

THE NATIONAL COLORECTAL CANCER FIT-BASED SCREENING PROGRAM OF THE NETHERLANDS: OUTCOMES OF THE SECOND YEAR

Esther Toes-Zoutendijk

Department of Public Health, Erasmus MC University Medical Center, Rotterdam, The Netherlands

On behalf of the national Monitoring and Evaluation of the Colorectal Cancer Screening program (LECO) and the members of Dutch national Colorectal Cancer screening working groups.

Background

In 2014, a national program for colorectal cancer (CRC) screening with biennial fecal immunochemical testing (FIT) using FOB-Gold (Sentinel, Italy) was initiated in the Netherlands. This abstract will report on the outcomes of the second year of the national CRC FIT-based screening program.

Methods

The screening program is gradually implemented from 2014 onwards, with projected roll-out period of five years. Individuals in the target population received a FIT by postal mail. Participants with a positive test received an appointment for an intake interview for colonoscopy. Cut-off level for a positive test was set at 47 µg Hb/g feces. Participation rates, positivity rates, positive predictive value (PPV) and detection rates per 1,000 participants were determined, using data from the national information system for the CRC Screening Program (ScreenIT).

Table 1: Participation rate and positivity rate for biennial FIT screening

	Participation rate		Positivity rate	
	<i>n</i>	% (95%CI)	<i>n</i>	% (95%CI)
All	848,761	72.6 (72.5-72.7)	53,490	6.4 (6.3-6.4)
Men	410,169	71.1 (71.0-71.3)	32,280	7.9 (7.9-8.0)
Women	438,592	74.0 (73.9-74.1)	21,210	4.9 (4.8-4.9)

Results

From the 1,171,550 persons invited, 848,761 (72.6%, 95% CI: 72.5-72.7%) participated in the national program. Of those, 53,490 (6.4%, 95% CI: 6.3-6.4%) participants had a positive test

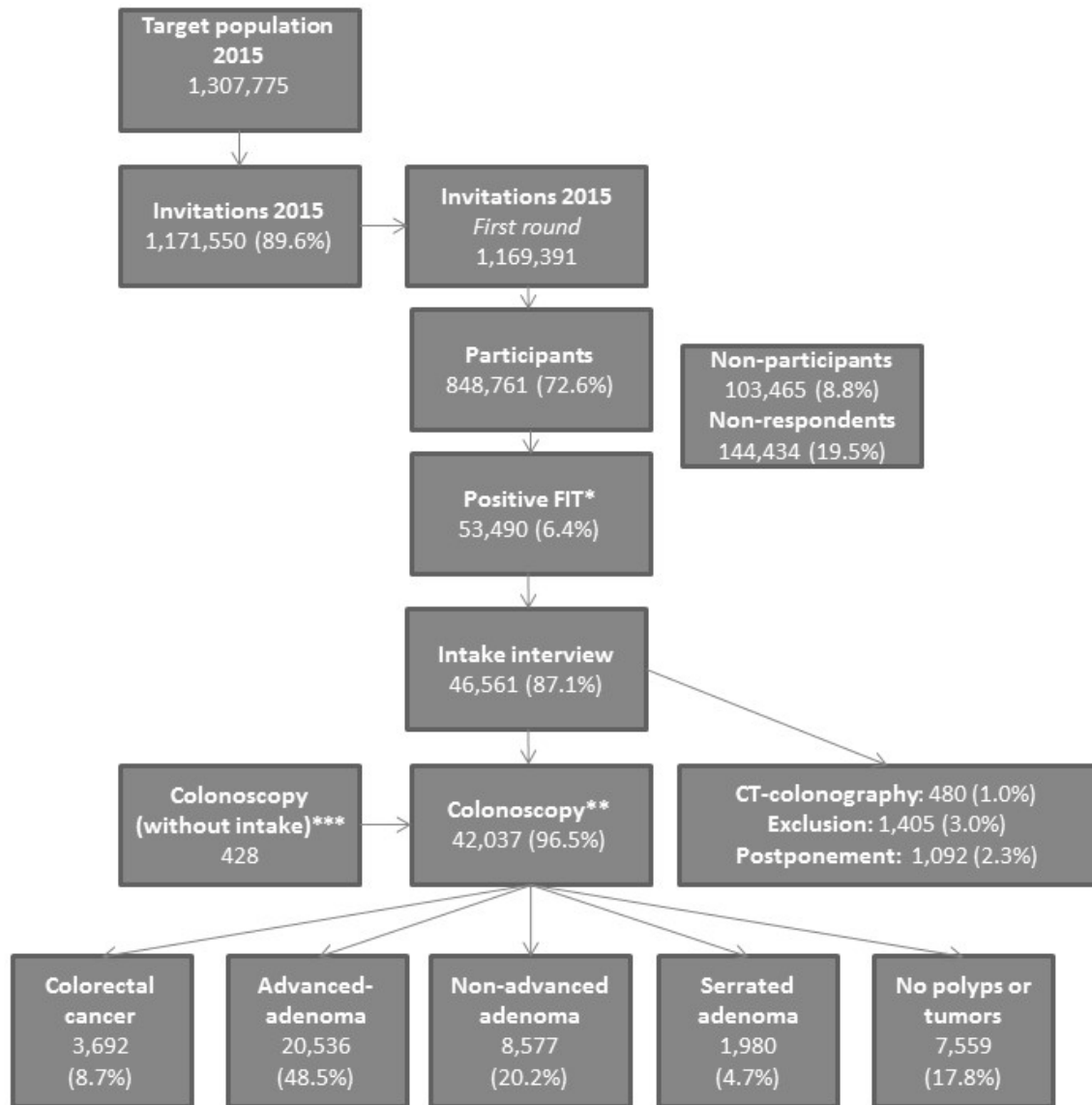
result. Participation and positivity rates differed for men and women (table 1). Of all persons with a positive test results, 42,465 (79.4%) had undergone a colonoscopy. Excluding those for whom colonoscopy was not recommended during intake interview (2,977), participation to diagnostic colonoscopy was 84.0%. During colonoscopy, CRC was detected in 3,692 (8.7%, 95% CI: 8.4-9.0%) individuals and AA was diagnosed in 20,536 (48.5%, 95% CI: 47.9-48.8%) participants. Detection rate for CRC was 4.3 (95% CI: 4.2-4.5) per 1,000 participants and for AA was 24.2 (95% CI: 2.39-2.45) per 1,000 participants (table 2). Figure 1 shows the flow of individuals through the screening process.

