



Comparison of screen-detected and interval cancers in FIT screening

Dr Isabel Portillo

The Basque Health Service

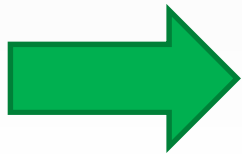
Biocruces Bizkaia Health Research Institute, Bilbao, Spain

mariaisabel.portillovillares@osakidetza.eus



BACKGROUND & AIMS

- Population-based Programme 50-69y (586,700)
- Biennial FIT (20µg Hb/g faeces)
- Colonoscopy under sedation in positive cases
- Coverage 100%: first invitation 2013. second 2017 and third 2019.
- Participation rate average 2009-2018: 70.1% (72.4 women vs 67.4 men)
- Colonoscopy compliance and definitive diagnosis in positive cases: 93%



To compare the features of the detected and undetected CRC by the screening programme 2009-2018

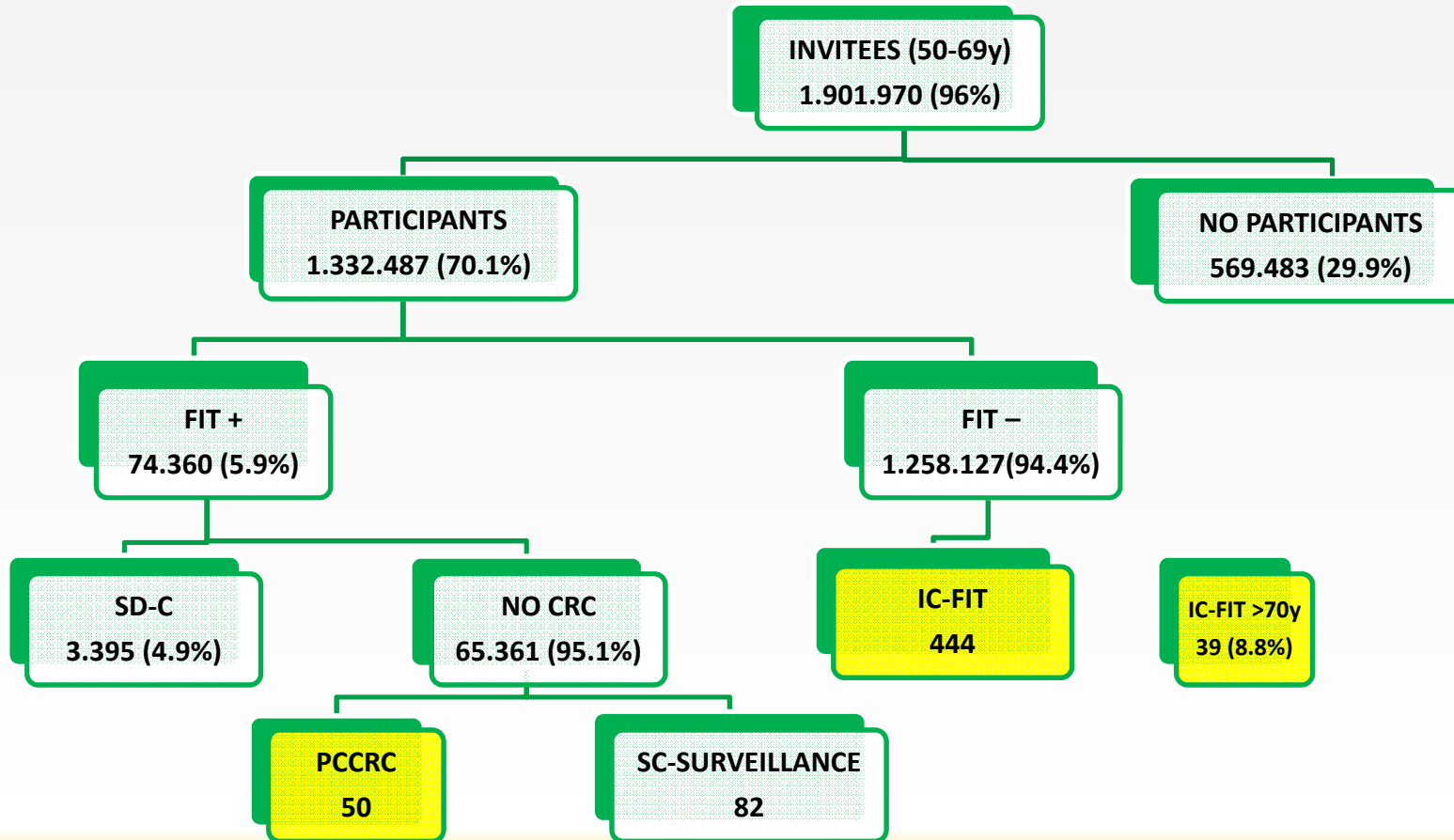


METHODS

- Invitees to the screening programme from 2009 to 2018
- Linking all cases with Population Cancer Registry.
- Variables included: age at invitation, sex, type of participant (initial, regular, and irregular). TNM stage, and location (C-18.0-C-20.0). FIT threshold.
- CRC was categorized in: screen detected by the programme after positive FIT (SD-C). Interval Cancer after negative FIT (IC-FIT). detected by surveillance protocol after FIT positive and colonoscopy (SD-S) and Post-colonoscopy CRC (PCCRC).
- IC Incidence. Sensitivity and Likelihood ratios were calculated for all period for FIT test. SPSS 23.0 v



BCSP: RESULTS OF INVITATION 2009-2018



MAIN RESULTS: SD-C IC-FIT SD-D PCCRC

	SCREEN DETECTED (SD-C) (n= 3,395)	INTERVAL-FIT (IC-FIT) (n= 444)	P-value	SCREEN DETECTED SURVEILLANCE (SD-S) (n= 82)	POST-COLONOSCOPY (PCCRC) (n= 50)	P-value
AGE			<0.001			0.943
< 60	37.6%	33.1%		18.3%	20%	
60-70	60.7%	58.1%		61%	66%	
>70	1.7%	8.8%		20.7%	14%	
LOCATION			<0.001			0.902
Right	24.1%	46.3%		46.3%	46%	
Left	56.3%	24.7%		36.6%	34%	
Rectum	19.6%	29%		17.1%	20%	
STAGE			<0.001			0.17
I-II	69.8%	43.9%		62.2%	50%	
