FIT can be used in CRC screening to eliminate the current disadvantages for women.

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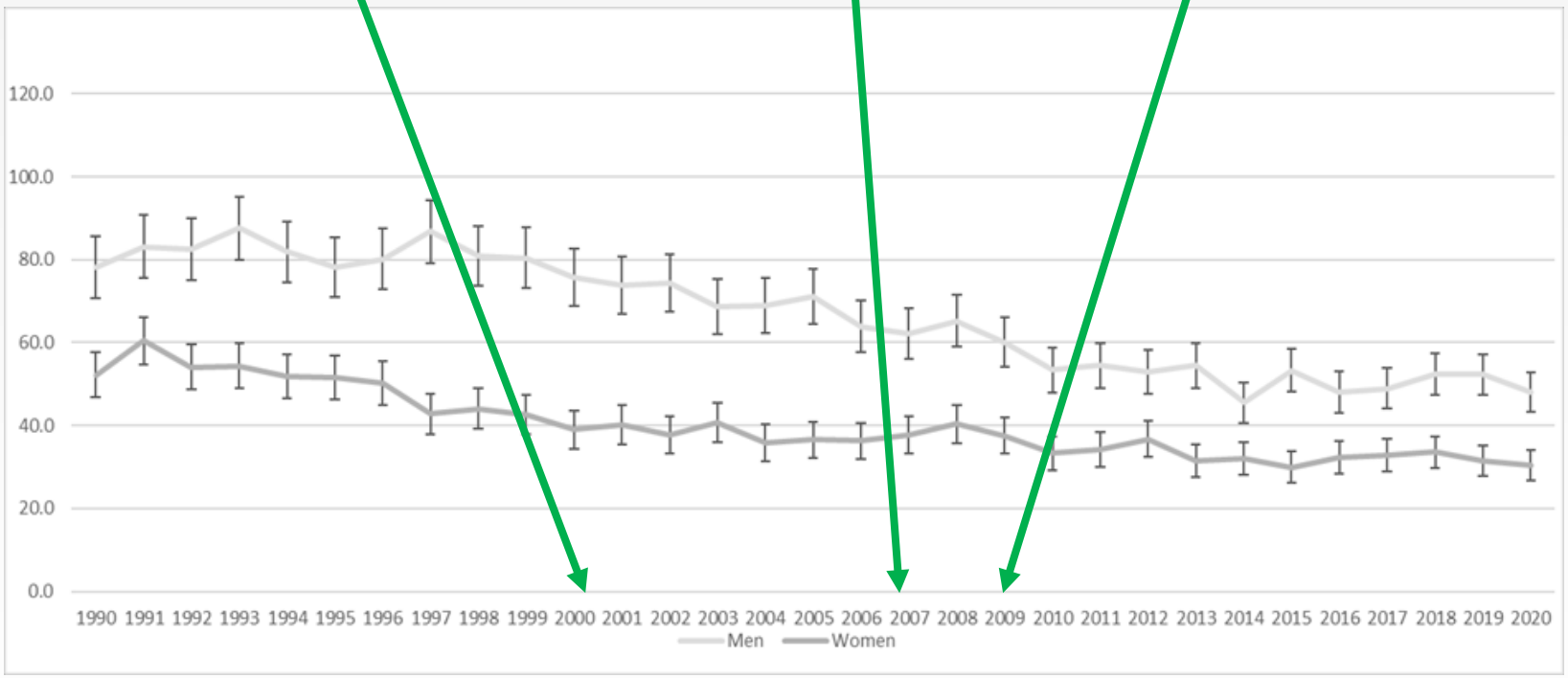
Possible Conflicts of Interest

CGF

Support to attend this meeting from Alpha Labs Ltd, Eastleigh, Hants, UK.

Age-standardised CRC mortality per 100,000 for women and men, from 1990 to 2020.

Screening pilots commenced Rollout began Rollout complete



Clark GRC, et al. Eur J Public Health 2023;33(2):331-335.

Women are disadvantaged in CRC screening

Using FIT with a single faecal haemoglobin concentration (f-Hb) threshold for all participants, followed by bowel visualisation for those with f-Hb above any chosen threshold, women are definitely disadvantaged.

