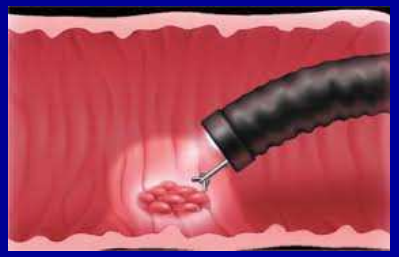
LA COLONSCOPIA ROBOTICA

Sergio Gullini

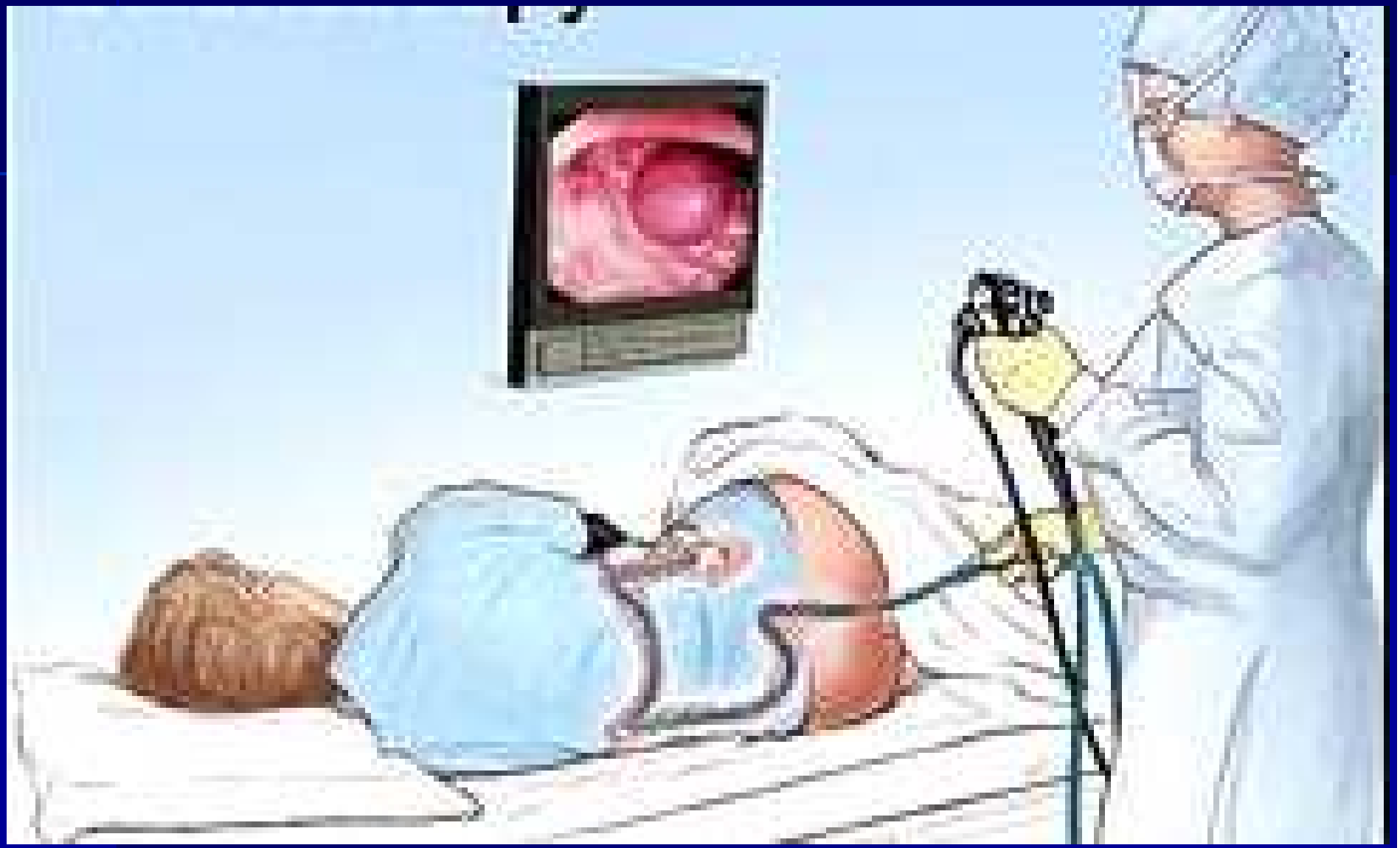
Ferrara 1.12.2012

PRINCIPALI CARATTERISTICHE DELLA COLOSCOPIA

- ✓ UTILE ED EFFICACE
- ✓ BUONA VISIONE DEL LUME
- ✓ PERMETTE DI FARE BIOPSIE, ASPORTARE LESIONI E POSIZIONARE ENDOPROTESI



- ✓ RICHIEDE ADEGUATA PULIZIA INTESTINALE
- ✓ FASTIDIOSA (SEDAZIONE)
- ✓ COMPORTA RISCHIO DI COMPLICANZE, A VOLTE SEVERE



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Editorial

Quality of colonoscopy: How to improve it?

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LA COLONOSCOPIA ROBOTICA

IL SISTEMA ENDOTICS®

Il core product dell'azienda è un colonoscopio robotico disposable ad avanzamento semiautonomo avente le potenzialità di rivoluzionare il campo della colonoscopia, rimpiazzando nella prevenzione dei tumori al colon le metodiche dolorose.

CARATTERISTICHE PRINCIPALI		EFFETTI PRINCIPALI
Robotics	→	Procedure meno dipendente dalle abilità dell'operatore
Self-propelling		rischi di Perforazione
High flexible	→	Alta accettazione da parte del paziente
Disposable	→	Rischi di contaminazione, turnover pazienti

