La colonscopia di qualità nell'epoca dello screening

La preparazione ottimale

Omero Triossi

Gastroenterologia

AUSL Romagna Territorio di Ravenna

Bowel preparation for colonoscopy: European Society of Gastrointestinal Endoscopy (ESGE) Guideline

2013

Authors C. Hassan[1], M. Bretthauer[2], M. F. Kaminski[3], M. Polkowski[3], B. Rembacken[4], B. Saunders[5], R. Benamouzig[6], O. Holme[7], S. Green[5], T. Kuiper[8], R. Marmo[9], M. Omar[10], L. Petruzziello[1], C. Spada[1], A. Zullo[11], J. M. Dumonceau[12]

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2014

Optimizing Adequacy of Bowel Cleansing for Colonoscopy: Recommendations From the US Multi-Society Task Force on Colorectal Cancer

David A. Johnson[1], Alan N. Barkun[2], Larry B. Cohen[3], Jason A. Dominitz[4], Tonya Kaltenbach[5], Myriam Martel[2], Douglas J. Robertson[6,7], C. Richard Boland[8], Frances M. Giardello[9], David A. Lieberman[10], Theodore R. Levin[11] and Douglas K. Rex[12]

Communication from the Standards of Practice Committee

2015 GUIDELINE

Bowel preparation before colonoscopy

Communication from the ASGE Quality Assurance in Endoscopy Committee

2015 QUALITY INDICATORS FOR GI ENDOSCOPIC PROCEDURES

Quality indicators for colonoscopy

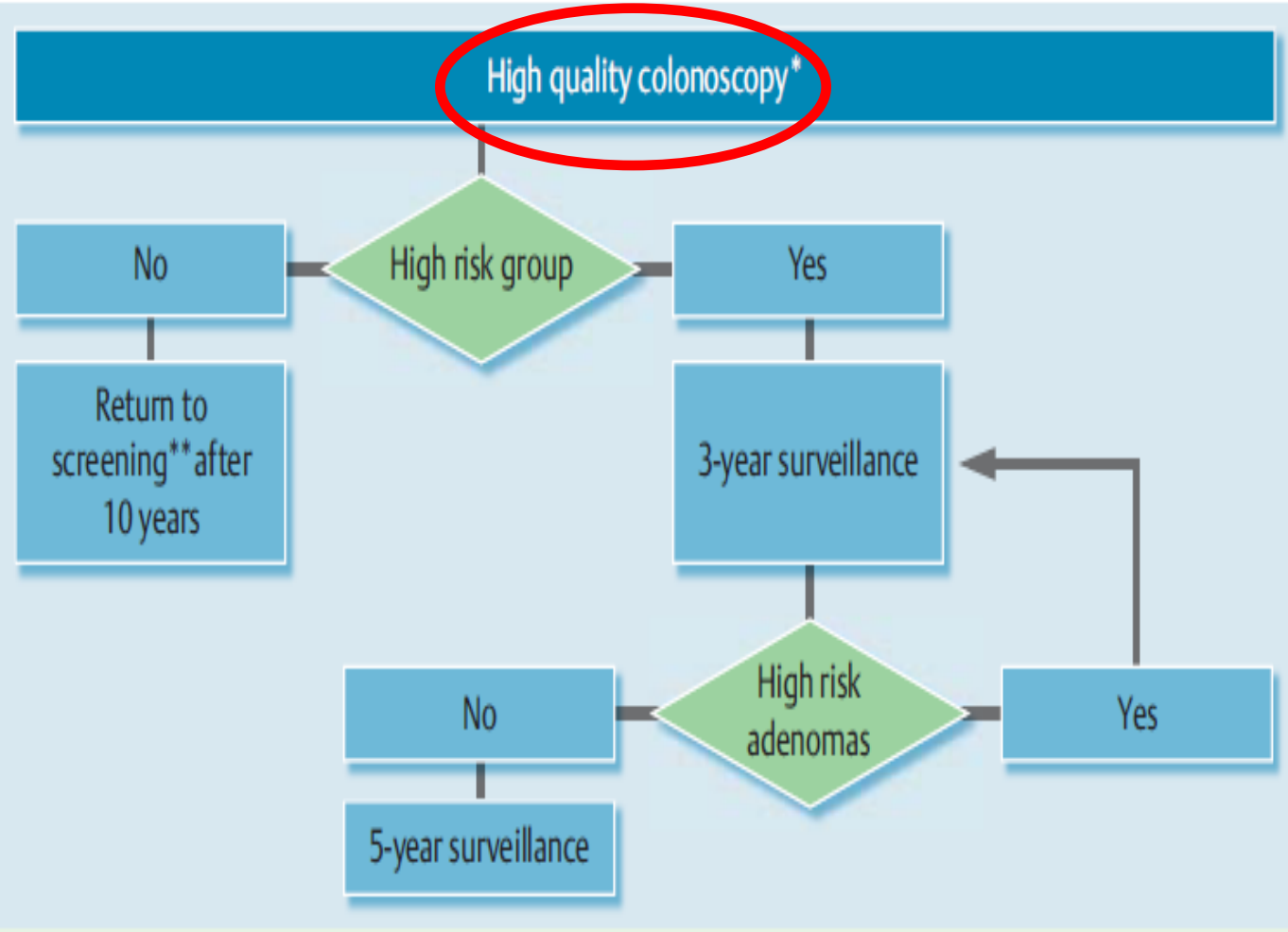


Fig. 1 Dichotomization of patients following a high quality colonoscopy in which high risk lesions have or have not been detected. High risk group: patients with an adenoma ≥10 mm; or with high grade dysplasia; or a villous component or ≥3 adenomas; serrated polyp ≥10 mm or with dysplasia. * Excluding those in whom cancer has already developed. ** To a screening programme if available, otherwise to repetition of colonoscopy.

2013

Post-polypectomy colonoscopy surveillance: European Society of Gastrointestinal Endoscopy (ESGE) Guideline

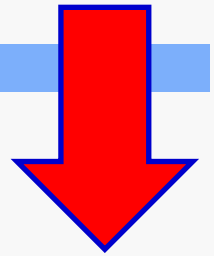
ESGE

Box 1 Main definitions adopted for this Guideline.

