Ruolo della colonscopia e della colon TC nel II livello del programma di screening

Roberto Rizzati

Bologna, 5 Aprile 2018

U.O Interaziendale AUSL
Arcispedale Sant'Anna Ferrara
Dir. Giorgio Benea

CTC e screening - Stato dell'arte (2017)

Radiol Clin North Am. 2017 Nov;55(6):1183-1196. doi: 10.1016/j.rcl.2017.06.009.

Imaging and Screening for Colorectal Cancer with CT Colonography.

Pickhardt PJ[1].

Author information

Abstract

Despite being readily preventable, colorectal cancer ranks second behind only lung cancer in overall mortality. However, this situation could be reversed if screening tests that effectively detect advanced adenomas and early cancers were broadly applied. Computed tomographic colonography (CTC) reflects an ideal balance of minimal invasiveness with high-level performance, assuming all facets of the examination are appropriately addressed. Unfortunately, this promising screening test remains grossly underused. This article details the technical and interpretive approaches used by one successful CTC screening program.

KEY POINTS

- Colorectal cancer (CRC) is readily preventable via screen detection of clinically relevant polyps using either virtual or optical colonoscopy.
- In addition to primary cancer prevention, detection of early-stage cancer is another important goal of CRC screening.
- Computed tomographic colonography (CTC) is a validated screening test that is equivalent to invasive colonoscopy for detection of advanced neoplasia, but is safer, more cost-effective, and more convenient for patients.
- High-quality results can be achieved with CTC screening in clinical practice when proven methods are applied.
- This review provides an updated blueprint for setting up a successful CTC screening program.

CTC – accuratezza (metanalisi)

Study	Quality[a]	Study Site	Cohort Size	Mean Patient Age, y	Fecal Tag[b]	No. of Readers, Training[c]	Reading Strategy[d]	Reference Standard	Adenoma ≥6 mm, % (95% CI)		Adenoma ≥10 mm, % (95% CI)	
									Sensitivity	Specificity	Sensitivity	Specificity
With Bowel Preparation												
Lefere et al,[89] 2013	Fair	Portugal	496	60	Yes	1, >5000 exams	3D (with 2D)	Repeat colonoscopy if indicated	98 (91-100)	91 (88-93)	NR	NR
Graser et al,[82] 2009	Good	Germany	307	60	No	3, >300 exams	3D (with 2D)	Colonoscopy, segmental unblinding[e]	91 (80-97)	93 (90-96)	92 (76-98)	98 (96-99)
Johnson et al,[85] 2008 (ACRIN)[f]	Good	United States	2531	58	Yes	15, >500 exams	3D (with 2D)	Repeat colonoscopy if indicated	78 (72-83)	90 (88-91)	90 (83-95)	86 (85-87)
Kim et al,[87] 2008	Fair	South Korea	241	58	No	2, >100 exams	2D (with 3D)	Single colonoscopy	68 (55-80)[g]	89 (84-93)[g]	87 (64-97)[h]	97 (95-99)[h]
Johnson et al,[86] 2007	Fair	United States	452	65	No	3, >1000 exams	3D (with 2D)[i]	Single colonoscopy	NR	NR	67 (45-84)	98 (96-99)
Macari et al,[93] 2004	Fair	United States	68	55	No	1, 5 y	NR	Single colonoscopy	NR	NR	100 (46-100)[j]	98 (93-100)[j]
Pickhardt et al,[99] 2003	Good	United States	1233	58	Yes	6, >25 exams	3D (with 2D)	Colonoscopy, segmental unblinding[e]	89 (83-93)	80 (77-82)	94 (84-98)	96 (95-97)

Conferma elevata accuratezza diagnostica per lesioni polipoidi **≥ 6 mm**

CT colonography: over two decades from discovery to practice

Perry J. Pickhardt,[1] Judy Yee,[2] C. Daniel Johnson[3]

[1]Department of Radiology, University of Wisconsin School of Medicine and Public Health, E3/311 Clinical Science Center, 600 Highland Avenue, Madison, WI 53792-3252, USA
[2]Department of Radiology, Montefiore Medical Center, Albert Einstein College of Medicine, 210 East 111 Street, Bronx, NY 10467, USA
[3]Department of Radiology, Mayo Clinic, 13400 E Shea Blvd, Scottsdale, AZ 85259-5452, USA

Conclusion

At the time of this writing, CMS has still not reopened the NCD for CTC screening. However, the authors see no legitimate reason why CTC should not be a covered screening test for Medicare beneficiaries—or for any other health insurance plan, for that matter. CTC has proven itself repeatedly to be clinically efficacious, highly cost effective, have an excellent safety profile, and have a strong patient preference. In short, CTC is better, faster, safer, and cheaper than OC—and also provides the critical preventive component largely missing in the emerging stool- or blood-based CRC-screening tests. A substantive change in how CRC screening is reimbursed, such as bundled payments, could immediately turn things around for CTC. To date, much like the colon itself, the path for CTC has been a truly long and winding road—but many more exciting chapters are yet to be written.

- ✓ Clinicamente efficace;
- ✓ Alto rapporto costo/beneficio;
- ✓ Eccellente profilo di sicurezza;
- ✓ Preferita dai pazienti.

CTC e screening – Oltreoceano (2016)

US Preventive Services Task Force | Evidence Report

FREE

June 21, 2016

Screening for Colorectal Cancer

Updated Evidence Report and Systematic Review for the US Preventive Services Task Force

Cancer Scree
Current Ame

Robert A. Smith, Ph

Colorectal	Men and women, aged ≥50 y, for all tests listed	Guaiac-b (gFOBT) sensitivit immuno at least for canc
		Multitarg
		Flexible
		Double-c
		Colonos
		CT color

Colon and rectal cancer

Beginning at age 50, both men and women at *average risk* for developing colorectal cancer should use one of the screening tests below. The tests that are designed to find both early cancer and polyps are preferred if these tests are available to you and you are willing to have one of these more invasive tests. Talk to your doctor about which test is best for you.

Tests that find polyps and cancer

- flexible sigmoidoscopy every 5 years*
- colonoscopy every 10 years
- double contrast barium enema every 5 years*
- CT colonography (virtual colonoscopy) every 5 years*

Tests that mainly find cancer

- fecal occult blood test (FOBT) every year*,**
- fecal immunochemical test (FIT) every year*
- stool DNA test (sDNA), interval uncertain*

Costi carcinoma colon retto

- RSO + Colonscopia + polipectomia = € **500** per caso guarito.
- RSO + Colonscopia + emicolectomia = € **5-8000** per caso guarito
- Emicolectomia + chemioterapia adiuvante = € **12-14000** per caso guarito

---

- Emicolectomia + chemioterapia palliativa = € **25-45000** per incremento sopravvivenza di 12-30 mesi
- Chemioterapia palliativa + farmaci biologici= € **40-60000** per incremento sopravvivenza di 12-30 mesi

E la Colonscopia Virtuale… ?

Ogni test di screening è un compromesso tra efficacia, compliance, sicurezza e costi

- Il FOBT è il test ideale di I livello

- La CV non può attualmente competere con il FOBT per:
  - Costi (non costo-efficacia)
  - Carenza di apparecchiature
  - Carenza di Radiologi

- La CV deve inserirsi a supporto di un programma di screening con FOBT+
  - Dopo colonscopia ottica, in sostituzione del CDC
  - SE colonscopia ottica incompleta o rifiutata

Sali L et al, WJG 2008 Liedenbaum MH et al, GUT 2009

Importante!

La Colonscopia Virtuale è il II miglior test diagnostico dopo la colonscopia !!!

La sensibilità per il CCR e per i polipi

è nettamente superiore rispetto al FOBT,

alla sigmoidoscopia e al clisma del colon

Health Technol Assess. 2015 Jul;19(54):1-134. doi: 10.3310/hta19540.

Computed tomographic colonography compared with colonoscopy or barium enema for diagnosis of colorectal cancer in older symptomatic patients: two multicentre randomised trials with economic evaluation (the SIGGAR trials).

Halligan S[1], Dadswell E[2], Wooldrage K[2], Wardle J[3], von Wagner C[3], Lilford R[4,5], Yao GL[4,6], Zhu S[4], Atkin W[2].

Come possiamo migliorare?

- Formazione MMG-Specialisti
- Linee guida congiunte con le altre società
- Mass media
- PDTA

Formazione MMG-Specialisti

Abstract ▾ Send to: ▾

Radiol Med. 2015 Jul 30. [Epub ahead of print]

CT colonography: a survey of general practitioners' knowledge and interest.

Flor N[1], Laghi A, Peri M, Cornalba G, Sardanelli F.

Author information

[1]Unità Operativa di Radiologia Diagnostica e Interventistica, Azienda Ospedaliera San Paolo, Via di Rudinì 8, 20142, Milan, Italy, nicola.flor@unimi.it.

Abstract

PURPOSE: To verify the knowledge and interest of general practitioners on computed tomography colonography (CTC).

MATERIALS AND METHODS: In 2014, a Web-based questionnaire was proposed to all general practitioners of [Milan, Italy]. The questionnaire consisted of ten questions concerning general practitioners' knowledge about CTC, including application of guidelines in clinical scenarios and diagnostic performance.

