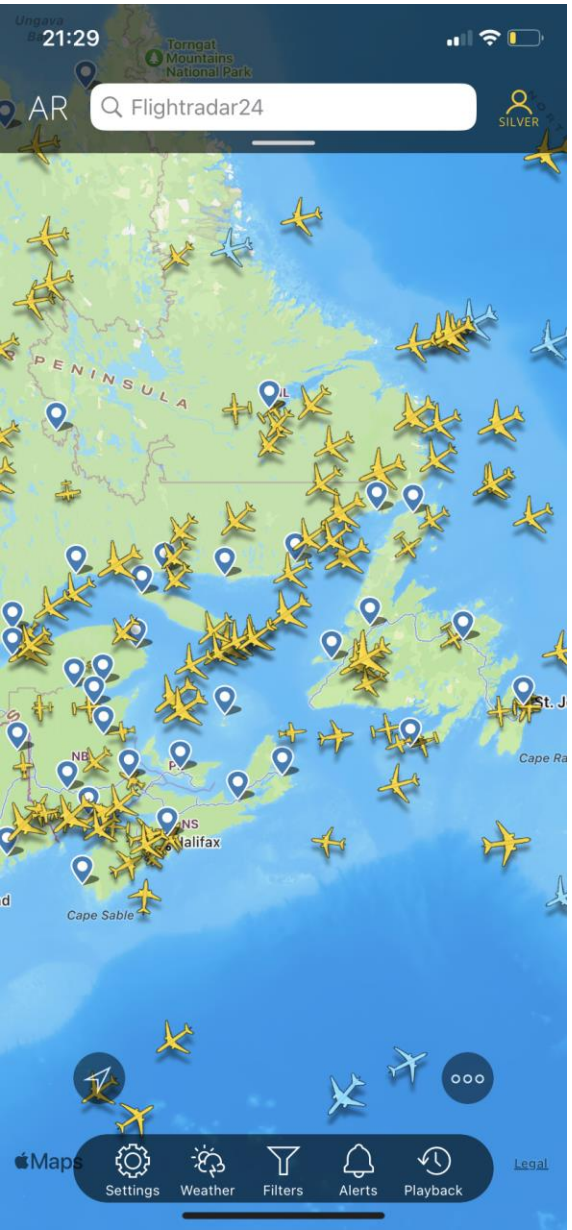
Interval = cancers diagnosed before planned interval

Non-interval A = cancers diagnosed at planned surveillance

Non-interval B = cancers diagnosed after planned surveillance

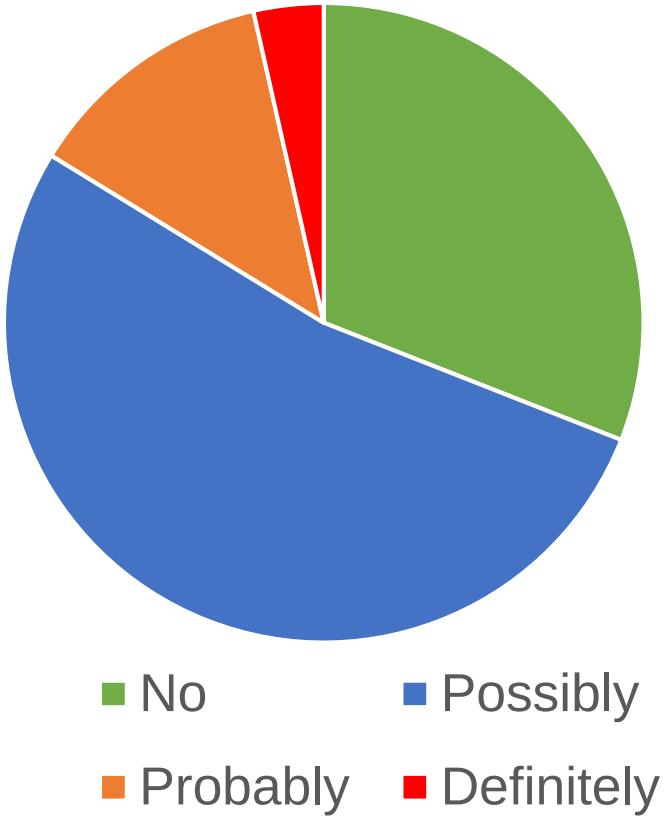
Non-interval C = no planned surveillance/repeat

Flying is safe because the airline industry reviews events obsessionally, however minor



Flights over Eastern Canada at 1529 MDT 3rd May 2023

National Audit - was the PCCRC avoidable?



In England there are 1400 PCCRC-4yr every year

? 60% avoidable

Anderson, Burr, Valori, Gastro 2020 found 89% avoidable

What harm resulted from the delay?

	n	%
None	962	56
Minor harm	486	28
Major harm	138	8
Premature death	138	8

60% avoidable is equivalent to two A380s full of patients having an avoidable PCCRC-4yr in England every year

14 A380s of patients in the US

18 A380s of patients in the EU

Every year!

Audit objective – to apply airline industry methodology

- Help services comply with a WEO recommendation and a JAG requirement
  - To improve the quality of colonoscopy at service level
  - In turn to prevent cancer and diagnose it earlier
- Create an evidence base from aggregated data
  - On which future quality measures and recommendations can be based

Audit future objectives

- Help services comply with a requirement
  - To improve the quality of colonoscopy at service level
  - In turn to prevent cancer and diagnose it earlier
- Create an evidence base from aggregated data
  - On which future quality measures and recommendations can be based
- Enable comparisons between regions and encourage competition
  - Benchmarking
- Monitor performance
  - Monitor impact of quality improvement using key PCCRC metrics

Final submissions as of 10/5/22

Participating sites	Completed audits	Excluded	Total
122/126	1724 (77%)	459	2465

Indication for the index colonoscopy

Indication	N	%
Symptomatic	1020	59%
Surveillance	456	26%
FIT-based Screening Programme	134	8%
Abnormal investigation	70	4%
Planned polypectomy	44	3%

Surveillance category	N	%	%
Surveillance (CRC)	130	7.5	26.1
Surveillance (polyps)	236	13.7	47.2
Surveillance (IBD)	83	4.8	16.6
Surveillance (Lynch)	45	2.6	9.0

