



# Finland: New Plans for FIT with a Difference

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# Background

- EU recommends colorectal cancer (CRC) screening since 2003
- **Finland:**
  - Randomized, biennial CRC gFOBT-program since 2004
  - 40 % of 60-69-year-old target population involved
  - No effectiveness after a median of 4,5 years of follow up (**Pitkäniemi et. al. 2015**)
    - ✓ non-significant CRC mortality reduction in men, no change in women
  - ✓ **Program on pause since 2016**

# New FIT program since April 2019

- Biennial, targeted to men and women aged 60-74 years
- Gradual implementation (ad. 2027)

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
1967	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
1966	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61
1965	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62
1964	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63
1963	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64
1962	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65
1961	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66
1960	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67
1959	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68
1958	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69
1957	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70
1956	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71
1955	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72
1954	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73
1953	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74
1952	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75
1951	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76
1950	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77

# New FIT program

- Currently launched in 9 municipalities (Jyväskylä, Oulu, Tampere)
  - ~ 100 000 target population; 28 000 invitees in 2019
- ✓ **Involved in the government plan (so far)**
  - Nationwide implementation 2022 onwards (60, 62, 64, 66 ...)
- FIT-test, questionnaire on risk factors (family history, symptoms, major lifestyle measures), and instructions posted to invitees
- Stool samples returned by post to one laboratory (Fimlab Oy)
- Web-based and one-site training provided for colonoscopists (criteria)
- Structured e-data sent to Finnish Cancer Registry for evaluation

# New FIT program

## ✓ Equity key issue

- Effectiveness has been shown to be higher in men than in women (33-37 % vs. 8-18 %) (e.g. Shaukat et. al. 2013, 2018)
  - Men vs. women
    - CRC incidence higher, increase in incidence at earlier age
    - colonic transit time faster
    - positive test results predict CRC better
    - less proximal and sessile serrated lesions (contribute to interval cancers)?

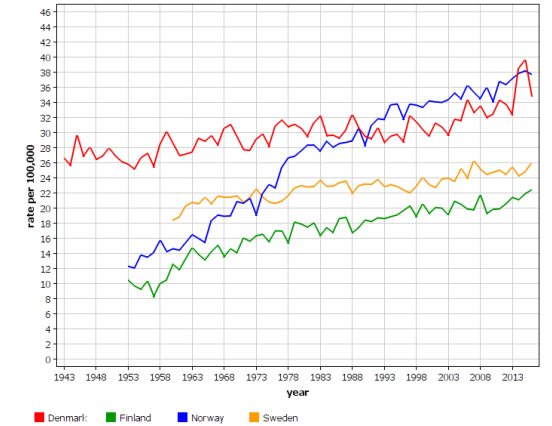
## ✓ Gender-specific cutoffs (by age)?

## ✓ Gender-specific starting and stopping ages?

# New FIT-program

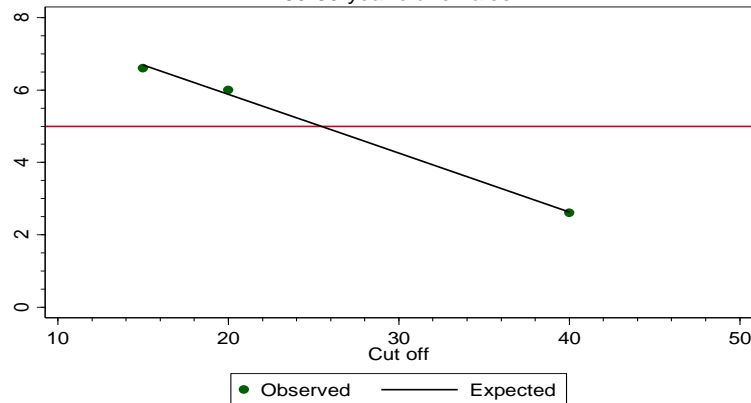
- ✓ Gender-specific cutoffs for test positivity
  - 25 ug/g for women
  - 70 ug/g for men

