Screening del colon retto

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Gastroenterologia –

Ravenna

OMCeO RAVENNA

Screening?? Yes, Yes, Yeees!

Perchè?

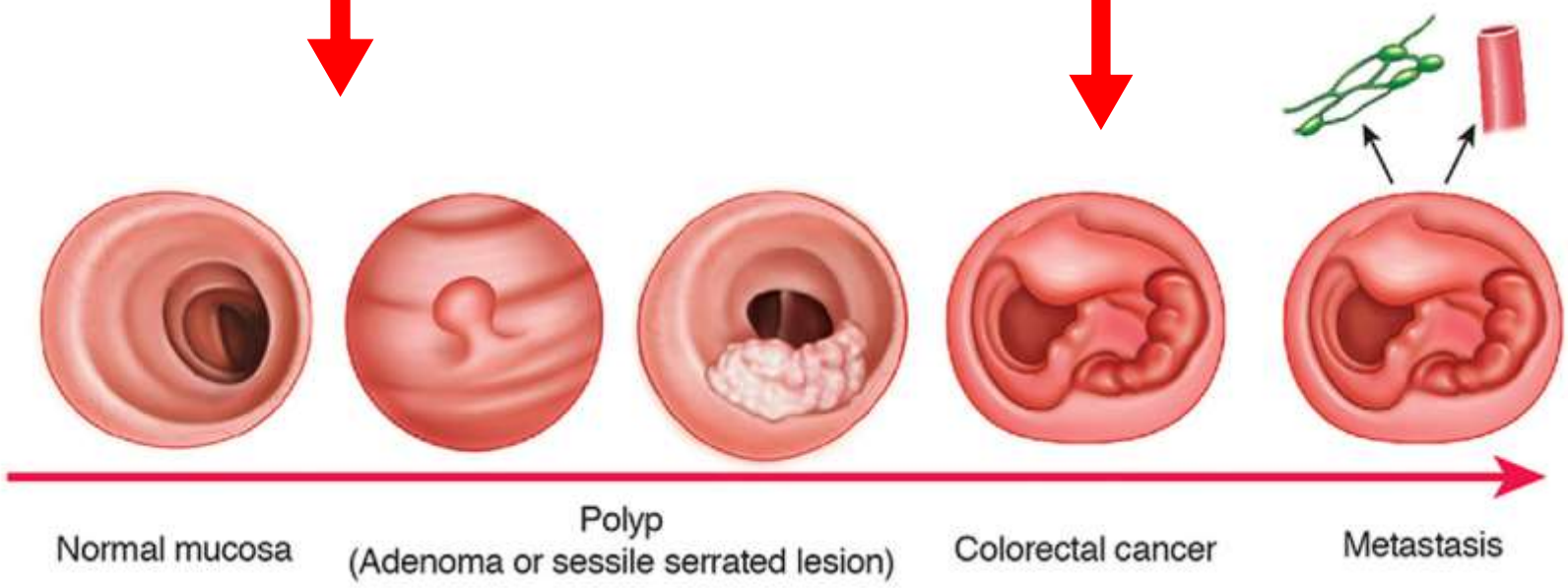
- Il cancro del colon-retto è la seconda causa di morte per cancro nel mondo

- La maggior parte dei tumori del colon-retto (CRC) ha una crescita lenta e origina da lesioni precancerose come polipi adenomatosi o lesioni sessili serrate.

- Questa crescita lenta consente di avere una finestra temporale per lo screening sia del cancro precoce che delle lesioni precursori

trovare e rimuovere un polipo
previene un cancro

trovare e rimuovere un cancro precoce
previene le metastasi



Screening?? Yes, Yes, Yeees!

Come?

• FOBT, FIT, sigmoidoscopia e pancolonscopia hanno chiaramente mostrato una diminuzione dell'incidenza del CCR e della mortalità per cancro

van Rossum LG, Gastroenterology 2008
Hewitson P, Coch Data Rev 2013

Hoff G, BMJ 2009
Holme O, Coch Data Rev 2012

Giorgi Rossi P, Am J Gastro 2015
Levin TR, Gastroenterology 2018

CRC screening with CT colonography

- Sensibilità per adenomi ≥6 mm 73–98% e specificità 89–91%; sensibilità complessiva per adenomi ≥10 mm 67–94%, specificità 96–98%; basso tasso di rilevamento per polipi sessili e piatti.

  Johnson CD, NEJM 2008
  Sakamoto T, Acta Radio 2013

- I vantaggi della CTC sono che è meno invasiva, non necessita di sedazione procedurale e ha un basso tasso di complicazioni

- Gli svantaggi sono la necessità di preparazione intestinale, l'esposizione alle radiazioni e i riscontri extracolici che comportano ulteriori esami e un potenziale sovratrattamento.

CRC screening con markers

Table 3 | **Novel and other non-invasive CRC screening tests under development**

Test	Details of technology	Special considerations
Stool and blood based		
Clinical genomics	Stool-based and blood-based biomarker study for early detection of CRC and advanced neoplasia	Study plans to recruit 1,800 individuals at average risk aged 18 years and older (NCT00843375)[112]; expected completion is 2022
Blood based		
Freenome	cfDNA plus artificial intelligence test to detect CRC and advanced adenomas	PREEMPT trial (NCT04369053)[109] is a prospective multicentre study that aims to recruit 25,000 individuals at average risk aged between 45 and 85 years undergoing colonoscopy screening
Guardant	The ctDNA LUNAR test is designed to detect cell-free tumour DNA in blood	The ECLIPSE trial (NCT04136002)[110] is a prospective multicentre study that aims to recruit 10,000 individuals at average risk aged between 45 and 84 years undergoing colonoscopy screening
CancerSEEK	Multi-cancer detection test to identify eight common cancers, including CRC; detects circulating proteins and mutations in ctDNA using an AI/ML classifier	The primary case–control study (NCT04213326)[111] has enrolled, since 2019, 6,399 individuals without cancer as well as individuals with cancer aged 50 years and older; primary end points are sensitivity and specificity for detection of invasive cancer; expected completion year is 2022
GRAIL	Multi-cancer early-detection test (breast, colorectal, pancreatic, lung and haematological malignancies in blood); in validation study, specificity of 99.5%, sensitivity for cancer of 51.5%[105]	The GRAIL test is now available as a laboratory-developed test; it is not covered by insurance and the list price is US$949; ongoing prospective, multicentre, validation study (the PATHFINDER study), started in 2019, that plans to recruit 6,600 individuals at average risk aged 50 years and older, in the USA; a larger study is planned including 165,000 individuals in the UK[115]

Shaukat A, Nature Reviews Gastro & Hep 2022

Impact of Screening Program on Incidence of Colorectal Cancer: A Cohort Study in Italy

Paolo Giorgi Rossi, PhD[1,2], Massimo Vicentini, MSc[1,2], Claudio Sacchettini, MSc[1,2], Enza Di Felice, MSc[1,2], Stefania Caroli, MSc[1,2], Francesca Ferrari, MSc[1,2], Lucia Mangone, MD[1,2], Annamaria Pezzarossi, MSc[1,2], Francesca Roncaglia, PhD[1,2], Cinzia Campari, MSc[2,3], Romano Sassatelli, MD[4], Roberto Sacchero, MD[5], Giuliana Sereni, MD[4], Luisa Paterlini, MD[3] and Marco Zappa, MD[6]

FIT every 2 years
between 50 and 69 years

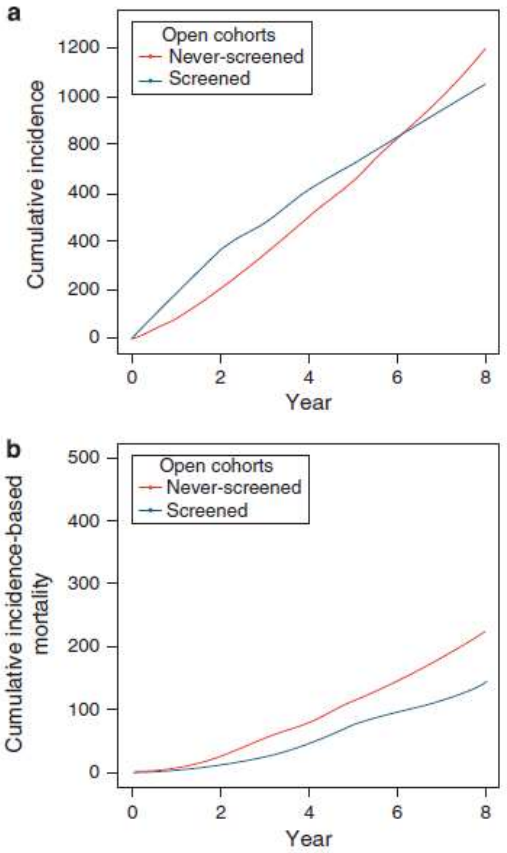
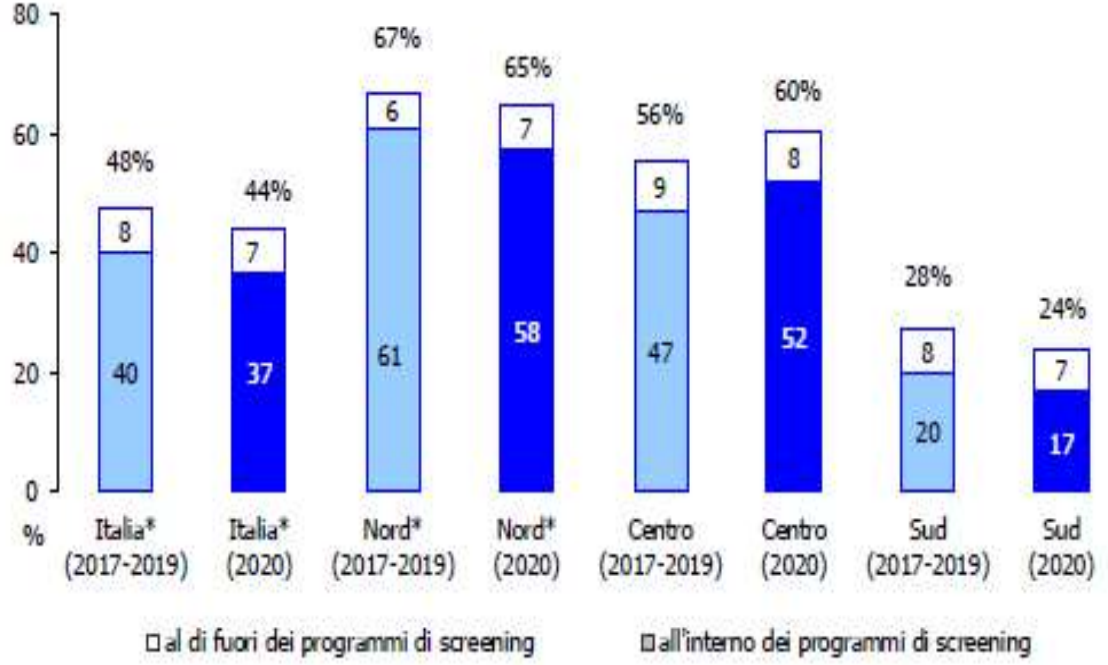


Figure 3. Cumulative incidence (**a**) and incidence-based mortality (**b**) in the pre-screening cohort and in the invited cohort.