Question

Should we aim for zero non-interval types A and B PCCRCs?
(excluding IBD-PCCRCs)

Procedural difficulties

	n	%
No difficulty	1253	72.7
Any difficulty	471	27.3
Specific difficulty mentioned in the report (may have >1)		
Severe diverticular disease	102	5.9
Rigidity or fixation of the colon	44	2.6
Excessive looping	115	6.7
Very obese patient	4	0.2
Lengthy procedure (>45 minutes) e.g. for therapy	42	2.4
Patient discomfort	75	4.4
Poor bowel prep	181	10.5
Cardio-respiratory complications	2	0.1
Other	69	4.0

Take home messages

- A difficult colonoscopy makes it more difficult to do the procedure well
  - Long and stressful procedures affect attention and chance of missing lesions
- These findings have implications
  - for when to repeat a procedure or perform an alternative test, even months or years later

Bowel preparation

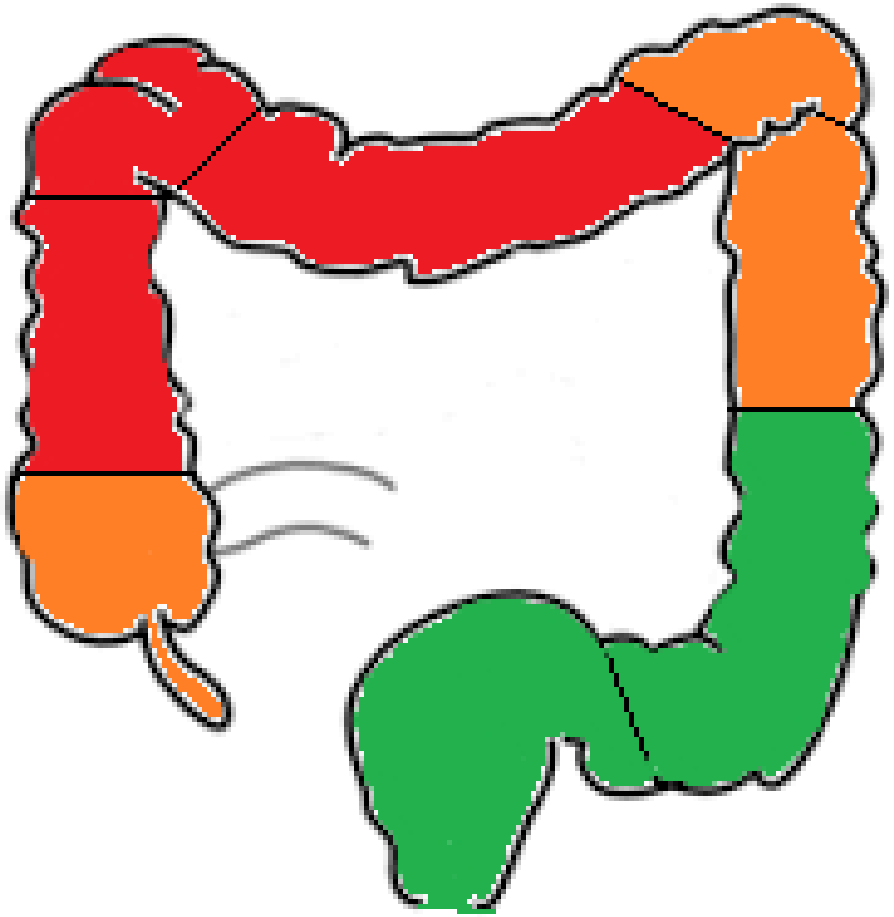
Bowel preparation	National	
	n	%
Good	867	50.3
Satisfactory	599	34.7
Poor	198	11.5
Not known	60	3.5

Question

Rather than complicated bowel prep scores, should we record:
“adequate (or not) for the indication”

“Inadequate for the indication” **requires** a decision which should be documented and acted upon

Site of CRC diagnosis in general population and PCCRC cases



Site	General population	PCCRC National audit	Relative proportion
Rectum	28.4%	19.3%	0.68
Sigmoid colon	28.0%	17.3%	0.62
Descending colon	2.9%	3.9%	1.34
Splenic flexure	2.2%	3.1%	1.41
Transverse colon	5.2%	9.6%	1.84
Hepatic flexure	2.9%	6.9%	2.37
Ascending colon	8.2%	15.1%	1.84
Caecum	14.6%	16.6%	1.13

Red >1.5, Amber <1.5, Green <1.0

Note: ICV 17, 0.99%, Unknown site 123, 7.1%

Photo-documentation of completion

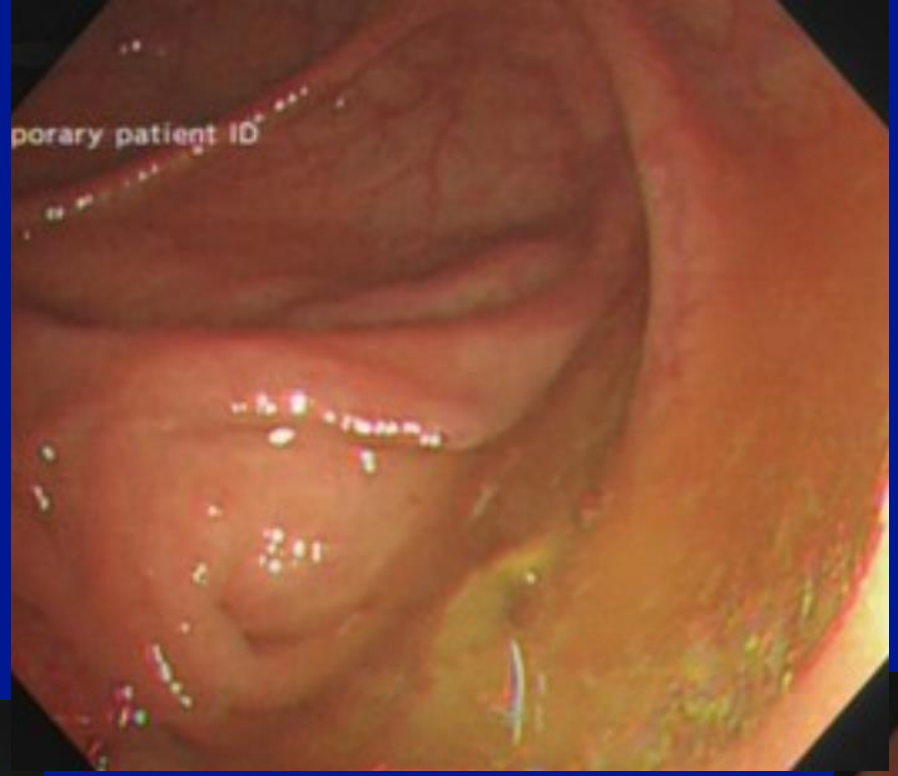
	n	%
No photos taken	165	10.8
Photo unavailable for review	291	19.0
Inadequate photodocumentation	234	15.3
Adequate photodocumentation	842	55.0