Colorectal  
Incidence: ASR (World), Female age 0-85+

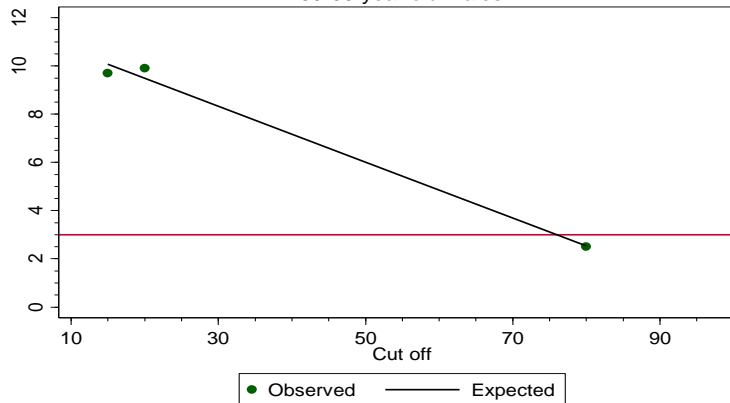


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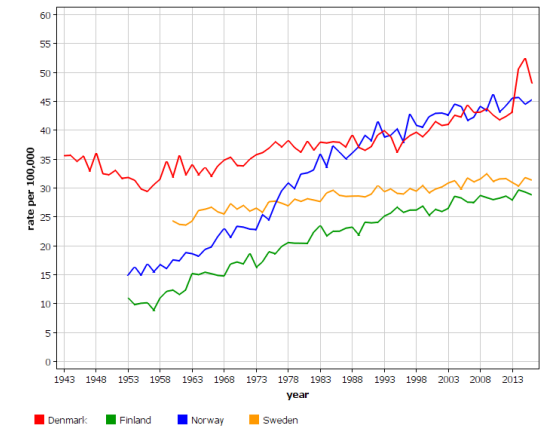
Proportion of test results vs test cut off  
60-69-year old females



Proportion of test results vs test cut off  
60-69-year old males



Colorectal  
Incidence: ASR (World), Male age 0-85+



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# New FIT-program, 17.4.-3.10

- Altogether 20 601 invitees, 14 093 participants (68%)

## ✓ Males

	Invited	Participated
60	2 474	1 432 (58%)
62	2 393	1 523 (64%)
64	2 391	1 584 (66%)
66	2 370	1 602 (68%)
<b>Total</b>	<b>9628</b>	<b>6 141 (64%)</b>

## Females

	Invited	Participated
60	2 801	1 945 (69%)
62	2 683	1 917 (71%)
64	2 744	2 034 (74%)
66	2 745	2 056 (75%)
<b>Total</b>	<b>10 973</b>	<b>7 952 (73%)</b>

# New FIT-program, 17.4.-3.10.

## ✓ Positivity rates

	Men	Women	Total
Negative	5 887 (97.2%)	7 623 (97.1%)	13 510 (97.1%)
Sample Incorrect	14 (0.2%)	18 (0.2%)	32 (0.2%)
Positive	157 (2.6%)	209 (2.7%)	366 (2.7%)



# New FIT-program, 17.4.-3.10

## ✓ Positivity rates by age group, males

	Negative	Sample incorrect	Positive
60	1 371 (97.0%)	6 (0.4%)	37 (2.6%)
62	1 503 (97.5%)	3 (0.2%)	34 (2.3%)
64	1 524 (97.3%)	3 (0.2%)	39 (2.5%)
66	1 526 (96.9%)	2 (0.1%)	47 (3.0%)
<b>Total</b>	<b>5 887 (97.2 %)</b>	<b>14 (0.2%)</b>	<b>157 (2.6%)</b>

- Information on further assessment available 80 (51%); colonoscopy performed 66 (82.5%)