RESULTS: Out of 1,053 general practitioners, 231 (22 %), 155 men and 76 women (mean age 58 years), completed the survey. We found a significant difference between the age of responders and that of non-responders (p = 0.0033). Of the 231 responders, 84 % were aware of the possibility of using CTC as a method for examining the colon-rectum. However, only 57 % were aware about low X-ray exposure delivered by CTC and about the possibility of using a reduced cleansing protocol. Only 48 % were aware that CTC accuracy in diagnosing 10-mm or larger polyps and colorectal cancers was similar to that of conventional colonoscopy, while 62 % were informed about CTC advantages in comparison with double-contrast barium enema; 59 % thought that CTC had a potential role as a screening test; 85-86 % suggested CTC in the case of refused or incomplete conventional colonoscopy; 79 % suggested immediate conventional colonoscopy in the case of at least one 10-mm polyp. About 54 % usually prescribe one CTC every 4-6 months, while 36 % never have, 3 % one CTC per month, and 7 % one every 2-3 months. Ninety-four per cent declared that they were willing to attend a course on CTC.

CONCLUSION: General practitioners have limited knowledge concerning CTC. Radiological societies should fill this gap offering dedicated educational initiatives.

Sondaggio raccomandazioni MMG

CO (95%) o FOBT (80%); minoranza CV (5%)*

**Am J Prev Med, 2009*

Formazione MMG-Specialisti

SENSIBILITA' PER PAZIENTE							
	Tutti	≥ 5 mm	≥ 6 mm	≥ 7 mm	≥ 8 mm	≥ 9 mm	≥ 10 mm
ACRIN	-	65%	78%	84%	87%	90%	90%
IMPACT	-	-	85%	86%	88%	91%	91%
Munich	84%	91%	-	-	-	-	92%
SPECIFICITA' PER PAZIENTE							
ACRIN		89%	88%	87%	87%	86%	86%
IMPACT		-	88%	87%	86%	85%	85%
Munich	47%	93%	-	-	-	-	98%

ACCURATA PER I POLIPI

Settembre 2015

Radiology

Colorectal Polyps Missed with Optical Colonoscopy Despite Previous Detection and Localization with CT Colonography[1]

B. Dustin Pooler, MD
David H. Kim, MD
Jennifer M. Weiss, MD
Kristina A. Matkowskyj, MD, PhD
Perry J. Pickhardt, MD

Purpose: To retrospectively evaluate and characterize nondiminutive colorectal polyps prospectively detected by using computed tomographic (CT) colonography but not confirmed with subsequent nonblinded optical colonoscopy (OC).

Materials and This study was institutional review board approved; the

Conclusion: In clinical practice, polyps prospectively identified with CT colonography but not confirmed with subsequent nonblinded (ie, despite a priori knowledge of the CT colonography findings) OC require additional review because a substantial proportion may be FN findings. Most FN findings found with OC demonstrated clinically significant histopathologic results, and a majority of advanced lesions occurred in the right colon.

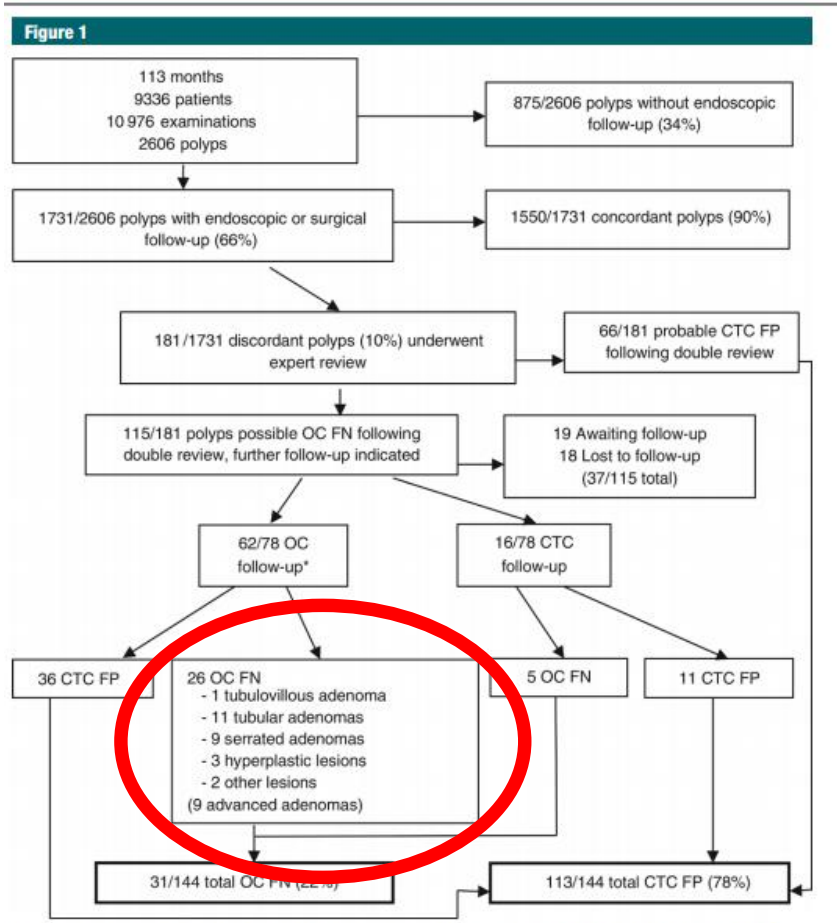


Figure 1: Flow diagram of study cohort. *Ten of the 62 polyps with OC follow-up first underwent repeat CT colonography *(CTC)* to confirm the presence of a lesion.

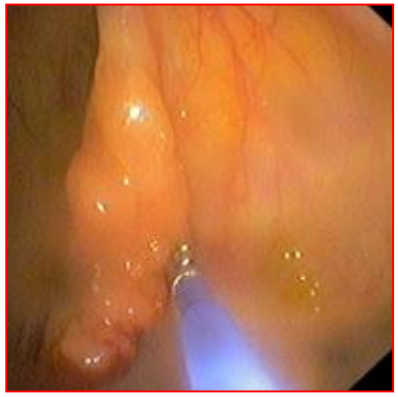
Adenoma Piatto - CTC

Analisi retrospettiva dati **ACRIN**

(≈2600 soggetti)

• Definizione di "lesione piatta":

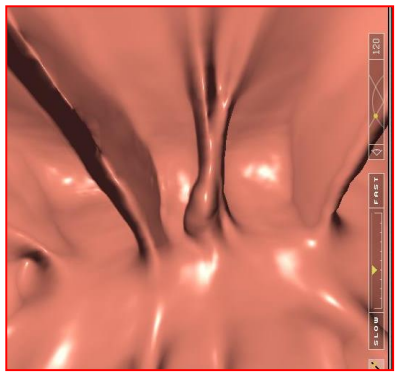
H/W ≤50%; H ≤ 3mm



RISULTATI

- **374** adenomi/adenoCa ≥5mm
- **19** (0.75%) piatti; dimensioni medie = 9mm
- **8/19** (42%) adenomi avanzati
- Sensibilità, 68% (>10mm, 67%)

analisi retrospettiva, 89% !



J Fidler, presentazione al meeting ACRIN, 1 Ottobre, 2009

...ad oggi

ACCURATA PER IL CANCRO

- ***SIGGAR TRIAL (UK)***

Health T

Comp cance trials) ...of colorectal ...(the SIGGAR

Halligan

Lancet. 2

Comp sugg ...toms

Atkin W ..., Wardle J, Halligan S; SIGG

- **CV >> CDC**

S. Halligan et al. Lancet 2013

- **CV ≥ CC**

Atkin et al Lancet 2013

Plumb et al, Eur.Radiol 2014

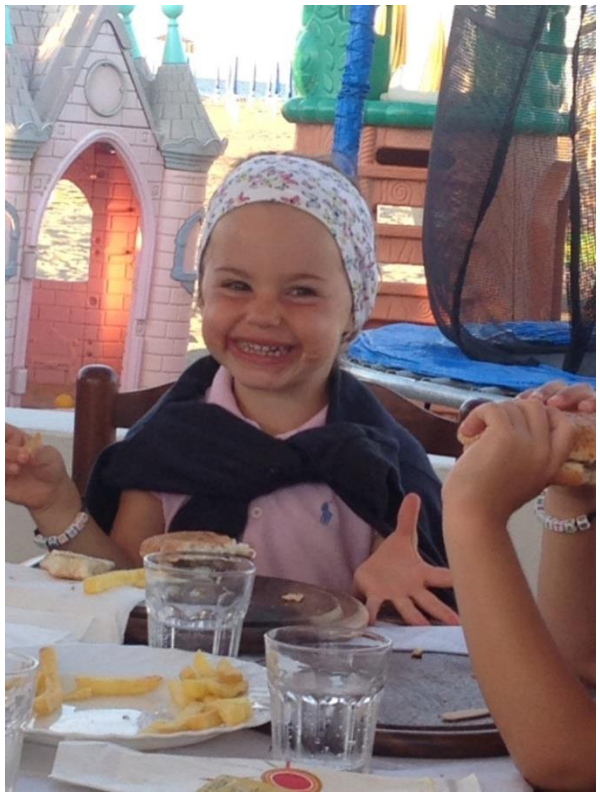
Eur Radiol. 2014 May;24(5):1049-58. doi: 10.1007/s00330-014-3106-0. Epub 2014 Feb 12.

