

Screening for colorectal cancer in Italy

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MINISTERO DELLA SALUTE
CENTRO NAZIONALE PER LA PREVENZIONE
E IL CONTROLLO DELLE MALATTIE



CONFERENZA DEI PRESIDENTI DELLE
REGIONI E DELLE PROVINCE AUTONOME



**OSSERVATORIO
NAZIONALE
SCREENING**

Colorectal Cancer Screening Data on activity 2005



Manuel Zorzi and GISCOR (Gruppo Italiano per lo Screening del carcinoma del Colon Retto) working group

SCREENING TEST - FOBT

- ***IMMUNOLOGICAL TEST***
- ***AUTOMATED READING IN A CENTRAL LABORATORY***

Theoretical extension in 2004 and 2005 by geographical area. 50-69 year old subjects

	2004		2005	
	Pop. 50-69		Pop. 50-69	
	N°	%*	N°	%*
ITALY	1,008,000	7.3	4,730,000	33.8
North	412,000	6.2	3,431,000	51.5
Centre	584,000	21.1	810,000	29.0
South - Islands	13,000	0.3	489,000	10.8

*proportion of eligible subjects residing in areas covered by organised screening programmes

Coverage levels by Region

FOBT	Number of programmes	Screened subjects in 2005	Theoretical extension (1)
PIEMONTE	3	6.800	11,6
LOMBARDIA	12	49.500	72,0
VENETO	11	80.300	44,5
EMILIA-ROMAGNA	11	102.100	100
TOSCANA	8	121.300	80,1
LAZIO	1	2.100	7,6
CAMPANIA	3	2.400	5,9
BASILICATA	1	11.400	100
TOTALE	52	376.000	34,1
RS			
PIEMONTE	4	4.300	20,7
VENETO	2	1.600	-

(1) Amount of residents in areas covered by screening

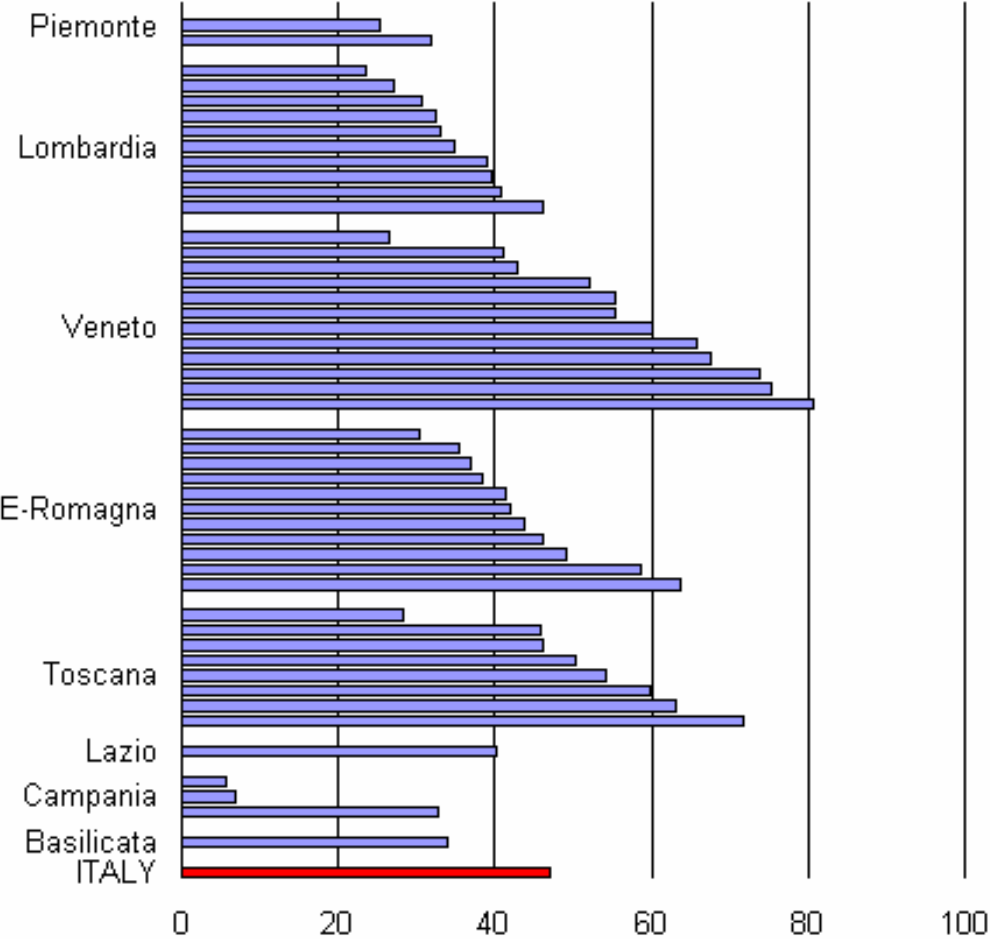
Main data of FOBT programmes by Region. 50-69 year old subjects.

Region	Subjects residing in the Region (n)	Subjects residing in areas with a programme	Theoretical extension (%) ¹	Invited subjects (n)	Actual extension (%) ²	Screened subjects (n)	Adjusted compliance (%)
Basilicata	137,265	137,265	100	34,113	49.7	11,445	33.8
Campania	1,196,771	351,472	5.9	28,830	16.4	2,611	15.9
Emilia-Romagna	1,054,614	1,054,614	100	225,395	42.7	102,147	46.2
Lazio	1,278,082	96,960	7.6	7,087	14.6	2,101	40.3
Lombardia	2,346,075	1,699,242	72.0	150,454	17.7	49,472	34.3
Piemonte	1,137,877	113,114	11.6	21,951	38.8	6,817	29.1
Toscana	927,854	713,381	80.1	239,478	67.1	121,342	51.6
Veneto	1,135,755	563,945	44.5	120,165	42.6	80,305	67.6
ITALY	13,993,865	4,729,993	33.8	827,473	35.0	376,240	47.1