*Gavin R.C. Clark, Robert J.C. Steele and Callum G. Fraser**

Strategies to minimise the current disadvantages experienced by women in faecal immunochemical test-based colorectal cancer screening.
Clin Chem Lab Med 2022; 60(10): 1496–1505

Graeme Young – "This paper is terrific. Let's find a way to persuade program organisers to consider this."

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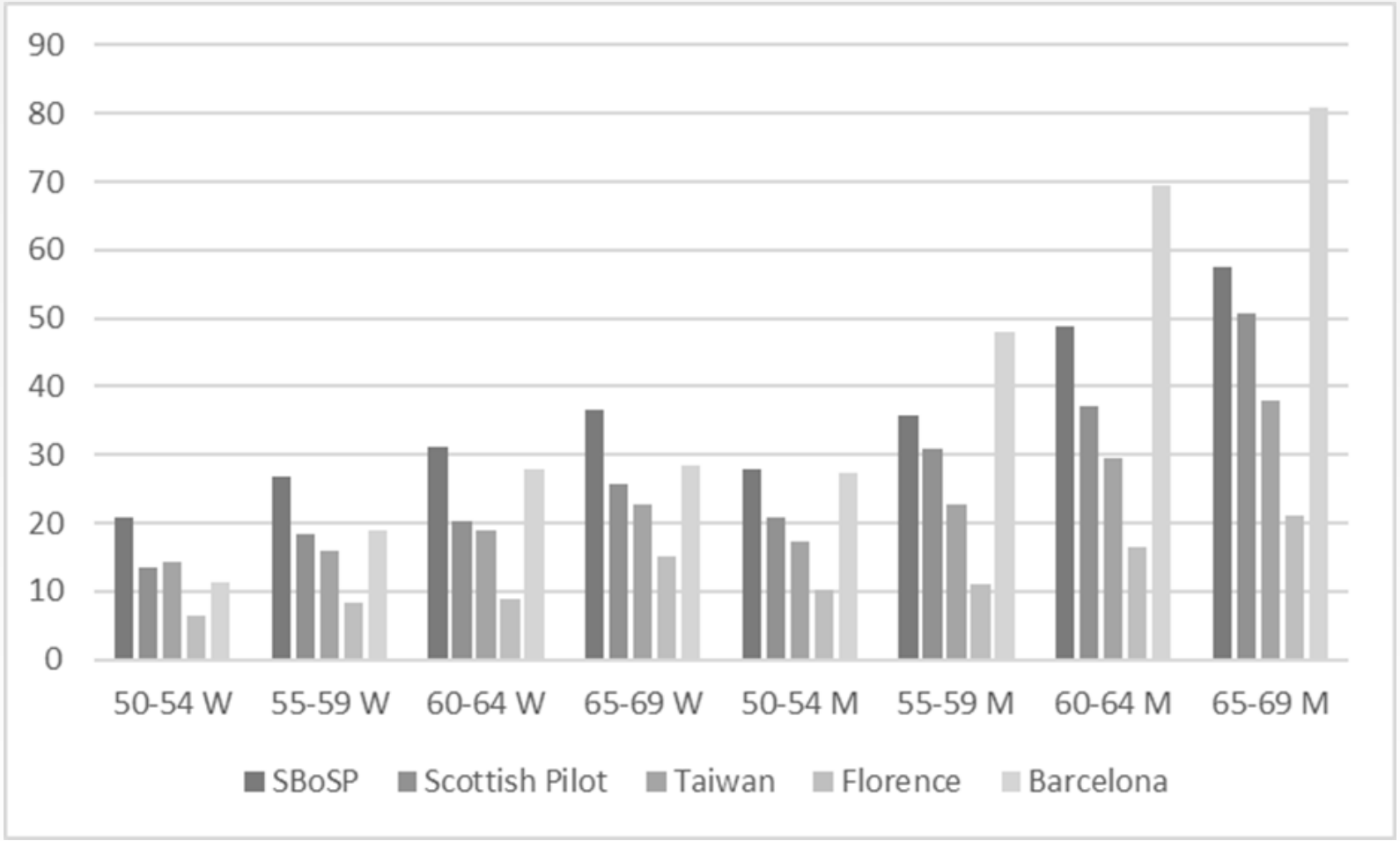
Women are disadvantaged in CRC screening