Term	Definition
High quality colonoscopy	Complete colonoscopy with a meticulous inspection of adequately cleaned colorectal mucosa. Neoplastic lesions have also been completely removed and retrieved for histological examination.

no high-quality bowel cleansing = no high-quality colonoscopy

ADEGUATA - INADEGUATA



Qualità prep.	Concettuale	Operativa BBPS	Clnica
Adeguata	**Permette la visualizzazione di tutti i polipi > 5mm**	**≥5**	**Le linee guida sulla sorveglianza vengono seguite**
Inadeguata	**Non è possibile escludere la presenza polipi > 5mm**	**<5**	**Gli intervalli di sorveglianza si accorciano**

Una preparazione inadeguata ha un impatto negativo sulla qualità della colonscopia:

- **Riduce la percentuale di intubazione ciecale**
- **Riduce la percentuale di rilevazione degli adenomi**
- **20-25% delle colonoscopie eseguite nella pratica clinica presentano una preparazione inadeguata**

La preparazione ottimale

- **Preparati per la pulizia intestinale**
- **Modalità di somministrazione**
- **Ruolo della dieta**
- **Ruolo della educazione/motivazione del paziente**

Preparati per la pulizia intestinale

- **Soluzioni a base di PEG (bassi/alti volumi)**
- **Catartici contenenti Magnesio citrato e sodio Picosolfato**

Preparati per la pulizia intestinale

Classe	Prodotti	Meccanismo azione
Soluzioni a base di PEG	**PEG 3350-4000 (macrogol)**	**Lavaggio**
Catartici iperosmolari	**Magnesio Citrato**	**Secrezione**
Lassativi stimolanti	**Sennosidi** **Bisacodile** **Sodio Picosolfato**	**Stimolazione**

Preparati per la pulizia intestinale

Tipo preparazione	Nome	Osmolarità (mosm/Kg)	Assorbimento principi attivi	Shift idroelettrolitico	Profilo Sicurezza
PEG-ELS	SELG ESSE® SELG 1000® Isocolan® Klean Prep® Colirei ®	288	assente	assente/minimo	++++
PEG-CS + bisacodile*	LOVOL-Esse®	293	assente	assente/minimo	+++
PEG-ASC**	Moviprep®	553	assente	modesto	+++
MgCitrato, Picosolfato	Citrafleet®	405	moderato	modesto	++

* PEG-CS: Solfati (Na_2SO_4) sostituiti a favore di citrati , con aggiunta di simeticone

** PEG-ASC: Solfati (Na_2SO_4) ridotti a favore di ascorbati (effetto osmotico)

Preparati per la pulizia intestinale

Tipo preparazione	Nome	Volume	Osmolarità (mosm/Kg)	Meccanismo azione
PEG-ELS	SELG ESSE® SELG 1000® Isocolan® Klean Prep® Colirei ®	4L	288	Lavaggio
[2]PEG-CS + bisacodile	LOVOL-Esse®	2L	293	Stimolazione + Lavaggio
PEG-ASC	Moviprep®	2L+(1L)	553	Lavaggio + Secrezione
[4]MgCitrato, Picosolfato	Citrafleet®	2L	405	Secrezione + Stimolazione

PEG-4L *o* PEG "low-volume"?

The ESGE recommends a split regimen of 4 L PEG solution (or a same-day regimen in the case of afternoon colonoscopy) for routine bowel preparation. A split regimen (or same-day regimen in the case of afternoon colonoscopy) of 2 L PEG plus ascorbate or of sodium picosulphate plus magnesium citrate may be valid alternatives, in particular for elective outpatient colonoscopy (strong recommendation,

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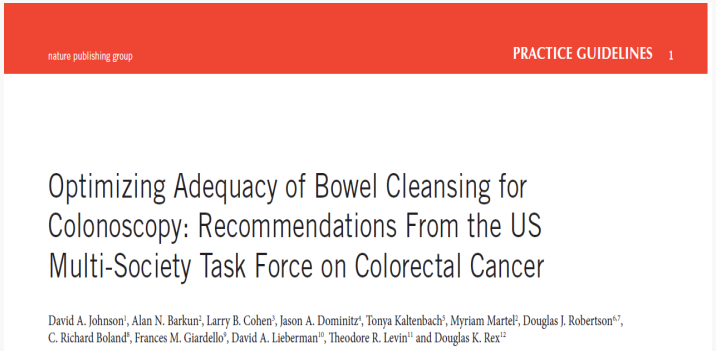
PEG-4L *o* PEG “low-volume”?