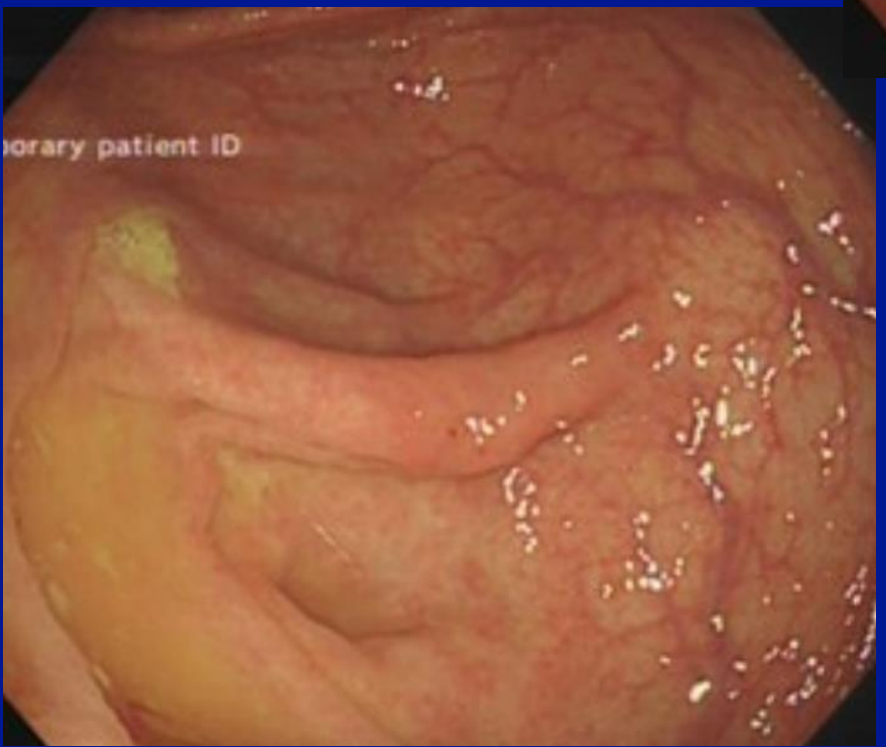
Photo of completion important*?

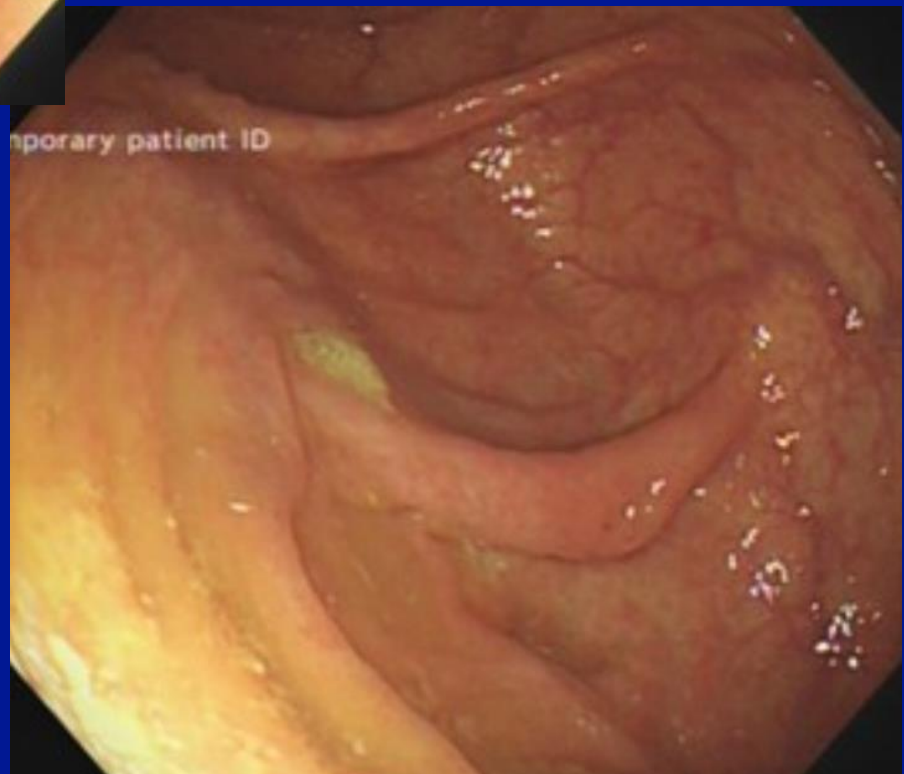
		Adequate photo	
		No	Yes
Completion photo important	No	502	539
	Yes	380 (56%)	303 (44%)

* Completion deemed important if the PCCRC occurred in the ascending colon, caecum or ileo-caecal valve

