

# Colorectal cancer detected and undetected in the colorectal cancer screening after a million invitations. The Basque Country programme (Spain)

Isabel Idigoras<sup>1</sup>, Eunáte Arana-Arri<sup>2</sup>, Isabel Bilbao<sup>1</sup>, Lorea Martínez Indart<sup>2</sup>, Natale Imaz-Ayo<sup>2</sup>, Inaki Gutierrez-Ibarluzea<sup>3</sup>, Luis Bujanda<sup>4</sup>, Isabel Portillo<sup>1</sup>  
<sup>1</sup>Colorectal Cancer Screening Coordination Center, Bilbao, Spain. <sup>2</sup>BioCruces Health Research Institute, Barakaldo, Spain.  
<sup>3</sup>Basque Office for Health Technology Assessment-Osteba, Vitoria-Gasteiz, Spain. <sup>4</sup>BioDonostia Health research Institute, Donostia, Spain.

## Background

The colorectal cancer (CRC) screening started in 2009 as a population-based programme 50-69 years of age (approximately 586,700 inhabitants of the Basque Country (Spain). Screening test and diagnosis: biennial faecal quantitative immunochemical test (FIT) and colonoscopy under sedation for positive cases.

## Aims

To study the effect of faecal immunochemical test on reduction in colorectal cancer-related-mortality.

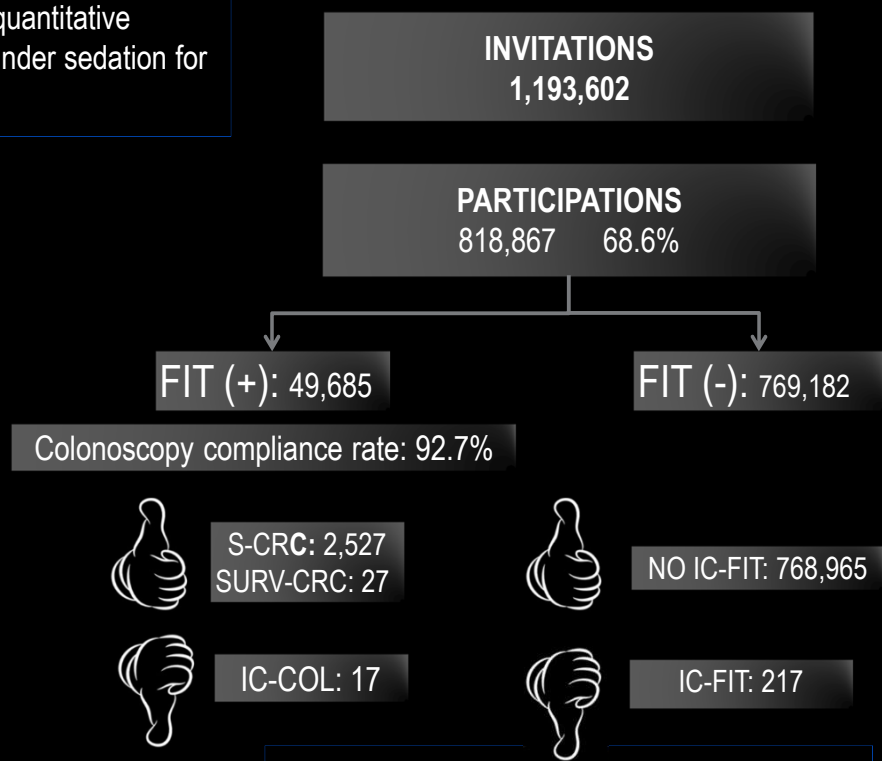
## Methods

- Retrospective observational study, comparing by sex, group of age, CRC stage and survival with the linkage with different clinical databases.
- CRC detected by the CRC screening programme from 2009 to 2015.
- CRC detected after surveillance colonoscopies of screening (IC-SURV).
- Interval Cancer FIT (IC-FIT).
- Interval Cancer colonoscopy (IC-COL).

	S-CRC	SURV-CRC	IC-FIT	IC-COL	p-value
n	2,527	27	217	17	
Men	65.7%	63.0%	66.8%	52.9%	ns
>60 year	63.8%	85.2%	58.4%	64.7%	<0.001
Stage I-II	66.9%	81.5%	43.3%	35.3%	<0.001

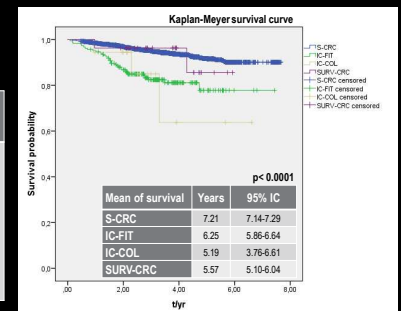
Survival	S-CRC	SURV-CRC	IC-FIT	IC-COL
1-year	98.5%	96.3%	95.2%	94.7%
3-year	95.0%	96.3%	82.4%	86.1%
5-year	91.6%	85.6%	77.8%	68.9%

CRC type	Hazard ratio	95% IC	p-value
S-CRC (ref)			
IC-FIT	3.31	2.25-4.86	<0.001
IC-COL	3.50	1.11-10.99	0.032
SURV-CRC	1.24	0.30-5.01	0.760



## Glossary:

- **S-CRC:** CRC detected by Screening Programme.
- **SURV-CRC:** CRC detected on the colonoscopy of surveillance.
- **IC FIT:** CRC after a negative FIT and before the next invitation to the Screening Programme.
- **IC COL:** CRC detected before the colonoscopy of surveillance.



## Conclusion

CRC were detected at earlier stages in screen-detected (S-CRC) and SURV-CRC; this is related with a significantly improved 5-year survival. At 95% IC, Sensibility of FIT for CRC has been 93.1% (92-94) and Specificity 94.2% (94.2-94.3). These findings indicate the need of population based studies that continue analyzing related factors.