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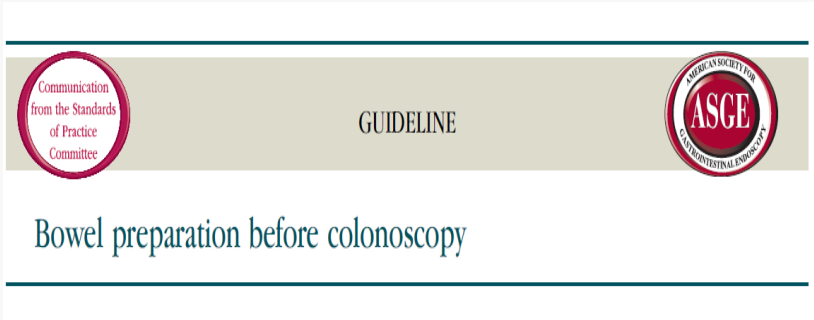
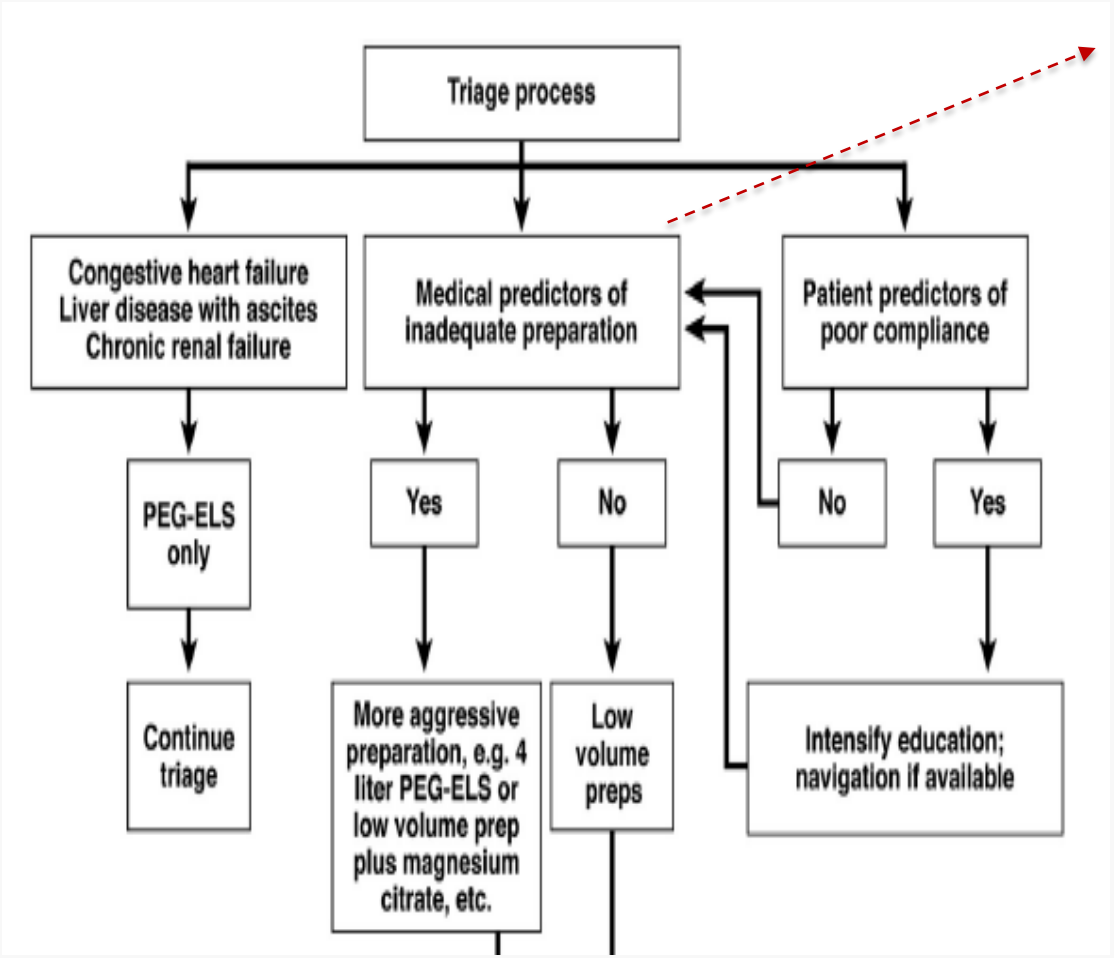
3. In healthy nonconstipated individuals, a 4-L PEG-ELS formulation produces a bowel-cleansing quality that is not superior to a lower-volume PEG formulation (***Strong recommendation, high-quality evidence***)

PEG-4L *o* PEG “low-volume”?



Low-volume PEG preparations. Low-volume PEG-ELS preparations were formulated to provide a more tolerable bowel preparation with a similar efficacy compared with the original 4-L PEG-ELS preparations.

La scelta della preparazione



Sodio Solfato (NaP)
Picosolfato/Mg

Risk factors for inadequate preparation

Health conditions/medication usage
Multiple comorbid conditions
Neurologic conditions (stroke, Parkinson)
Impaired mobility
Prior gastrointestinal surgical resection
Diabetes mellitus
Spinal cord injury
Medications associated with constipation as side effect

Recommendations

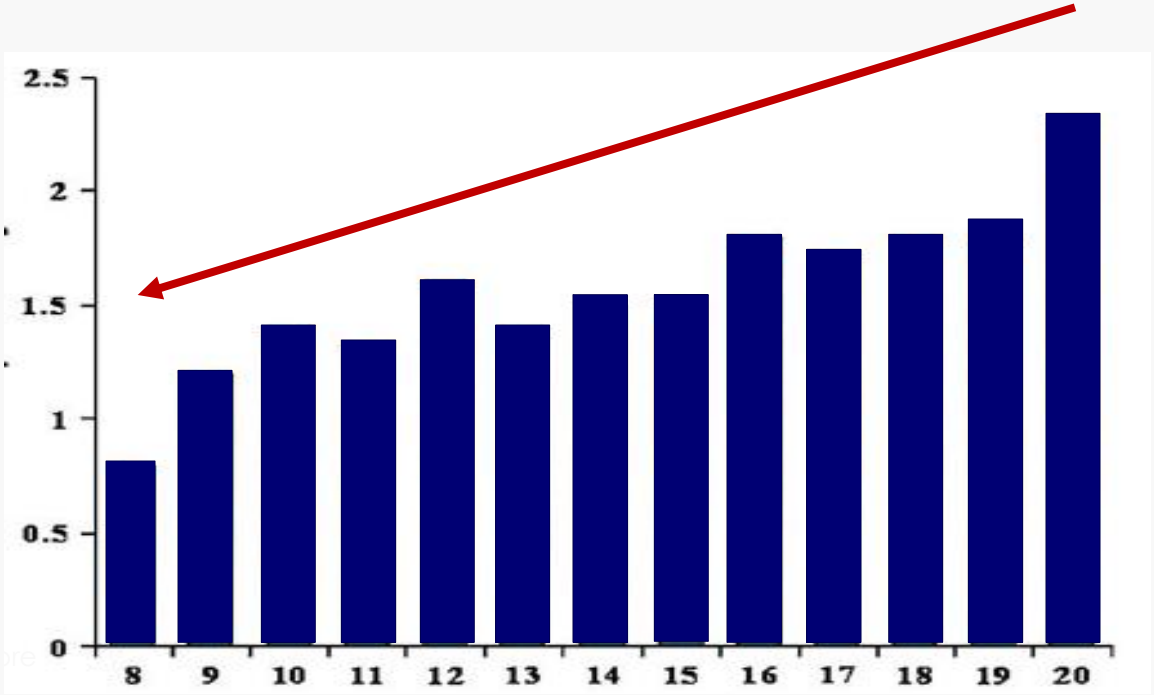
1. Selection of a bowel-cleansing regimen should take into consideration the patient's medical history, medications, and, when available, the adequacy of bowel preparation reported from prior colonoscopies (***Strong recommendation, moderate-quality evidence***)