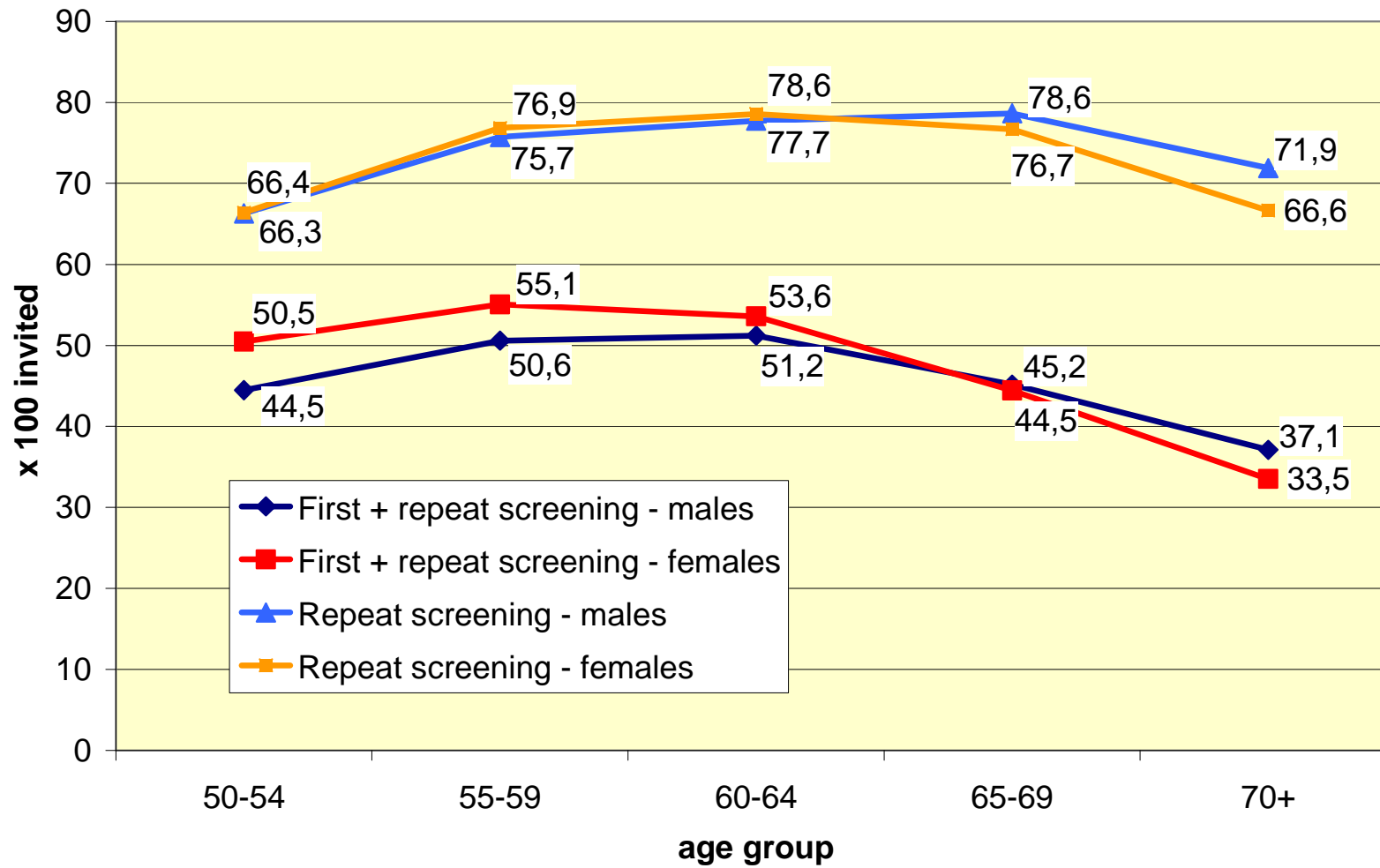
1 Proportion of subjects residing in areas with a programme

2 Proportion of subjects who were sent an invitation to screening

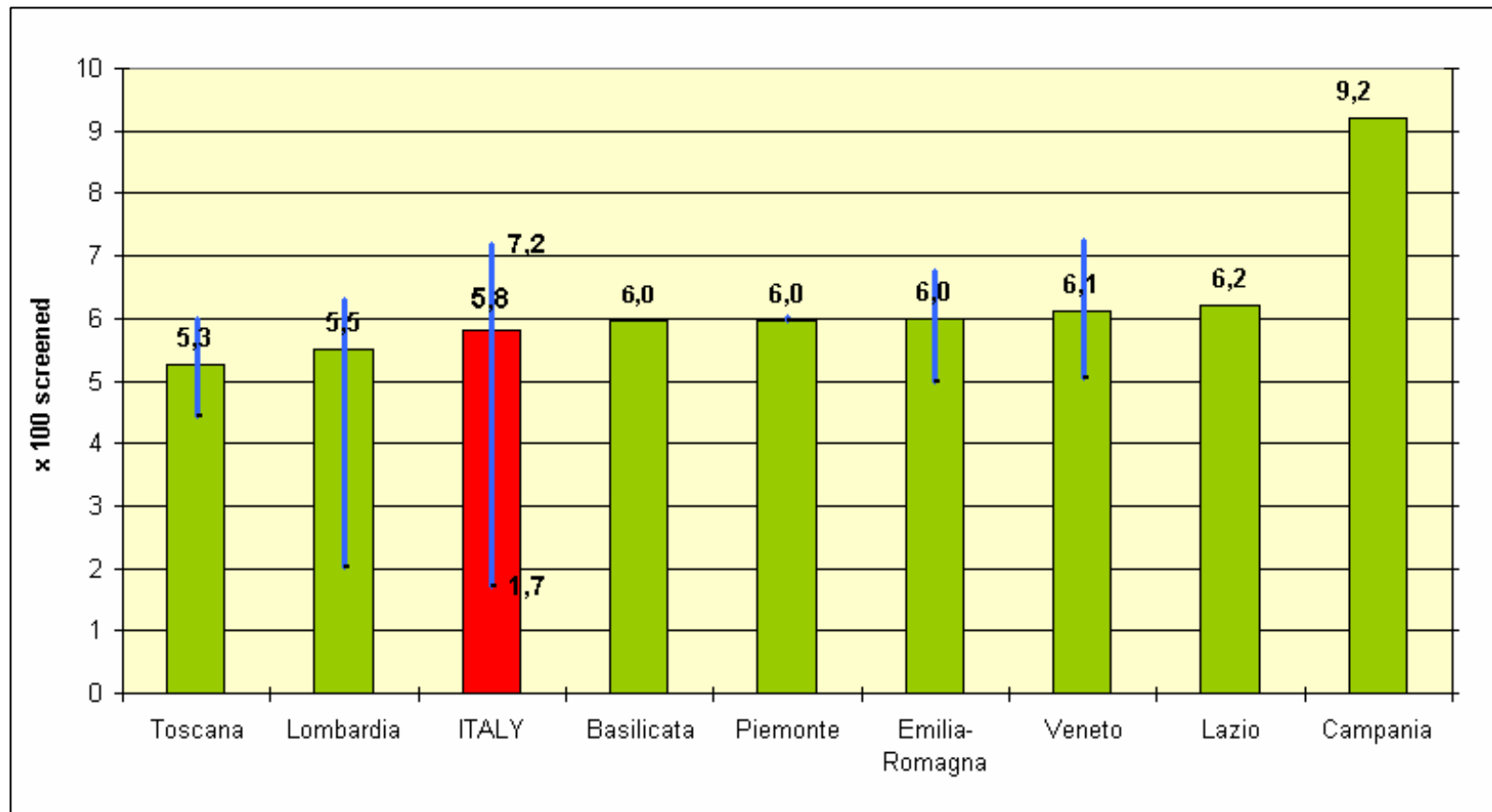
FOBT programmes: adjusted attendance of single programmes, by Region



FOBT programmes: adjusted attendance by age and gender.