Sensitivity and specificity of CT colonography for the detection of colonic neoplasia after positive faecal occult blood testing: systematic review and meta-analysis.

Plumb AA[1], Halligan S, Pendsé DA, Taylor SA, Mallett S.

BEN TOLLERATA DAI PAZIENTI

- **NO purganti**
- **NO sedazione**
- **NO sonda endoscopica**
- **CO2**



Gut. 2015 Feb;64(2):342-50. doi: 10.1136/gutjnl-2014-308696. Epub 2014 Dec 2.

CT colonography: accuracy, acceptance, safety and position in organised population screening.

de Haan MC[1], Pickhardt PJ[2], Stoker J[3].

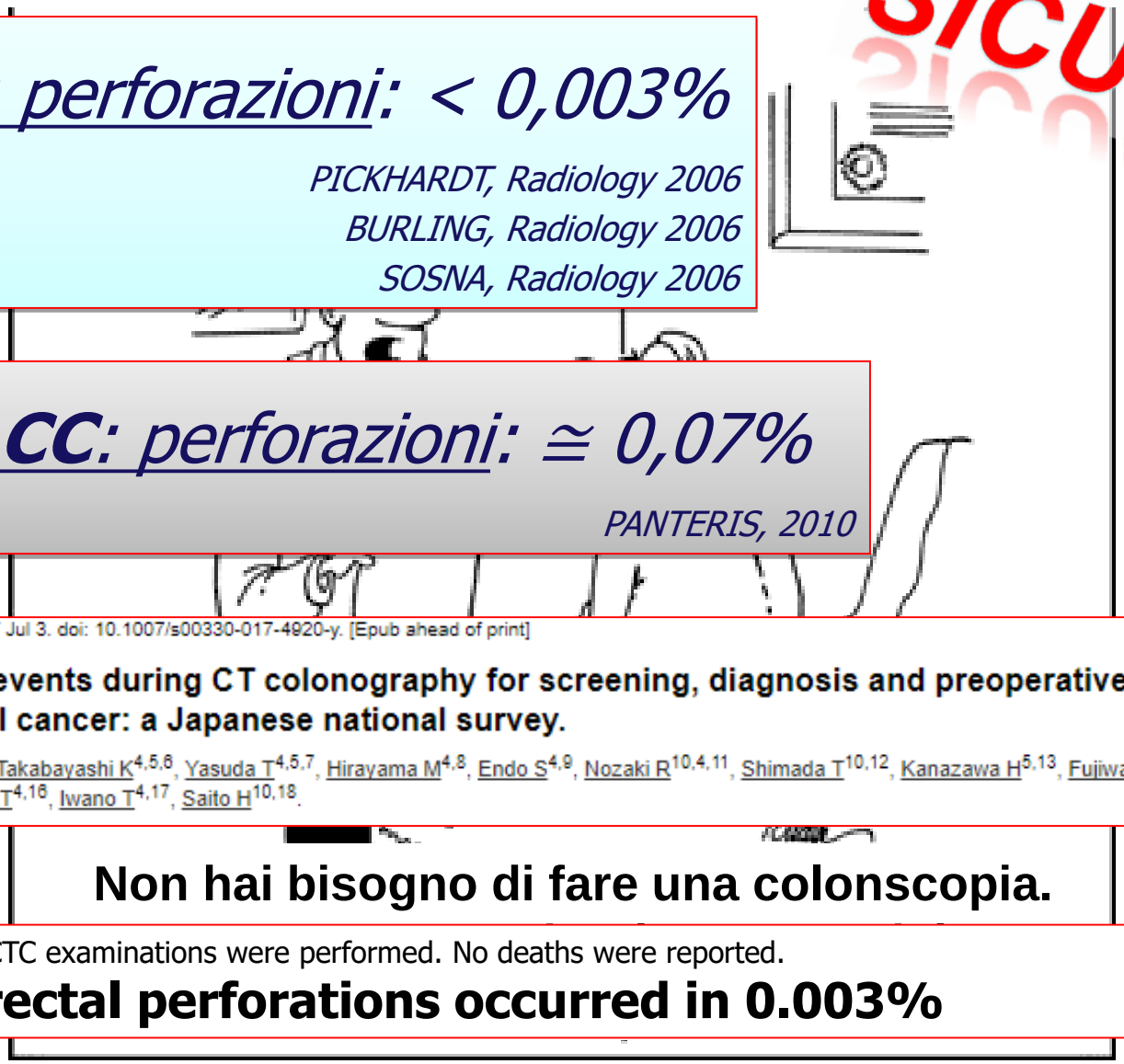
SICURA

CV: perforazioni: < 0,003%

PICKHARDT, Radiology 2006
BURLING, Radiology 2006
SOSNA, Radiology 2006

CC: perforazioni: ≅ 0,07%

PANTERIS, 2010



Eur Radiol. 2017 Jul 3. doi: 10.1007/s00330-017-4920-y. [Epub ahead of print]

Adverse events during CT colonography for screening, diagnosis and preoperative staging of colorectal cancer: a Japanese national survey.

Nagata K[1,2,3], Takabayashi K[4,5,6], Yasuda T[4,5,7], Hirayama M[4,8], Endo S[4,9], Nozaki R[10,4,11], Shimada T[10,12], Kanazawa H[5,13], Fujiwara M[4,14], Shimizu N[4,15], Iwatsuki T[4,16], Iwano T[4,17], Saito H[10,18].

Non hai bisogno di fare una colonscopia.

147,439 CTC examinations were performed. No deaths were reported.

Colorectal perforations occurred in 0.003%

Come possiamo migliorare?

- Formazione MMG-Specialisti
- Linee guida congiunte con le altre società
- Mass media
- PDTA

Consensus ESGAR

Eur Radiol (2013) 23:720–729
DOI 10.1007/s00330-012-2632-x

GASTROINTESTINAL

The second ESGAR consensus statement on CT colonography

Emanuele Neri · Steve Halligan · Mikael Hellström · Philippe Lefere · Thomas Mang · Daniele Regge · Jaap Stoker · Stuart Taylor · Andrea Laghi · ESGAR CT Colonography Working Group

European Radiology
February 2007, Volume 17, Issue 2, pp 575-579

European society of gastrointestinal and abdominal radiology (ESGAR): Consensus statement on CT colonography

Stuart A. Taylor, Andrea Laghi, Philippe Lefere, Steve Halligan, Jaap Stoker

Main recommendations

1 ESGE/ESGAR recommend computed tomographic

5 ESGE/ESGAR do not recommend CTC as a primary test for population screening or in individuals with a positive first-degree family history of colorectal cancer (CRC). However, it may be proposed as a CRC screening test on an individual basis providing the screenee is adequately informed about test characteristics, benefits, and risks (weak recommendation, moderate quality evidence).

moderate quality evidence).

3 When endoscopy is contraindicated or not possible, ESGE/ESGAR recommend CTC as an acceptable and equally sensitive alternative for patients with symptoms suggestive of colorectal cancer (strong recommendation, high quality evidence).

Come possiamo migliorare?

- Formazione MMG-Specialisti
- Linee guida congiunte con le altre società
- Mass media
- PDTA


la Nuova Ferrara
la Repubblica.it
Il mondo in diretta
24 ore
Rai
CORRIERE DELLA SERA
La Gazzetta dello Sport
TUTTO VERO!
CAMPIONI DEL MONDO
LIPPI COME BEARZOT
Italia-Francia 6-4 dopo i calci di rigore (1-1). E' il risultato che ci dà il quarto titolo mondiale: secondi soltanto al Brasile (5). Rigore di Zidane (poi espulso) parò di Materazzi. Ai rigori decide Grosso
CHI VINCE... VOLA!
FINO AL 18 LUGLIO SU ALITALIA.COM
Alitalia
Milioni di italiani nelle piazze Oggi festa a Roma
Con questa prima pagina celebriamo il trionfo in Spagna '82
Il Rompi Pallone
DENIM
PER L'UOMO CHE NON DEVE CHIEDERE MAI.
MEDIASET
TGCOM24
LA7
sky
TG24
Quotidiano Nazionale
QN
il Resto del Carlino

Informare!

Patient Prefer Adherence. 2015 Jul 23;9:1043-51. doi: 10.2147/PPA.S81901. eCollection 2015.

Patient willingness for repeat screening and preference for CT colonography and optical colonoscopy in ACRIN 6664: the National CT Colonography trial.

Gareen IF[1], Siewert B[2], Vanness DJ[3], Herman B[4], Johnson CD[5], Gatsonis C[6].

CONCLUSION: While a larger proportion of participants indicated that they preferred CTC to OC, willingness to undergo repeat CTC compared to OC was limited by unanticipated exam discomfort and embarrassment and CTC's shorter screening interval.

Eur J Gastroenterol Hepatol. 2018 May;30(5):520-525. doi: 10.1097/MEG.0000000000001090.

