

Prevenzione Serena

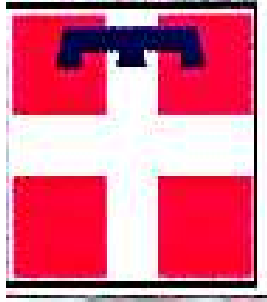
Workshop Regionale: Impatto dello Screening del Carcinoma Colorettale

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Prevenzione Serena: screening cancro colorettaale



THE LANCET

Volume 375, Issue 9726, 8 May 2010-14 May 2010, Pages 1624-1633



Once-only flexible sigmoidoscopy screening in prevention of colorectal cancer: a multicentre randomised controlled trial

Wendy S Atkin, Rob Edwards, Ines Kralj-Hans, Kate Wooldrage, Andrew R Hart, John M A Northover, D Max Parkin, Jane Wardle, Stephen W Duffy, Jack Cuzick, UK Flexible Sigmoidoscopy Trial Investigators

Summary

Lancet 2010; 375: 1624-33

Published Online

April 28, 2010

DOI:10.1016/S0140-

6736(10)60551-X

See Comment page 15B2

Background Colorectal cancer is the third most common cancer worldwide and has a high mortality rate. We tested the hypothesis that only one flexible sigmoidoscopy screening between 55 and 64 years of age can substantially reduce colorectal cancer incidence and mortality.

Methods This randomised controlled trial was undertaken in 14 UK centres. 170 432 eligible men and women, who had indicated on a previous questionnaire that they would accept an invitation for screening, were randomly allocated

J Natl Cancer Inst. 2011 Sep 7;103(17):1310-22

Once-Only Sigmoidoscopy in Colorectal Cancer Screening: Follow-up Findings of the Italian Randomized Controlled Trial—SCORE

Nereo Segnan, Paola Armaroli, Luigina Bonelli, Mauro Risio, Stefania Sciallero, Marco Zappa, Bruno Andreoni, Arrigo Arrigoni, Luigi Bisanti, Claudia Casella, Cristiano Crosta, Fabio Falcini, Franco Ferrero, Adriano Giacomin, Orietta Giuliani, Alessandra Santarelli, Carmen Beatriz Visioli, Roberto Zanetti, Wendy S. Atkin, Carlo Senore; and the SCORE Working Group

Manuscript received February 11, 2011; revised June 28, 2011; accepted June 30, 2011.

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The NEW ENGLAND
JOURNAL *of* MEDICINE

ESTABLISHED IN 1812

JUNE 21, 2012

VOL. 366 NO. 25

Colorectal-Cancer Incidence and Mortality with Screening
Flexible Sigmoidoscopy

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Danielle M. Carrick, Ph.D., Patrick Wright, B.S., Thomas L. Riley, B.S., Mark P. Purdue, Ph.D., Grant Izmirlian, Ph.D.,
Barnett S. Kramer, M.D., M.P.H., Anthony B. Miller, M.D., John K. Gohagan, Ph.D., Philip C. Prorok, Ph.D.,
and Christine D. Berg, M.D., for the PLCO Project Team*