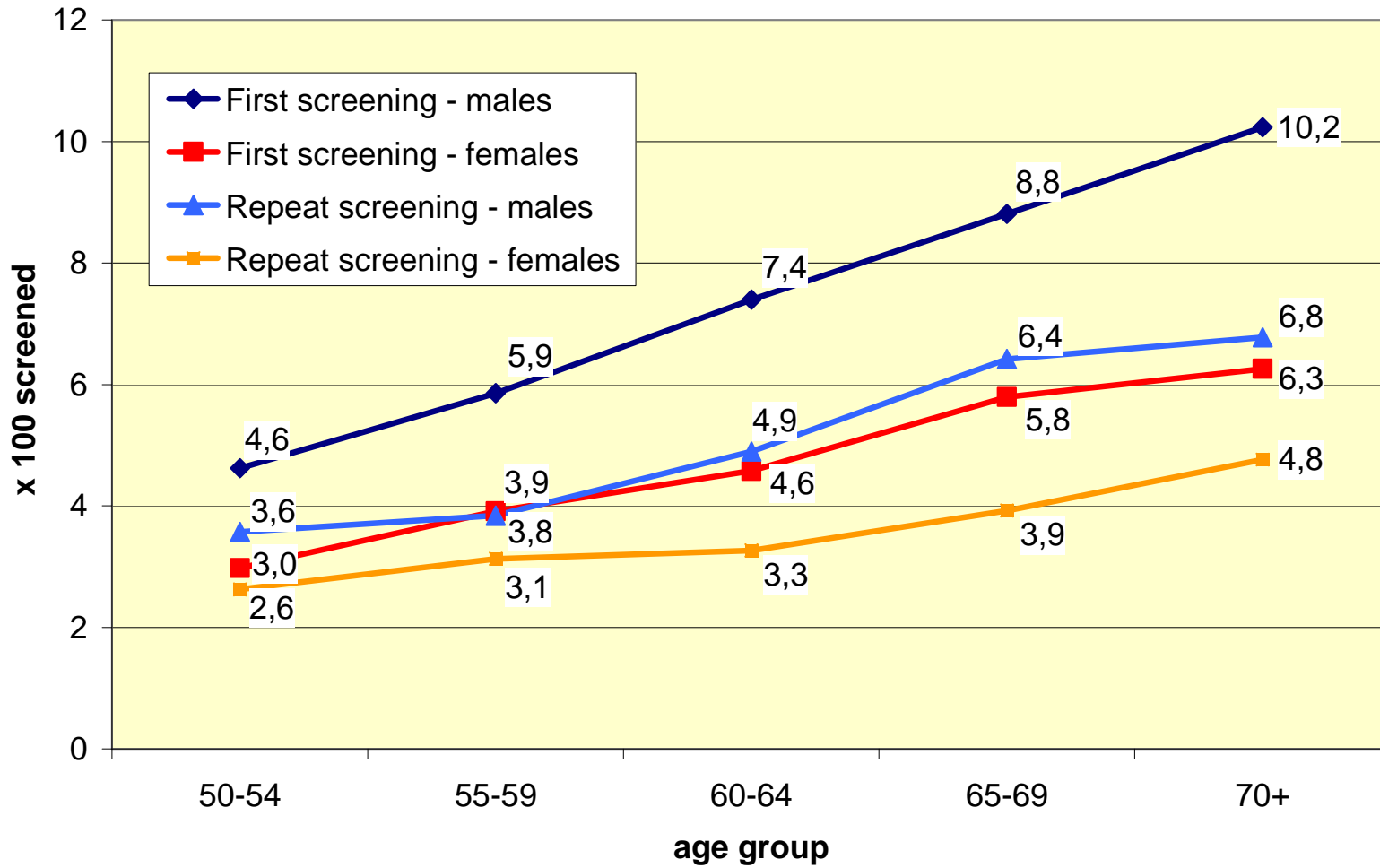


Standardised* proportion of FOBT+ by Region and range of single programmes at first exams.