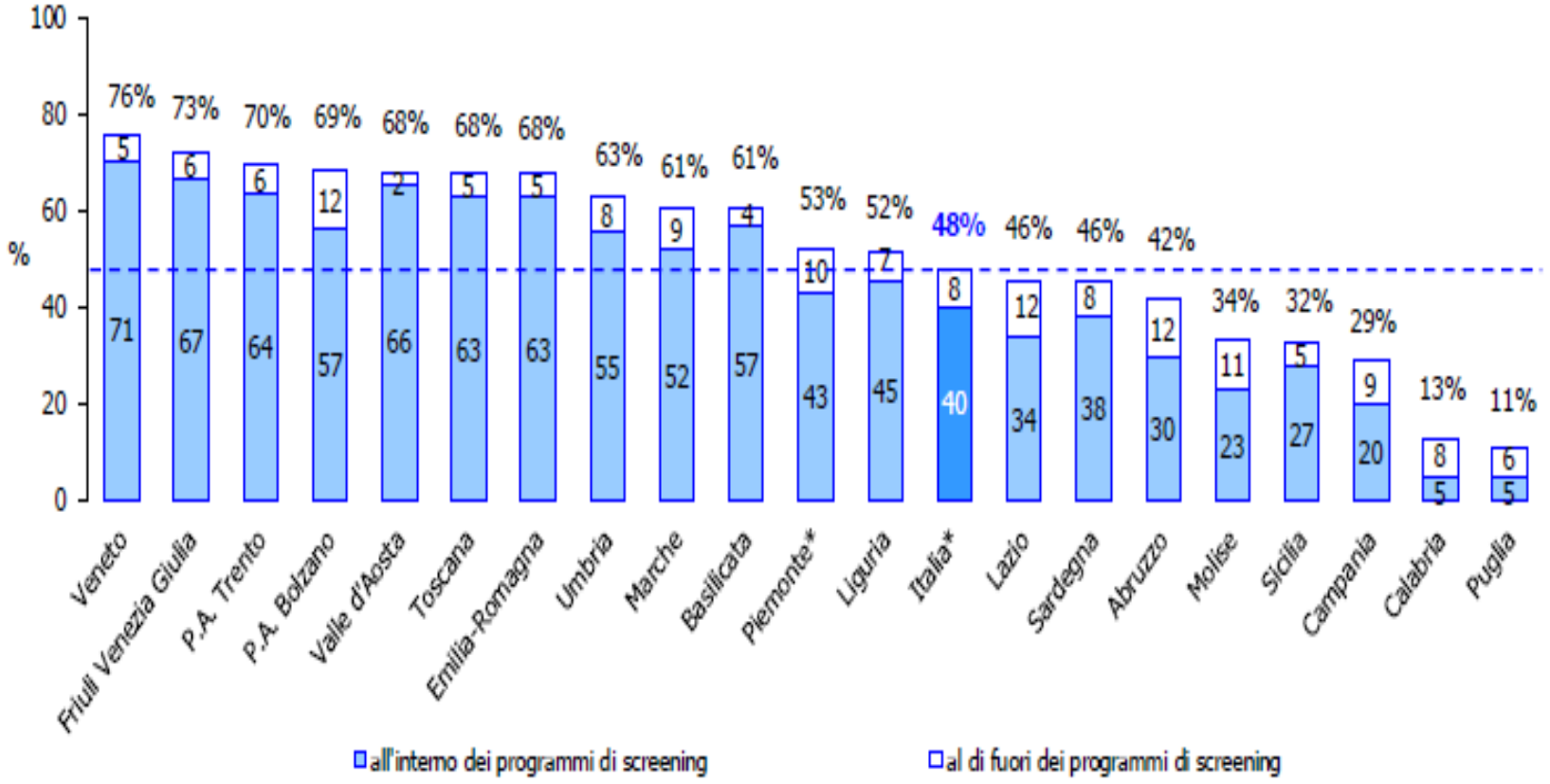
Am J Gastro 2015

What about Italy?



**Il dato relativo al Piemonte viene calcolato con un algoritmo apposito che tiene conto delle diverse modalità di organizzazione dello screening (rettosigmoidoscopia a 58 anni o in alternativa ricerca del sangue occulto ogni due anni nella fascia 59-69 anni).*

What about Italy?



Ravenna

- SOF+ -> colonscopia entro 30 giorni ≥ 90%
- Colloquio utente – gastroenterologo
  - (anamnesi, familiarità, uso di farmaci anticoagulanti / antiaggreganti, device cardiaci)
- Spiegazione dell'esame endoscopico, scelta della preparazione intestinale, consiglio su sedazione procedurale, dieta!
- Consegna del consenso informato
- Eventuali alternative se rifiuto

Il programma di screening colo-rettale della Regione Emilia-Romagna

Anno d'inizio	**2005**
Età bersaglio	**50-69 anni**
Popolazione bersaglio	**1,150,000**
Intervallo di screening	**2 anni**
Test di screening	**immunochimico (FIT)**
Approfondimento	**colonscopia (colonscopia virtuale)**

How a faecal immunochemical test screening programme changes annual colorectal cancer incidence rates: an Italian intention-to-screen study

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British Journal of Cancer Published online: 20 April 2022

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Clinical Gastroenterology and Hepatology 2022;

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tassi annui di incidenza
di cancro colo-rettale nella popolazione bersaglio:
osservati vs. attesi

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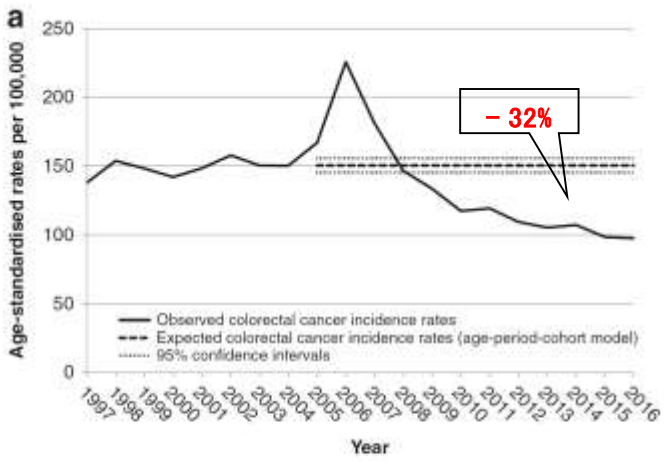
Maschi



Femmine

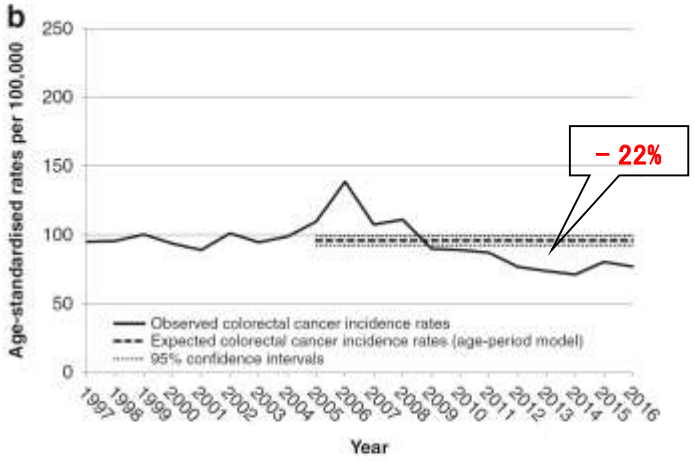


Fig. 1 Curves of observed and expected annual colorectal cancer incidence rates. The graphs show the curve of observed annual colorectal cancer incidence rates per 100,000 persons aged 50–69 years in 1997–2016 (bold line) and the curve of rates that would be expected in 2005–2016 in the absence of the organised faecal immunochemical test screening programme (dashed line) by sex (**a** men; **b** women). The dotted lines represent the 95% confidence bands around the expected annual rates. The expected annual rates were estimated by analysing the observed annual rates in 1997–2016 with an age-period-cohort model (men) and an age-period model (women). 2005 was the year of introduction of the screening programme. 2006 was the first full year of screening. All rates were age-standardised using the European standard population. Emilia-Romagna Region, Italy, 1997–2016.

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Table 2. Ratio between the observed annual colorectal cancer incidence rates per 100,000 persons aged 50–69 years in 2005–2016 and the rates that would be expected in the absence of the organised FIT screening programme, and annual and cumulative number of prevented colorectal cancer cases, by sex.