ABSTRACT

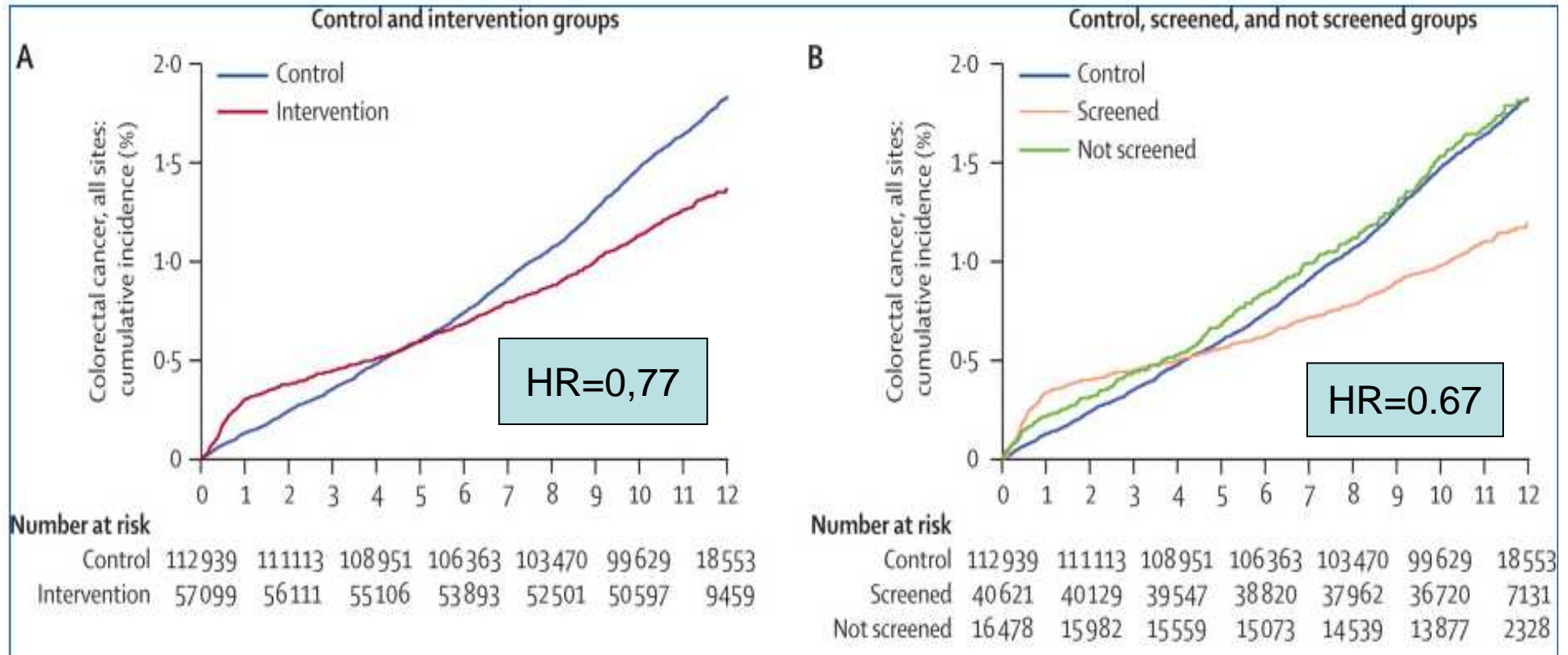
Colorectal cancer incidence and mortality with screening flexible sigmoidoscopy

ITT analysis	UK Flexible Sigmoidoscopy Trial	SCORE Randomized Controlled Trial	PLCO Randomized Controlled Trial
CRC Incidence	RR 0,77 CI 0,70 – 0,84	RR 0,82 CI 0,69 – 0,96	RR 0,79 CI 0,72 – 0,85
CRC Mortality	RR 0,69 CI 0,59 – 0,82	RR 0,78 CI 0,56 – 1,08	RR 0,74 CI 0,63 – 0,87