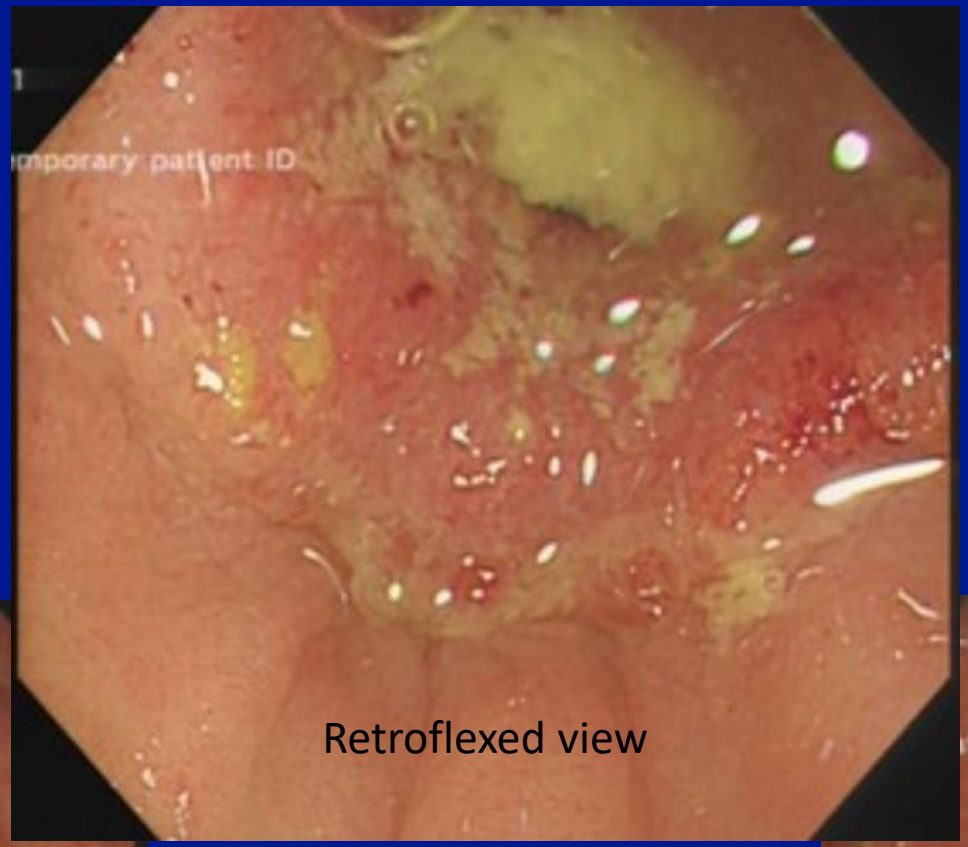
The caecum has been reached
- but has it been adequately visualised?