Year[a]	Men			Women		
	Incidence rate ratio [95% CI]	Annual number prevented	Cumulative number prevented	Incidence rate ratio [95% CI]	Annual number prevented	Cumulative number prevented
2005	1.11 [1.06, 1.16]	−91	−91	1.18 [1.13, 1.22]	−97	−97
2006	1.52 [1.46, 1.59]	−427	−518	1.45 [1.40, 1.51]	−249	−346
2007	1.20 [1.15, 1.25]	−163	−681	1.11 [1.07, 1.15]	−62	−408
2008	0.97 [0.93, 1.01]	21	−660	1.16 [1.12, 1.20]	−70	−478
2009	0.88 [0.85, 0.92]	77	−583	0.93 [0.89, 0.96]	32	−446
2010	0.78 [0.75, 0.81]	146	−437	0.94 [0.90, 0.97]	28	−418
2011	0.80 [0.76, 0.83]	137	−300	0.91 [0.88, 0.94]	41	−377
2012	0.73 [0.70, 0.76]	185	−115	0.80 [0.77, 0.83]	90	−287
2013	0.70 [0.67, 0.73]	204	89	0.77 [0.74, 0.80]	108	−179
2014	0.71 [0.68, 0.74]	179	268	0.74 [0.71, 0.77]	108	−71
2015	0.65 [0.62, 0.68]	220	488	0.84 [0.81, 0.87]	69	−2
2016	0.65 [0.62, 0.67]	229	717	0.81 [0.78, 0.84]	85	83

Emilia-Romagna Region, Italy, 2005–2016.
FIT faecal immunochemical test, *CI* (bootstrap-estimated) confidence interval.
[a]2005 was the year of introduction of the screening programme. 2006 was the first full year of screening. The annual incidence rates that would be expected in 2005–2016 in the absence of screening were estimated by analysing the observed annual rates in 1997–2016 with an age-period-cohort model for men and an age-period model for women, i.e. the models providing the best fit to the observed rates. In both models, the values of parameters of the non-linear period effect were set to zero. All rates were age-standardised using the European standard population.

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Clinical Gastroenterology and Hepatology 2022;

tassi cumulativi di incidenza di,
e tassi cumulativi di mortalità da

cancro colo-rettale:

persone aderenti all'invito vs. persone non aderenti

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Clinical Gastroenterology and Hepatology 2022;

Criteri di inclusione

- persone residenti
- senza una diagnosi di cancro colo-rettale prima del primo invito
- invitate tra il 2005 e il 2016
- età al primo invito compresa tra i 50 e i 69 anni

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Definizione dell'adesione

In base all'adesione **ai primi due inviti**

Aderenti: coloro che hanno risposto a tutti e due gli inviti
Non aderenti: coloro che non hanno risposto a nessuno dei due inviti

Per chi ha avuto solo un invito, l'esposizione è valutata solo su questo

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Casi di cancro colo-rettale (CCR) per adesione, sesso, età al primo invito, stadio e sede

	Maschi		Femmine	
	Casi CCR aderenti	**Casi CCR non Aderenti**	**Casi CCR aderenti**	**Casi CCR non aderenti**
	N = 1,994	N = 2,496	N = 1,681	N = 1,628
Età				
50-54	354 (17.8)	527 (21.1)	373 (22.2)	405 (24.9)
55-59	392 (19.7)	479 (19.2)	361 (21.5)	331 (20.3)
60-64	512 (25.7)	625 (25.0)	390 (23.2)	337 (20.7)
65-69	736 (36.9)	865 (34.7)	557 (33.1)	555 (34.1)
Stadio[a]				
I	830 (42.3)	508 (20.7)	657 (40.6)	290 (18.7)
II	426 (21.7)	560 (22.8)	335 (20.7)	409 (26.4)
III	402 (20.5)	551 (22.4)	361 (22.3)	358 (23.1)
IV	224 (11.4)	661 (26.9)	195 (12.0)	400 (25.8)
Missing	80 (4.1)	175 (7.1)	71 (4.4)	93 (6.0)
Sede				
Colon prossimale	723 (36.3)	750 (30.0)	688 (40.9)	567 (34.8)
Colon distale	697 (35.0)	915 (36.7)	575 (34.2)	549 (33.7)
Retto	528 (26.5)	764 (30.6)	343 (20.4)	417 (25.6)
Ano e canale anale	32 (1.6)	41 (1.6)	62 (3.7)	78 (4.8)
Colon Nas	14 (0.7)	26 (1.0)	13 (0.8)	17 (1.0)

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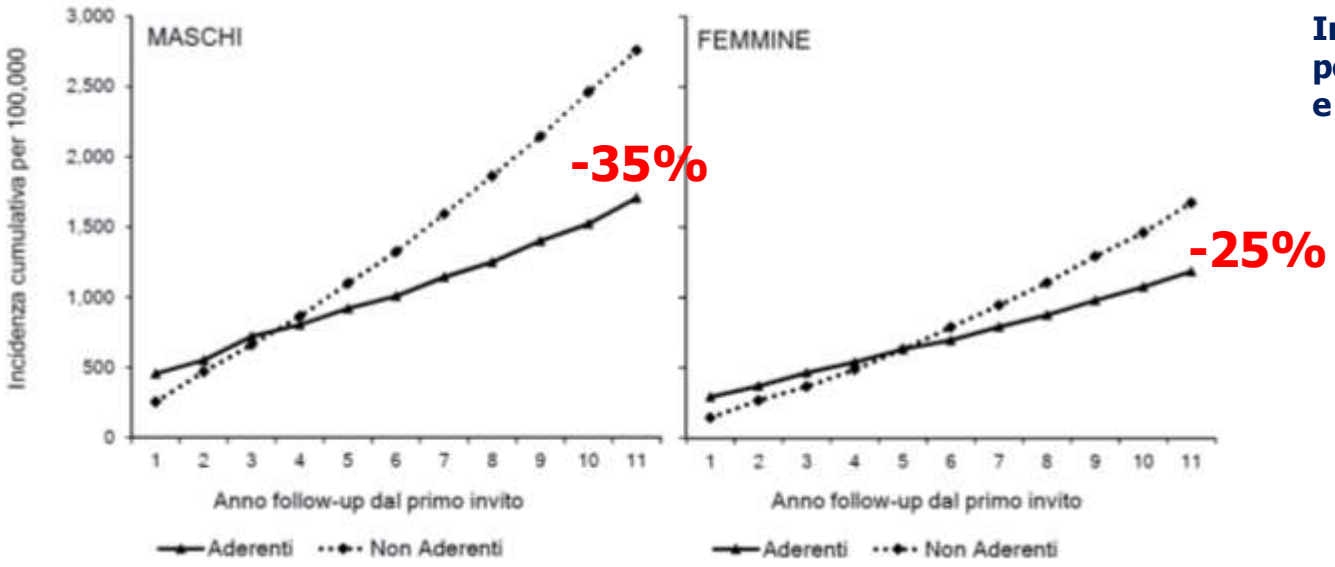

Incidenza cumulativa per adesione, sesso e anno di follow-up

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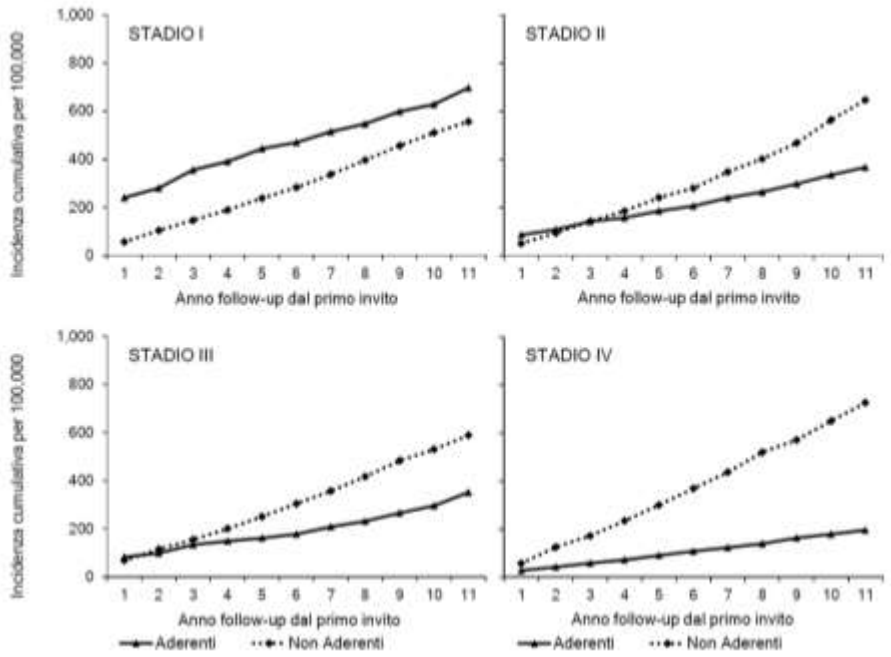
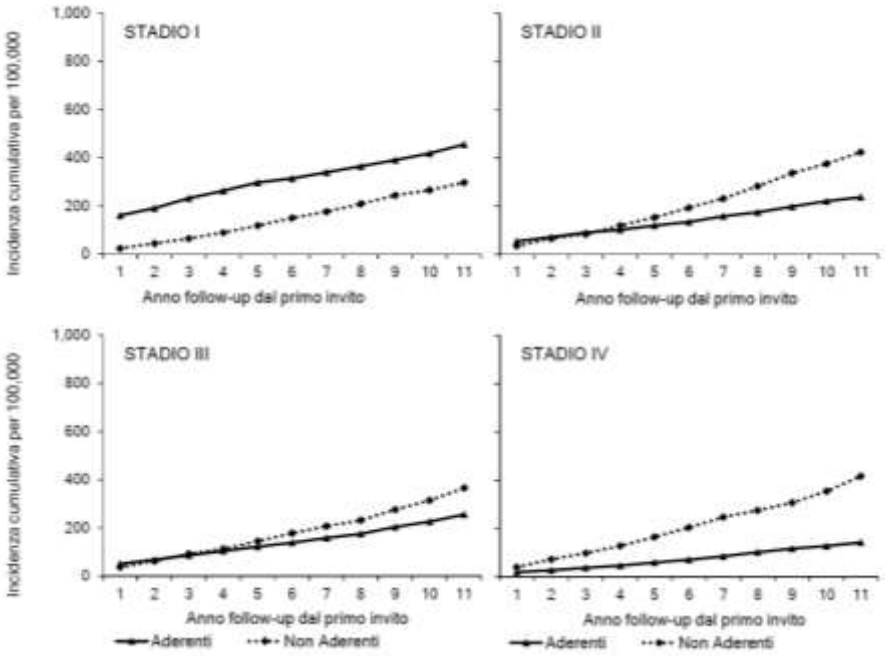


Incidenza cumulativa per adesione, stadio e anno di follow-up. MASCHI

Effects of Attendance to an Organized Fecal Immunochemical Test Screening Program on the Risk of Colorectal Cancer: An Observational Cohort Study