Patient tolerance and acceptance of different colonic imaging modalities: an observational cohort study.

Ojidu H[1], Palmer H[2], Lewandowski J[2], Hampton J[3], Blakeborough T[3], Epstein O[2], McAlindon ME[1].

CONCLUSION: Patient tolerance and experience favours CTC and CCE over OC and informed about all aspects of each procedure; a noninvasive option is commonly chosen by the lay public.

Curr Probl Diagn Radiol. 2018 Jan 6. pii: S0363-0188(17)30155-X. doi: 10.1067/j.cpradiol.2017.12.011. [Epub ahead of print]

Patient Knowledge Regarding Colorectal Cancer Risk, Opinion of Screening, and Preferences for a Screening Test.

Moreno CC[1], Jarrett T[2], Vey BL[3], Mittal PK[4], Krupinski EA[4], Roberts DL[2].

CONCLUSION: Improved patient education about the negligible radiation risk associated with CTC or development of a non-invasive imaging test that did not involve a preprocedural bowel cleansing regimen may increase rates of colorectal cancer screening.

Quando **correttamente informati**
(specie in ambito dosimetrico) i pazienti preferiscono indagine meno invasiva.

Come possiamo migliorare?

- Formazione MMG-Specialisti
- Linee guida congiunte con le altre società
- Mass media
- PDTA

Percorso diagnostico-terapeutico-assistenziale PDTA

COMPOSIZIONE

- **Core team** (sempre al completo):endoscopista, radiologo, anatomo-patologo, chirurgo, oncologo, infermiere case-manager
- **Extended team**: genetista, medico nucleare, chirurgo del tratto epatobiliopancreatico, radiologo/ecografista interventista, radioterapista, stomaterapista, psico-oncologo, medico di medicina generale, palliativista.

METODI:

- Contestualizzazione delle linee guida
- Consulto multidisciplinare
- Verbalizzazione della riunione (1/settimana)

SCOPO:

- Riproducibilità degli interventi
- Uniformità delle prestazioni
- Riduzione degli interventi straordinari
- Valutazione integrata del paziente

RISULTATI:

- Ottenere il miglior percorso praticabile

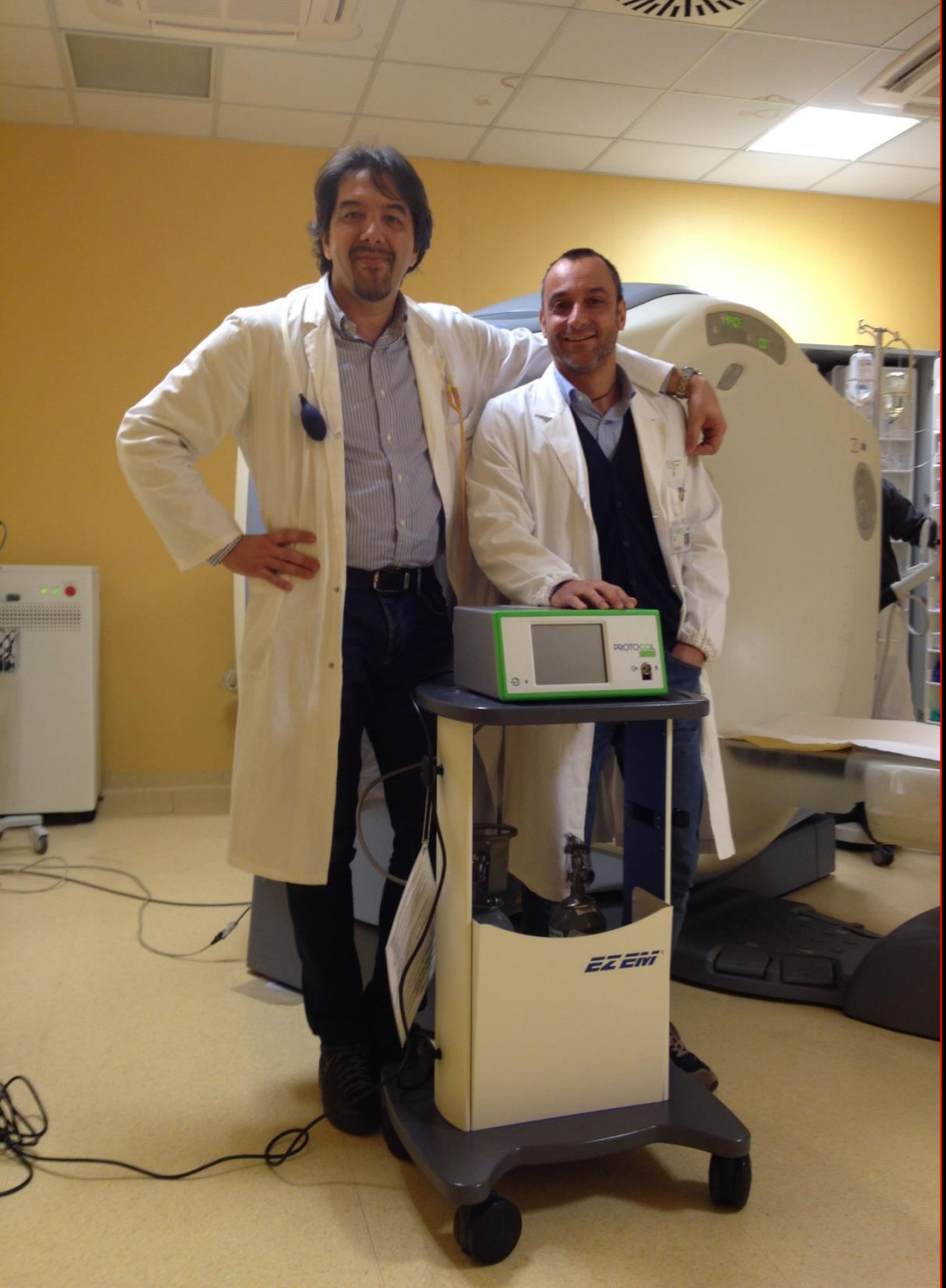
  all'interno della proprio

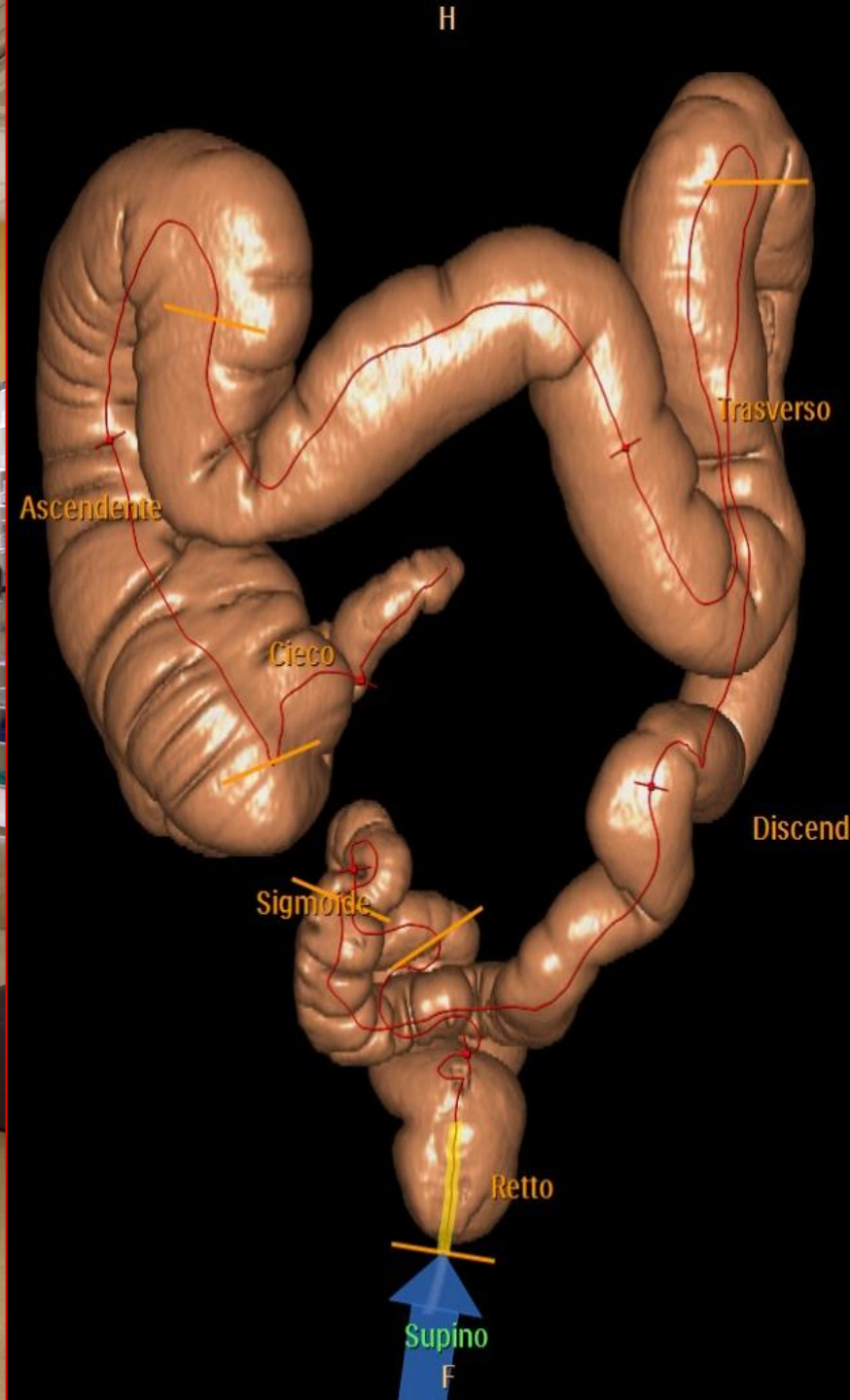
  Organizzazione/Struttura

….Presente e futuro in Emilia Romagna?!….

