



QUALITY IN ENDOSCOPY

ESGE / ESDO SYMPOSIUM

COLONOSCOPY &
COLONIC NEOPLASMS

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The Great Debate 4

FIT vs. Colonoscopy – pro Colonoscopy

Session No.: 5

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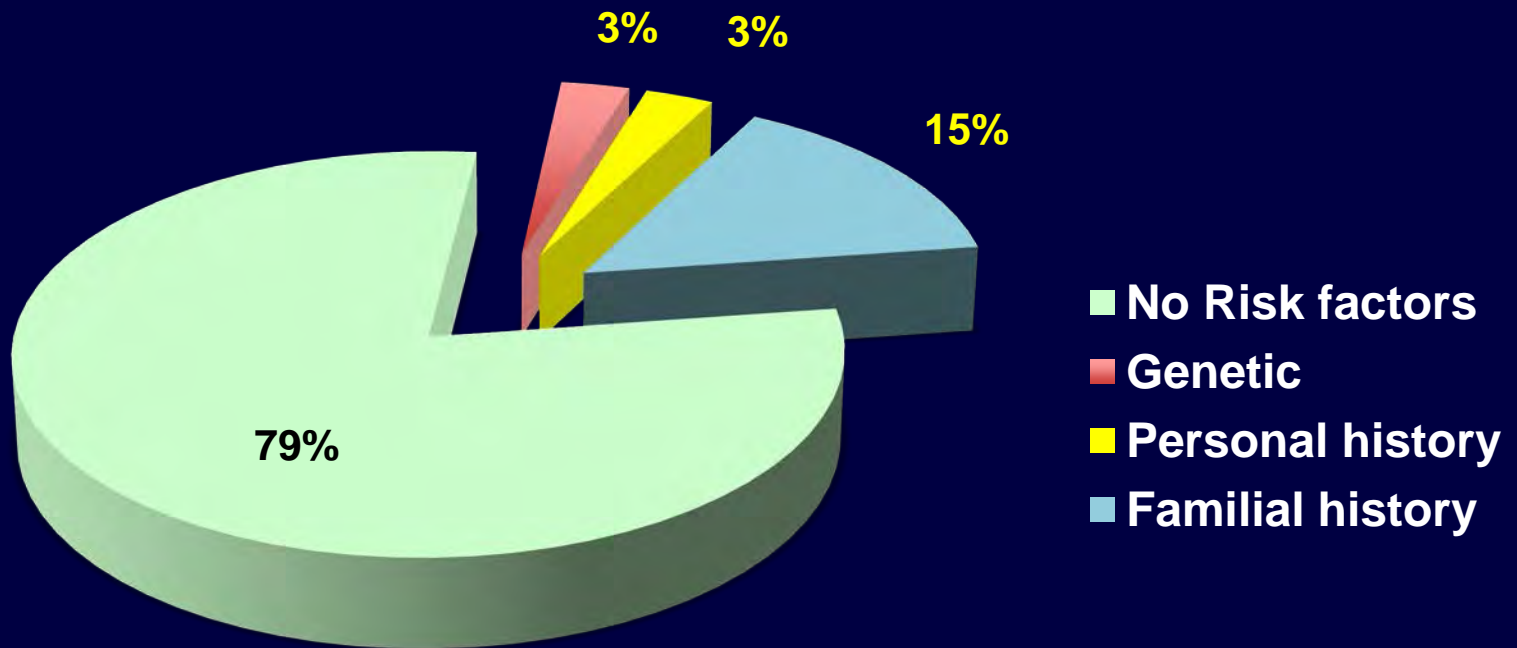


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Main problem of CRC screening

- **335,000 new cases colorectal cancers/ year (2012 EU)**
- **Among 10,000 peoples aged + 50 years, there are 50 asymptomatic colorectal cancers**
- **Screening method should be:**
 - **Simple, acceptable, without danger,**
 - **not so expensive, effective**