- *FIT positivity ↓ number referred ↓*
- *Although uptake and adherence ↑ neoplasia ↓*
- *Interval cancer proportion ↑*
- *FIT clinical sensitivity ↓ and clinical specificity ↑*
- *CRC incidence and mortality reduction ↓*
- *CRC location is different ↑ adenomas located in the proximal colon giving ↓ f-Hb and ↓ neoplasia detection.*
- *Sessile serrated lesions ↑ and such lesions are not well detected by FIT.*

f-Hb in women and men (95th percentiles)



Fraser CG. Best Pract & Res Clin Gastroenterol 2023, available online

Equalising women and men – the evidence

Simple? Use different f-Hb thresholds!

The Netherlands: *individualised thresholds from 36.9 µg Hb/g faeces for a 50-year-old female to 9.5 µg Hb/g faeces for a 75-year-old male =* ***comparable risk of advanced neoplasia.***

Finland: *thresholds of 25 µg Hb/g faeces for women and 70 µg Hb/g faeces for men =* ***similar CRC detection rates.***

Denmark: *varying f-Hb thresholds by age and sex, where women aged 55–59 and 65–69 had lower thresholds than men of the same age =* ***overall sensitivity and specificity improved.***

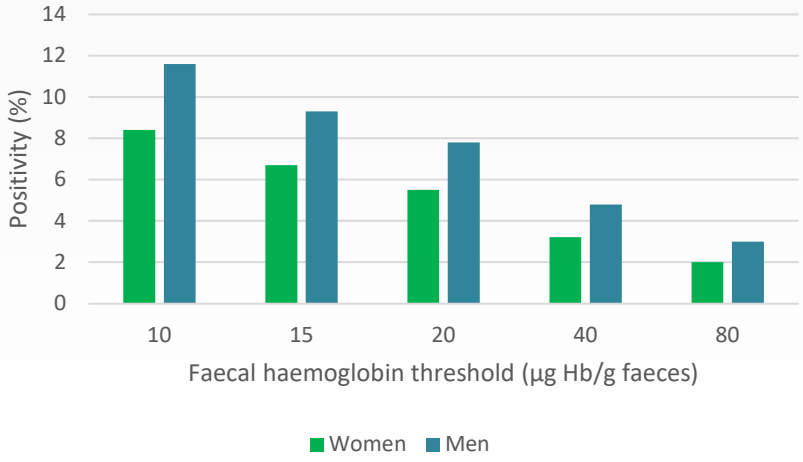
Sweden: *uses a f-Hb threshold of 40 µg Hb/g faeces for women compared with 80 µg Hb/g faeces for men =* ***positivity*** ***and*** ***IC incidence equalised.***

Equalising women and men - Scotland

FIT Pilot evaluation in 2/14 NHS Boards – OC Sensor

McDonald PJ, et al. Clin Chem Lab Med 2012;50(5):935–940

		f-Hb threshold (µg Hb/g faeces) Positivity (%)				
Sex	**Age range (y)**	**10**	**15**	**20**	**40**	**80**
Women	**50 – 74**	**8.4**	**6.7**	**5.5**	**3.1**	**2.0**
Men	**50 – 74**	**11.6**	**9.3**	**7.8**	**4.8**	**3.0**



Equalising women and men - Scotland

FIT in SBoSP – HM-JACKarc

Clark GRC, et al. Gut 2021;70(1):106-113.

At SBoSP f-Hb threshold of ≥80 µg Hb/g faeces:

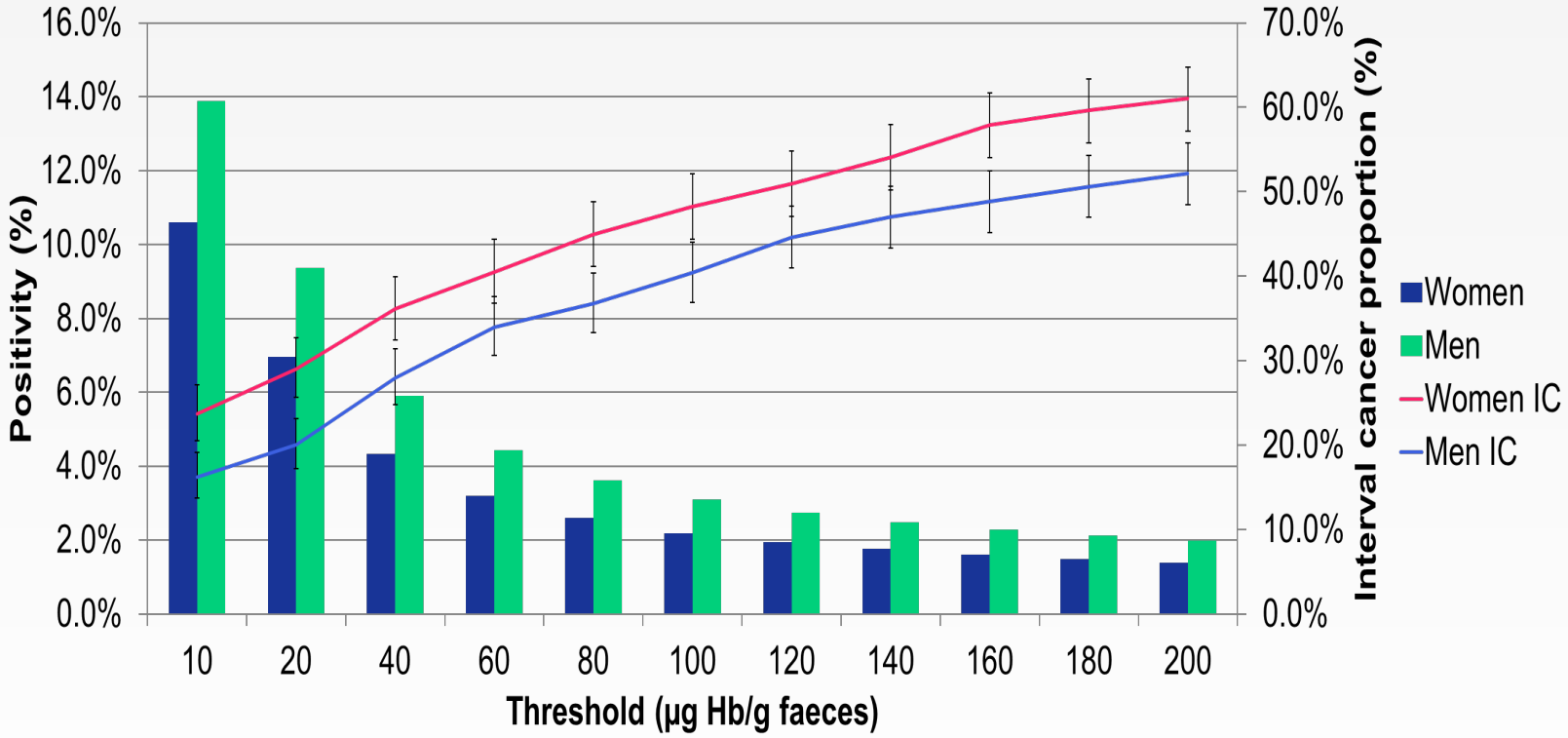
Positivity:	***Overall:***	***3.1%***
	Women:	***2.6%***
	Men:	***3.6%***

Positivity – to equalise sexes - retain ≥80 µg Hb/g faeces for men - so they are not disadvantaged – ≥50 µg Hb/g faeces for women.

Note: numerical results generated from the two FIT systems are not identical. Women – 2.0% at ≥80 µg Hb/g faeces with OC-Sensor but 2.6% with HM-JACKarc.

Are data transferrable over FIT system?