Situazione E.R CV-CLISMA (2015)

PROVINCIA	N° CV ANNO	N° MEDICI DEDICATI A CV	N° CLISMA ANNO
RAVENNA	110	2	250
RIMINI – RICCIONE	280	4	/
FORLI' - CESENA	70	1	150
MODENA (2) e prov	74	12	200
PARMA	155	4	100
FERRARA	**1100**	20	/
REGGIO EMILIA	60	3	250
PIACENZA	/	/	300
BOLOGNA S.Orsola	**500**	4	400
BOLOGNA Malpighi	**550**	2	/


EZ EM


H
Trasverso
Ascendente
Cieco
Discend
Sigmoide
Retto
Supino
F

Clisma Opaco e Colon-TC

- 1° Aprile 2007:
  sospensione delle prenotazioni delle indagini
  ra nali
  (
  c
  in
- S
  (
- A ale
- D
  p

1112 Colonscopie virtuali nel 2015

Dati screening Ferrara

	2014	2014	2015	2015
Invitati 1° Livello	48822		**47912**	
Aderenti Primo livello	23810	**49%**	23956	50%
Invitati 2° Livello	1188	5%	1206	5,5%
Aderenti 2° livello	946	80%	956	81%
Pazienti NON aderenti 2° Livello	242	**20%**	356	25%

Cortesia Prof. Ferretti

Adesione al II Livello FE - anno 2016

	Inviti	Aderenti	(%)	Aperte	Rifiuto visita/non rintracciabile (R\A)	Rifiuti
Invitati FOBT+	1489	1298**	**87,2****	24 (1,6)	47 (3,2%)	120(8%)***
Invitati FU	711	563**	**79,7****	8	91	45***
Inviti totali	2200	1865**	**84,8****	32	138	165***

** compr
*** rifiut
esegue p

+ 6,2 % ADESIONE CON CV

Cortesia Centro Screening FE

Special Thanks to:

M.D

Barbieri

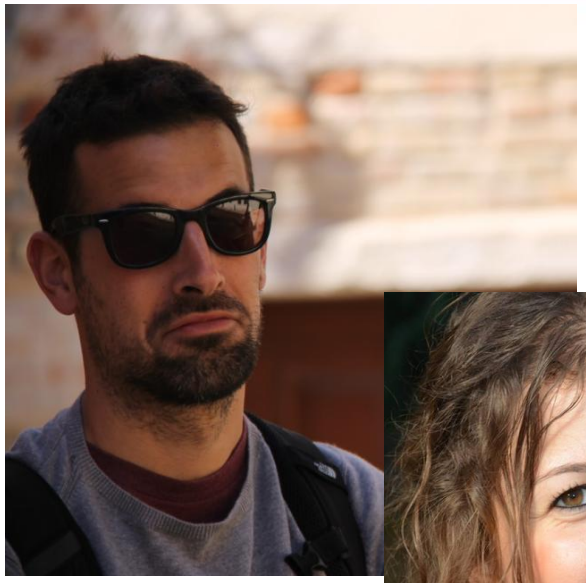
Bassi

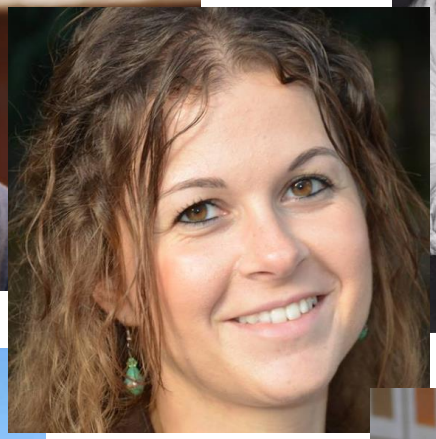
De Paoli

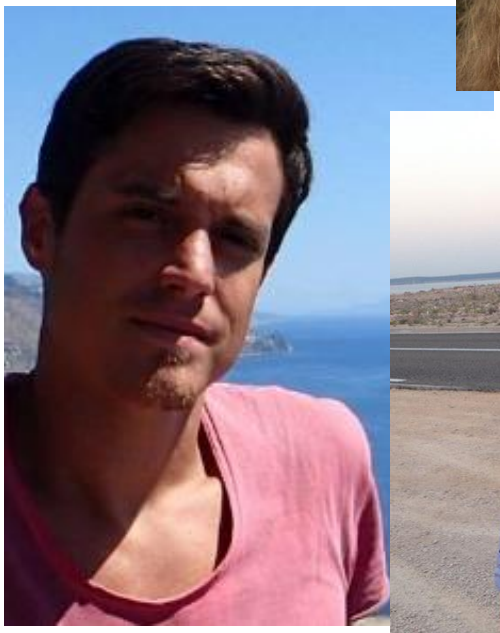
Raimondi

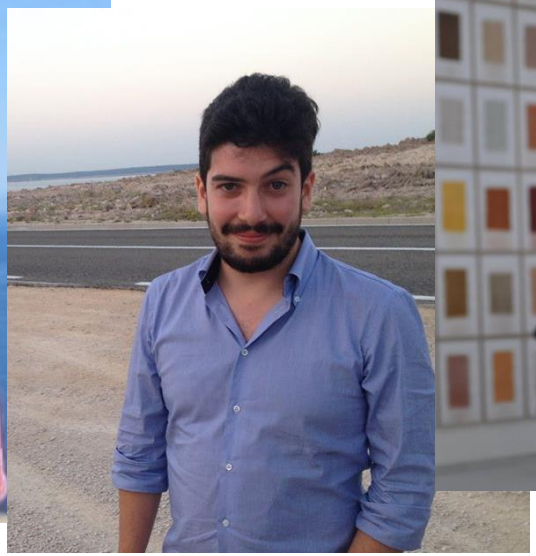
Cucchi

Tralli









Nuova organizzazione supporto screening (dal 12/2015)

- Colloquio gruppo screening

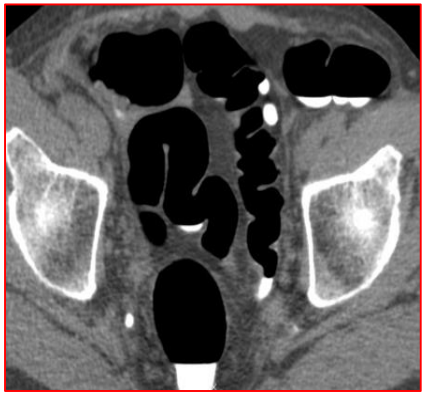
- Selezione Pz che rifiutano o controindicano la CO

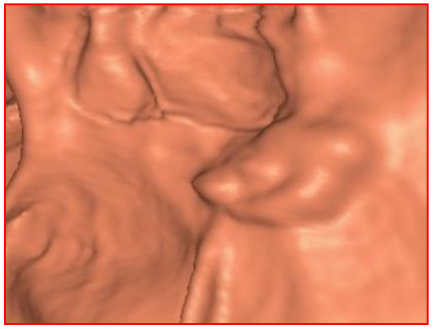
- Colloquio radiologo-paziente (1 volta al mese)

- Giornata e posti dedicati unificata sul dipartimento

- Solo radiologi esperti (>300 esami CTC)