US Guidelines. Gastrointest Endosc 2014; 80: 543-62

Rex DK, Clin Gastroenterol Hepatol 2014; 12: 460,

Modalità di somministrazione

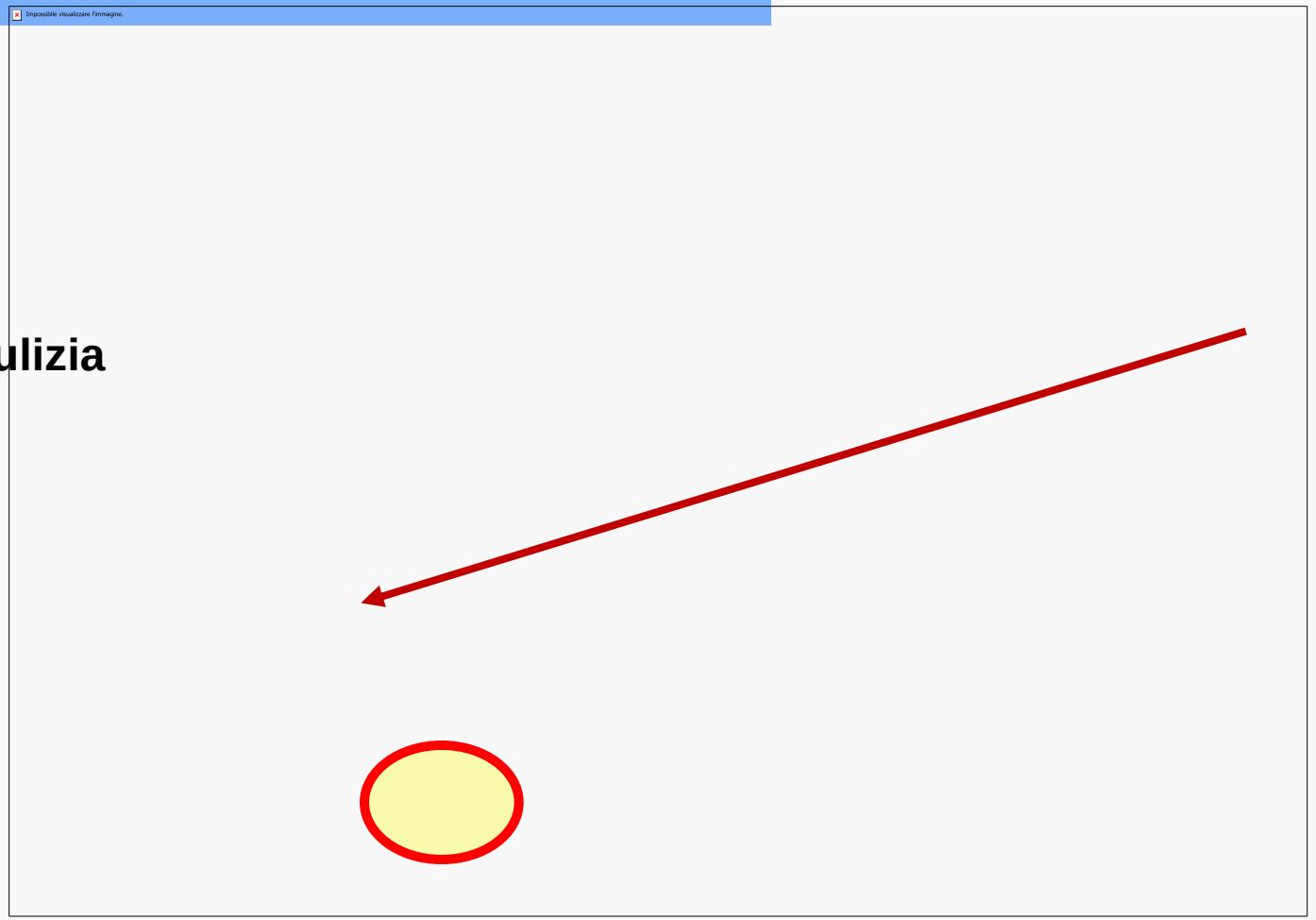
Correlazione tra qualità media della preparazione ed intervallo di tempo tra completamento della assunzione della ultima dose e inizio colonscopia



Siddiqui AA. Gastrointest Endosc 2009; 69: 700-6

Modalità di somministrazione

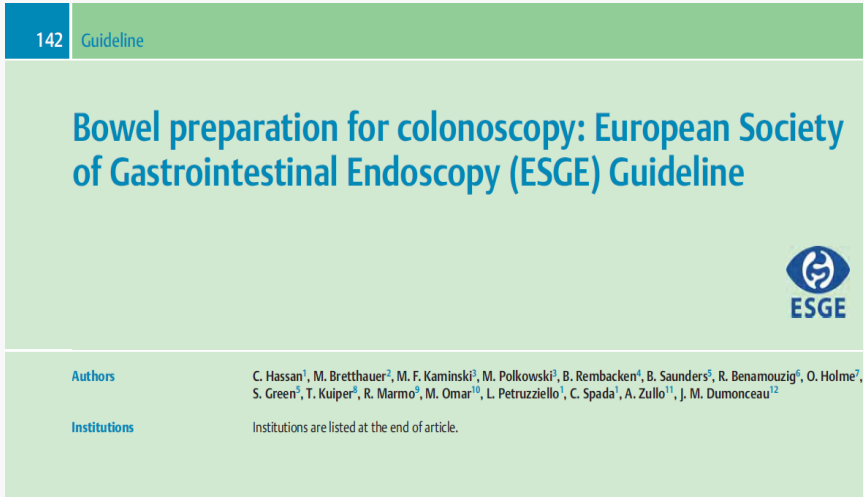
Correlazione tra qualità media della preparazione ed intervallo di tempo tra completamento della assunzione della ultima dose e inizio colonscopia



Seo et al Gastroint Endosc 2012

Intervallo di tempo tra completamento della assunzione della ultima dose e inizio colonscopia

recommended bowel preparation. The delay between the last dose of bowel preparation and colonoscopy should be minimized and no longer than 4 hours (strong recommendation, moderate quality evidence).