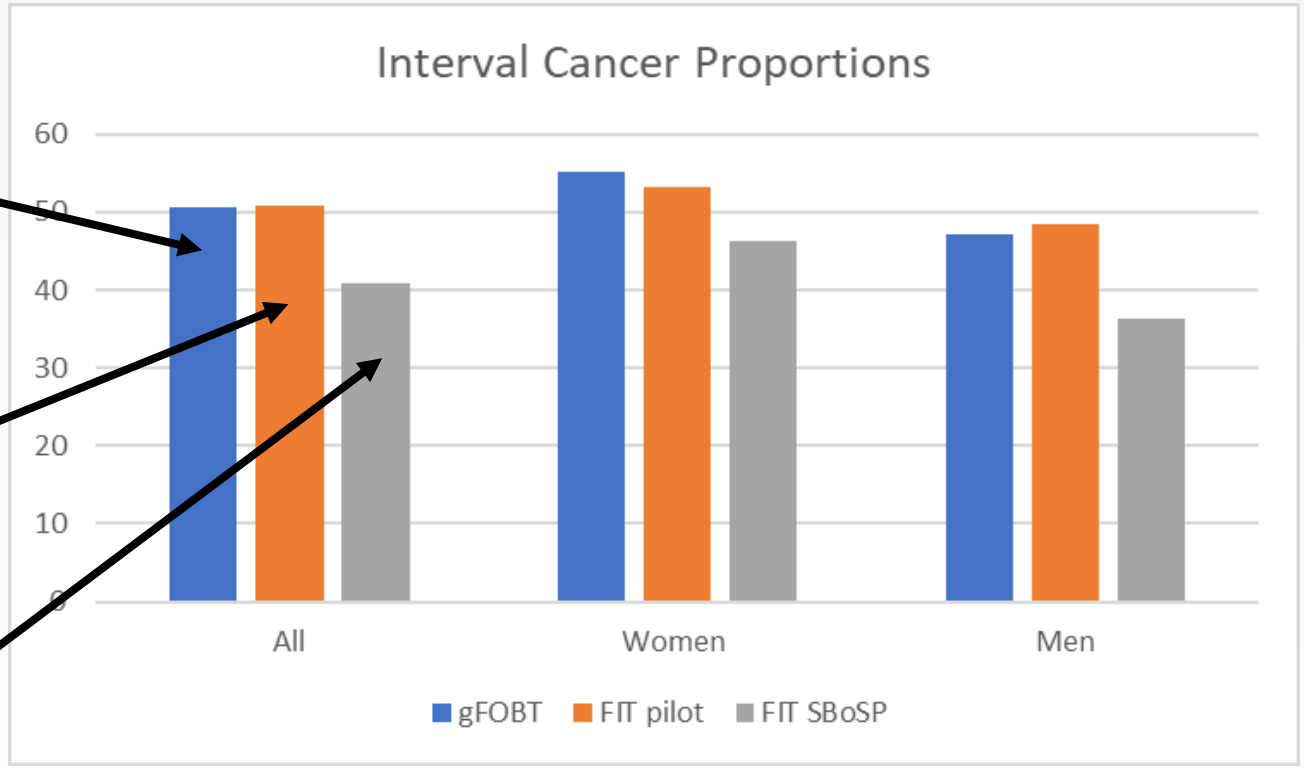
Interval cancers in women and men



Clarke GRC, et al. J Med Screen 2023, available online

Equalising women and men - Scotland

Approximately equivalent ICP could be achieved by lowering the f-Hb threshold for women to ≥40 µg Hb/g faeces – compare to positivity – women to ≥50 µg Hb/g faeces.



Clark GRC, et al. Ann Clin Biochem. 2022;59(6):450-452.