- Lettura doppio cieco

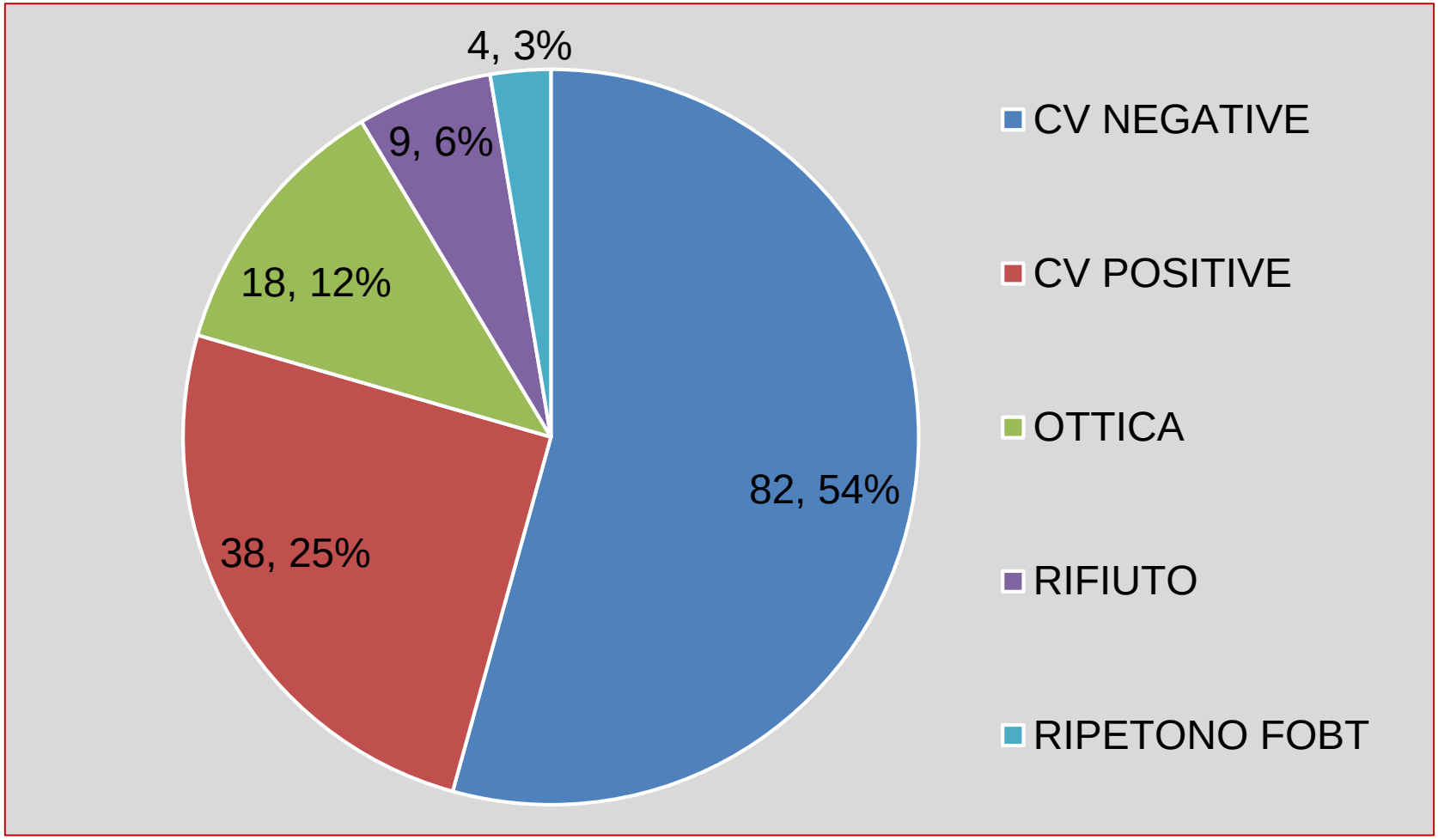




RISULTATI – reperti colici

151 pz
(Gennaio 2016-Febbraio 2018)

ANNO 2016	**79**
ANNO 2017	**63**
ANNO 2018	**9**



RISULTATI – reperti colici

Qualità dell'indagine:

ottimale nel 95%

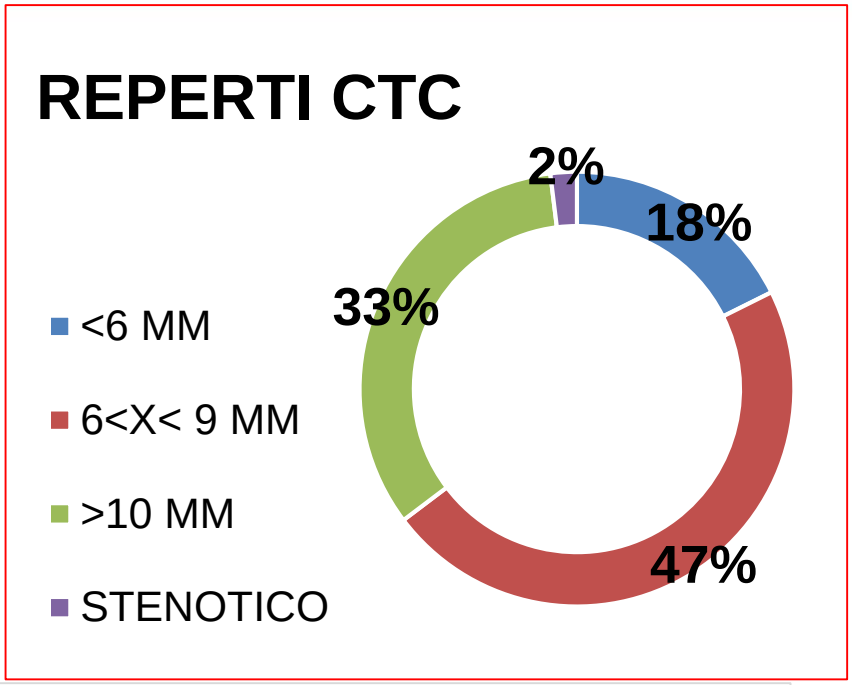
<u>38 pz positivi</u> (25%):