Colorectal cancer incidence and mortality with screening flexible sigmoidoscopy

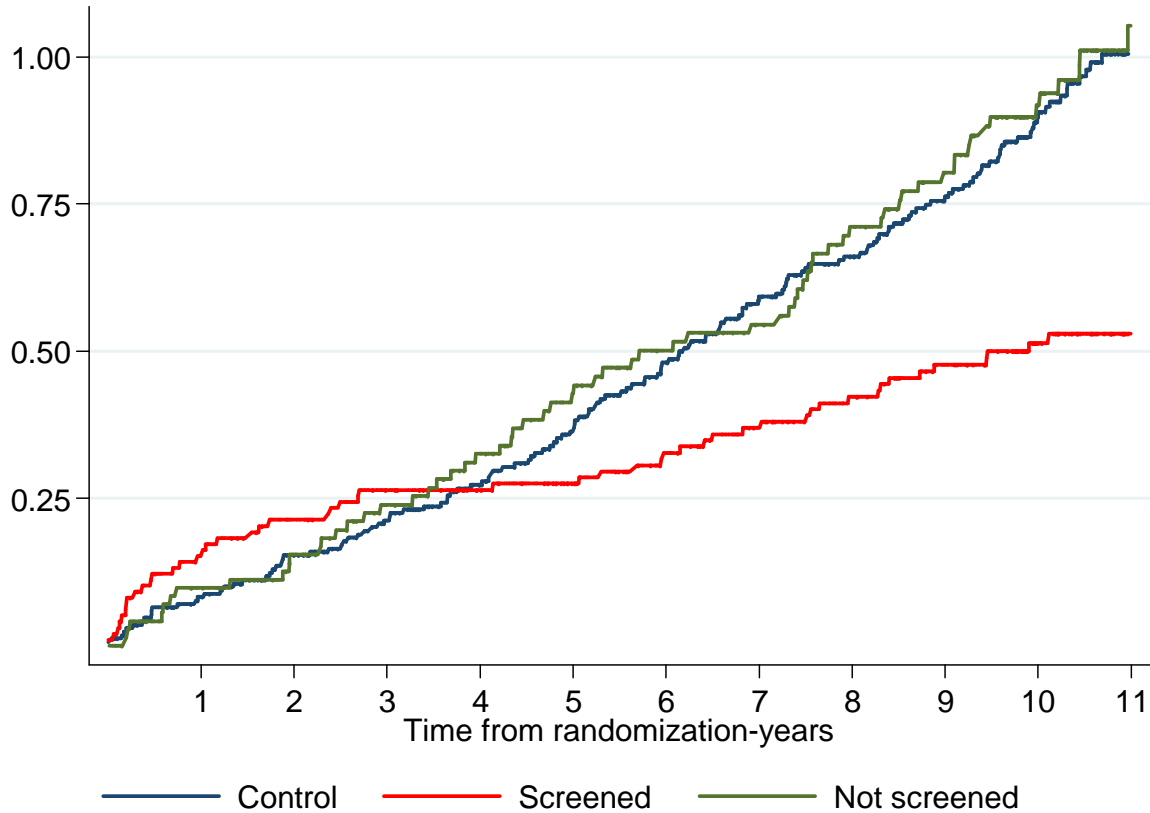
Per-protocol analysis	UK Flexible Sigmoidoscopy Trial	SCORE Randomized Controlled Trial
CRC Incidence	RR 0,67 CI 0,60-0,76	RR 0,69 CI 0,56 – 0,86
CRC Mortality	RR 0,57 CI 0,45 – 0,72	RR 0,62 CI 0,40 – 0,96

Colorectal cancer incidence (Kaplan-Meier estimates)