Flavia Baldacchini,[*] Lauro Bucchi,[*] Orietta Giuliani,[*] Silvia Mancini,[*] Alessandra Ravaioli,[*] Rosa Vattiato,[*] Federica Zamagni,[*] Paolo Giorgi Rossi,[‡] Lucia Mangone,[‡] Cinzia Campari,[§] Romano Sassatelli,[‖] Paolo Trande,[¶] Pasqualina Esposito,[¶] Federica Rossi,[#] Giuliano Carrozzi,[**] Omero Triossi,[‡‡,¤] Carlo Fabbri,[§§] Enrico Strocchi,[‖‖] Mauro Giovanardi,[¶¶] Debora Canuti,[##] Priscilla Sassoli de Bianchi,[##] Stefano Ferretti,[***] and Fabio Falcini,[*,‡‡‡] on behalf of the Emilia-Romagna Region Workgroup for Colorectal Screening Evaluation

Clinical Gastroenterology and Hepatology 2022;



Incidenza cumulativa per adesione, stadio e anno di follow-up. FEMMINE

Effects of Attendance to an Organized Fecal Immunochemical Test Screening Program on the Risk of Colorectal Cancer: An Observational Cohort Study

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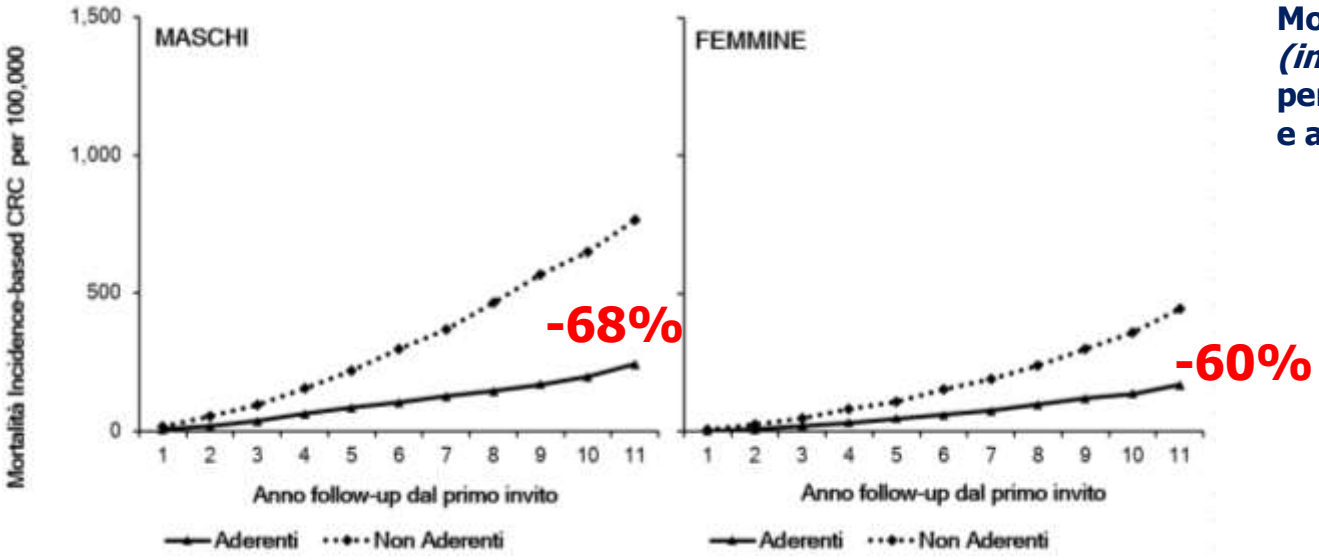

Mortalità cumulativa *(incidence-based mortality)* per adesione, sesso e anno di follow-up

Effects of Attendance to an Organized Fecal Immunochemical Test Screening Program on the Risk of Colorectal Cancer: An Observational Cohort Study

Flavia Baldacchini,* Lauro Bucchi,* Orietta Giuliani,* Silvia Mancini,* Alessandra Ravaioli,* Rosa Vattiato,* Federica Zamagni,* Paolo Giorgi Rossi,‡ Lucia Mangone,‡ Cinzia Campari,§ Romano Sassatelli,‖ Paolo Trande,¶ Pasqualina Esposito,# Federica Rossi,** Giuliano Carrozzi,** Omero Triossi,‡‡,** Carlo Fabbri,§§ Enrico Strocchi,‖‖ Mauro Giovanardi,¶¶ Debora Canuti,## Priscilla Sassoli de Bianchi,### Stefano Ferretti,*** and Fabio Falcini,*,‡‡‡ on behalf of the Emilia-Romagna Region Workgroup for Colorectal Screening Evaluation

La pubblicazione dell'articolo su Clinical Gastroenterology and Hepatology, una delle riviste ufficiali dell'American Gastroenterological Association, è stata commentata in un Editoriale che contiene una forte apertura alla tesi che il FIT è il test di screening migliore per i programmi di sanità pubblica

Clinical Gastroenterology and Hepatology Vol. ■, No. ■

EDITORIAL

Fecal Immunochemical Tests: The Right Colorectal Cancer Screening Test for the Average-Risk Population?

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International Agency for Research on Cancer
Lyon, France

KEVIN SELBY
Center for Primary Care and Public Health (Unisanté)
University of Lausanne
Lausanne, Switzerland

Evidence is mounting that although one should still offer colonoscopy as an initial screening test for selected individuals, especially those at increased risk of CRC, FIT may be the best test for the average-risk population in a programmatic setting.

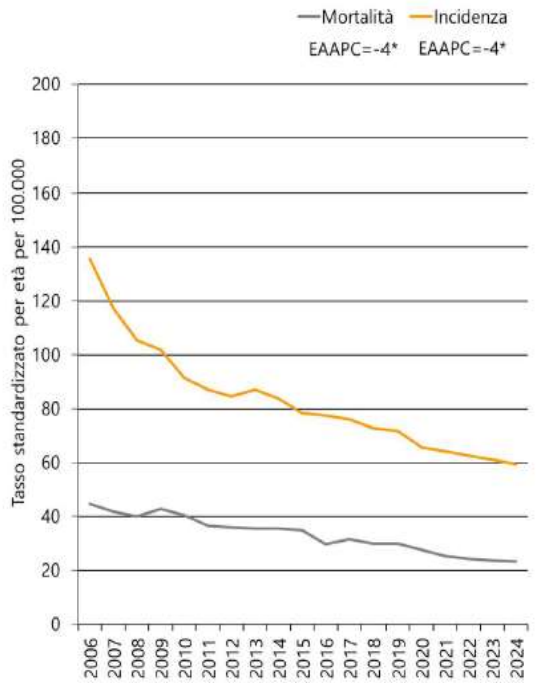
…and what about Emilia-Romagna?

Colon-retto - Maschi

Tabella 1. Incidenza e mortalità.
Periodo 2017-2020

Indicatori	Incidenza	Mortalità
Numero casi/anno	1741	724
% sul totale dei tumori	11,0	10,1
Tasso grezzo (per 100.000)	80,5	33,5

Figura 1. Incidenza e mortalità: andamento temporale dei tassi. Periodo 2006-2024

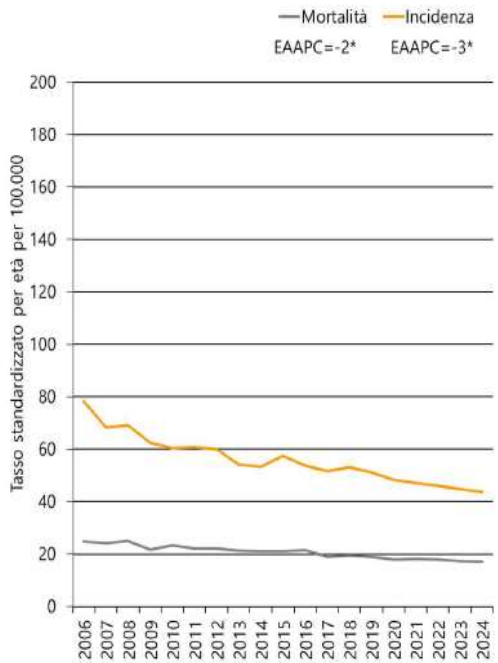


Colon-retto - Femmine

Tabella 1. Incidenza e mortalità.
Periodo 2017-2020

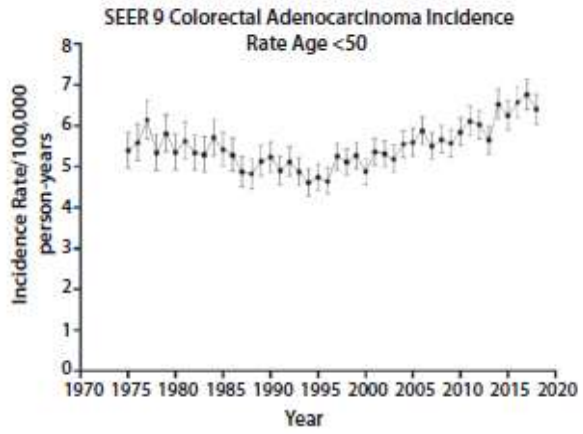
Indicatori	Incidenza	Mortalità
Numero casi/anno	1585	669
% sul totale dei tumori	10,7	10,9
Tasso grezzo (per 100.000)	69,3	29,2

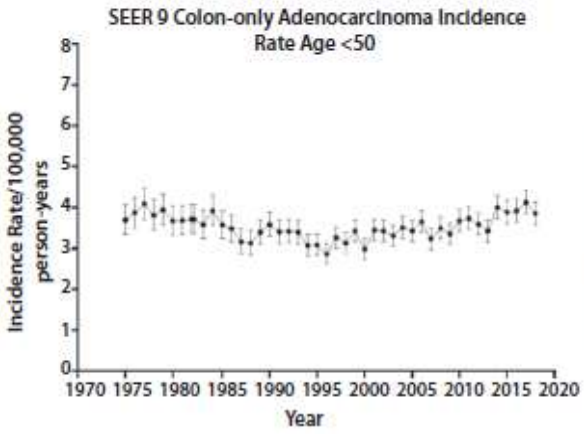
Figura 1. Incidenza e mortalità: andamento temporale dei tassi. Periodo 2006-2024