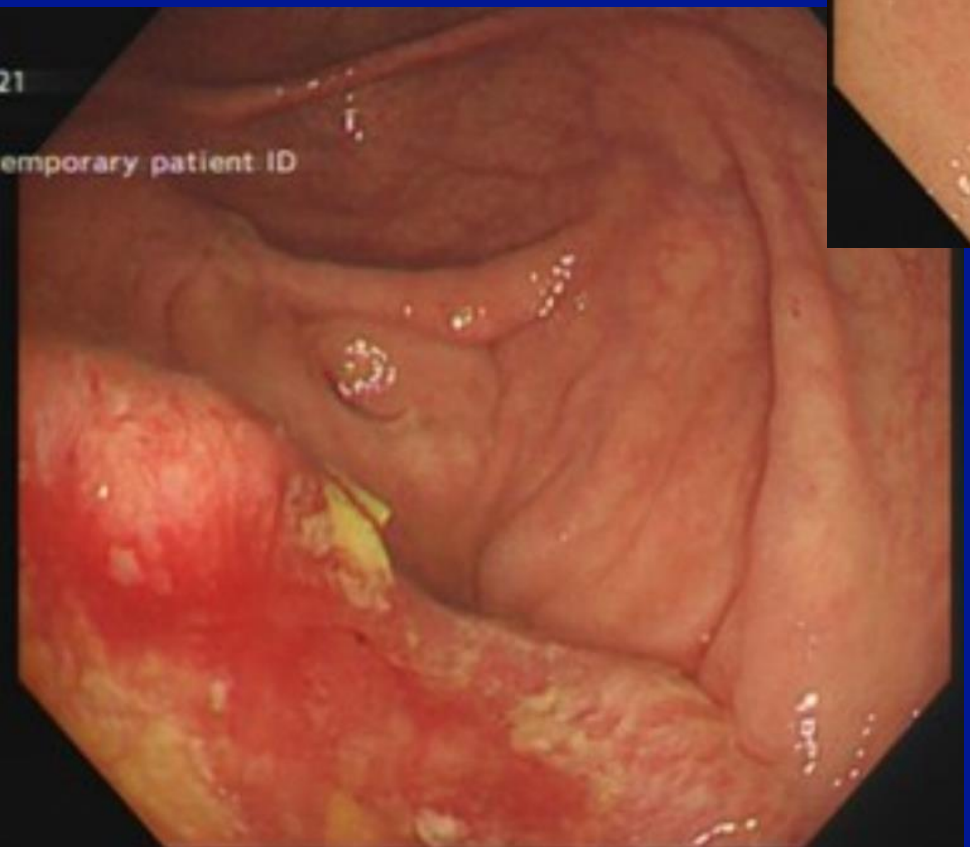




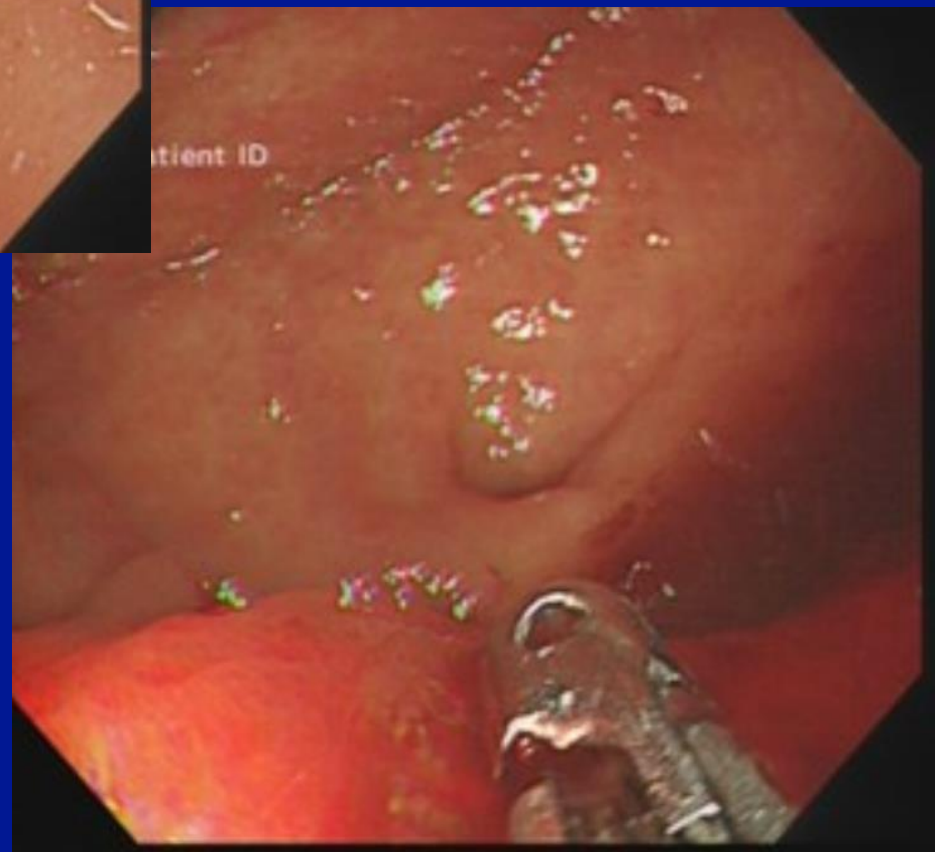
The caecum had not been adequately visualised



Retroflexed view



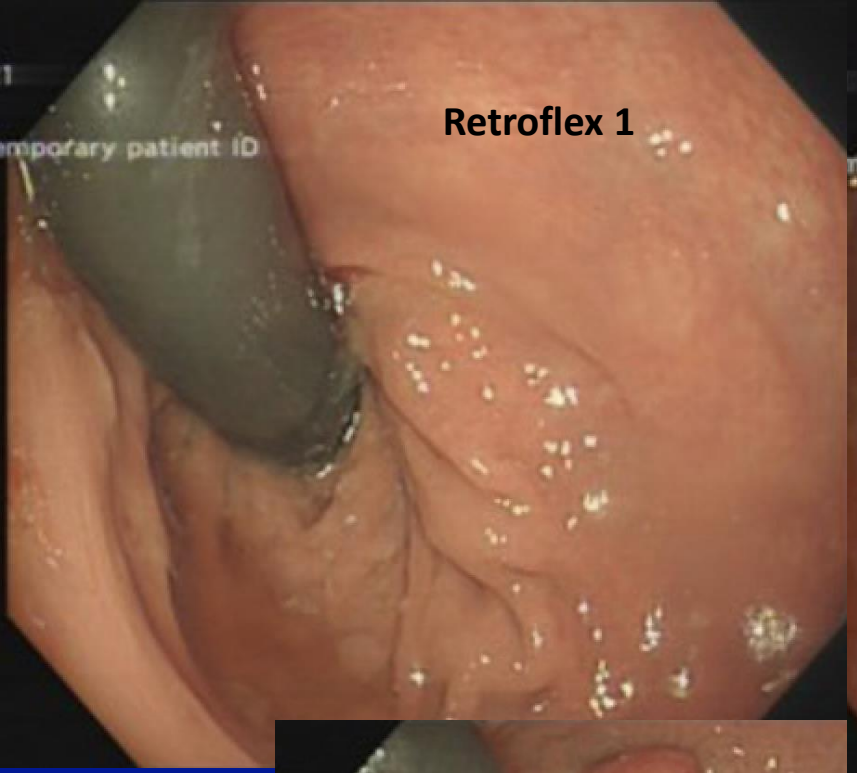
Cancer sitting on medial wall of caecum just behind the ICV