Distribution of Colorectal cancers



High risk population

Cumulative rate CRC Risk (0 - 74 y)

General population	4%
2 parents affected	20%
1 parent affected < 45 years	20%
1 parent affected 45-60 years	10%
1 parent affected > 60 years	6%

High risk population

Screening by colonoscopy is justified:

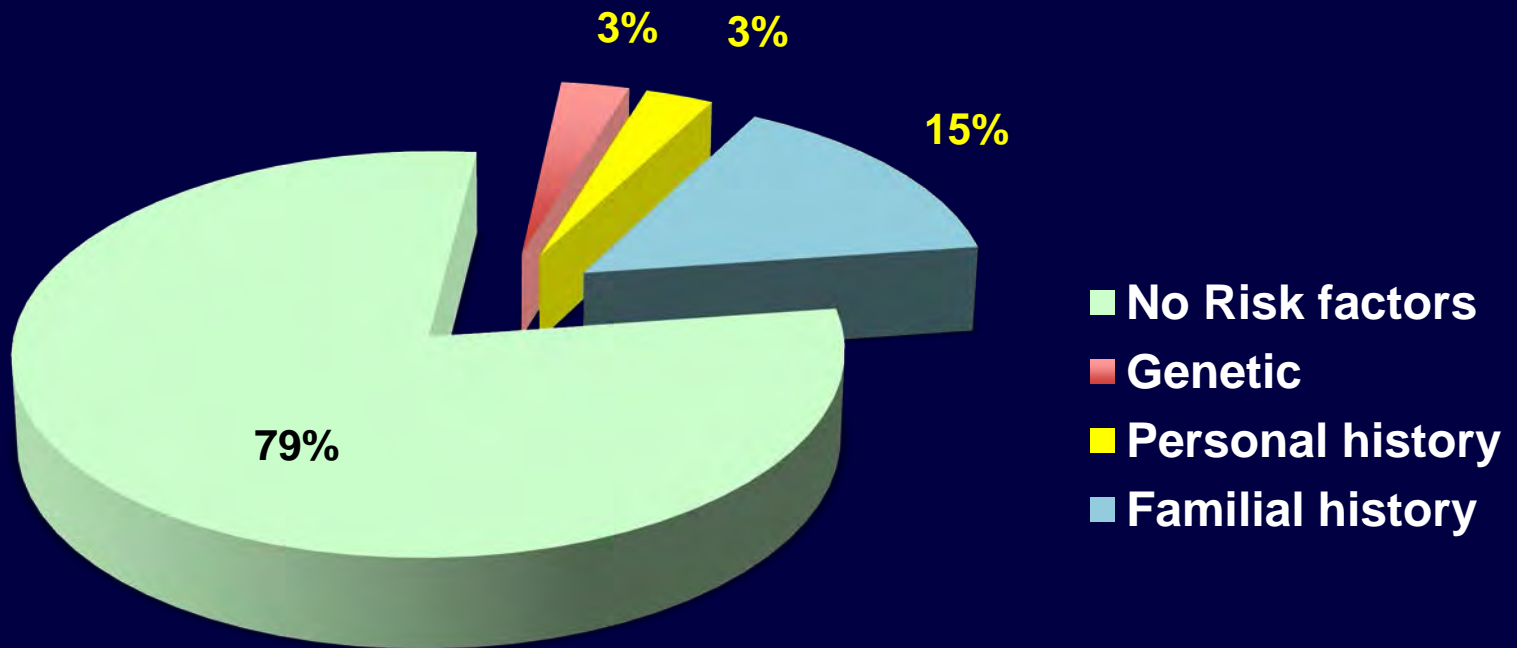
From 40 years when:

- 2 parents are affected
- 1 parent affected < 45 years

From 45 years when:

- 1 parent affected between 45 and 60 years

Distribution of Colorectal cancers



Rectosigmoidoscopy (RSS)