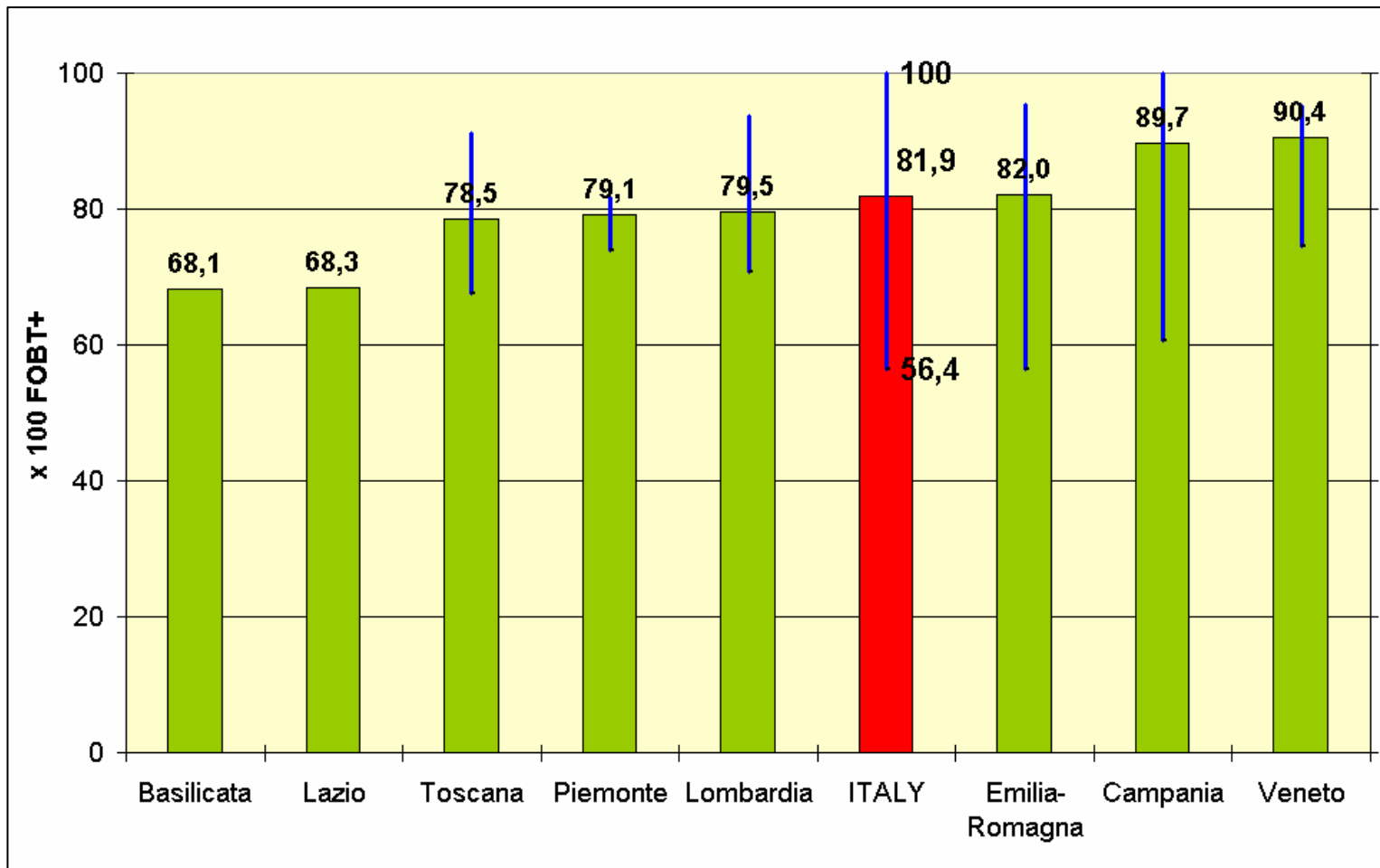


* by age and gender

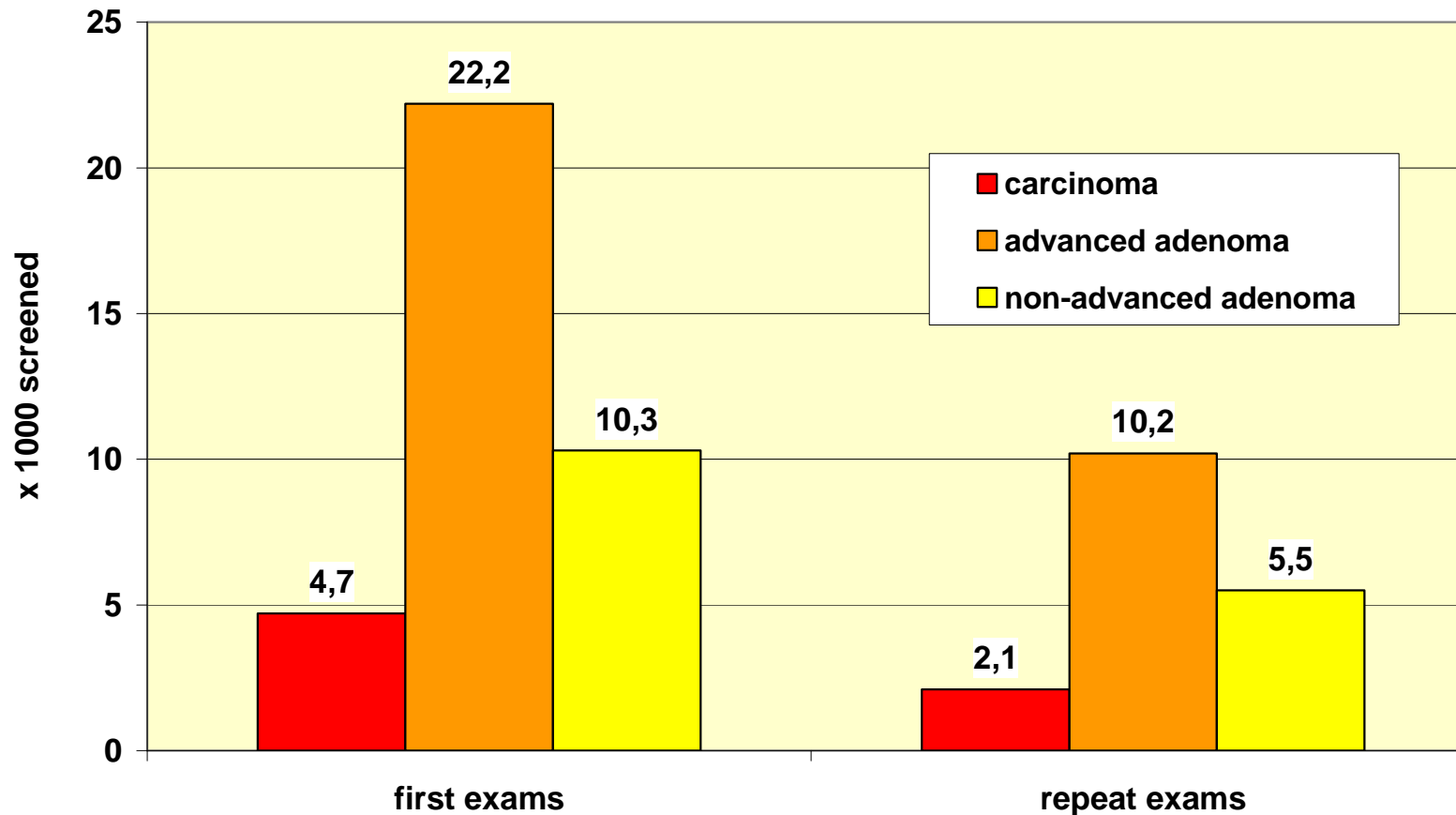
Proportion of FOBT+ by age and gender



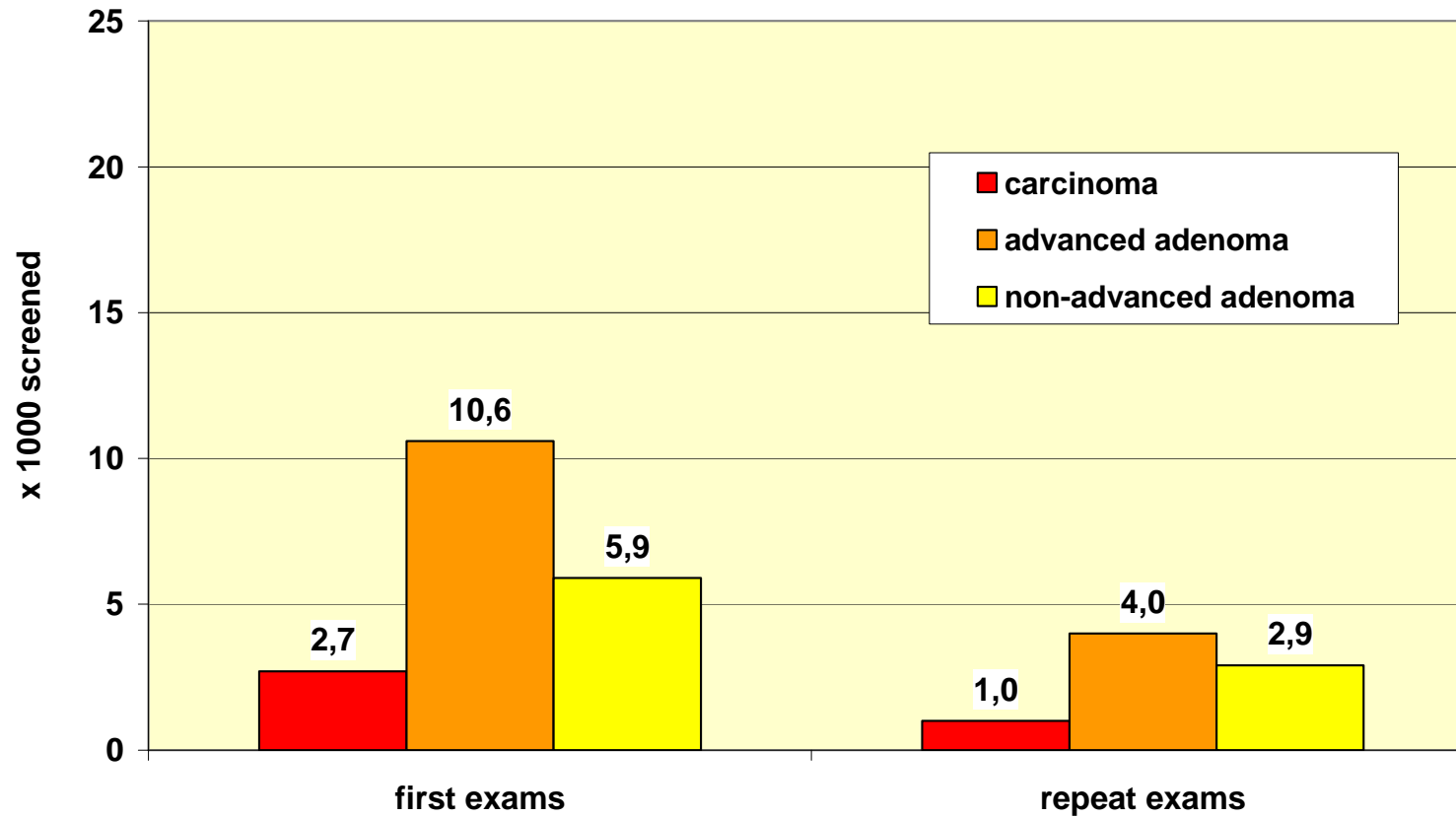
FOBT programmes. Attendance to colonoscopy by Region and range of single programmes