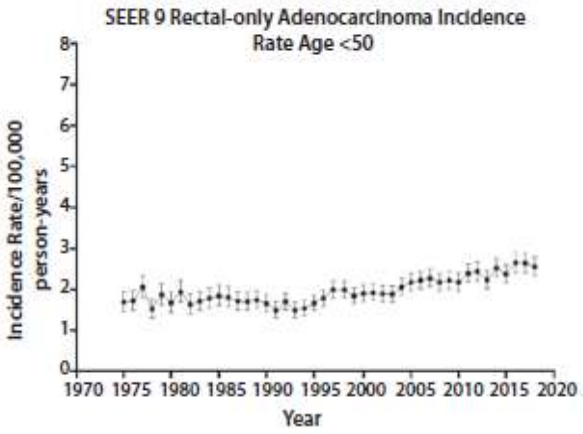


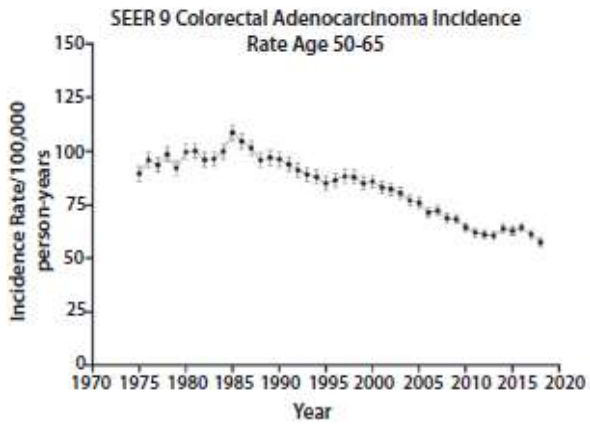
“Youth” Screening

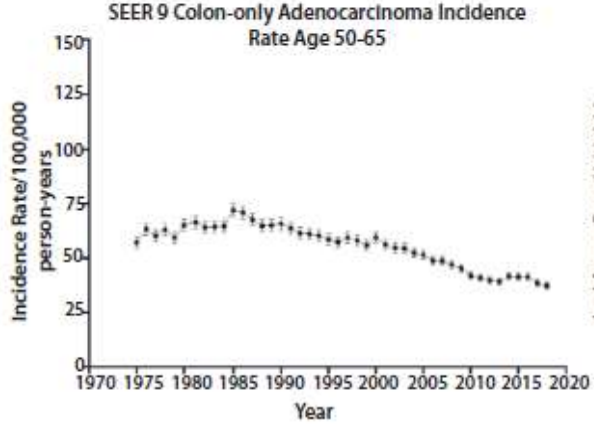
“Geriatric” Screening

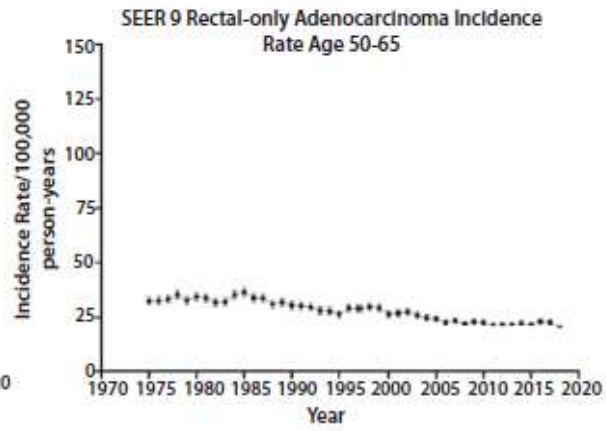


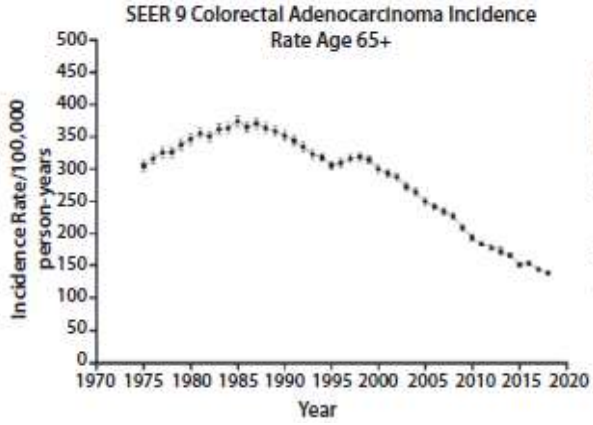


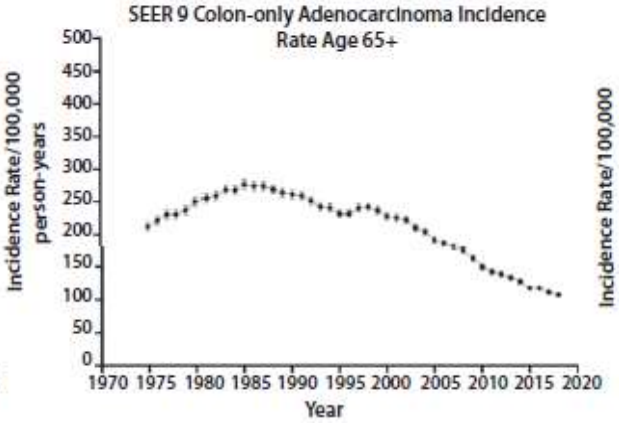


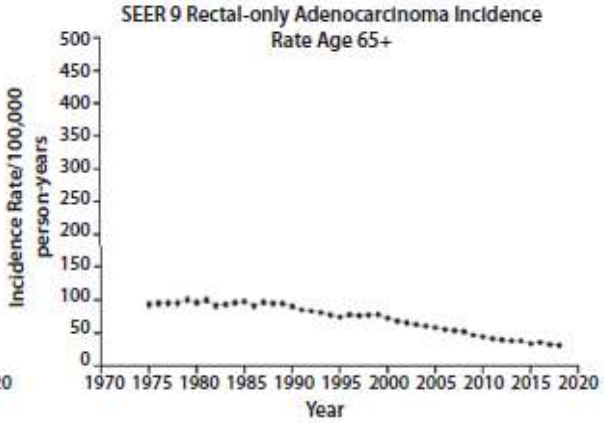












Montminy EM, Ann Int Med 2021

Screening starting at 45 years

Table 3. Life-Years Gained, Additional Colonoscopies Required, and Adverse Events of Screening per 1000 Individuals Screened at Ages 45-75 Compared With Ages 50-75

	Additional life-years gained	CRC prevented	CRC death averted	Additional tests required	Additional adverse events
Colonoscopy every 10 y	16-34	1-4	1-2	Colonoscopy: 756-800	2
Annual FIT	17-33	1-4	1	FIT: 3387-3520 Colonoscopy: 175-205	1
Triennial sDNA–FIT	16-31	1-4	1	sDNA–FIT: 1166-1201 Colonoscopy: 177-196	<1
Flexible sigmoidoscopy every 5 y	13-30	1-3	1	Flexible sigmoidoscopy: 743-801 Colonoscopy: 170-192	<1
CT colonography every 5 y	14-31	1-3	1	CT colonography: 798-806 Colonoscopy: 153-165	1

NOTE. Results are based on 3 independently developed microsimulation models from the Cancer Intervention and Surveillance Modeling Network: Simulation Model of Colorectal Cancer, Colorectal Cancer Simulated Population model for Incidence and Natural history, and Microsimulation Screening Analysis for Colorectal Cancer.[57]
CRC, colorectal cancer; FIT, fecal immunochemical testing; sDNA, stool DNA.

Patel et al, Gastroenterology 2022

“Geriatric” screening

JAMA Oncology | Original Investigation

Association of Screening Lower Endoscopy With Colorectal Cancer Incidence and Mortality in Adults Older Than 75 Years

Screening endoscopy after 75 years of age was associated with reduced risk of CRC incidence (multivariable hazard ratio [HR], 0.61; 95%CI, 0.51-0.74) and CRC-related mortality (HR, 0.60; 95%CI, 0.46-0.78)

Ma W, et al. Jama Oncology 2021

"Geriatric" screening

Clinical Gastroenterology and Hepatology 2021;19:547–555

Calculation of Stop Ages for Colorectal Cancer Screening Based on Comorbidities and Screening History

	Women				Men			
Screening history[a]/comorbidity status[b]	No	Low	Mod	Sev	No	Low	Mod	Sev
Perfect prior screening with FIT	78[c]	72[d]	72[d]	66[d]	76[c]	76[c]	72[d]	66[d]
Most prior screening with FIT	84[c]	82[c]	78[c]	70[d]	80[c]	80[c]	76[c]	70[d]
Reasonable prior screening with FIT	86[c]	84[c]	82[c]	76[c]	82[c]	82[c]	78[c]	74[e]
Some prior screening with FIT	88[c]	86[c]	86[c]	80[c]	84[c]	84[c]	82[c]	78[c]
No prior screening	90[c]	90[c]	90[c]	86[c]	88[c]	88[c]	86[c]	82[c]
Colonoscopy 10 years prior	74[e]	68[d]	66[d]	<66[d]	73[d]	72[d]	69[d]	<66[d]
Colonoscopy 15 years prior	83[c]	76[c]	74[e]	68[d]	80[c]	78[c]	75[c]	66[d]

Registro regionale tumori, in Emilia-Romagna la sopravvivenza a cinque anni per i malati oncologici è superiore al dato nazionale: 65% per gli uomini e 69% per le donne

> Dal 2025 la Regione estende lo screening gratuito per il cancro del colon-retto alla fascia d'età 70-74 anni

A partire dal prossimo anno inizierà la graduale estensione dell'invito a screening per effettuare il **test del sangue occulto nelle feci** alle persone di età compresa tra i 70 e i 74 anni. **Si partirà nel 2025 proseguendo l'invito per i nati nel 1955** che nel corso dell'anno compiranno i 70 anni, in continuità con la cadenza biennale dall'ultimo test eseguito o invito ricevuto, e **contemporaneamente sarà invitata l'intera coorte dei nati nel 1951 che compiranno i 74 anni** e che avranno così l'opportunità di eseguire un ulteriore screening prima di uscire dalla popolazione target.

Nel 2026 si aggiungeranno altre due coorti da invitare: quella del 1956 e del 1952, proseguendo così fino al 2028, quando i 70-74enni saranno tutti compresi nella chiamata di screening. **In questo modo verrà offerto almeno un ulteriore invito a effettuare lo screening a tutte le coorti che nel 2025 compiranno tra i 70 e i 74 anni.**

Chiunque è in fascia di età tra i 50 e 69 anni, residente o domiciliato assistito in Emilia-Romagna, anche se non ha aderito precedentemente, può contattare il centro screening della propria Azienda Usl e chiedere di effettuare il test del sangue occulto nelle feci, che è offerto gratuitamente ogni due anni.