Target

INDOLORE

SICURO

FACILE

ENDOTICS® SYSTEM

PRINCIPIO DI FUNZIONAMENTO

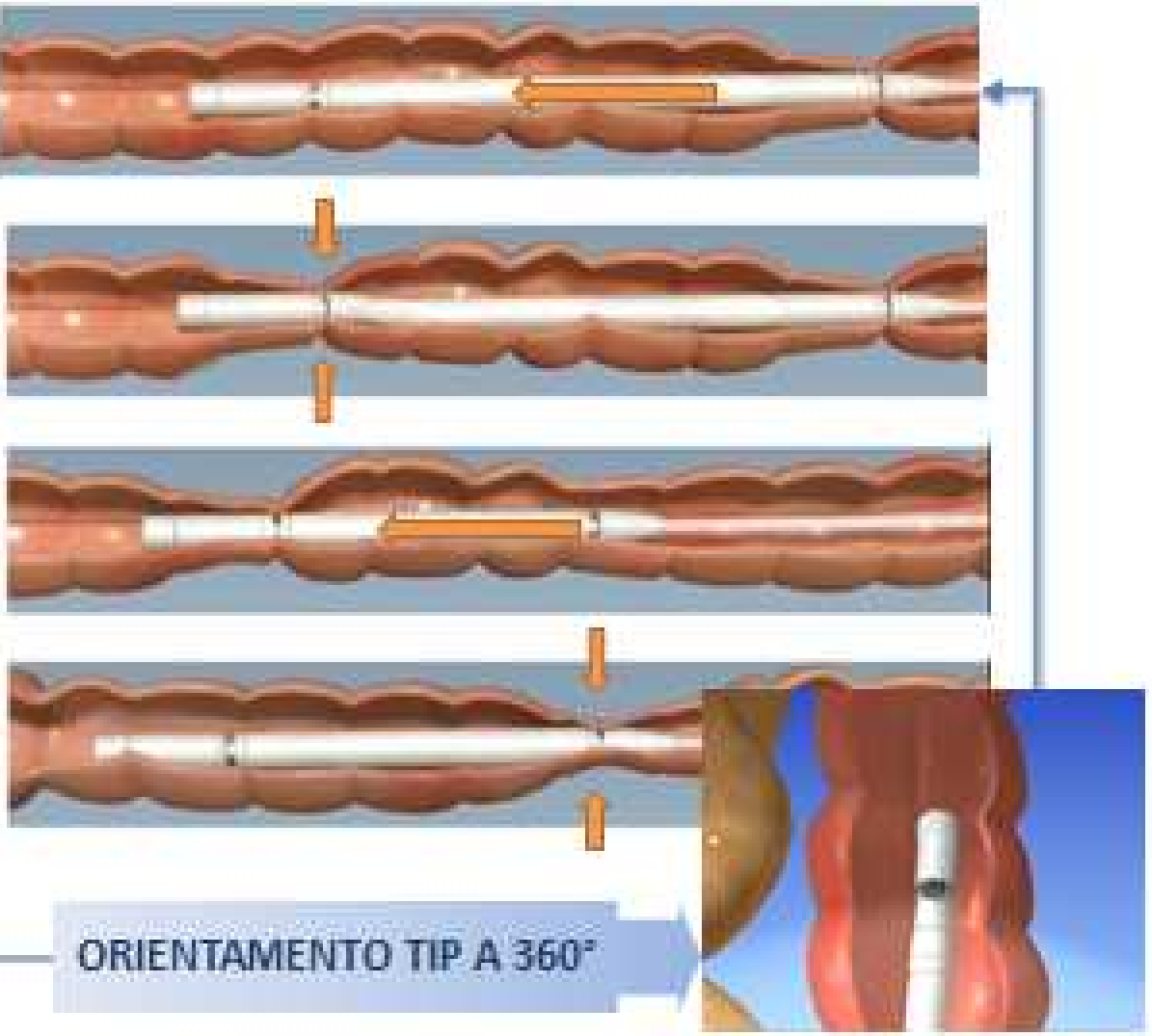
SELF PROPELLING

ALLUNGAMENTO

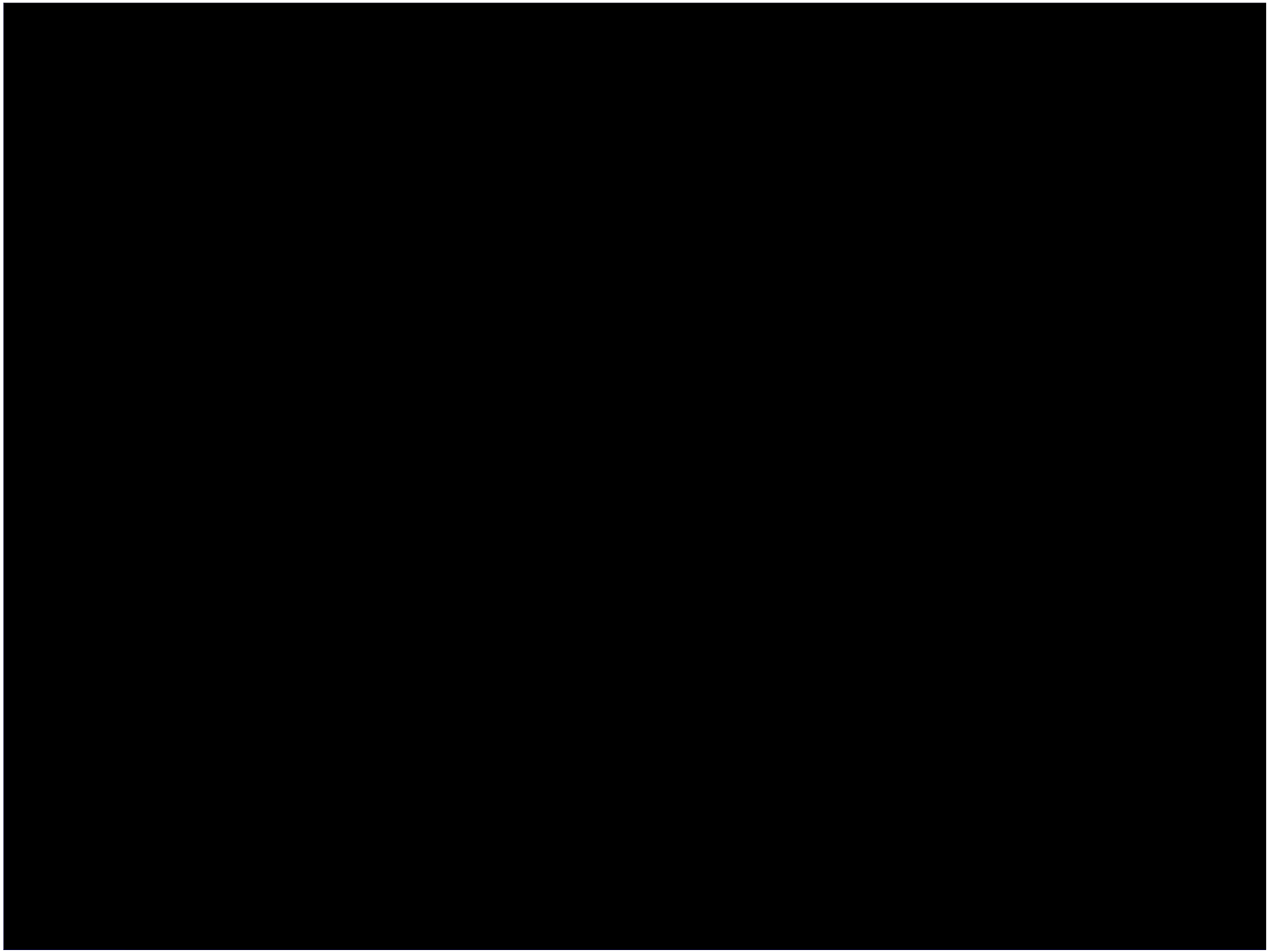
BLOCCO TESTA

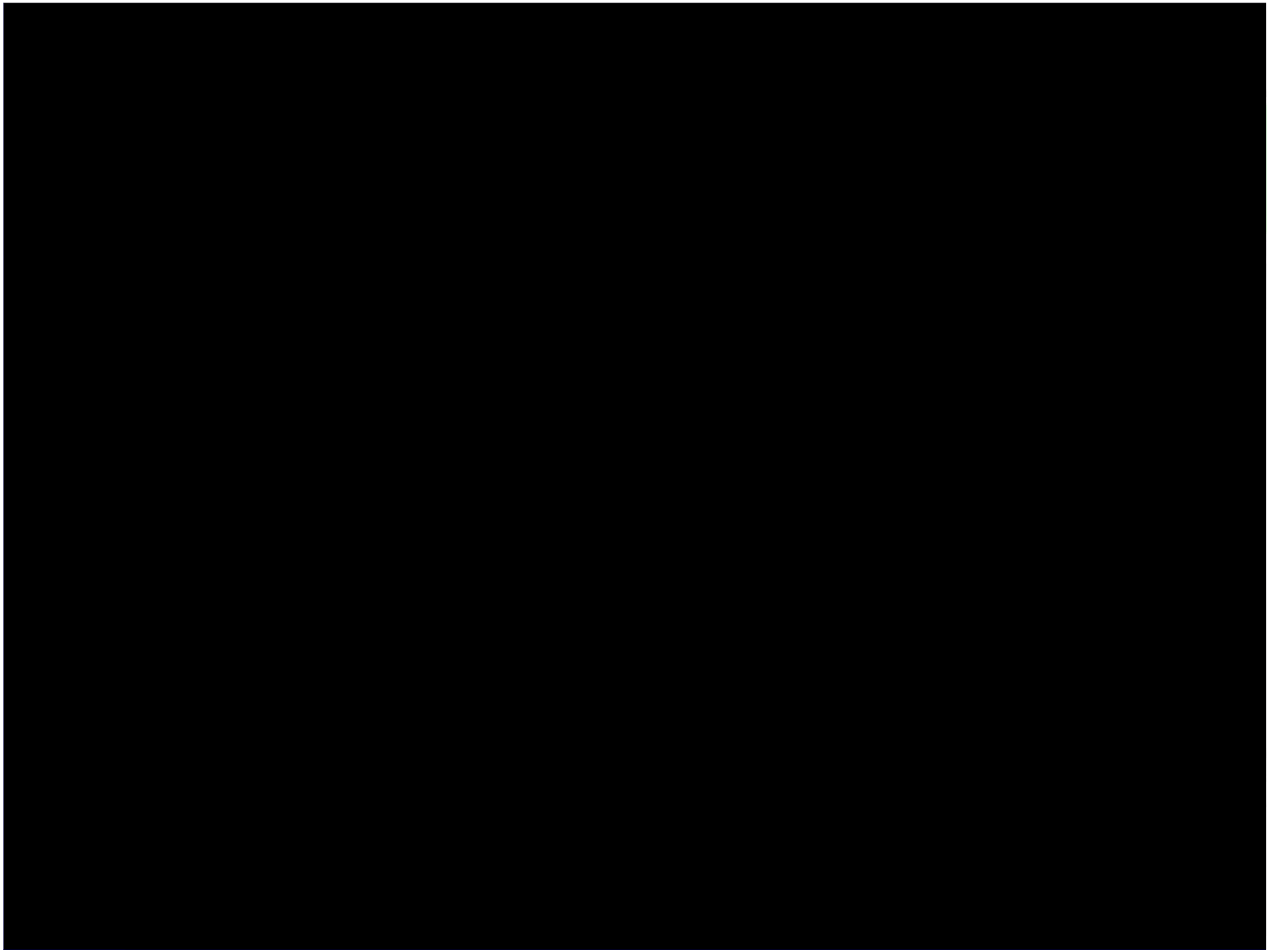
RECUPERO CODA

BLOCCO CODA

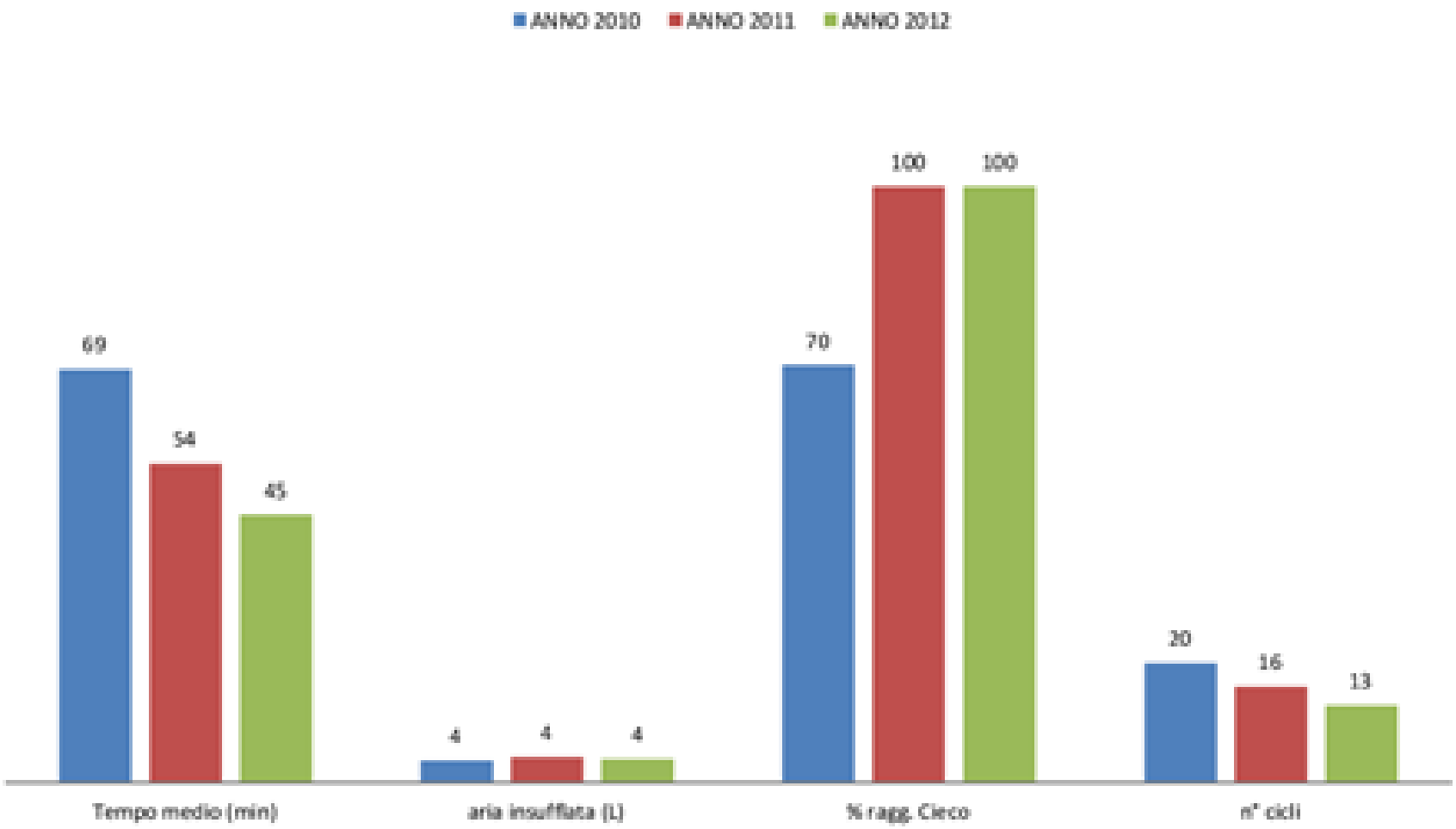


ORIENTAMENTO TIP A 360°





Esperienza personale dr Cadoni



Servizio Endoscopie Digestive - Iglesias

Servizio Endoscopie Digestive - Iglesias

World J Gastroenterol. 2010 November 21

Endotics system vs colonoscopy for the detection of polyps