Table 2: Yield of diagnostic colonoscopy by age

Birthcohort	Colorectal cancer		Advanced adenoma		Non-advanced adenoma		Serrated polyps		No polyps or tumors	
	Count	Percentage	Count	Percentage	Count	Percentage	Count	Percentage	Count	Percentage
1938	3	16.7%	11	61.1%	2	11.1%	0	-	2	11.1%
1939	17	12.9%	61	46.2%	28	21.2%	4	3.0%	22	16.7%
1940	501	10.7%	2,146	45.9%	1,061	22.7%	152	3.3%	814	17.4%
1946	747	9.1%	4,000	48.8%	1,787	21.8%	344	4.2%	1,320	16.1%
1947	107	9.6%	512	46.1%	221	19.9%	45	4.1%	225	20.3%
1948	631	8.7%	3,553	49.0%	1,465	20.2%	339	4.7%	1,268	17.5%
1949	165	9.6%	818	47.8%	344	20.1%	81	4.7%	303	17.7%
1950	504	7.9%	3,190	50.3%	1,220	19.2%	310	4.9%	1,122	17.7%
1951	233	8.7%	1,267	47.3%	526	19.6%	138	5.2%	512	19.1%
1952	485	8.2%	2,907	49.3%	1,092	18.5%	294	5.0%	1,110	18.8%
1954	299	6.9%	2,071	47.8%	831	19.2%	273	6.3%	861	19.9%
Total	3,692	8.7%	20,536	48.5%	8,577	20.2%	1,980	4.7%	7,559	17.8%

Conclusion – The second year of the Dutch national CRC screening program performed according to expectations and a total of 3,692 persons were diagnosed with CRC. Participation rate of FIT screening remained high. Attention should be paid on the participation to diagnostic colonoscopy. However, it is suspected that some individuals may have had a colonoscopy in a center outside the screening program. It is expected that the program will be fully implemented in 2019, according as planned.

Figure 1: Flow chart of the main data of the second year of the Dutch CRC FIT-based screening program



* Not all participants had an assessable stool sample (99.1%)

** During the intake interview, 43,584 (93.6%) persons were recommended to undergo a colonoscopy

*** Persons without registered data in the national information of the intake interview