Per protocol analysis-Colorectal cancer INCIDENCE, All sites Advanced

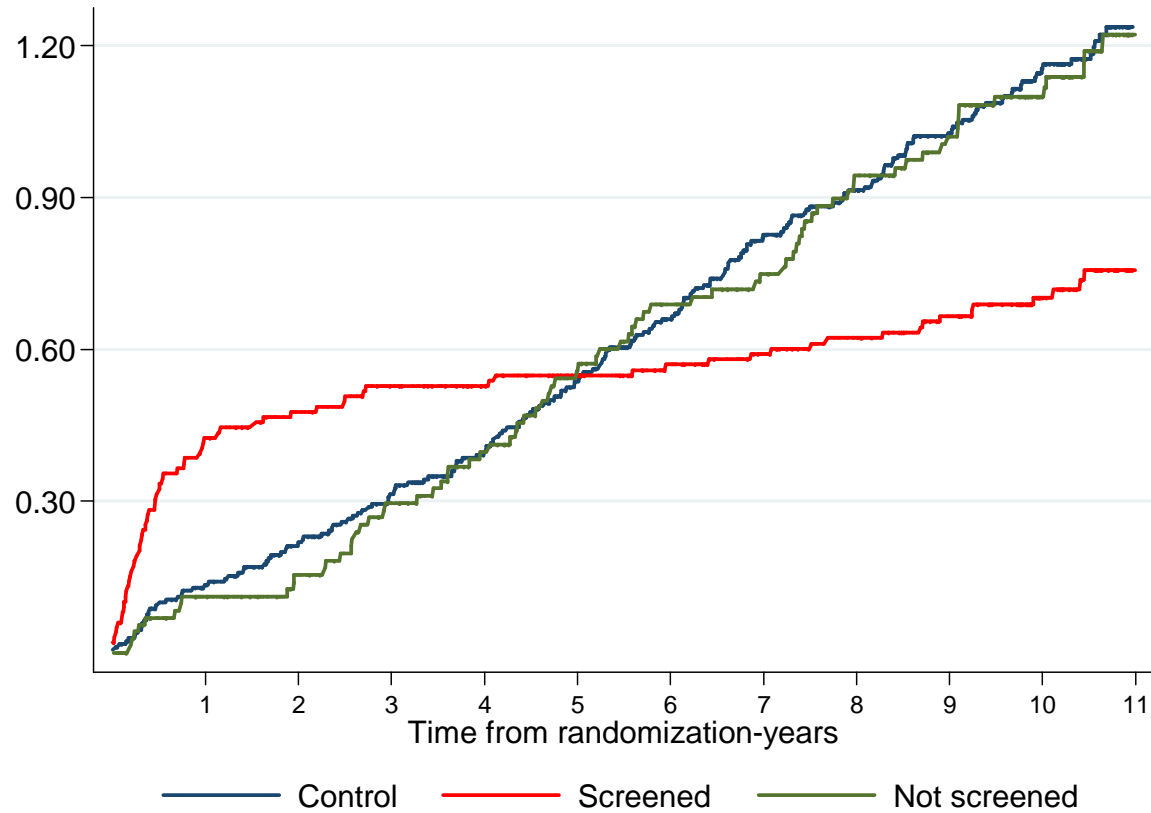
Nelson Aalen Cumulative Hazard (%) by time from randomization



RR (95%CI) =
0.54 (0.39-0.76)

Cumulative Events by years from randomization						
	≤2	≤4	≤6	≤8	≤10	>10
Control	26	44	77	105	140	152
Not Screened	9	20	31	45	57	64
Screened	21	26	32	40	47	48

Per protocol analysis-Colorectal cancer
INCIDENCE, Distal&Descendent (SCORE trial)
 Nelson Aalen Cumulative Hazard (%) by time from randomization



RR (95%CI) =
 0.60 (0.46-0.80)

Cumulative Events by years from randomization						
	≤2	≤4	≤6	≤8	≤10	>10
Control	37	67	110	151	187	198
Not Screened	11	28	48	65	75	81
Screened	47	52	56	61	68	71

PARTICIPATION RATE IN FS SCREENING

Gut. 2010 Jan

Screening for colorectal cancer: randomised trial comparing guaiac-based and immunochemical faecal occult blood testing and flexible sigmoidoscopy

L Hol,¹ M E van Leerdam,¹ M van Ballegooijen,² A J van Vuuren,¹ H van Dekken,³ J C I Y Reijerink,⁴ A C M van der Togt,⁵ J D F Habbema,² E J Kuipers^{1,6}

gFOBT : 49.5%
FIT : 61.5%
FS : 32.4%

Gut. 2013 May

ORIGINAL ARTICLE

Offering people a choice for colorectal cancer screening

Carlo Senore,¹ Andrea Ederle,² Luca Benazzato,² Arrigo Arrigoni,³ Marco Silvani,¹ Alberto Fantin,² Mario Fracchia,⁴ Paola Armaroli,¹ Nereo Segnan¹