Per approfondire

DIGESTIVE FINDINGS THAT DO NOT REQUIRE ENDOSCOPIC SURVEILLANCE

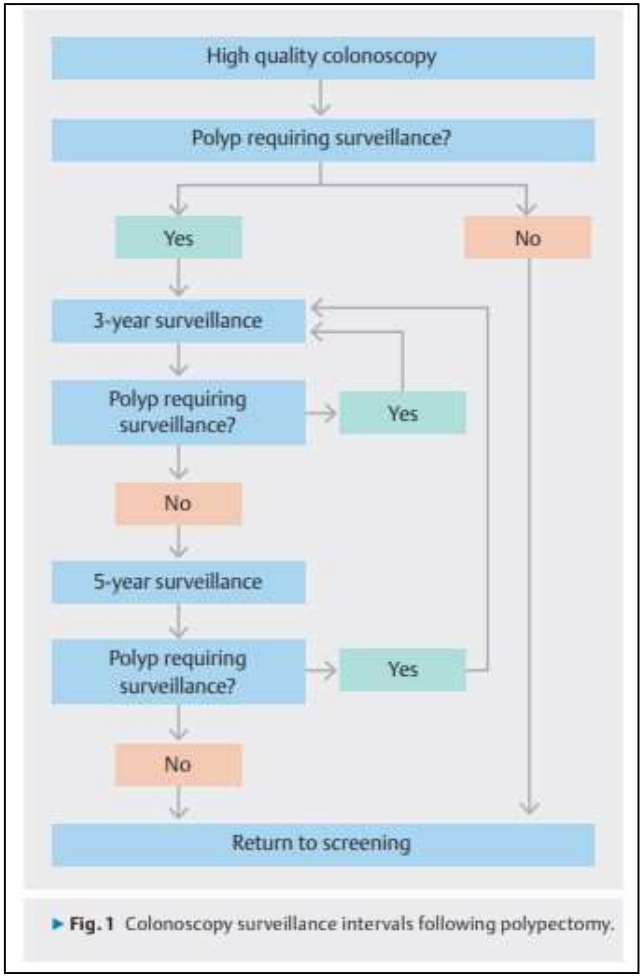
	Finding or condition	Prevalence	Malignancy risk
Esophagus	Inlet patch	0.1%–12%	0–1.6% risk of dysplasia
	Erosive esophagitis	11%	0–9% risk of Barrett's esophagus for LA grade A or B erosive esophagitis
	<1 cm columnar-lined esophagus	10%	No increased risk of esophageal cancer
Stomach	Intestinal metaplasia or atrophy limited to one location (i.e., antrum or corpus only)	Up to 25%	0.55% risk of progression to gastric cancer
	Fundic gland polyps	13%–77%	No documented risk of gastric cancer if <1 cm and no suspicious features
Subepithelial lesions	Leiomyoma	0.08%–0.43%	Benign lesion
	Lipoma	0.2%	Benign lesion
	Pancreatic rest	0.6%–13.7%	Anecdotal malignant transformation
Duodenum	Duodenal peptic ulcer	2%–13%	No cancer risk
Pancreas	Serous cystic neoplasm	Up to 16% of pancreatic cystic neoplasms	Benign lesion
Colon	Low-risk adenomas	~15%–30%	No increased risk versus general population

LA, Los Angeles [classification of gastroesophageal reflux disease]

No surveillance in patients over 80 years old with poor general health status

Rodríguez-de-Santiago Enrique et al. Digestive findings that do not require endoscopic surveillance: ESGE 2020

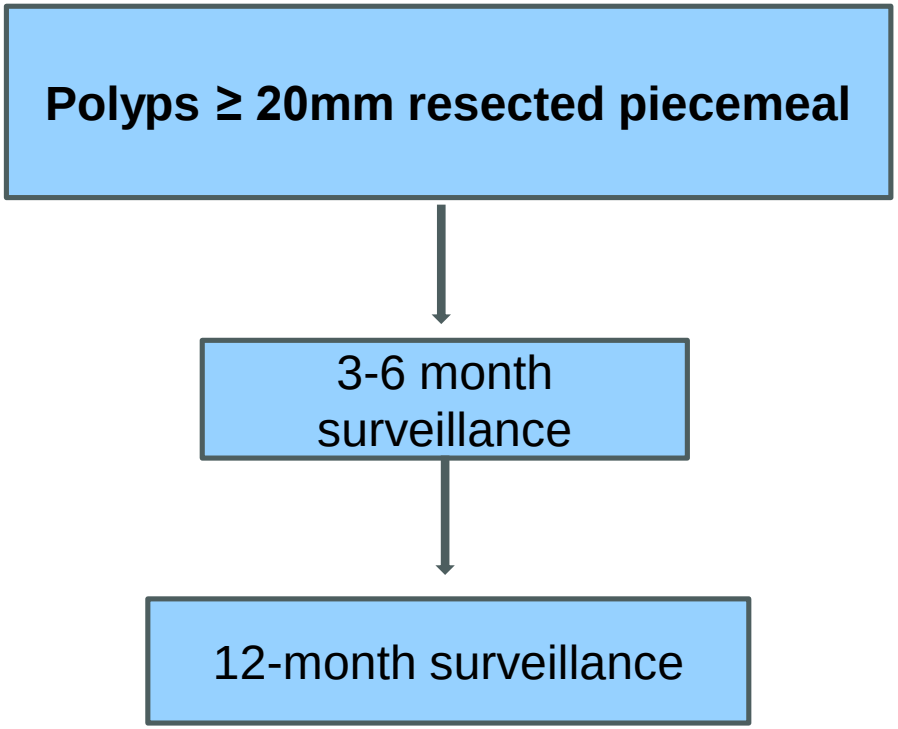
POST-POLYPECTOMY COLONSCOPY SURVEILLANCE



▶ **Fig. 1** Colonoscopy surveillance intervals following polypectomy.

SURVEILLANCE	NO SURVEILLANCE
High grade dysplasia	1- 4 < 10 mm adenomas
At least 1 adenoma ≥ 10mm	Low grade dysplasia
≥ 5 adenomas	Serrated polyp < 10 mm without dysplasia
Any serrated polyp with dysplasia ≥ 10 mm	

Hassan C et al. Post-polypectomy colonoscopy surveillance: ESGE 2020



Hassan Cesare et al. Post-polypectomy colonoscopy surveillance: ESGE 2020

Preparazione alla colonscopia

Corretta priorità?

Alto rischio di preparazione inadeguata?

Corretta scelta del purgante?

Corretto timing della preparazione?

Corretta gestione dell’anticoagulante?

Quale ruolo MMG per colonscopia?

Pre-procedura

Colonscopia

Performance measures for lower gastrointestinal endoscopy: a European Society of Gastrointestinal Endoscopy (ESGE) Quality Improvement Initiative

ESGE ueg

Post-procedura

Pre-procedura

1. Selezione (e *prioritizzazione*) dei soggetti sintomatici a rischio

Classe di Priorità		COLONSCOPIA
U	Entro 72h	Livello priorità NON previsto [Condizioni di urgenza/ emergenza (es. rettorragia massiva, corpo estraneo). Prevedono presa in carico da parte PS]
B	Breve Entro 10 gg	• Anemizzazione (Hb <10g/dL) di recente insorgenza con sintomi digestivi • Sanguinamento non compendiato come urgente, rettorragia/ enterroragia non grave, diarrea muco-emorragica non infettiva • Sospetto clinico e/o strumentale di neoplasia • ALTRO (10%)*: descrivere in dettaglio la condizione clinica*
D	Differita Entro 60gg	• Anemia sideropenica • Diarrea che perdura da almeno 30 giorni con accertamenti infettivologici negativi • Perdite ematiche minori (ematochezia) • FIT+ in paziente asintomatico • Sintomatologia dolorosa addominale e alterazione dell'alvo in paziente con età > 50aa, mai indagata con colonscopia • Alterazioni radiologiche di natura non neoplastica con quadro clinico compatibile • Stadiazione pre-trapianto • ALTRO (10%): *descrivere in dettaglio la condizione clinica*
P	Programmata Entro 180 gg	• Paziente < 50 aa con modificazioni persistenti dell'alvo da almeno 3 mesi, senza fattori di rischio, dopo inefficacia dei trattamenti empirici • Esami di sorveglianza • Altre condizioni non riconducibili alle indicazioni precedentemente elencate

Pre-procedura

Corretta preparazione all'esame

Dieta

Preparazione

Farmaci

Splittare i bassi volumi aumenta la tollerabilità

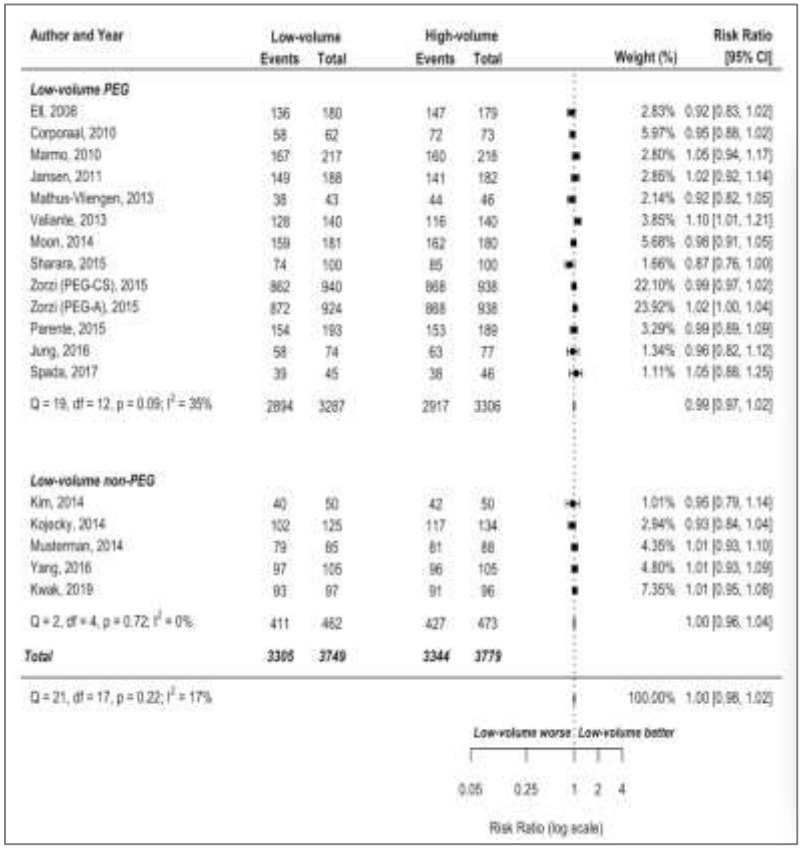
Basso vs Alto volume Split	RR	95%CI
Volontà di ripetere la stessa preparazione	1.41	1.20-1.66
Tollerabilità	1.39	1.12-1.74