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Intervallo di tempo tra completamento della assunzione della ultima dose e inizio colonscopia

3. The second dose of split preparation ideally should begin 4–6 hours before the time of colonoscopy with completion of the last dose at least 2 hours before the procedure time (***Strong recommendation, moderate-quality evidence***)

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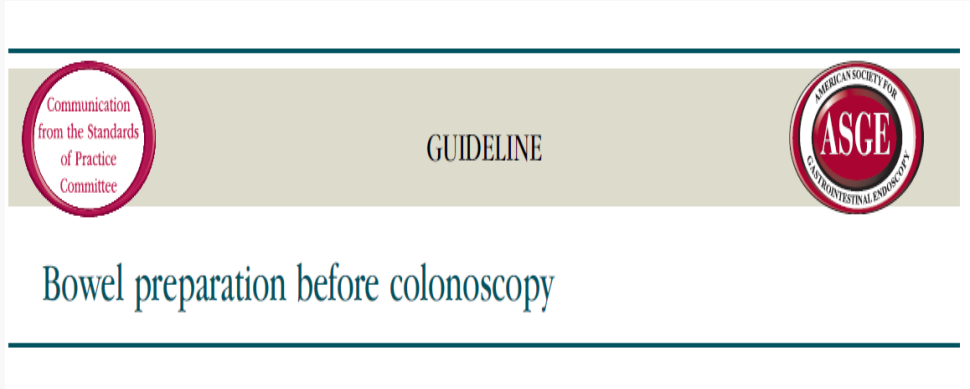
Intervallo di tempo tra completamento della assunzione della ultima dose e inizio colonscopia

will be performed. The second dose should be administered between 3 to 8 hours before the planned start of the colonoscopy procedure.[41,42] A prospective trial found



Intervallo di tempo tra completamento della assunzione della ultima dose e inizio colonscopia

patients scheduled in the early morning (before 9 AM) who refuse to begin ingestion 4 to 5 hours before the scheduled time can begin ingestion of the second half of the preparation late on the evening before (after 11 PM) and maintain reasonable preparation quality, although true split dosing is preferred.

Communication from the ASGE Quality Assurance in Endoscopy Committee

QUALITY INDICATORS FOR GI ENDOSCOPIC PROCEDURES

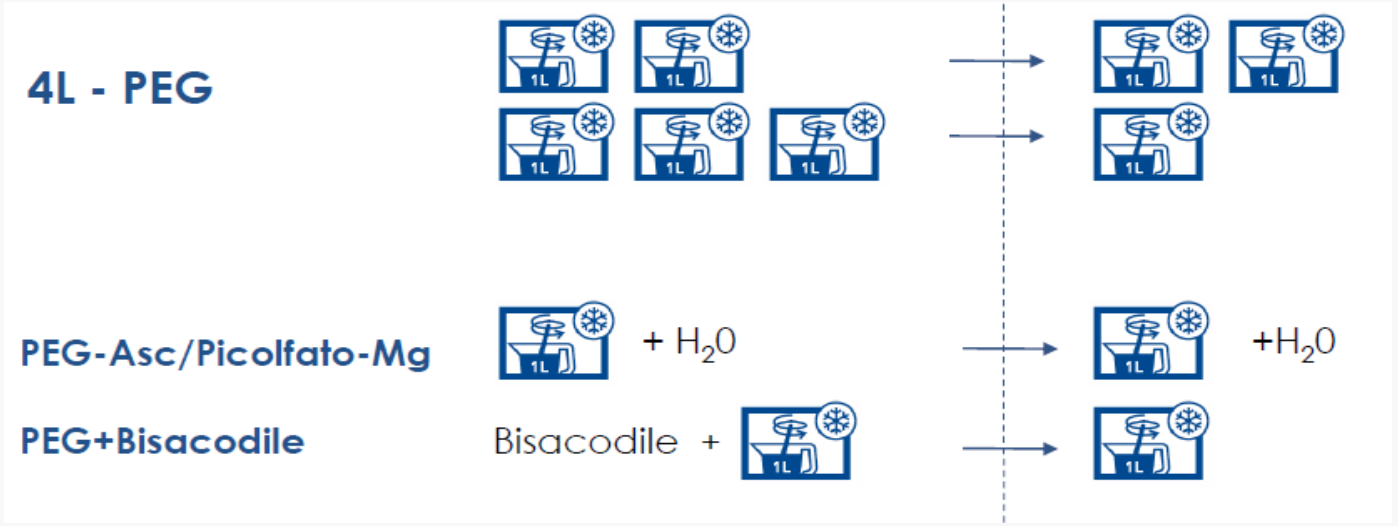
Quality indicators for colonoscopy

Modalità di somministrazione

Somministrazione “split”

Giorno -1
(tardo pomeriggio)

Giorno
colonscopia



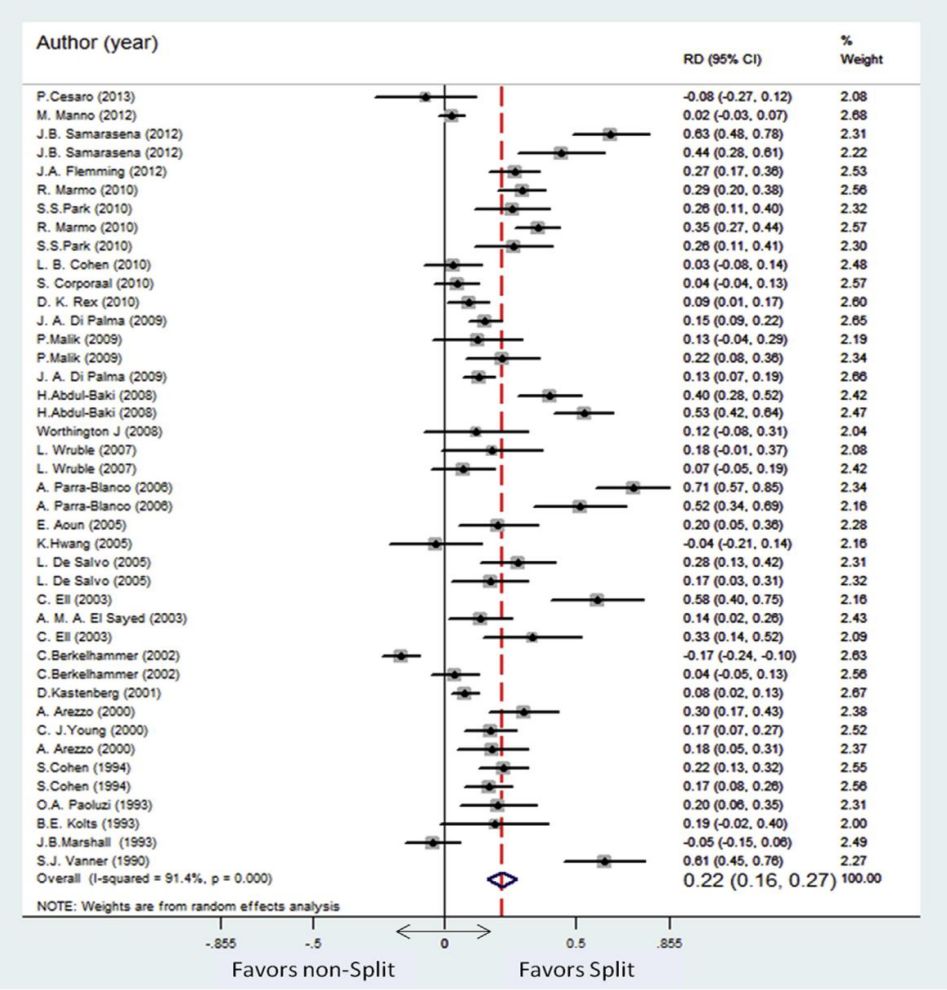
Somministrazione “split”