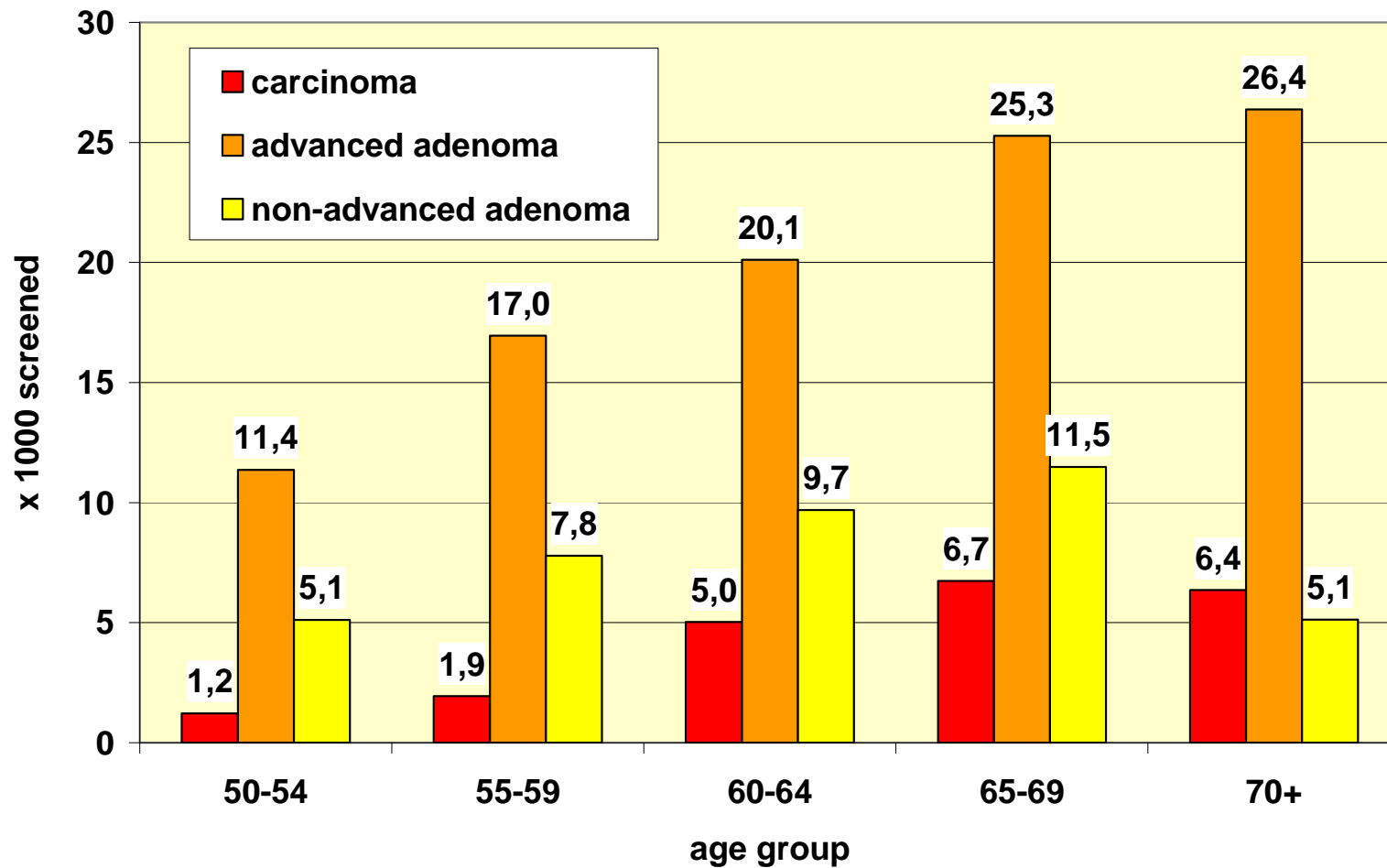
**FOBT programmes: detection rates of carcinoma, advanced adenoma and non-advanced adenoma at first and repeat exams.
Males**



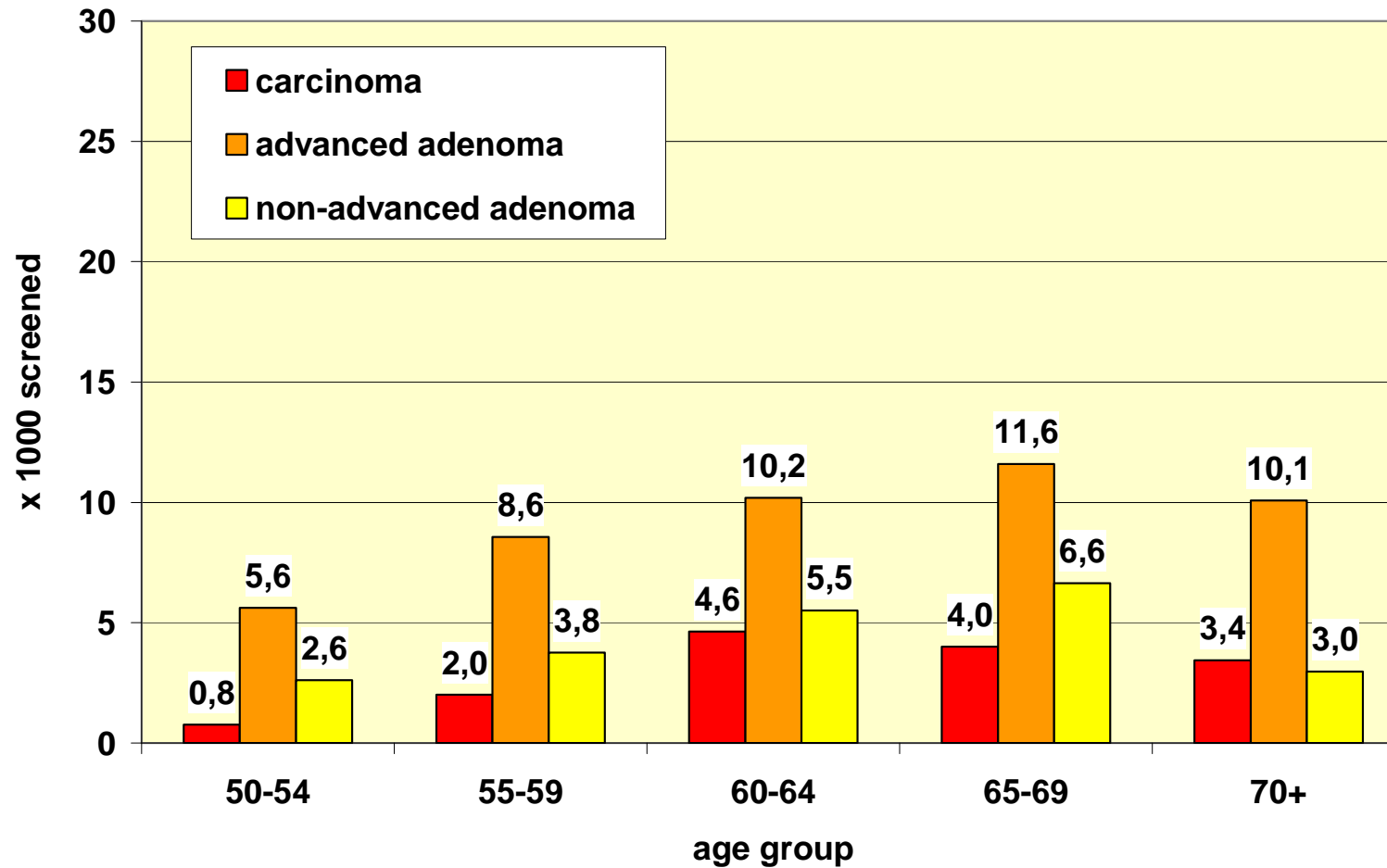
**FOBT programmes: detection rates of carcinoma, advanced adenoma and non-advanced adenoma at first and repeat exams.
Females**