FS : 29-39%

Gastroenterology. 2007 Jun

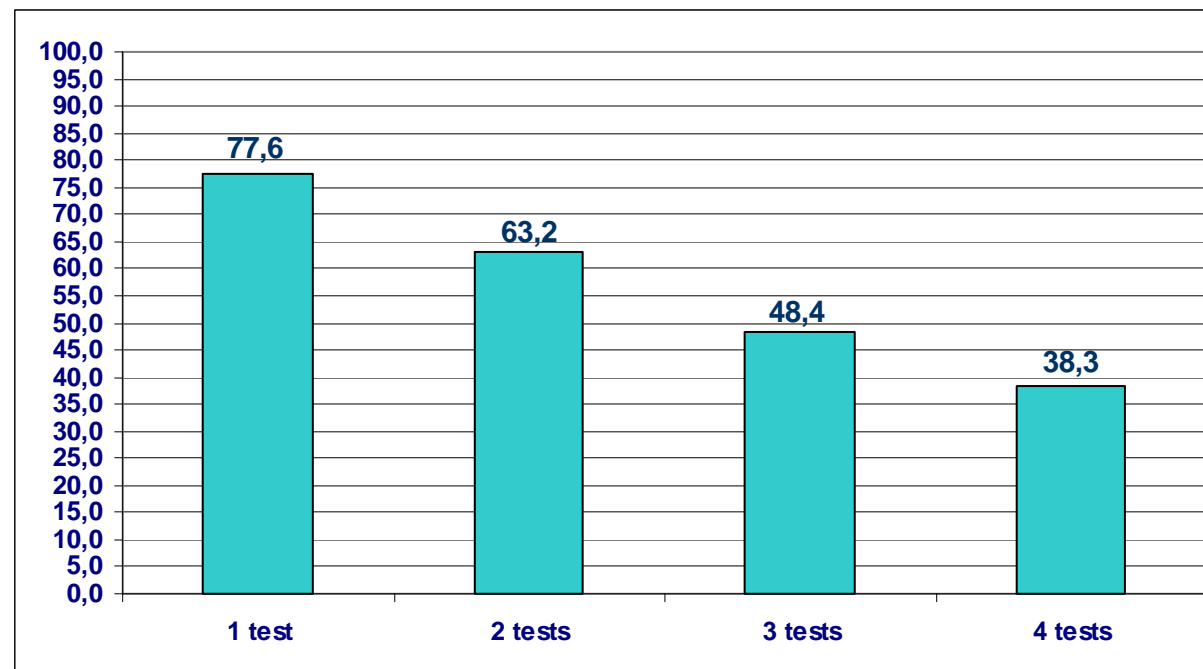
Comparing Attendance and Detection Rate of Colonoscopy With Sigmoidoscopy and FIT for Colorectal Cancer Screening

Segnan, et al.

TC : 26.5%
FIT : 32.3%
FS : 32.3%

Proportion of regular attenders FIT repeated screening Cohort 50-74 years - 4 FIT screening rounds

60% of people participating in each round



Source: Crotta S, et al. **High rate of advanced adenoma detection in 4 rounds of colorectal cancer screening with the fecal immunocemical test.** Clin Gastroenterol Hepatol. 2012

Evidence of efficacy of colonoscopy

	Year	Outcome	Left side	Right side
Singh	2010	Mortality	0.53	0.95
Baxter	2009	Mortality	0.33	0.99
Brenner	2009	High Risk Adenomas	0.33	1.02
Lakoff	2008	Incidence	0.21	varied by year
Cotterchio	2005	Incidence	0.68	1.02

Singh et al. Gastroenterology 2010;139:1128–1137

Baxter et al. Ann Intern Med. 2009;150:1-8.

Brenner et al. JNCI. 2010;102(2): 89-95.

Lakoff et al. Clin Gastroenterol Hepatol. 2008 Oct;6(10):1117-21

Cotterchio et al. Cancer Causes Control. 2005 Sep;16(7):865-75.

