

**WEO**  
World Endoscopy  
Organization

## SHOULD WE USE DIFFERENT CUT-OFF FOR WOMEN AND MEN IN FIT?

Eunate Arana-Arri, Isabel Portillo, Isabel Idigoras, Lorea Martínez-Indart, Luis Bujanda, Haritz Cortés, Fidencio Bao, Antonio López-Urrutia, Ana Samper, Begonia Uranga, Carmen Rodríguez-Casado, Itziar Marzana, Carmen Mar

Isabel Portillo. The Basque Health Service-Osakidetza. Bilbao. Spain.  
[mariaisabel.portillovillares@osakidetza.net](mailto:mariaisabel.portillovillares@osakidetza.net)

World Endoscopy Organization  
Colorectal Cancer Screening Committee  
Expert Working Group: FIT for Screening

### SCREENING PROGRAMME

Target Population: 50-69 y

FIT every 2 years.  
1 sample  
Positivity:  $\Rightarrow$  100 ng/100 ml buffer).  
From 2010 OC-Sensor (Eiken).

Colonoscopy under sedation for positive cases confirmation

Surveillance by Primary Care and Hospitals

Centralized Coordination

### GENERAL OBJECTIVE and COVERAGE

To reduce incidence and mortality rates in CRC by pre-malignant and malignant lesions detection and treatment



### 1st ROUND RESULTS 2009-2012 Basque Country (03/26/2014)

Target Population 50-69 year of age 421,435 (583,706 Eustat)

Eligible Population 379,404

Valid Invitations\* 368,446

72.2% COVERAGE

No participants 127,878

Participants \*\* 240,568 (65.3%)

Negative FIT 223,9201

Positive FIT 16,601 (6.9%)

Colonoscopy compliance 15,289

Normal Hyperplastic polyps/ No adenomas 4,921	Low risk Adenoma 2,317	Others 610***	High and Intermediate risk Adenoma 6,535	CRC 906
32.2%	15.2%	4%	42.7%	5.9%

Fit kit sent\*; Fit analysed\*\*. ColonPrev study included\*\*\*

### OBJECTIVE

Analysing the cut-off points in FIT by gender in order to reduce false positive rate in women

### METHODOLOGY

- People invited in first round from 2010 to 2012
- FIT: OC-Sensor (Eiken)
- Lesions considered: Low Risk Adenoma, Advanced Adenoma and CRC
- False Positive: No adenoma detected

### Main data and indicators of CRC Screening Programme. 2010-2012

	Women		Men	
	Number	% (CI95%)	Number	% (CI95%)
Invited	171,563		163,830	
Participants	117,563	68.5 (68.3-68.7)	103,287	63.1 (62.8-63.3)
Positive cases	5,365	4.6 (4.4-4.7)	8,764	8.5 (8.3-8.7)
Lesions detected				
Hyperplastic polyps	231		299	
Low Risk Adenoma	672		1,206	
Advanced Adenoma	969		2,877	
Colorectal Cancer	270		563	
Detection rate (%; CI95%)				
Low Risk detection rate		5.7 (5.3-6.2)		11.7 (11.0-12.3)
Advanced Adenoma detection rate		8.2 (7.7-8.8)		27.9 (26.9-28.9)
Colorectal cancer detection rate		2.3 (2.0-2.6)		5.5 (5.0-5.9)
Positive Predictive Value for FIT (%; CI95%)		23.1 (22.0-24.2)		39.2 (38.2-40.3)

**Advanced Adenoma, CRC detection rate and Positive Predictive Value by gender and age group**

	Age Group (years)	Women	Men	P-value
Advanced Adenoma detection rate; % (CI95%)	50-54	6.2 (5.5-7.0)	16.3 (15.0-17.6)	< 0.001
	55-59	8.0 (7.0-9.1)	27.3 (25.3-29.4)	< 0.001
	60-64	9.5 (8.4-10.7)	36.3 (34.1-38.7)	< 0.001
CRC detection rate; % (CI95%)	50-54	11.3 (9.8-12.8)	40.9 (38.0-44.1)	< 0.001
	55-59	1.6 (1.2-2.0)	2.3 (1.8-2.8)	< 0.05
	60-64	2.1 (1.6-2.7)	5.0 (4.2-5.9)	< 0.001
Positive Predictive Value; % (CI95%)	50-54	2.6 (2.0-3.3)	7.1 (6.1-8.2)	< 0.001
	55-59	3.8 (2.9-4.8)	10.5 (9.0-12.2)	< 0.001
	60-64	21.1 (19.1-23.2)	30.6 (28.6-32.5)	< 0.001
Positive Predictive Value; % (CI95%)	55-59	23.9 (21.5-26.3)	39.2 (37.1-41.3)	< 0.001
	60-64	23.6 (21.4-25.9)	42.7 (40.8-44.6)	< 0.001
	65-69	24.3 (21.9-26.9)	44.6 (42.4-46.8)	< 0.001

**Estimation of Positive Predictive Value, detection rates, missed cases and decrease in the number of colonoscopies, with different cut-off points in women**

Items *	Men 100ng	Women 100ng	Women 150ng	Women 200ng	Women 250ng	Women 300ng	Women 350ng
Advanced Adenoma detection rate; n (%)	2,759 (27.4)	916 (8.0)	765 (6.6)	675 (5.9)	624 (5.5)	570 (5.0)	522 (4.6)
Advanced detection rate; n (%)	540 (5.4)	261 (2.3)	246 (2.1)	229 (2.0)	217 (1.9)	210 (1.8)	202 (1.8)
Positive Predictive Value; (%)	38.8	22.6	25.4	27.5	29.1	30.2	31.1
Advanced Adenomas not diagnosed; n			151	241	292	346	394
Colorectal Cancers not diagnosed; n			15	32	44	51	59
Stage of CCR missed; (%)			I 53.3%	I 50.0%	I 47.7%	I 51.0%	I 50.8%
			IIA 13.3%	IIA 15.3%	IIA 18.2%	IIA 15.7%	IIA 15.3%
			IIIB 6.7%	IIIB 9.4%	IIIB 15.9%	IIIB 13.7%	IIIB 11.9%
			IIIC 6.7%	IIIC 6.3%	IIIC 4.5%	IIIC 3.9%	IIIC 5.1%
			IIIV 6.7%	IIIV 3.1%	IIIV 2.3%	IIIV 2.0%	IIIV 3.4%
			IIIA 3.1%	IIIA 3.1%	IIIA 2.3%	IIIA 3.9%	IIIA 5.1%
			IIIV 3.1%	IIIV 3.1%	IIIV 2.3%	IIIV 3.9%	IIIV 3.4%
			Unknown 20%	Unknown 9.4%	Unknown 6.8%	Unknown 5.9%	Unknown 5.1%
Decrease in the number of colonoscopies; n (%)			1,205 (23.2)	1,903 (36.7)	2,289 (44.2)	2,600 (50.2)	2,854 (55.1)

\*Only included cases with known FIT quantitative value.

## CONCLUSIONS

The differences in results of CRC Screening Programme between women and men must be carefully considered in order to diminish the side-effect of false positive cases in women

More studies should be performed to analyze negative side-effects of the colonoscopies and false negative cases, to make correct decision about establishing different cut-off points for women and men including the age group.

Maybe other risk factors should be included (multivariate analysis) to improve the sensitivity and specificity of the test.