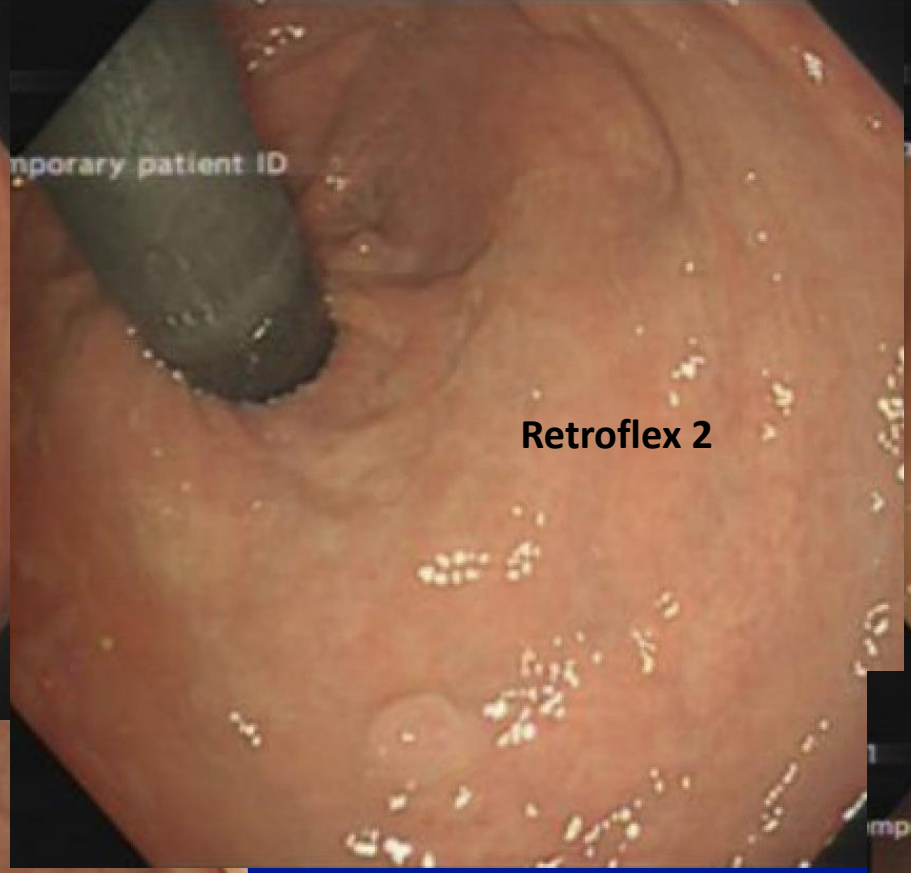


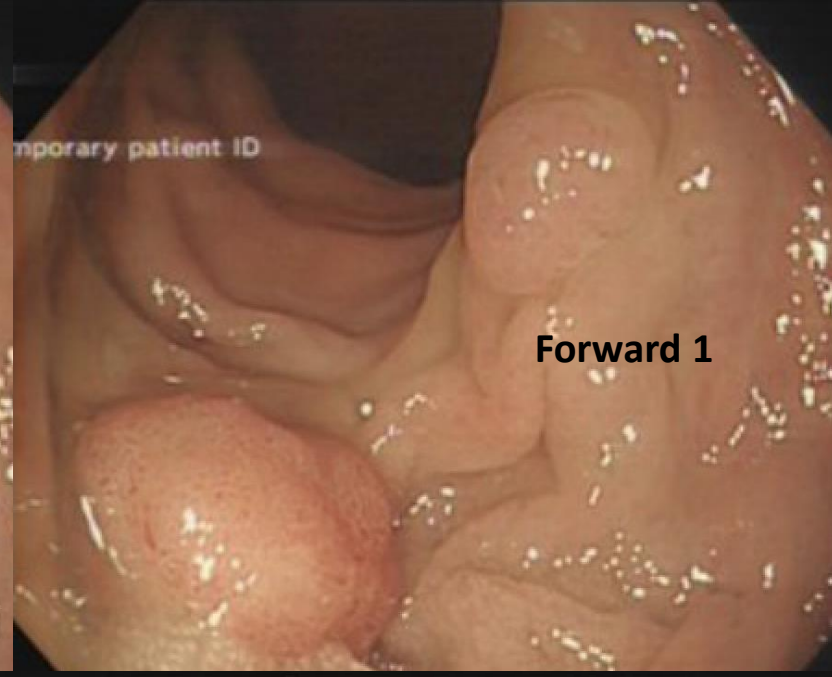
Rectal retroversion photo important*

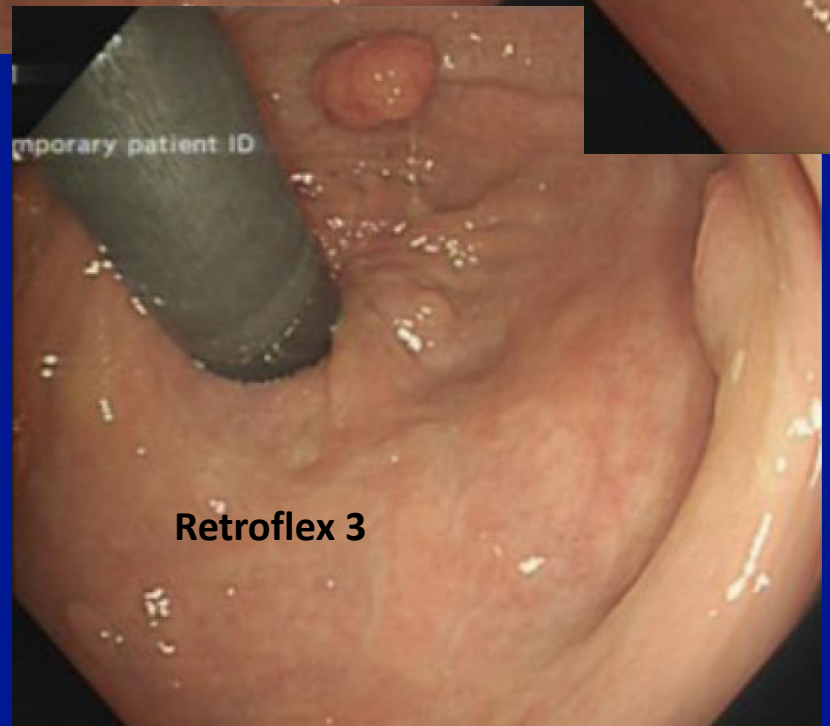
		Adequate photo	
Photo of rectum important		No	Yes
	No	789	602
	Yes	184 (55%)	149 (45%)

* Photo of rectal retroversion deemed important if the PCCRC occurred in the rectum

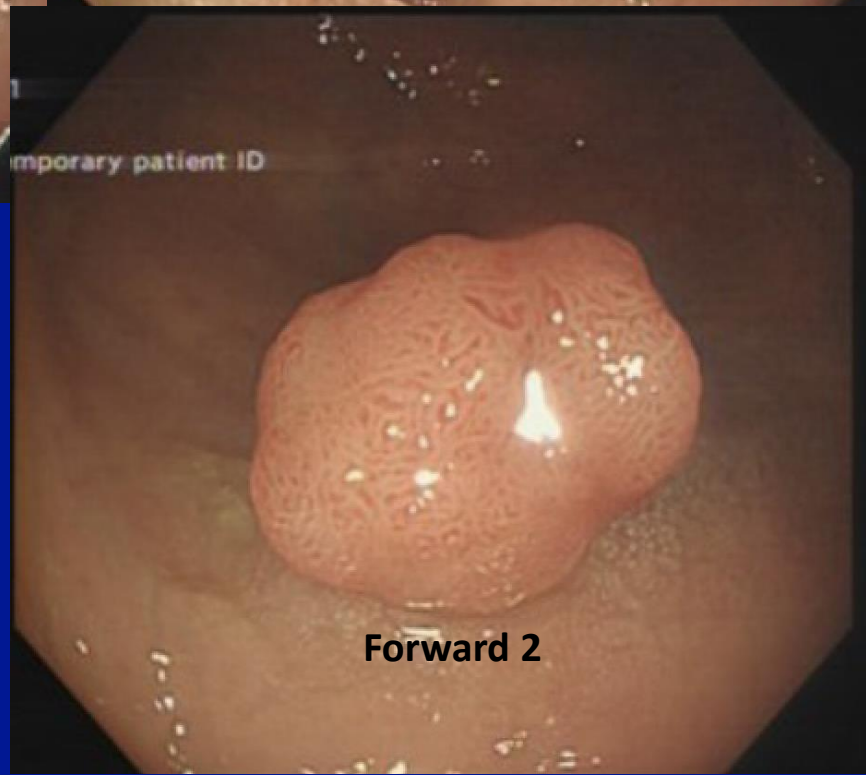








12/11/21
adequate
retroflexion?