# New FIT-program, 17.4.-3.10.

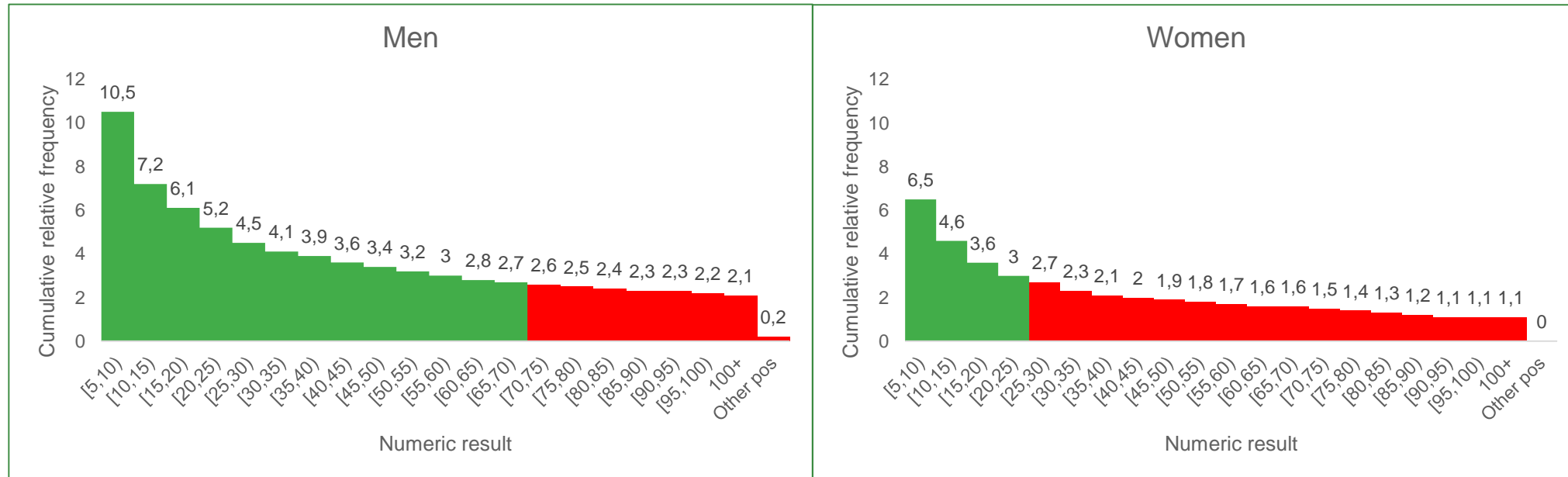
## ✓ Positivity rates by age group, females

	Negative	Sample incorrect	Positive
60	1 857 (97.1%)	4 (0.2%)	51 (2.7%)
62	1 849 (97.6%)	4 (0.2%)	42 (2.2%)
64	1 967 (97.6%)	2 (0.1%)	47 (2.3%)
66	1 950 (96.2%)	8 (0.4%)	69 (3.4%)
<b>Total</b>	<b>7 623 (97.1 %)</b>	<b>18 (0.2%)</b>	<b>209 (2.7%)</b>

- Information on further assessment available 111 (53%); colonoscopy performed 78 (70.3%)

# New FIT-program, 17.4.-3.10

✓ Cutoff variation



# New FIT-program

## ✓ Study group

- Sirpa Heinävaara, Finnish Cancer Registry
- Maija Jäntti, Finnish Cancer Registry
- Nea Malila, Finnish Cancer Registry
- Tytti Sarkeala, Finnish Cancer Registry
  
- Martti Färkkilä, Helsinki University Hospital
- Marja Hyöty, Tampere University Hospital
- Matti Kairaluoma, Jyväskylä Central Hospital
- Tero Rautio, Oulu University Hospital
- Markku Voutilainen, Turku University Hospital

# Thank you!