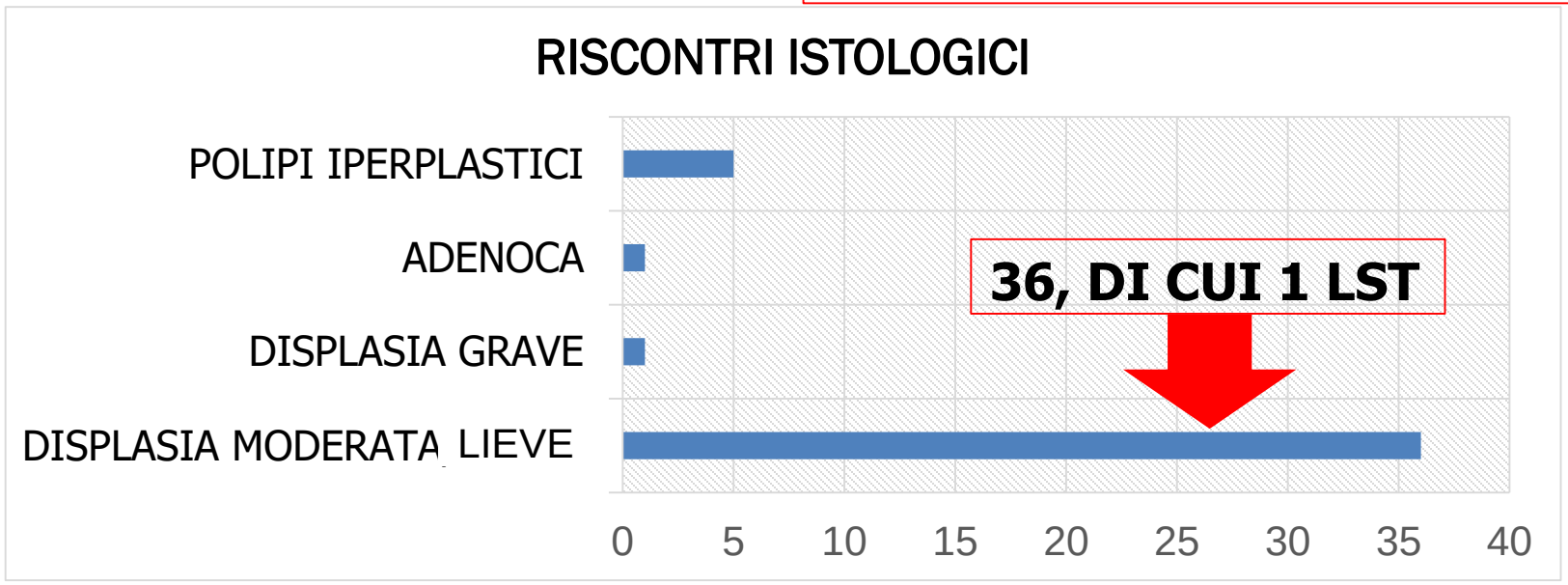
9 (<6 mm) → 2%

24 (6-9 mm) → 47%

17 (>10 mm) → 33%

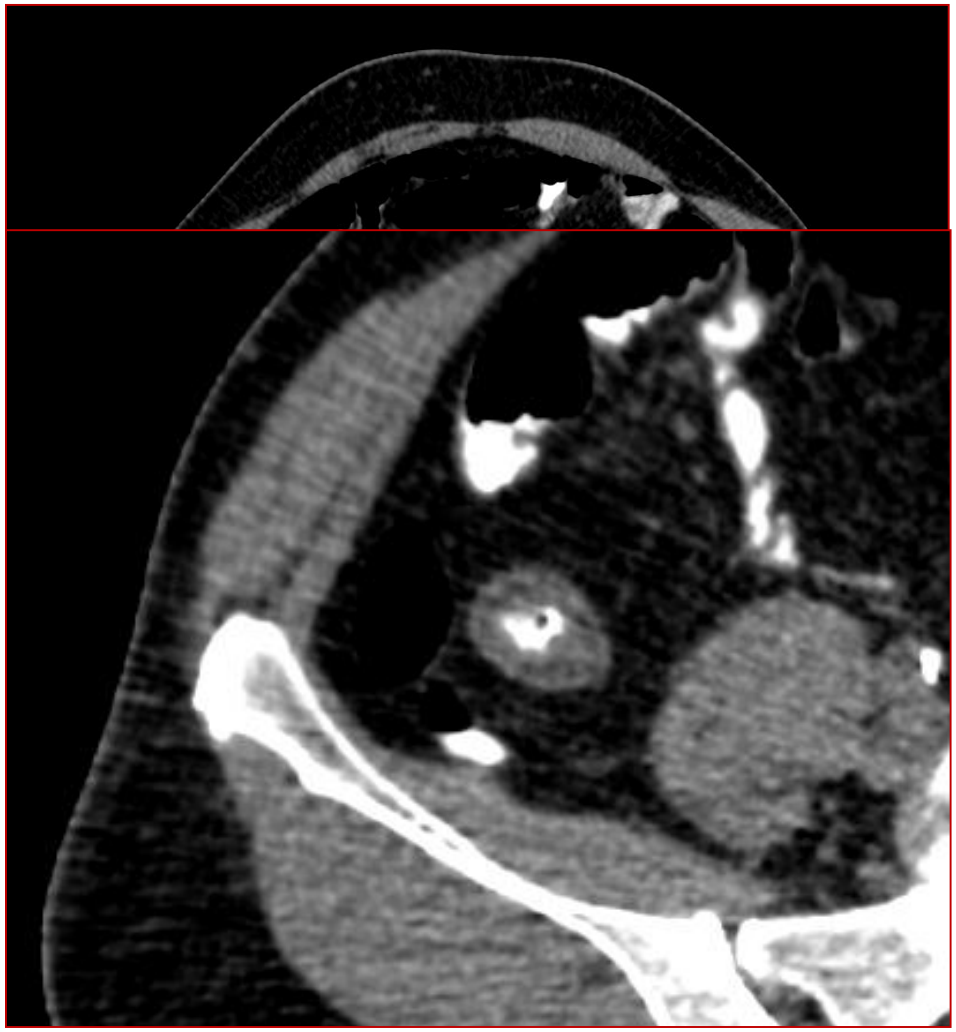
STENOSANTE → 2%

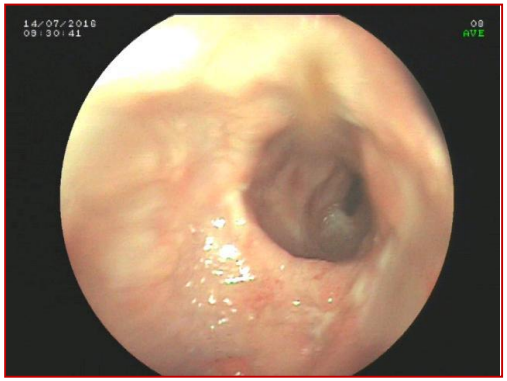




RISULTATI – reperti extracolici

- 1 caso di ILEITE TERMINALE → M. CROHN



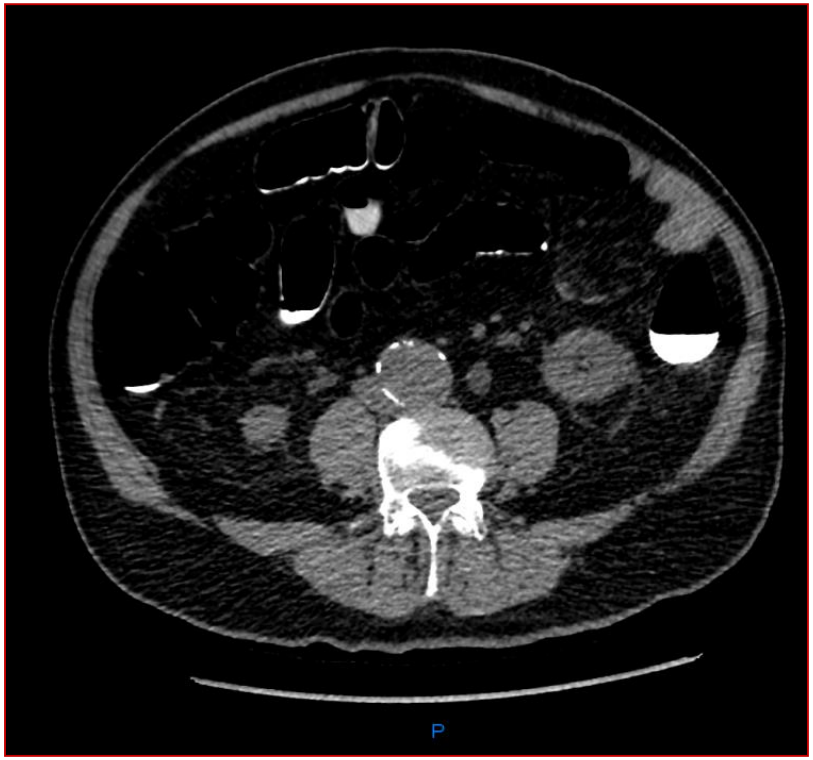


RISULTATI – reperti extracolici

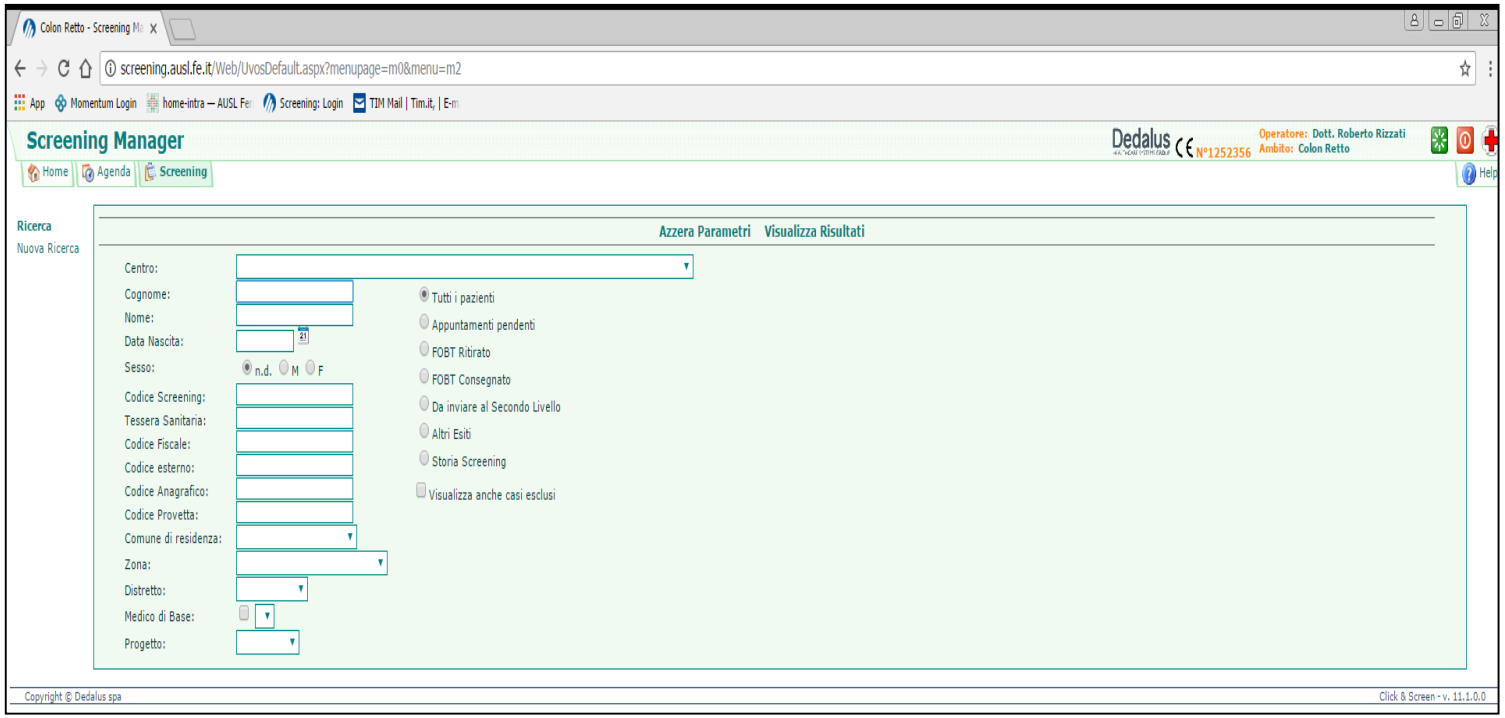
Diagnosi Citologica
Carcinoma a piccole cellule.

RISULTATI – reperti extracolici

- 1 AAA



Patient organizer



Totale autonomia nella gestione dei pazienti screening

Conclusioni

- RSO + Colonscopia + polipectomia = 500 euro per caso guarito.