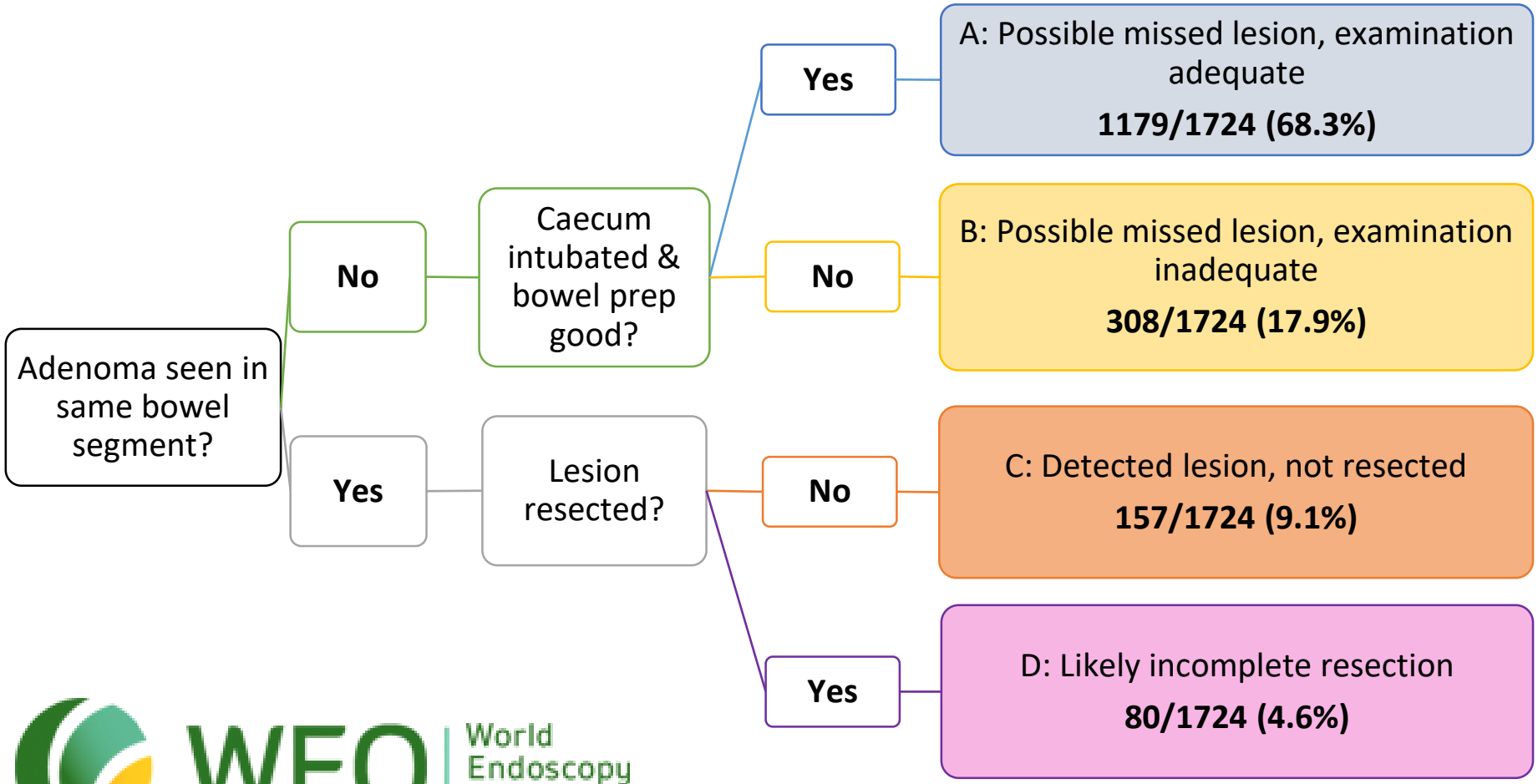


Questions

What constitutes adequate photo-documentation?

Should adequate photo-documentation become an auditable outcome?

WEO categorisation for root cause analysis



WEO | World Endoscopy Organization

Quality improvement strategies

- Category A
  - Adopt evidence-based methods to improve visualisation of the colon
- Category B
  - Reduce inadequate procedures: competence; bowel preparation; and adequate sedation
  - Make explicit decision post-procedure about whether the procedure was “adequate for the indication”
  - Take appropriate action if the procedure was deemed inadequate for the indication
- Category C
  - Planning appropriate and timely treatment of known lesions
  - Recognition of the features of overt and covert CRC
  - Ensure there are robust referral pathways in place for polyp resection
- Category D
  - Effective resection techniques, particularly of larger lesions
  - Audit recurrence rates for larger lesions (>20mm): they should be <3%
  - Adopt evidence-based techniques to prevent recurrence
  - Ensure there are robust referral pathways for resection of complex lesions

Questions

Should **adequate documentation** after incomplete or poor prep be an auditable outcome?

Should we aim for zero PCCRCs in categories C&D?

Non-procedural factors- national

Patient

	n	%
Patient failed to attend despite multiple attempts to arrange further tests	33	2
Further tests delayed for socio-economic reasons	10	0.6
Decision not to investigate further because of co-morbidity	51	3
Patient declined further tests	74	4
Patient moved out of area	8	0.5
None	1548	90

Booking

	n	%
Booking delay	86	5
Cancellation and not rebooked	6	0.4
No test booked	35	2
None	1597	93

Decisions

	n	%
No clear decision	59	3.4
Decision not acted upon	44	2.6
Inappropriate decision	61	3.5
None	1560	90.5

This is only the beginning – so what next?