Efficacia di pulizia

Metanalisi di 29 RCTs split vs. no split
Preprazioni differenti

Percentuale prep. adeguate:
85% (split) *vs*. 63% (no split)

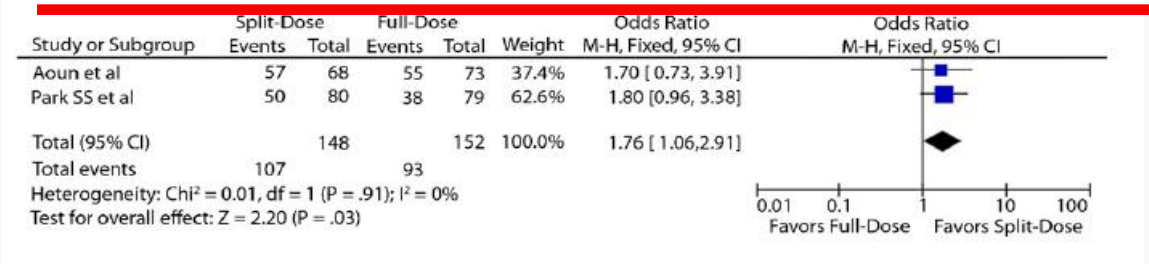
Bucci C et al., Gastrointest Endosc 2014; 80: 566-76



Somministrazione “split”

Meta-analisi di RCTs di confronto tra 4L-PEG “full-dose” *vs*. “split-dose”

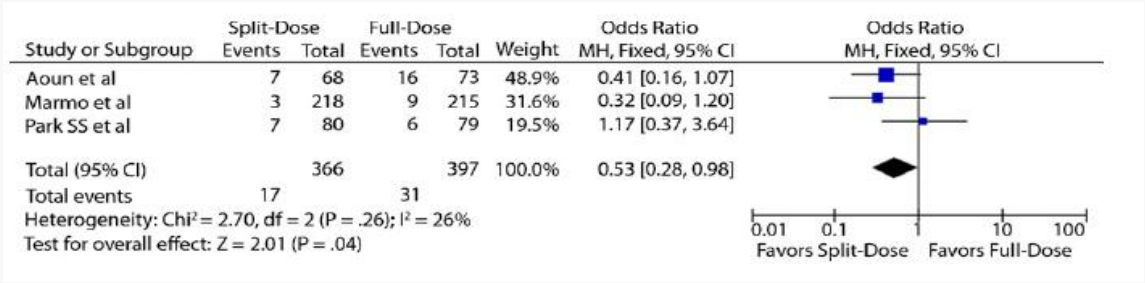
Minore incidenza di effetti collaterali con la split dose



Study or Subgroup	Split-Dose Events	Total	Full-Dose Events	Total	Weight	Odds Ratio M-H, Fixed, 95% CI
Aoun et al	57	68	55	73	37.4%	1.70 [0.73, 3.91]
Park SS et al	50	80	38	79	62.6%	1.80 [0.96, 3.38]
Total (95% CI)		148		152	100.0%	1.76 [1.06,2.91]
Total events	107		93			

Heterogeneity: Chi² = 0.01, df = 1 (P = .91); I² = 0%
Test for overall effect: Z = 2.20 (P = .03)

Minore rischio di interruzione della preparazione con la split dose



Study or Subgroup	Split-Dose Events	Total	Full-Dose Events	Total	Weight	Odds Ratio MH, Fixed, 95% CI
Aoun et al	7	68	16	73	48.9%	0.41 [0.16, 1.07]
Marmo et al	3	218	9	215	31.6%	0.32 [0.09, 1.20]
Park SS et al	7	80	6	79	19.5%	1.17 [0.37, 3.64]
Total (95% CI)		366		397	100.0%	0.53 [0.28, 0.98]
Total events	17		31			

Heterogeneity: Chi² = 2.70, df = 2 (P = .26); I² = 26%
Test for overall effect: Z = 2.01 (P = .04)

Kilgore TW et al., Gastrointest Endosc 2011; 713: 1240-5

Somministrazione “split”

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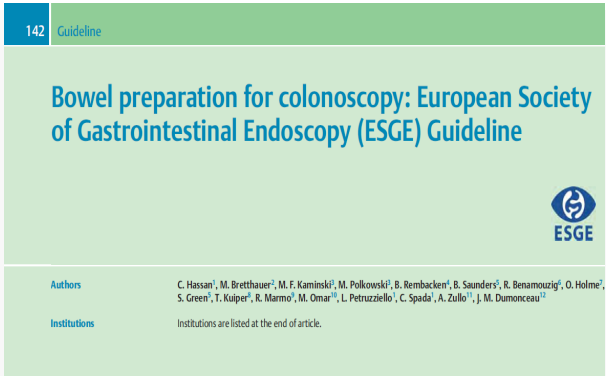
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Somministrazione “split”

1. Use of a split-dose bowel cleansing regimen is strongly recommended for elective colonoscopy (***Strong recommendation, high-quality evidence***)

2. A same-day regimen is an acceptable alternative to split dosing, especially for patients undergoing an afternoon examination (***Strong recommendation, high-quality evidence***)

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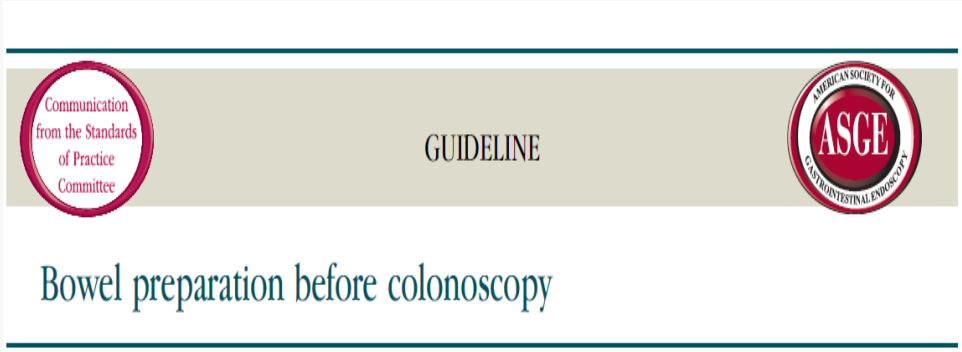
Somministrazione “split”