	Atkins UK 2010	SCORE Italy 2011	NORCCAP Norway 2009	PLCO trial USA 2012
Method	1994-1999 RSS 11 y	1995-1999 RSS 10.5 y	1999-2000 RSS 7 y	1993-2001 2 RSS 12 y
Randomised Population	57,230 (55-64 y)	17,140 (55- 64 y)	13,820 (55- 64 y)	77,450 (55- 74 y)
Participation	71% (*)	58%	65%	83.5%
Colonoscopy	5%	8.4%		22%
Colon cancer Incidence L/R	-23% (36/2%)	-18% (24/9%)	NS	-21% (29/14%)
Mortality	-31%	NS	NS	-26%

Atkins, Lancet 2010

Hoff, BMJ 2009

Segnan, J Natl Cancer Inst 2011

Schoen, NEJM 2012

Colonoscopy

- **No population-based controled randomised study**
- **Running trails**
 - **North Europe : NordICCTrial (1)**
 - **Colonoscopy vs surveillance (CT.gov number, NCT00883792)**
 - **Norway, Poland, Hollande (2009-2026)**
 - **Espagne: ColonPrev Study (2)**
 - **Coloscopie vs FIT biannuel (CT.gov number, NCT00906997)**
 - **2008-2021**
 - **USA : CONFIRM Study**
 - **Coloscopie vs FIT annuel (CT.gov number, NCT01239082)**
 - **US military Administration (2012-2025)**

Case-control studies

	Population	⚡ Risk distal cancers	Colonoscopy completion
Baxter Ann Intern Med 2008	1996-2001 Ontario	-31% at 8 y	31%
Singh JAMA 2006	1989-2003 Manitoba	-72% at 10 y	37%
Brenner I J Natl Cancer Inst 2010	2005-2007 Sarre	-48% at 10 y	98%
Brenner 2 Ann Intern Med 2011	2003-2004 Rhin-Neckar	-77% at 10 y R/L: -54%/-84%	91%

Population-based studies vs. Hemoccult®

	MINNESOTA 1975-1977	NOTTINGHAM 1981-1991
Population	31000/15000	76000/76000
Method	Annual/Biannual Rehydrated Test	Biannual NON Rehydrated Test
Mortality	-33% at 13 y (1)	-13% at 11 y (2)
Incidence	-17% to 20% at 18 y (3)	NS à 19 y (4)
Attendance	> 75%	57%
positivity rate	9.8%	2.1%
Colonoscopy rate (invited population)	22%	5%

- 1) *Mandel, NEJM 1993*
- 2) *Hardcastle, Lancet 1996*
- 3) *Mandel ,NEJM 2000*
- 4) *Scholefield ,Gut 2012*

Normal colonoscopy

- Different study show a long reduction of CRC risk after:
 - a normal colonoscopy
 - small non-adenoma polyp resection
- - 70% at 10 years