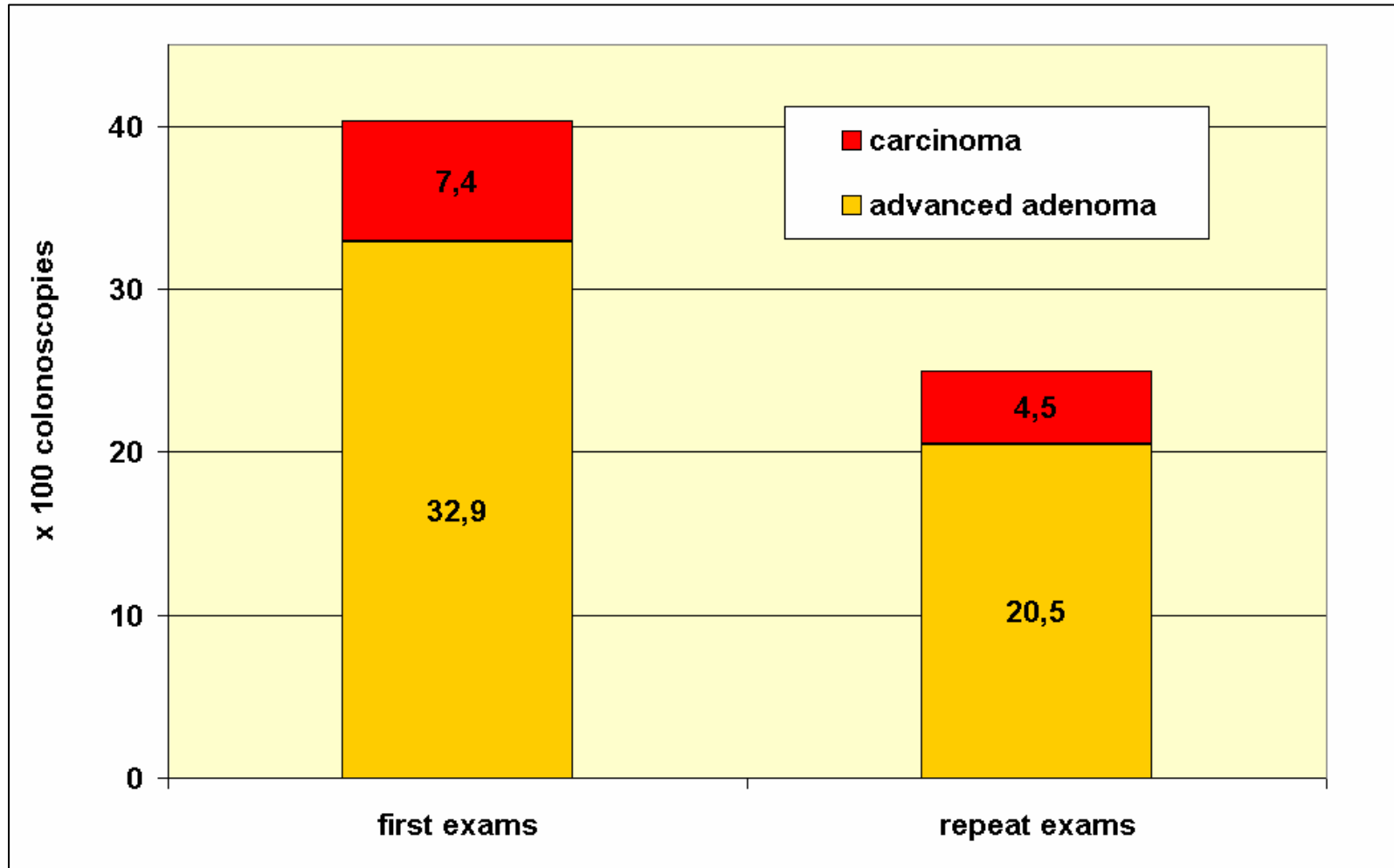
FOBT programmes: detection rates of carcinoma, advanced adenoma and non-advanced adenoma by age at first exams. Males.



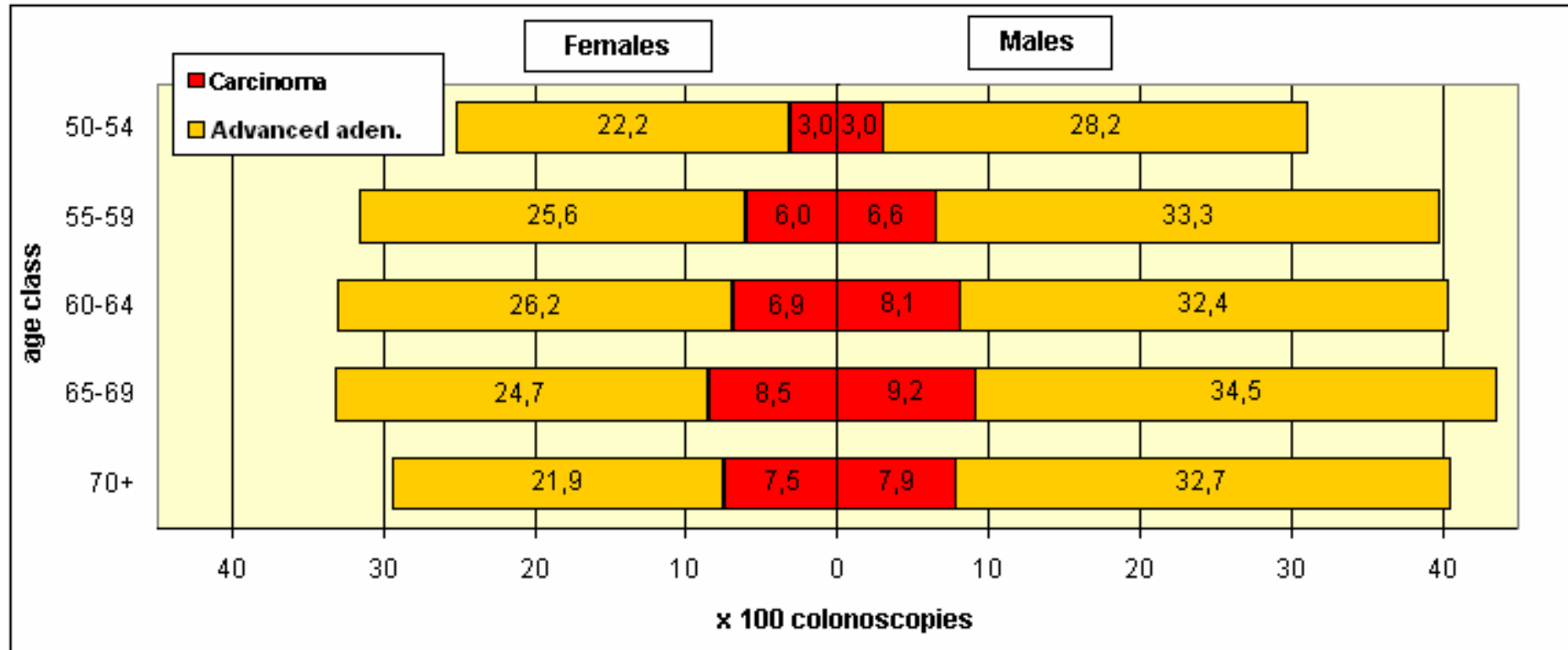
FOBT programmes: detection rates of carcinoma, advanced adenoma and non-advanced adenoma by age at first exams. Females.