III-IV	28.5%	54.9%		32.9%	50%	
Unknown	1.7%	1.2%		4.9%		

Isabel Portillo



MAIN RESULTS :SD-C/ IC-FIT

	SCREEN DETECTED (SD-C)			INTERVAL-FIT (IC-FIT)		
	MEN (n= 2,187)	WOMEN (n= 1,208)	P-value	MEN (n= 274)	WOMEN (n= 170)	P-value
	64.4%	35.6%		61.7%	38.3%	
AGE						
<60	34.6	43.0		30.3	37.6	
60-70	63.7	55.3	<0.001	63.1	50.0	.012
>70	1.6	1.7		6.6	12.4	
PARTICIPATION						
Initial	51.9	47.8		10.9	8.8	
Regular	31.6	34.9	0.068	56.2	55.3	0.681
Irregular	16.5	17.3		32.8	35.9	
LOCATION						
Right	22.7	26.2		41.2	52.9	
Left	56.9	53.8		26.3	21.2	
Rectum	19.7	18.9	0.063	31.0	24.7	0.057
Unknown	0.7	1.2		1.5	1.2	
STAGE						
I-II	71.4	67.0		47.1	38.8	
III-IV	27.2	30.8	.017	51.8	60.0	0.088
Unknown	1.4	2.2		1.1	1.2	



MAIN RESULTS: SENSITIVITY _ LIKELIHOOD RATIO

- 82.1% of IC-FIT. in previous rounds the FIT threshold was < 10µgHb/g faeces

FIT	MEN	WOMEN	TOTAL
Sensitivity	88.9% CI 95% (87.6-90.1)	87.7% CI 95% (85.8-89.4)	88.5% CI 95% (87.4-89.5)
Likelihood Ratio+	13.3 CI 95% (13.0-13,5)	21.0 CI 95% (20.6-21.5)	16.6 CI 95% (16.3-16.8)
Cumulative incidence X 10.000 FIT negative	4.78 CI 95% (4.23-5.38)	2.49 CI 95% (2.12-2.88)	3.53 CI 95% (3.21-3.87)



CONCLUSIONS

- Interval Cancer-FIT was detected over 70y (6.6% men and 12.4% women)
- 31% Interval Cancer-FIT in men were located in rectum vs 25% in women
- Stages III –IV were more in IC-FIT with differences between sexes
- The previous threshold on the IC-FIT was less than $< 10\mu\text{g Hb/g faeces}$
- Cumulative incidence for IC-FIT and LR+ was significantly higher in men
- Interval Cancer-FIT was more frequently diagnosed on right colon than Screen Detected
- Screen Detected CRC more often found in initial and regular participants
- Screen Detected Surveillance cancers compared with Postcolonoscopy CRC show no significant differences in location, age and stage
- Sensitivity for FIT is appropriated. However was lower for women but is not significant