- RSO + CV + CO + polipectomia = 700-750 euro per caso guarito

- RSO + Colonscopia + emicolectomia = 5-8000 euro per caso guarito

- Emicolectomia + chemioterapia adiuvante = 12-14000 euro per caso guarito

---

- Emicolectomia+ chemioterapia palliativa = 25-45000 euro per incremento sopravvivenza di 12-30 mesi

- Chemioterapia palliativa + farmaci biologici= 40-60000 euro per incremento sopravvivenza di 12-30 mesi

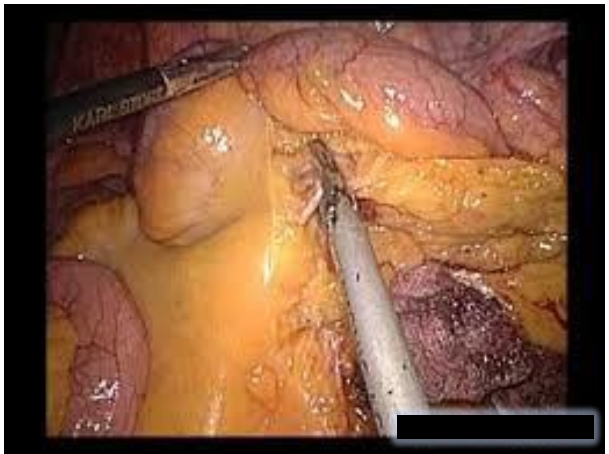
Chirurgia laparoscopica colon

Fondamentale!!!

- Adeguata selezione del paziente
- Fine pianificazione dell'intervento

Value of CT colonography as preliminary study prior to laparoscopic surgery in patients with colon malignancies and complicated diverticular disease

R. Rizzati[1], S. Tartari[1], C. Cavallini[1], M. Princivalle[1], R. Righi[1], G. Anania[2], G. Benea[1]; [1]*Lagosanto Ferrara/IT*, [2]*Ferrara/IT*



Localizzazione lesionale (vs CO)

Eur J Surg Oncol. 2017 Sep 20. pii: S0748-7983(17)30706-0. doi: 10.1016/j.ejso.2017.09.016. [Epub ahead of print]

Preoperative segmental localization of colorectal carcinoma: CT colonography vs. optical colonoscopy.

Offermans T[1], Vogelaar FJ[2], Aquarius M[3], Janssen-Heijnen MLG[4], Simons PCG[5].

CONCLUSION: CTC has a lower localization error rate than OC, which is most relevant for tumors located in the descending colon. If there is a doubtful localization on OC, particularly in the left-sided colon, an additional CTC should be performed to choose the best surgical treatment.

European Review for Medical and Pharmacological Sciences 2015; 19: 1645-1651

Preoperative staging of colorectal cancer using virtual colonoscopy: correlation with surgical results

A. STAGNITTI, F. BARCHETTI, G. BARCHETTI, E. PASQUALITTO, A. SARTORI, M. GLORIOSO, S. GIGLI, V. BUONOCORE, M.L. MONTI, A. MARINI, C. MELE[1], F. STAGNITTI[2], A. LAGHI[3]

Department of Radiological Sciences, Oncology and Pathology, "Sapienza" University of Rome, Rom Italy
[1]Epatobiliary Surgery, Catholic University of the Sacred Heart, School of Medicine, Rome, Italy
[2]Department of Surgery, "Sapienza" University of Rome, Polo Pontino, Terracina, Italy
[3]Department of Radiological Sciences, "Sapienza" University of Rome, Polo Pontino, Latina, Italy

Conclusions

CTC can provide an accurate CRC localization, tumour extent, tumour/nodal staging, and extra-colic abnormalities, which are critical for the proper management of patients. As a result, CTC may become a modality of choice for preoperative evaluation of all colorectal cancers. CTC with "fecal tagging" approach is a very useful tool for accurate pre-treatment staging and localization of occlusive CRC.

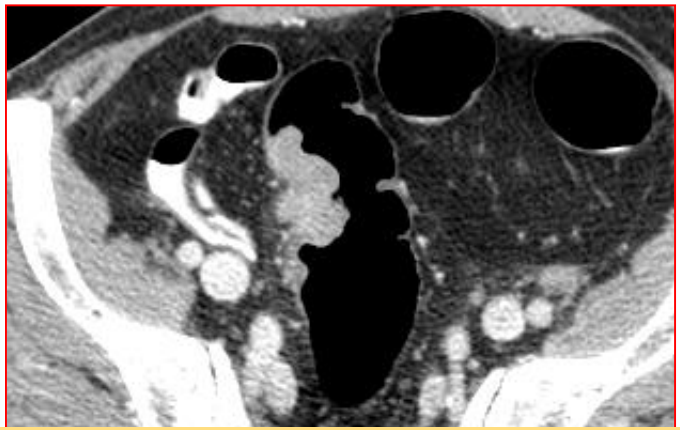
CTC>>OC

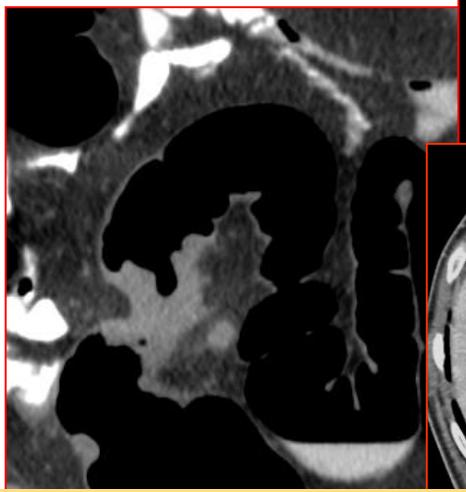
nella valutazione sede lesionale

Specie in condizioni «anomale» e colon di sinistra.

Ca stenosante – completamento studio colico

1. Ricerca altre lesioni a monte della stenosi (lesioni cancerose 1-9%* - lesioni polipoidi 27-55%)
2. Segni di infiltrazione locoregionale e linfoadenomegalie
3. Metastasi a distanza





Somministrazione mdc e.v.

** **"Malignant tumors of the colon"** 2 Vol textbook of gastroenterology 3° edition Boland et al*

Grazie per l'attenzione

Ciao Paolo……

United European Gastroenterol J. 2015 Aug;3(4):358-63. doi: 10.1177/2050640615577881.

The safety of same-day CT colonography following incomplete colonoscopy with polypectomy.

Lara LF[1], Avalos D[1], Huynh H[1], Jimenez-Cantisano B[1], Padron M[1], Pimentel R[1], Erim T[1], Schneider A[1], Ukleja A[1], Parlade A[1], Castro F[1].

CONCLUSIONS: Radiologists' apprehension to perform a CTC the same day as an incomplete colonoscopy following polypectomies because of perceived risk of perforation may be unfounded. More data are needed to determine the safety of same-day CTC in patients with high-risk findings during colonoscopy such as a stricture, severe IBD, and after complex polypectomies.

Health Technol Assess. 2015 Jul;19(54):1-134. doi: 10.3310/hta19540.

Computed tomographic colonography compared with colonoscopy or barium enema for diagnosis of colorectal cancer in older symptomatic patients: two multicentre randomised trials with economic evaluation (the SIGGAR trials).

Halligan S[1], Dadswell E[2], Wooldrage K[2], Wardle J[3], von Wagner C[3], Lilford R[4,5], Yao GL[4,6], Zhu S[4], Atkin W[2].

CONCLUSIONS: CTC is superior to BE for detection of cancers and large polyps in symptomatic patients. CTC and colonoscopy detect a similar proportion of large polyps and cancers and their costs are also similar. CTC precipitates significantly more additional investigations than either BE or colonoscopy, and evidence-based referral criteria are needed. Further work is recommended to clarify the extent to which patients initially referred for colonoscopy or BE undergo subsequent abdominopelvic imaging, for example by computed tomography, which will have a significant impact on health economic estimates.

Eur Radiol. 2014 May;24(5):1049-58. doi: 10.1007/s00330-014-3106-0. Epub 2014 Feb 12.

Sensitivity and specificity of CT colonography for the detection of colonic neoplasia after positive faecal occult blood testing: systematic review and meta-analysis.

Plumb AA[1], Halligan S, Pendsé DA, Taylor SA, Mallett S.

CONCLUSION: Few studies have investigated CTC in FOBt-positive individuals. CTC is sensitive at a ≥6 mm threshold but specificity is lower and variable. Despite the limited data, these results suggest that CTC may adequately substitute for colonoscopy when the latter is undesirable.

Acad Radiol. 2015 Jul;22(7):807-13. doi: 10.1016/j.acra.2015.03.002. Epub 2015 Apr 15.

Cost Differences After Initial CT Colonography Versus Optical Colonoscopy in the Elderly.

Zafar HM[1], Yang J[2], Armstrong K[3], Groeneveld P[4].

CONCLUSIONS: Despite higher adjusted costs of outpatient testing potentially related to colonic and extracolonic findings among asymptomatic elderly patients 1 year after initial CTC compared to OC, we found no differences in adjusted total, inpatient, or outpatient costs between cohorts. Although Medicare does not cover screening CTC, our results suggest that these modalities generate comparable downstream costs to payers.

Abdom Imaging. 2015 Sep 9. [Epub ahead of print]

Medicare cost of colorectal cancer screening: CT colonography vs. optical colonoscopy.

CONCLUSION: CTC is a cost-effective CRC screening option for the Medicare population and will likely reduce Medicare expenditures for CRC screening.