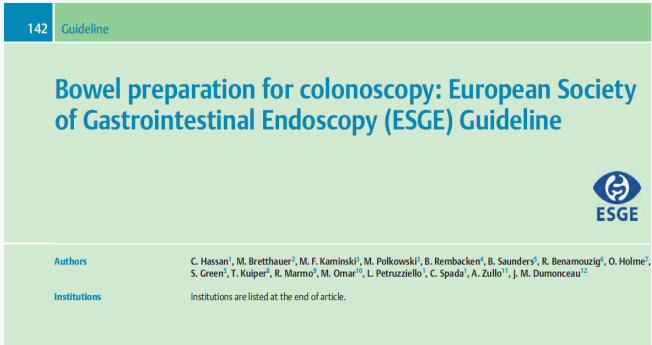
Giving part (usually half) of the bowel preparation dose on the same day as the colonoscopy (termed split-dose) results in a higher-quality colonoscopy examination compared with ingestion of the entire preparation on the day or evening before colonoscopy.[31-39] A higher-quality



Ruolo della dieta

The ESGE recommends a low-fiber diet on the day preceding colonoscopy (weak recommendation, moderate quality evidence).

The ESGE does not make any recommendations regarding the use of low-fiber diet for more than 24 hours prior to the examination (insufficient evidence to make a recommendation).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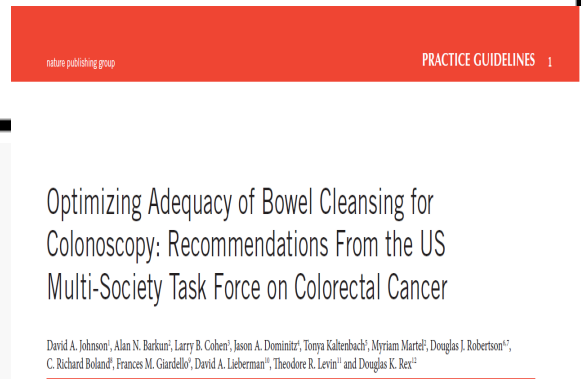
Ruolo della dieta

Recommendation

1. By using a split-dose bowel cleansing regimen, diet recommendations can include either low-residue or full liquids until the evening on the day before colonoscopy (***Weak recommendation, moderate-quality evidence***)



Ruolo della dieta

Bowel preparation regimens typically incorporate dietary modifications along with oral cathartics.[20] Most commonly, a clear liquid diet is advised for the day before colonoscopy. Red liquids can be mistaken for blood in the

the procedure.[21] However, it is not clear whether a clear

Communication from the Standards of Practice Committee

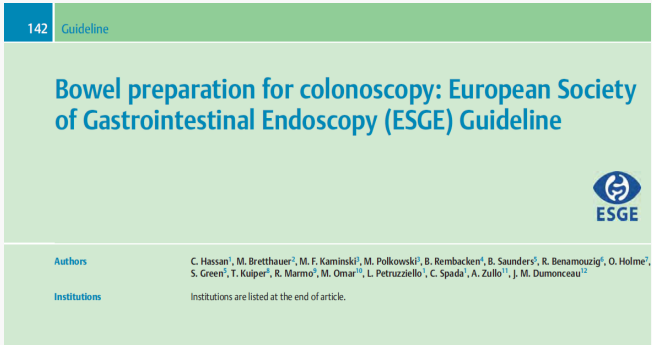
GUIDELINE

ASGE

Bowel preparation before colonoscopy

Educazione - motivazione del paziente

The ESGE recommends that oral and written information about bowel preparation should be delivered by healthcare professionals. (strong recommendation, moderate quality evidence).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Educazione - motivazione del paziente

Recommendations

1. Health care professionals should provide both oral and written patient education instructions for all components of the colonoscopy preparation and emphasize the importance of compliance (***Strong recommendation, moderate-quality evidence***)


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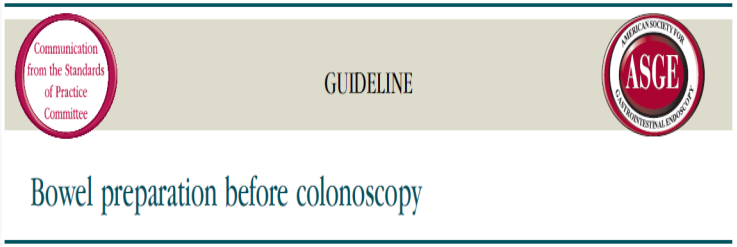
Educazione - motivazione del paziente

It is important that patients are educated and engaged in the colonoscopy prepararion process,[13] and it has been shown that effective education significantly improves the quality of bowel preparation.[14] Patient counseling along with written instructions that are simple and easy to follow and in their native language should be provided to patients,[15] and patient education may improve with the use of visual aids.[16] Recently, educational booklets



Educazione - motivazione del paziente

Pazienti prenotati CUP
2079/ 12.835

16,2%

Radaelli F, Am J Gastroenterol 2008; 103:1122-30

Screening FIT+
5218/ 75.569

6,9%

Zorzi M, Gut 2014; 2014 (EQuIPE)