Courtesy of W.Atkin

Sigmoidoscopia

	Adesione sigmoidoscopia 25% FIT 12,5%	Adesione sigmoidoscopia 35% FIT 15%	Adesione sigmoidoscopia 45% FIT 20%
Inviti FS	597.100	597.100	597.100
Esami FS	149.275	208.985	268.695
Esami CT	14.927	20.898	26.869
Costo per persona esaminata	€ 110	€ 110	€ 110
Costo del programma su 10 anni	€ 16.420.244	€ 22.988.341	€ 29.556.438
Casi attesi 59-75 anni su 10 coorti di 58enni	17.310	17.310	17.310
Casi prevenuti	1.264	1.769	2.275
Casi anticipati	282	395	508
Costo per caso prevenuto	€ 12.994	€ 12.994	€ 12.994
Costo medio I anno trattamento	€ 25.957	€ 25.957	€ 25.957
Risparmio casi prevenuti	€ 16.380.402	€ 22.932.563	€ 29.484.724
Risparmio casi anticipati	€ 4.378.853	€ 6.130.395	€ 7.881.936
Risparmio totale	€ 20.759.255	€ 29.062.958	€ 22.419.996
Risparmio nei primi 10 anni	€ 12.455.553	€ 17.437.775	€ 22.419.996

FIT

	Adesione sigmoidoscopia 25% FIT 12,5%	Adesione sigmoidoscopia 35% FIT 15%	Adesione sigmoidoscopia 45% FIT 20%
Esami FIT	148.309	153.874	173.431
Esami CT	6.377	6.617	7.458
Costo per persona esaminata	€ 31	€ 31	€ 31
Costo del programma su 10 anni	€ 4.582.738	€ 4.754.701	€5.359.026
Casi prevenuti	254	268	304
Casi anticipati	159	165	186
Costo per caso prevenuto	€ 18.069	€ 17.773	€ 17.627
Costo medio I anno trattamento	€ 25.957	€ 25.957	€ 25.957
Risparmio casi prevenuti	€ 2.000.682	€ 2.189.297	€ 2.532.523
Risparmio casi anticipati	€ 2.474.180	€ 2.567.021	€ 2.893.291
Risparmio totale	€ 4.474.861	€ 4.756.318	€ 5.425.813

Totale

	Adesione sigmoidoscopia 25% FIT 12,5%	Adesione sigmoidoscopia 35% FIT 15%	Adesione sigmoidoscopia 45% FIT 20%
Risparmio nei primi 10 anni	€ 12.455.553	€ 17.437.775	€ 22.419.996
Costo totale del programma su 10 anni	€ 21.002. 982	€ 27.743.042	€ 34.915.464
Risparmio costi trattamento su 10 anni	€ 25.234.117	€ 33.819.275	€ 42.792.473

Fabbisogno di personale per il programma di screening

% di unità di personale medico a tempo pieno per Dipartimento e stima delle unità di personale complessive

Adesione FS	Alessandria	Asti	Biella VerCELLI	Cuneo	Ivrea	Moncalieri	Novara VCO	Rivoli Collegno	Torino	Totale Piemonte		
										Medici	Infermieri	Amministrativi
25,0%	39,3%	18,3%	32,1%	50,4%	46,0%	26,6%	45,0%	52,8%	72,8%	3,8	7,7	3,8
35,0%	55,5%	25,9%	45,2%	71,1%	64,9%	37,5%	63,5%	74,5%	102,8%	5,4	10,8	5,4
45,0%	70,6%	33,0%	57,6%	90,6%	82,6%	47,8%	80,8%	94,9%	130,9%	6,9	13,8	6,9

Fabbisogno di personale per il programma di screening

% di unità di personale medico a tempo pieno per dipartimento e stima delle unità di personale complessive

Scenario a volume di attività ridotto

Ade- sione FS	Ales- san- dria	Asti	Biella Vercelli	Cuneo	Ivrea	Monca- lieri	Novara VCO	Rivoli Col- legno	Torino	Totale Piemonte	
										Medi- ci	Infer- mieri
25,0%	50,5%	23,5%	41,2%	64,7%	59,0%	34,1%	57,7%	67,8%	93,5%	4,9	9,8
35,0%	71,1%	33,2%	58,0%	91,2%	83,2%	48,1%	81,3%	95,5%	131,7%	6,9	13,9
45,0%	90,7%	42,3%	74,0%	116,3%	106,1%	61,3%	103,8%	121,9%	168,1%	8,8	17,7