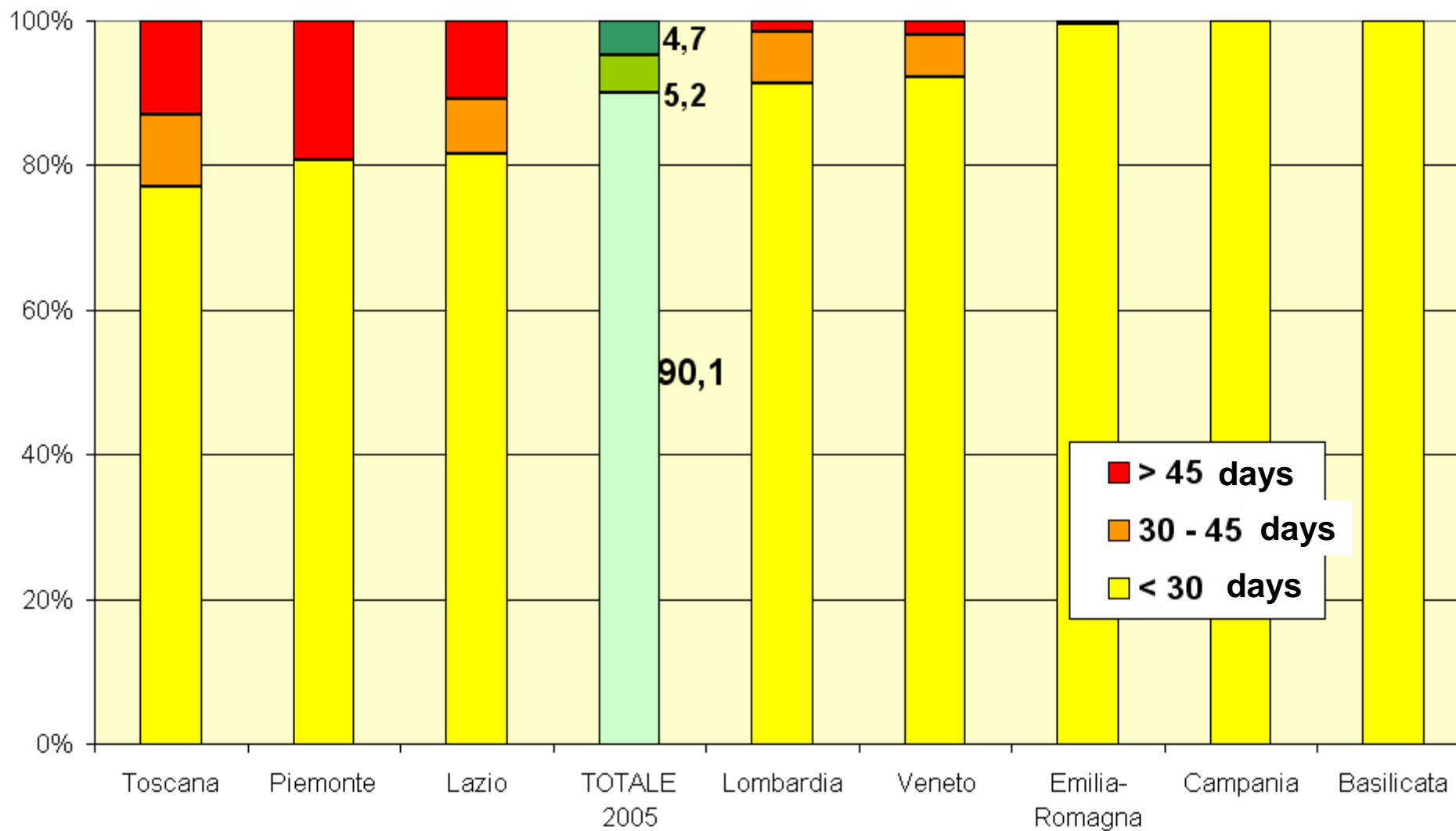
FOBT programmes. Positive Predictive Value of colonoscopy for carcinoma and advanced adenoma at first and repeat exams.



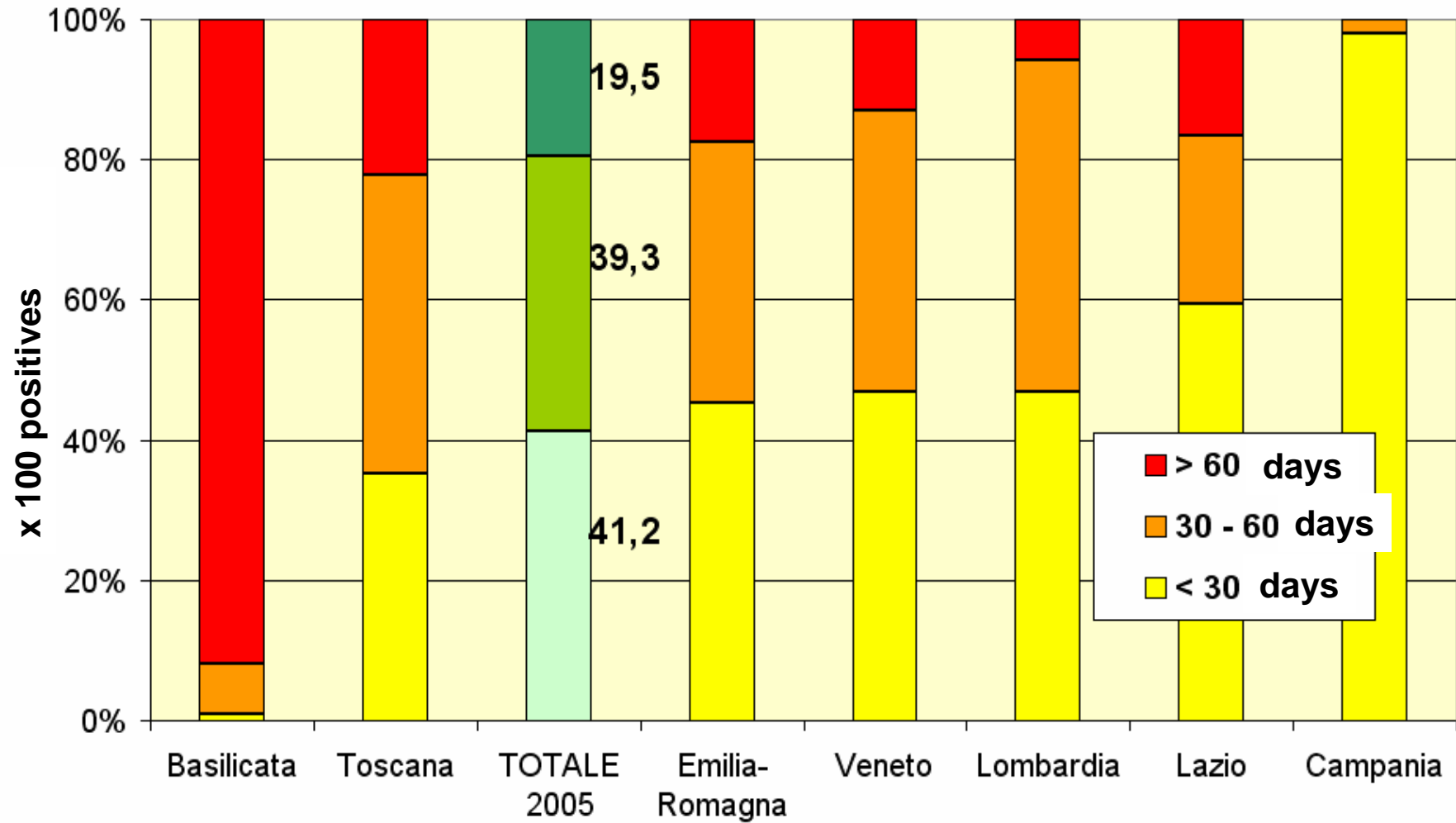
FOBT programmes. Positive Predictive Value of colonoscopy for carcinoma and advanced adenoma by age and gender at first exams.