Quality indicators for colonoscopy

Frequency with which the procedure note documents the quality of preparation

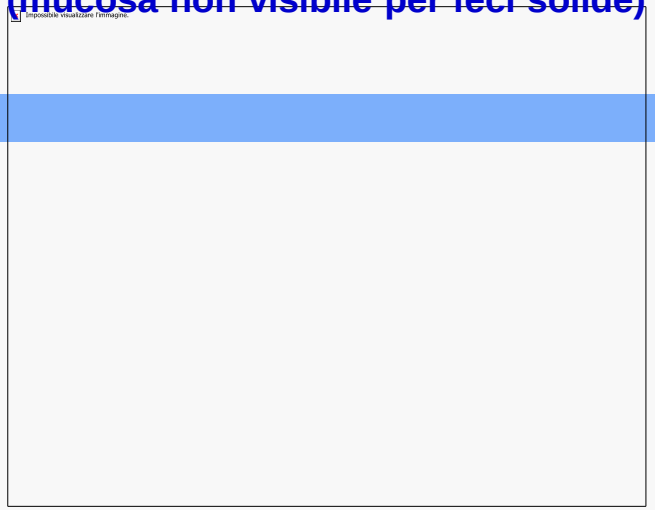
Level of evidence: 3

Performance target: >98%

or *inadequate*. The ASGE/ACG task force recommends that the examination be considered adequate if it allows detection of (within the technical limitations of the procedure) polyps >5 mm in size.[80] Another option is to use independently validated preparation scores, such as the Boston Bowel Preparation Scale[81]

Boston Preparation Scale "bee-bops"

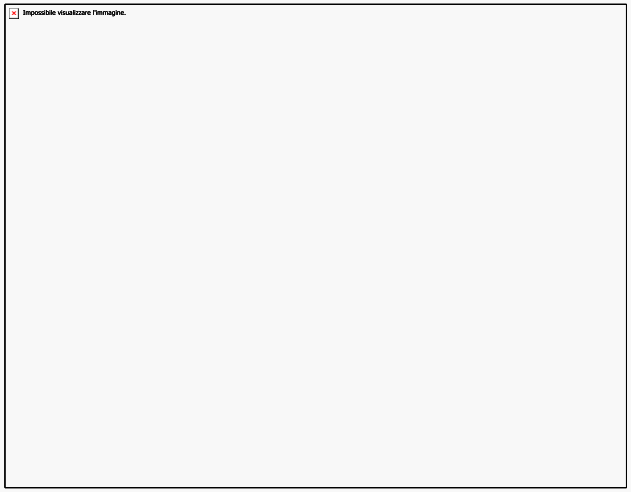
Score 0
(mucosa non visibile per feci solide)



Score 1
(mucosa ipovisibile, feci semisolide)

Score 2
(mucosa visibile, feci rimovibili)

Score 3
(mucosa visibile, liquido chiaro)



- Dopo manovre di lavaggio, in uscita
- Per colon dx, trasverso, colon sx
- Score 0-9 (<5 preparazione inadeguata)

Lai et al GIE 2009

Quality indicators for colonoscopy

Frequency with which the bowel preparation is adequate to allow the use of recommended surveillance or screening intervals

Level of evidence: 3

Performance target: ≥85% of outpatient examinations

Prepazione e effetti sulla pratica clinica

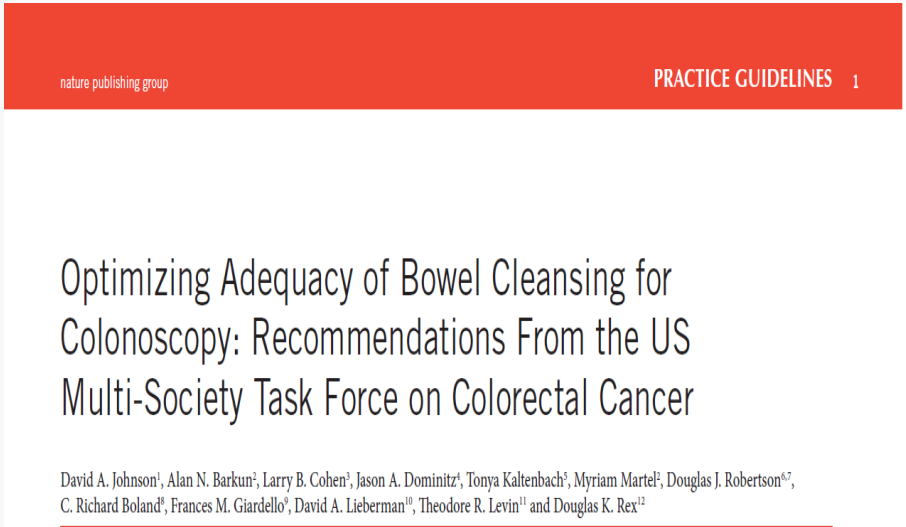
Preliminary assessment of preparation quality should be made in the rectosigmoid colon, and if the indication is screening or surveillance and the preparation clearly is inadequate to allow polyp detection greater than 5 mm, the procedure should be either terminated and rescheduled or an attempt should be made at additional bowel cleansing strategies that can be delivered without cancelling the procedure that day (***Strong recommendation, low-quality evidence***)

Prepazione e effetti sulla pratica clinica

If the colonoscopy is complete to cecum, and the preparation ultimately is deemed inadequate, then the examination should be repeated, generally with a more aggressive preparation regimen, within 1 year; intervals shorter than 1 year are indicated when advanced neoplasia is detected and there is inadequate preparation (***Strong recommendation, low-quality evidence***)

Prepazione e effetti sulla pratica clinica

If the preparation is deemed adequate and the colonoscopy is completed then the guideline recommendations for screening or surveillance should be followed (***Strong recommendation, high-quality evidence***)


nature publishing group PRACTICE GUIDELINES 1

Optimizing Adequacy of Bowel Cleansing for Colonoscopy: Recommendations From the US Multi-Society Task Force on Colorectal Cancer

David A. Johnson[1], Alan N. Barkun[2], Larry B. Cohen[3], Jason A. Dominitz[4], Tonya Kaltenbach[5], Myriam Martel[2], Douglas J. Robertson[6,7], C. Richard Boland[8], Frances M. Giardello[9], David A. Lieberman[10], Theodore R. Levin[11] and Douglas K. Rex[12]

Conclusioni

✓**Parliamo - Motiviamo il paziente sull'importanza della preparazione, utilizziamo anche istruzioni scritte**

✓**Utilizziamo la split dose**

✓**Consideriamo le prepazioni a basso volume su pazienti esterni senza fattori di rischio per preparazione inadeguata**

Conclusioni

✓**In ambito di screening effettuiamo un colloquio con il paziente**

✓**In caso di precedente preparazione inadeguata utilizziamo una diversa preparazione**

✓**Misuriamo la percentuale di pazienti con preparazione inadeguata nel nostro centro**

SERVIZIO SANITARIO REGIONALE
EMILIA-ROMAGNA
Azienda Ospedaliero - Universitaria di Ferrara

UO Gastroenterologia ed Endoscopia Digestiva

GASTROcare

Corso Regionale
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