17 RCTs; n = 7528

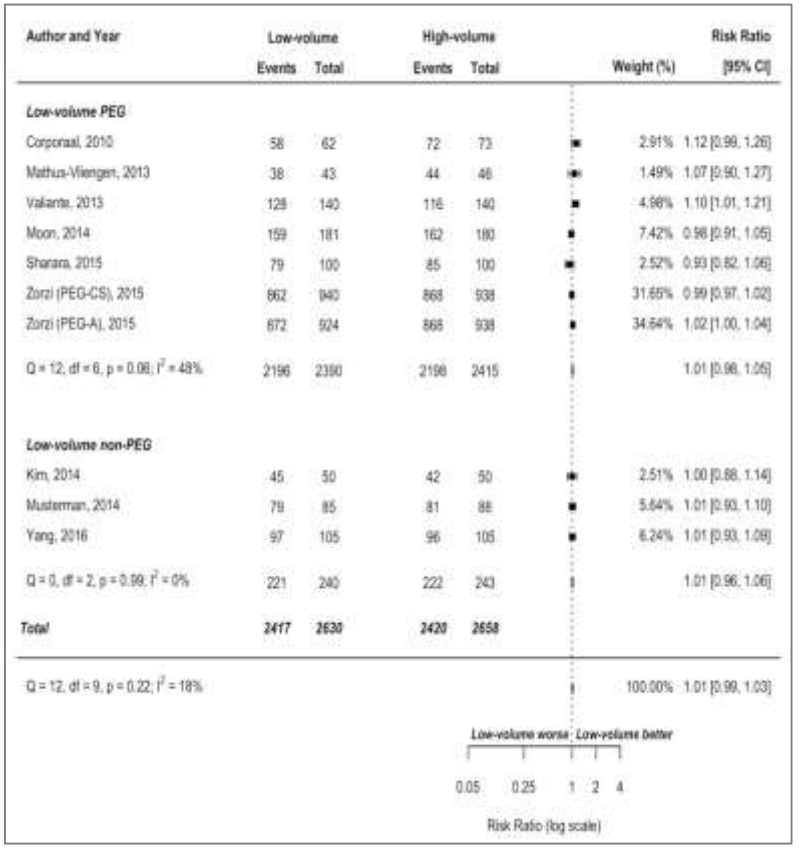
Spadaccini, CGH 2020

Ricordiamoci dei bassi volumi…

Tasso di adeguatezza tutto il colon



Tasso di adeguatezza colon destro



17 RCTs; n = 7528

Alto volume = Basso volume

Spadaccini, CGH 2020

Come «splittare»?

Time elapsed from the last dose of bowel purgative intake to colonoscopy session	Split- vs Non-split (RD)	p
≤ 3 hours	0.23 (0.143-0321)	.00
4-5 hours	0.18 (0.112-0.243)	.00
> 5 hours	0.03 (- 0.078-0.142)	.56

《ESGE recommends to start the last dose of bowel preparation within 5 hours of colonoscopy, and to complete it at least 2 hours before the beginning of the procedure》.

Strong recommendation, moderate quality evidence.

Hassan, Endoscopy 2020

Pre-procedura

Gestione farmaci antitrombotici

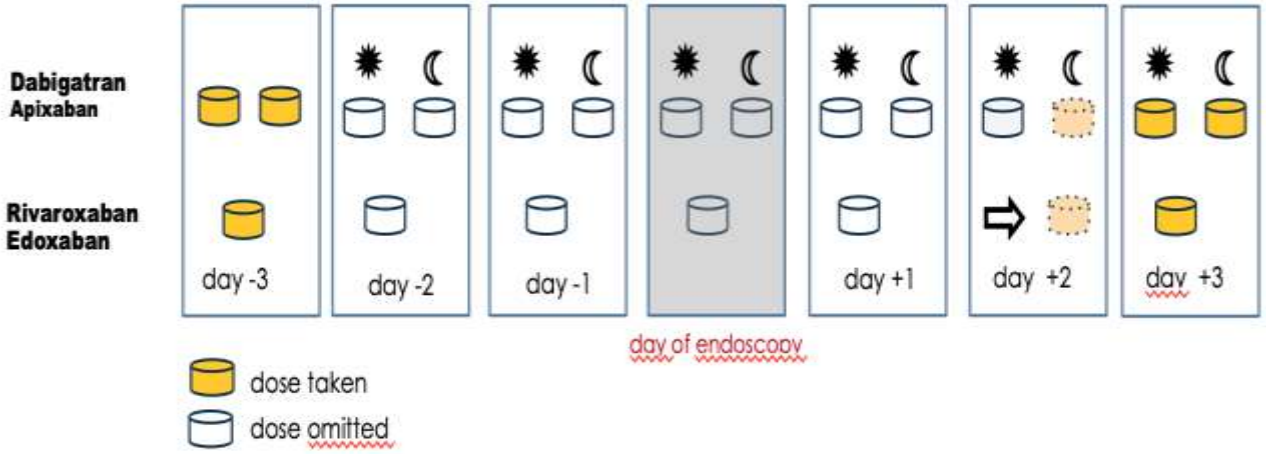
Considerazioni generali:

- Colonscopia è procedura con alta probabilità di operatività (“alto rischio”)
- Aspirina (profilassi secondaria) non necessita mai sospensione
- Terapia anticoagulante (warfarin, DOAC) preferenzialmente da sospendere
- Gestione della “doppia antiaggregazione” sempre da condividere con cardiologo

Pre-procedura

Procedure ad alto rischio emorragico

DOAC → Sospensione



Dabigatran, CrCl 30-50ml/min: ultima dose 72 ore prima dell'esame

Jama 2019
Endoscopy 2021

Considerare ripresa dopo 72-96 ore serischio di sanguinamento tardivo significativo (EMR lesioni >20mm, ESD)

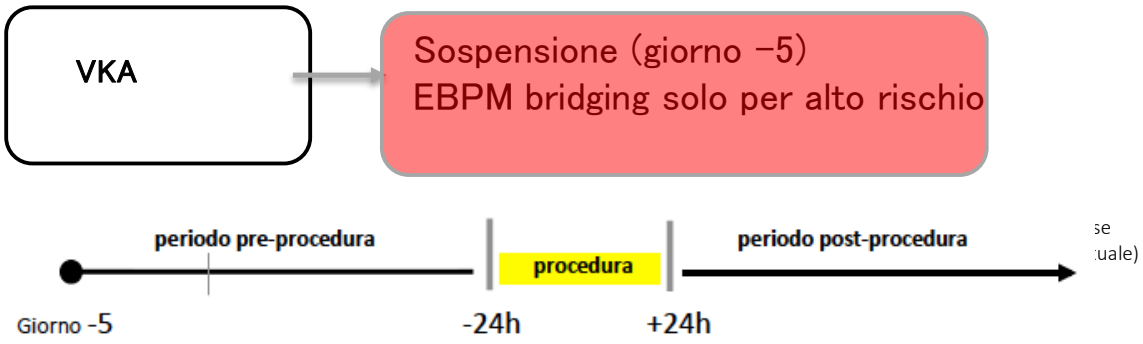
Pre-procedura

Antiaggreganti piastrinici (procedure operative)

	Aspirina	**Clopidogrel Ticlopidina**	**Prasugrel**	**Ticagrelor**
Meccanismo azione	Inibizione enxima cox-1 (blocco sintesi TXA_2)	Inibizione irreversibile recettore P2Y12 (blocco via ADP-dipendente)	Inibizione irreversibile recettore P2Y12 (blocco via ADP-dipendente)	Antagonista reversibile recettore P2Y12 (blocco via ADP-dipendente)
Utilizzo clinico	singola *oppure* doppia antiaggregazione	singola *oppure* doppia antiaggregazione	doppia antiaggregazione	doppia antiaggregazione
Potenza antiaggregante	+	++	+++	+++
Rischio emorragico	++	++	+++	+++
Tempo minimo di sospensione (per ripristino aggregazione piastrinica)	5gg	5gg	7gg	5gg

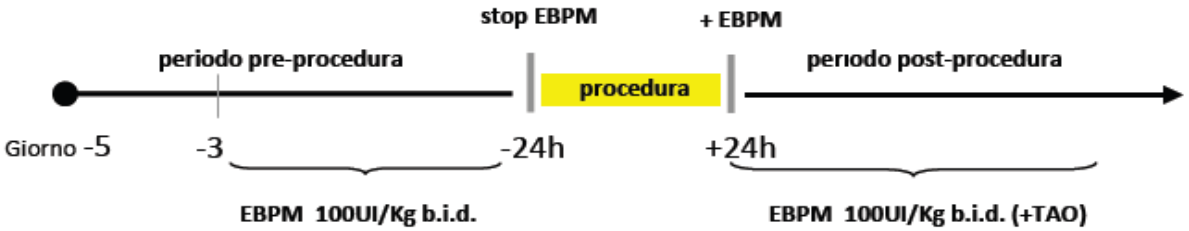
Pre-procedura

Procedure ad alto rischio emorragico



Indicazioni a EBPM bridging:

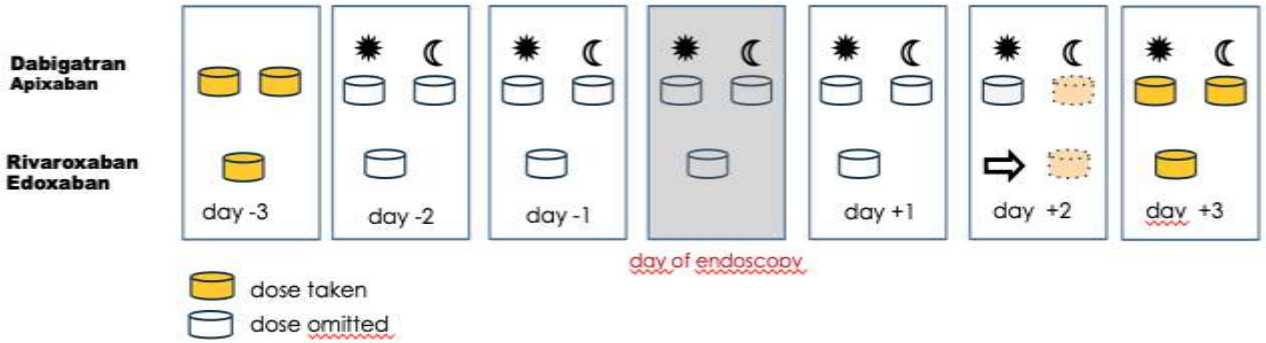
- Protesi meccanica mitralica
- Protesi meccanica + pregresso evento TE
- FA + (stroke o TIA recenti)
  oppure + ($CHADS_2$ 5-6)
- TEV recente (<3 mesi)



Pre-procedura

Procedure ad alto rischio emorragico

DOAC → Sospensione



Dabigatran, CrCl 30-50ml/min: ultima dose 72 ore prima dell'esame

Jama 2019
Endoscopy 2021

Considerare ripresa dopo 72-96 ore se rischio di sanguinamento tardivo significativo (EMR lesioni >20mm, ESD)

E la prevenzione primaria?
Stili di vita!