Distribution of time by sending of negative report



Distribution of time by colonoscopy invitation



Main results of FS programmes.

	Males	Females	Total
Screened (n)	2,763	3,058	5,821
Reason prompting colonoscopy (%)			
Advanced adenoma*	7.8	3.7	5.9
Other**	5.9	4.4	5.2
Detection Rate (‰)***			
Carcinoma	2.9	2.2	2.6
Advanced adenoma	64.4	30.0	48.1
Non-advanced adenoma	77.8	46.3	62.9
PPV (%)****			
Carcinoma	0.3	0.0	0.2
Advanced adenoma	7.9	5.0	6.9

* at least one advanced adenoma (with a diameter \geq 1 cm, with villous/tubulo-villous type or with high-grade dysplasia); 3 or more adenomas with diameter $<$ 10 mm, with tubular type and low grade dysplasia; carcinoma

** all centres: inadequate preparation with adenoma; Verona: at least one adenoma or polyp \geq 5 mm

*** estimates

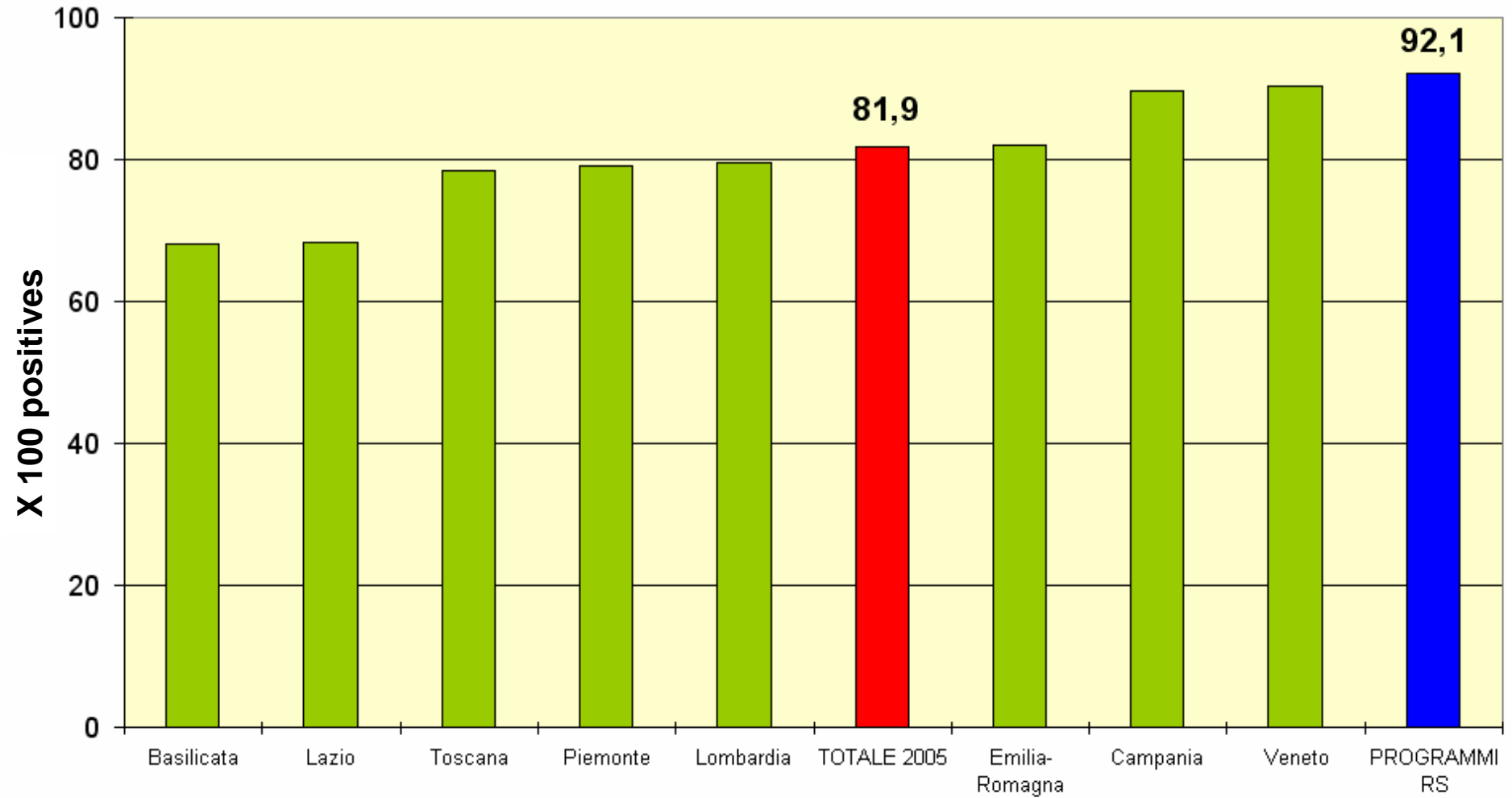
**** lesions of the proximal colon

Odds ratio for advanced adenomas in FOBT and sigmoidoscopy arms by age and sex and among all patients examined, excluding those in the patient's choice arm, by age, sex, and screening test (2) - Table 5

	n	OR* (95% CI)
ALL PATIENTS EXAMINED (excluding those in patient's choice arm)		
FOBT arms	2336	1.00 (referent)
Sigmoidoscopy arms	4025	3.58 (2.49-5.14)
55-59 yrs	2578	1.00 (referent)
60-64 yrs	3783	1.32 (1.01-1.72)
Women	3316	1.00 (referent)
Men	3045	1.61 (1.24-2.090)

* Multivariable ORs adjusted for screening center and for all the other variables in the table

Compliance to colonoscopy in FOBT and FS



Stage distribution of screen detected cancers during 2005 (all programmes), compared to a clinical series observed in the absence of organised screening.

Stage	2005 screening (n=891)	Reggio Emilia and Parma 1994-2003 (n=3353)**
I	40%	20%
I*	15%	-
II	17%	29%
III-IV	20%	51%
Unknown	8%	0%

Stage I: T1 or T2, N0, M0

Stage I*: malignant adenomas treated by endoscopic excision only

Stage II: T3 or T4, N0, M0

Stage III-IV: lymph-node involvement or distant metastases