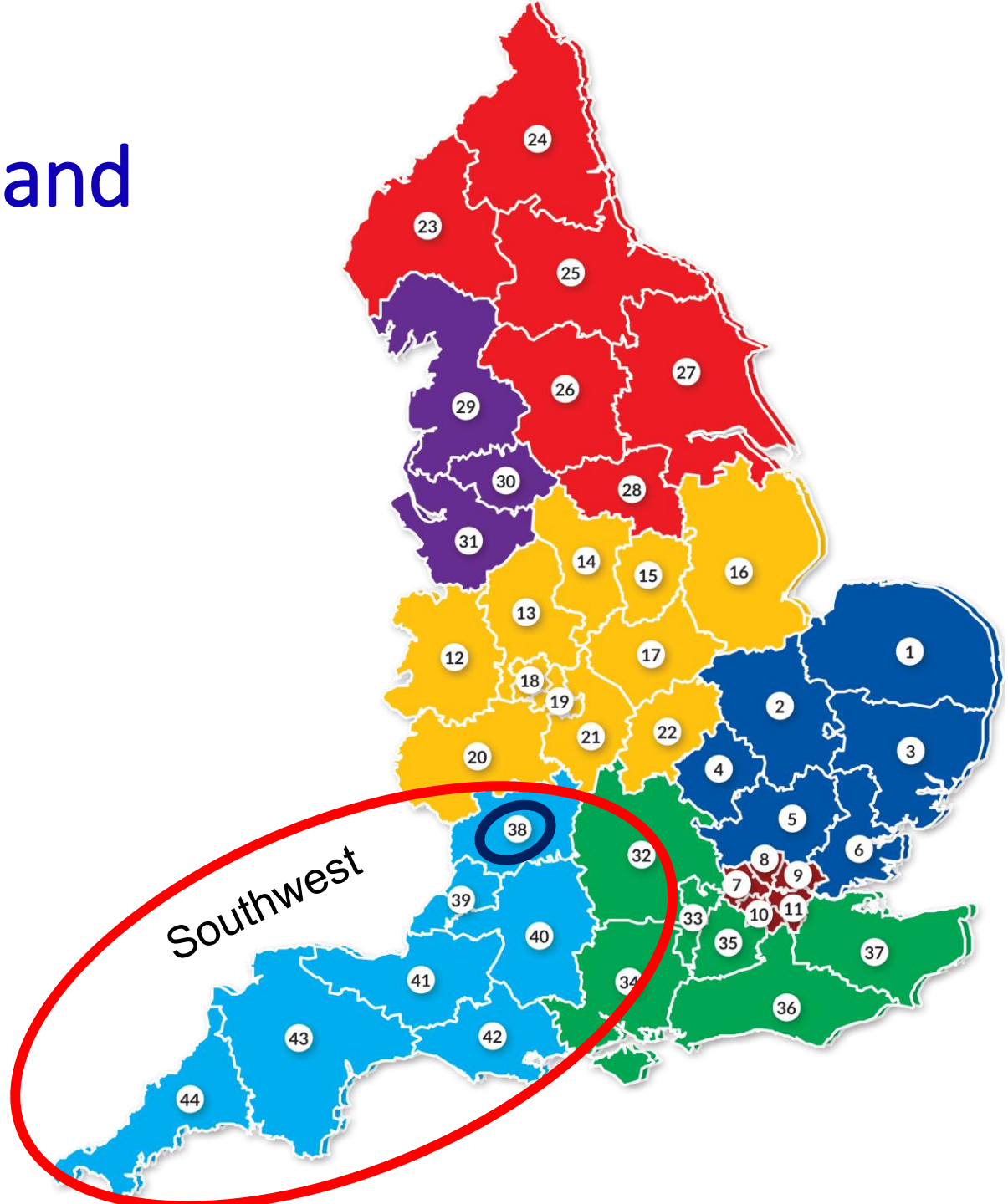
- The audit should become “business as usual”
  - Integrated into the current quality assurance infrastructure
  - Uploads x3/year – capturing all PCCRCs
- Non-compliant services should be held to account
  - Inform the regulator of non-compliant sites
- Create healthy competition
  - Agree measures to monitor and compare regional performance

Measures to monitor and compare performance

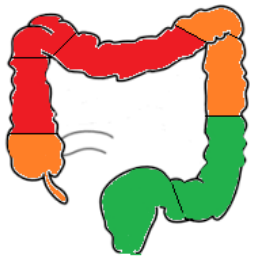
- General
  - Compliance with the audit
  - Review of reasons for rejections
  - Frequency of poor coding
- Quality of the procedure
  - Adequate photo-documentation
  - Decision-making (and documentation) of incomplete or inadequate procedures
- Surveillance
  - Compliance with guidelines
  - Identification of very high-risk groups
  - Colonoscopy after cancer resection
- Administrative processes
  - Waits beyond tolerances
- Therapy
  - Rates of “avoidable” WEO category C&D
  - Compliance with pathways for advanced therapy
  - Recurrence rates

Seven regions of NHS England

- General
  - Compliance with the audit
  - Review of reasons for rejections
  - Frequency of poor coding
- Quality of the procedure
  - Adequate photo-documentation
  - Decision-making (and documentation) of incomplete or inadequate procedures
- Surveillance
  - Compliance with guidelines
  - Identification of very high risk groups
  - Colonoscopy after cancer resection
- Administrative processes
  - Waits beyond tolerances
- Therapy
  - Rates of “avoidable” WEO category C&D
  - Compliance with pathways for advanced therapy
  - Recurrence rates



Acknowledgements



This work uses data provided by patients and collected by the NHS as part of their care and support

Special thanks to

- 122 site audit leads
- Their support teams
- Cancer Alliances
- National BCSP team

Project Team

- Nick Burr
- Eva Morris
- David Beaton
- Emma Saunsbury
- Andrew Lee
- Nigel Trudgill
- Natasha Wood
- Iosif Bentaris
- Matt Rutter
- Tameera Rahman
- Kim Whittlestone
- Brian Shand
- Nathaniel Rashbass
- Jem Rashbass