Gastroenterology 2015;148:1244–1260

Nutrients, Foods, and Colorectal Cancer Prevention



Mingyang Song[1,2] *Wendy S. Garrett*[3,4,5,6] *Andrew T. Chan*[5,7,8]

E la prevenzione primaria: stili di vita!

Nutrient or food	Level of evidence[a]	Estimate of RR[b]	Proposed mechanisms
Nutrient			
Calcium	Probable	RR, 0.92 (95% CI, 0.89–0.95) per 300 mg/day increase of total calcium intake[74]	Binding to fatty acids and free bile acids, suppression of cell proliferation, promotion of cell differentiation and apoptosis, inhibition of oxidative DNA damage, and modulation of colorectal cancer-related cell signaling pathways
Vitamin D	Limited-suggestive	RR, 0.95 (95% CI, 0.93–0.98) per 100 IU/day increase of dietary vitamin D intake; RR, 0.96 (95% CI, 0.94–0.97) per 2.5 ng/mL (6.25 nmol/L) increase of circulating 25(OH)D[7]	Antiproliferation, prodifferentiation and apoptosis, anti-inflammation, inhibition of invasion and metastasis, and suppression of angiogenesis
Fiber	Convincing	RR, 0.90 (95% CI, 0.86–0.94) per 10 g/day increase of dietary fiber intake[131]	Increased stool weight, decreased transit time, dilution of colonic carcinogenic content, decreased adiposity, and anticancer properties of short-chain fatty acids produced by bacterial fermentation of resistant starch
Folate	Limited-suggestive	RR, 0.99 (95% CI, 0.93–1.05) per 100 μg/day increase of dietary folate intake; RR, 0.98 (95% CI, 0.94–1.03) per 100 μg/day increase of total folate intake[7]	Essential nutrient for DNA methylation and DNA synthesis, critical processes in carcinogenesis
Vitamin B6	N/A	RR, 0.90 (95% CI, 0.75–1.07) comparing the highest with the lowest categories of vitamin B6 intake; RR, 0.51 (95% CI, 0.38–0.69) per 100 pmol/mL increase of blood level of pyridoxal 5'-phosphate[218]	One-carbon metabolism, critical for DNA synthesis and DNA methylation
Methionine	N/A	RR, 0.89 (95% CI, 0.79–1.00) comparing the highest with the lowest categories[228]	One-carbon metabolism, critical for DNA synthesis and DNA methylation; inhibition of cell growth and reduced inflammation
Vitamin A, C, E	Limited-no conclusion	RR, 0.93 (95% CI, 0.79–1.10) for total vitamin A; RR, 0.86 (95% CI, 0.74–1.00) for total vitamin C; and RR, 0.83 (95% CI, 0.70–0.99) for total vitamin E, comparing the highest with the lowest categories[255]	Antioxidative, inhibition of cell proliferation, pro-apoptosis, and reduced inflammation
Selenium	Limited-no conclusion	RR, 0.81 (95% CI, 0.71–0.92) comparing the highest with the lowest categories of selenium concentrations in serum, plasma, or toenails[253]	Antioxidative, inhibition of cell proliferation, pro-apoptosis, and reduced inflammation
Total fat	Limited-no conclusion	RR, 0.99 (95% CI, 0.89–1.09) comparing the highest with the lowest categories[307]	Increased intestinal level of bile acids, which can be metabolized by bacteria to deoxycholic acid to promote CRC development
Omega-3 polyunsaturated fatty acids	Limited-no conclusion	RR, 0.97 (95% CI, 0.86–1.10) comparing the highest with the lowest categories[314]	Reduced inflammation through inhibition of arachidonic acid–derived eicosanoid biosynthesis, and modulation of transcription factor activity, gene expression, and signal transduction; improved insulin sensitivity; altered cell membrane fluidity

E la prevenzione primaria: stili di vita!

Food			
Red and processed meat	Convincing	RR, 1.16 (95% CI, 1.04–1.30) per 100 g/day increase of red and processed meat intake[7]	Carcinogenic effect of heme iron, N-nitro compounds, and heterocyclic amines generated during cooking at high temperature; proneoplastic effect of increased adiposity and insulin
Milk	Probable	RR, 0.91 (95% CI, 0.85–0.94) per 200 g/day increase of total milk intake[4,19]	Antineoplastic effect of calcium, vitamin D (for fortified milk), conjugated linoleic acid, butyric acid, and lactose
Fruits	Limited-suggestive	RR, 0.97 (95% CI, 0.94–0.99) per 100 g/day increase of fruit intake[7]	Anticarcinogenic compounds, such as folate, vitamins, fiber, minerals, and flavonoids; decreased adiposity

Food Chemistry
Volume 356, 15 September 2021, 129697

Review

Red and processed meat consumption and cancer outcomes: Umbrella review

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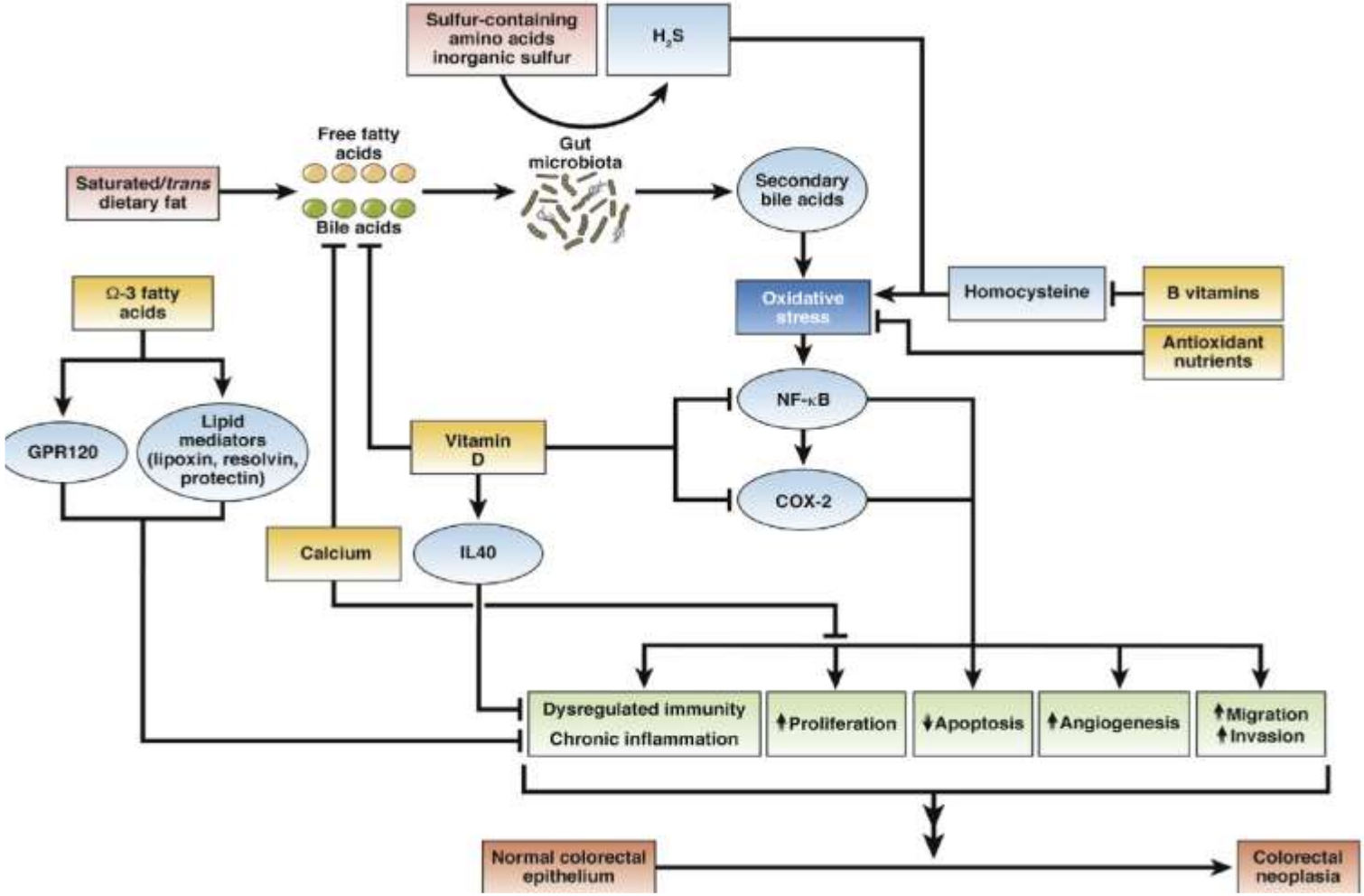
Highlights

- Umbrella review of various cancer risks related to red and processed meat intake.
- 100 g/d increment of red meat could increase by 11–51% risk of multiple cancer.
- 50 g/d increment of processed meat could increase by 8–72% risk of multiple cancer.
- Red and processed meat consumption seems to be not related to any benefit of cancer.



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