Equalising women and men

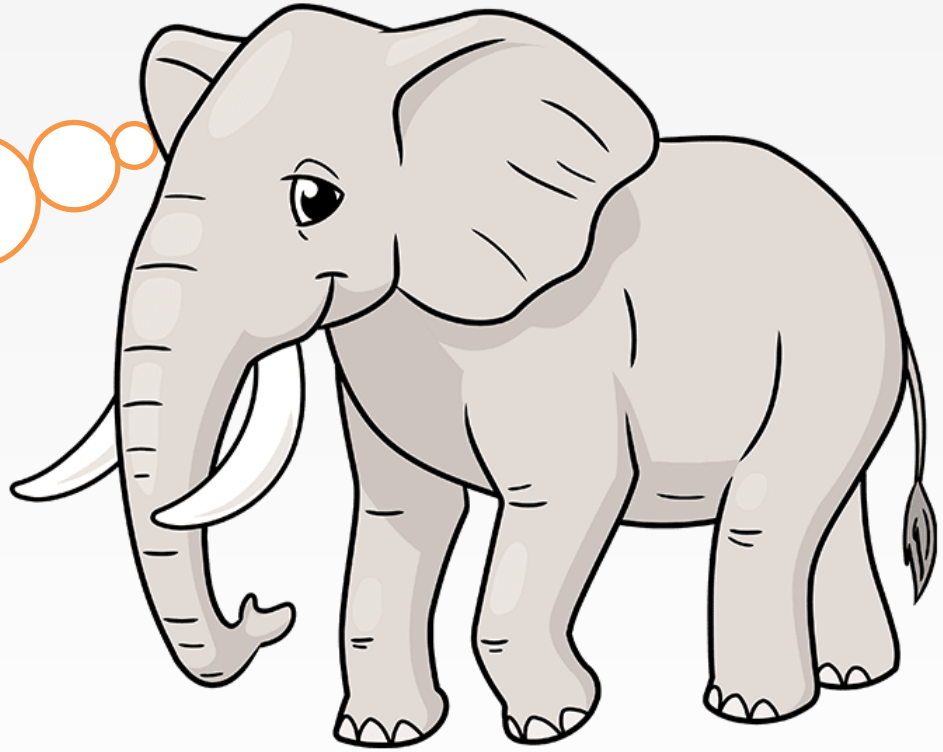
A quandary is to decide which performance characteristic to use to achieve equality by using different f-Hb thresholds for women and men:

- ***Positivity***
- ***Interval cancer proportions***
- ***Sensitivity***
- ***Specificity***
- ***Detection rates***
- ***Risk***

Possibly positivity initially because likely easy to do and results and consequences able to be determined early.

The "elephant in the room"

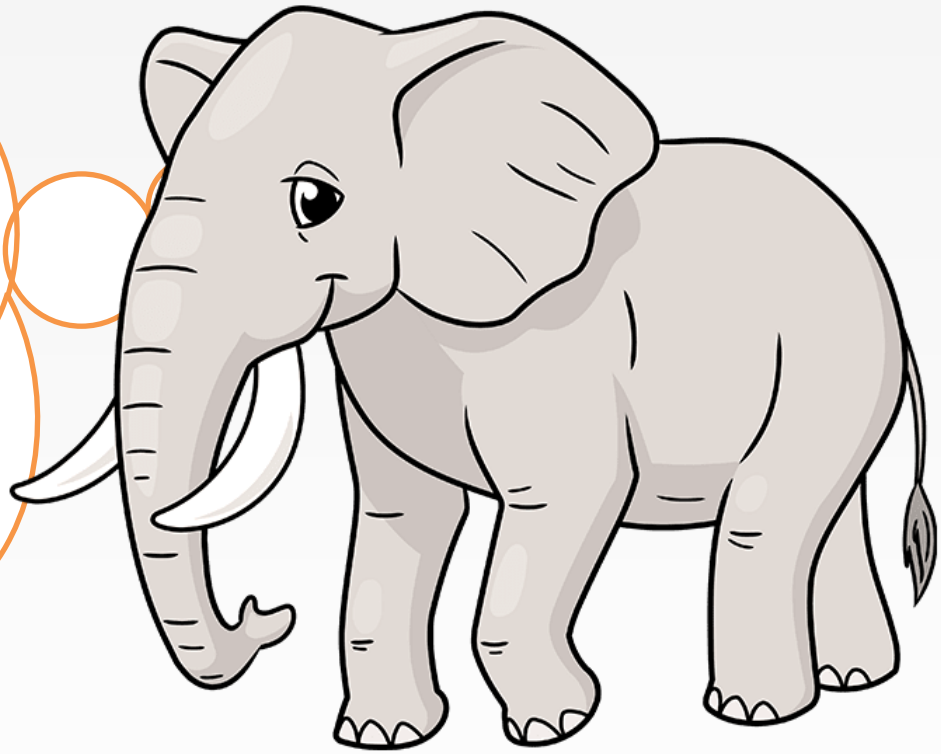
Colonoscopy resource?



The "elephant in the room"

Additional resources and staff.

Further use of FIT in assessment of symptomatic patients AND post-polypectomy surveillance?



Craig Mowat, Jayne Digby, Callum Fraser, Gavin Clark, Bob Steele, Alisson McPherson, Judith Strachan