Emanuele Tumino, Rodolfo Sacco, Marco Bertini, Michele Bertoni, Giuseppe Parisi and Alfonso Capria.

Abstract

AIM:
To compare the endotics system (ES), a set of new medical equipment for diagnostic colonoscopy, with video-colonoscopy in the detection of polyps.

METHODS:
Patients with clinical or familial risk of colonic polyps/carcinomas were eligible for this study. After a standard colonic cleaning, detection of polyps by the ES and by video-colonoscopy was performed in each patient on the same day. In each single patient, the assessment of the presence of polyps was performed by two independent endoscopists, who were randomly assigned to evaluate, in a blind fashion, the presence of polyps either by ES or by standard colonoscopy. The frequency of successful procedures (i.e. reaching to the cecum), the time for endoscopy, and the need for sedation were recorded. Sensitivity, specificity, positive predictive value (PPV) and negative predictive value (NPV) of the ES were also calculated.

RESULTS:
A total of 71 patients (40 men, mean age 51.9 ± 12.0 years) were enrolled. The cecum was reached in 81.6% of ES examinations and in 94.3% of colonoscopies ($P = 0.03$). The average time of endoscopy was 45.1 ± 18.5 and 23.7 ± 7.2 min for the ES and traditional colonoscopy, respectively ($P < 0.0001$). No patient required sedation during ES examination, compared with 19.7% of patients undergoing colonoscopy ($P < 0.0001$). The sensitivity and specificity of ES for detecting polyps were 93.3% (95% CI: 68-98) and 100% (95% CI: 76.8-100), respectively. PPV was 100% (95% CI: 76.8-100) and NPV was 97.7% (95% CI: 88-99.9).

CONCLUSION:
The ES allows the visualization of the entire colonic mucosa in most patients, with good sensitivity/specificity for the detection of lesions and without requiring sedation.

XVII Congresso Nazionale delle Malattie Digestive 5-9 Marzo 2011

ASSESSMENT OF ULCERATIVE COLITIS ENDOSCOPIC ACTIVITY WITH A NOVEL ROBOTIC COLONOSCOPE: THE ENDOTICS SYSTEM. VALUTAZIONE DELL'ATTIVITÀ ENDOSCOPICA DI MALATTIA IN COLITE ULCEROSA TRAMITE UN NUOVO ENDOSCOPIO ROBOTICO: IL SISTEMA ENDOTICS.