Brenner Gut 2006

Brenner Gastroenterology 2010

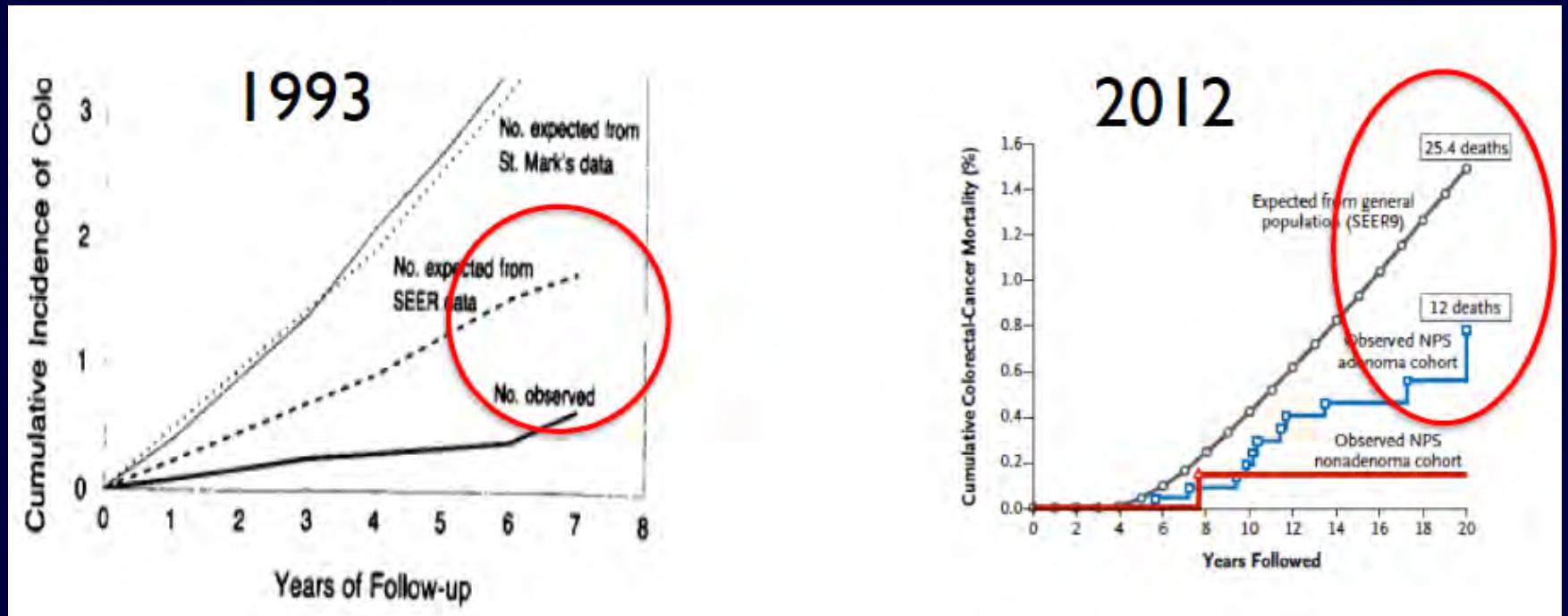
Singh JAMA 2006

Imperiale.NEJM 2008

→ Rational for a single colonoscopy every 10 years

National polyp study

- 2600 patients followed after a polyp resection between 1980 & 1990



- ↘ Incidence 76%
at 6 year $p < 0.001$

Winawer NEJM 1993

- ↘ Mortality 53 %
 $p < 0.008$

Zauber NEJM 2012

Compliance problem: Duch randomised trial

	Hemoccult (n=5004)	OC-Sensor* (n=5007)	Sigmoidoscopy (n=5000)
Compliance	50%	62%	32%
Colorectal cancer	6	14	8

** 1 sample, cut-off value 100ng/mL*

Effect of compliance on mortality

Compliance (%)	↓	Mortality (%)	Cost per life-year gained (€)
100		- 40	
65		- 22	2700 (-20%)
50		- 20	3375
45		- 13	4400 (+31%)
35		- 9	6200 (+86%)
10		- 4	

Conclusion

- Colonoscopy is the gold standard for CRC diagnosis
- Use of colonoscopy for Screening in patients with personal or familial history is relevant because of the high risk of developing a CRC
- For sporadic CRC ...

Conclusion

- **Colonoscopy is the gold standard for CRC diagnosis**
- **Use of colonoscopy for Screening in patients with personal or familial history is relevant because of the high risk of developing a CRC**
- **For sporadic CRC the use of colo for mass screening faces four major problems:**
 - **The availability of resources in endoscopy**
 - **The cost**
 - **This is not a simple, acceptable, without danger test**
 - **The compliance of patients**

Conclusion

- Colonoscopy is the gold standard for CRC diagnosis
- Use of colonoscopy for Screening in high risk patients is recommended
- For sporadic CRC ...

Sorry, I tried,...

but I can not recommend the use of colonoscopy for asymptomatic population screening !