Stefano Pallotta,Emanuele Tumino,Gianpiero Manes,Rodolfo Sacco,Sandro Ardizzone,Gianpaolo Bresci,Roberto De Franchis

BACKGROUND & AIM OF THE STUDY:
Patients with inflammatory bowel diseases undergo multiple colonoscopies during their lifetime. Standard colonoscopy (SC) is usually performed under conscious sedation but also under anesthesist- assisted deep sedation, because of little tolerability, and sedation has costs and possible complicationes. Moreover, even in expert hands, SC is not a 100% safe exam: some perforations may occur. Aim of our study was to compare the diagnostic performance and tolerability of the Endotics Endoscopy System (EES), a soft, self-propelled, disposable colonoscope, with that of standard colonoscopy (SC) for the staging of ulcerative colitis.

METHODS:
Patients with mildly to moderately active ulcerative colitis seen at one of our 2 endoscopy departments (Milan and Pisa) for follow-up colonoscopies were studied first with EES and then with SC. We assessed the endoscopic activity according to Baron criteria, and we recorded time to reach the caecum, sedation, patient's pain/discomfort and operator's difficulty.

RESULTS:
We studied 12 patients (7M/ 5F), mean age 41 yrs and disease duration 5.33 yrs. 53 colonic segments (caecum, ascending, transverse, descending and sigmoid colon and rectum in each patient) out of the 54 evaluated had the same assessment of disease activity (absent = 0 points, mild = 1 pt, moderate = 2 pts and severe = 3 pts) with EES and SC. Mean activity score with EES was 0.35 pts (SD 0.60) and 0.33 pts (SD 0.60) with SC, without significant difference. The caecum was reached in 11/12 cases by SC in an average of 29.42 min (SD 28.94), and in 10/12 cases by EES, in an average of 46.67 min (SD 24.98 min), with a mean difference of 17,25 min., not statistically significant. Incomplete colon explorations with EES clustered in Milan, probably because of our smaller experience. An average of 1.45 (SD 0.79) mg of midazolam were used during SC while 0.41 (SD 0.38) mg during EES. Mean pain/discomfort on a 0-10 scale was 2.08 (SD 1.67) for EES and 4.17 (SD 1.74) for SC, with a statistically significant difference (p = 0.066) favouring EES. Mean perceived operator's difficulty on a 0-10 scale was 4.44 (SD 1.78) for EES, and 4.08 (SD 1.44) for SC, with a mean difference of 0.42 pts favoring SC, not statistically significant.

CONCLUSION:
EES appears to be a promising method for disease staging in patients with ulcerative colitis of long duration, because of reduction in pain and discomfort. The capability of obtaining biopsies is still needed before EES can be proposed as a tool for the long term follow-up and screening for dysplasia in patients with disease of long duration.

NOSTRA ESPERIENZA

11 ESAMI
1 NON RIUSCITO PER SUB
STENOSI ANASTOMOSI
9 ESPLORAZIONE SINO AL TRASVERSO
1 visualizzazione di tutto il colon

PROBLEMI DELLA COLOSCOPIA ROBOTICA ALLO STATO ATTUALE

Visione limitata

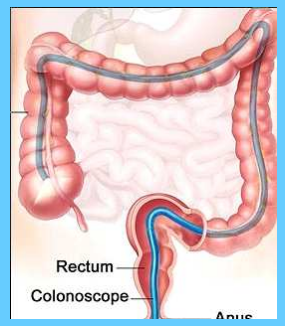
Manca il canale operatore

Richiede una perfetta pulizia intestinale

E’ indaginosa e richiede tempo

I COMPETITOROS

VIDEOCOLOSCOPIA TRADIZIONALE (Gold Standard)



VIDEOCAPSULA

COLOSCOPIA VIRTUALE

Colonscopia robotica Endotics