



REVIEW ARTICLE

# Follow-Up Endoscopy in Gastroenterology: When Is It Helpful?

Background: The indications for follow-up endoscopy have not been established in all diseases that can be diagnosed by endoscopy.

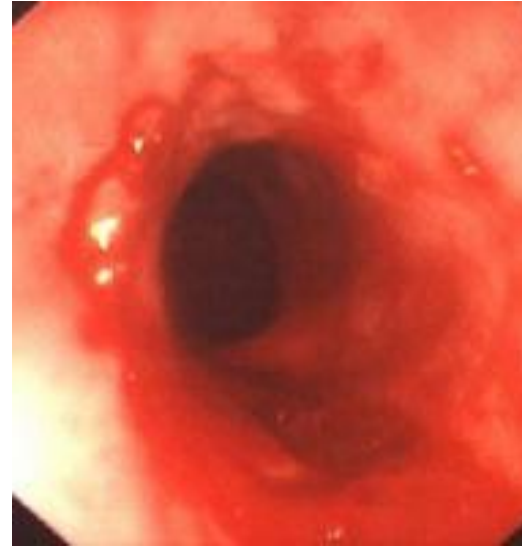
Methods: Selective review of the literature and a survey of national guidelines.

The paper is based on a selective literature review with particular reference to national guidelines and their specified classes of recommendation and levels of evidence, and on a PubMed search on recommendations for follow-up endoscopy for the diseases specified below. However,

studies are needed to establish with sufficient certainty what really helps our patients.

# Controlli e follow-up: quando si e quando no

**ERD/NERD**



**esofago di Barrett**

# Controlli e follow-up: quando si e quando no

Duodenal Ulcer (DU)



Gastric Ulcer (GU)



# Controlli e follow-up: quando si e quando no

**varici esofagee**



**varici fondo**



# Controlli e follow-up: quando si e quando no

**lesioni precancerose**



**neoplasia colon-retto**



## Role of endoscopy in the management of GERD

GERD symptoms that are persistent or progressive despite appropriate medical therapy

Dysphagia or odynophagia

Involuntary weight loss > 5%

Evidence of GI bleeding or anemia

Finding of a mass, stricture, or ulcer on imaging studies

Evaluation of patients with suspected extra-esophageal manifestations of GERD

Screening for BE in selected patients (as clinically indicated)

Persistent vomiting

Evaluation of patients with recurrent symptoms after endoscopic or surgical antireflux procedures

In confirmed erosive reflux disease/non-erosive reflux disease (ERD/NERD), follow-up endoscopy is only indicated when there are complications (ulcers, strictures) or in Barrett's esophagus (reddening of the distal mucosa of the esophagus with histological evidence of specialized intestinal metaplasia) Biopsies are essential during initial and follow-up endoscopy, since almost a third of all early cancers related to Barrett's esophagus are only detected histologically.

# AGA

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## American Gastroenterological Association Medical Position Statement on the Management of Barrett's Esophagus

### Barrett's Esophagus Risk and Screening

In patients with multiple risk factors associated with esophageal adenocarcinoma (age 50 years or older, male sex, white race, chronic GERD, hiatal hernia, elevated body mass index, and intra-abdominal distribution of body fat), we suggest screening for Barrett's esophagus (weak recommendation, moderate-quality evidence).

We recommend against screening the general population with GERD for Barrett's esophagus (strong recommendation, low-quality evidence).

# AGA

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## American Gastroenterological Association Medical Position Statement on the Management of Barrett's Esophagus

### Endoscopic Surveillance in Patients With Barrett's Esophagus

We suggest that endoscopic surveillance be performed in patients with Barrett's esophagus (weak recommendation, moderate-quality evidence).

We suggest the following surveillance intervals (weak recommendation, low-quality evidence):

- No dysplasia: [REDACTED]
- Low-grade dysplasia: [REDACTED]
- High-grade dysplasia in the absence of eradication therapy: [REDACTED]

## Biopsy Protocol for Endoscopic Surveillance of Barrett's Esophagus

For patients with Barrett's esophagus who are undergoing surveillance:

We recommend endoscopic evaluation be performed using white light endoscopy (strong recommendation, moderate-quality evidence).

We recommend 4-quadrant biopsy specimens be taken every 2 cm (strong recommendation, moderate-quality evidence).

We recommend specific biopsy specimens of any mucosal irregularities be submitted separately to the pathologist (strong recommendation, moderate-quality evidence).

We recommend 4-quadrant biopsy specimens be obtained every 1 cm in patients with known or suspected dysplasia (strong recommendation, moderate-quality evidence).

# The role of endoscopy in the management of patients with peptic ulcer disease

Volume 71, No. 4 : 2010 GASTROINTESTINAL ENDOSCOPY

## Role of endoscopic surveillance

# ulcera duodenale

**NO**

**Si solo se persistono i sintomi  
nonostante la terapia medica**



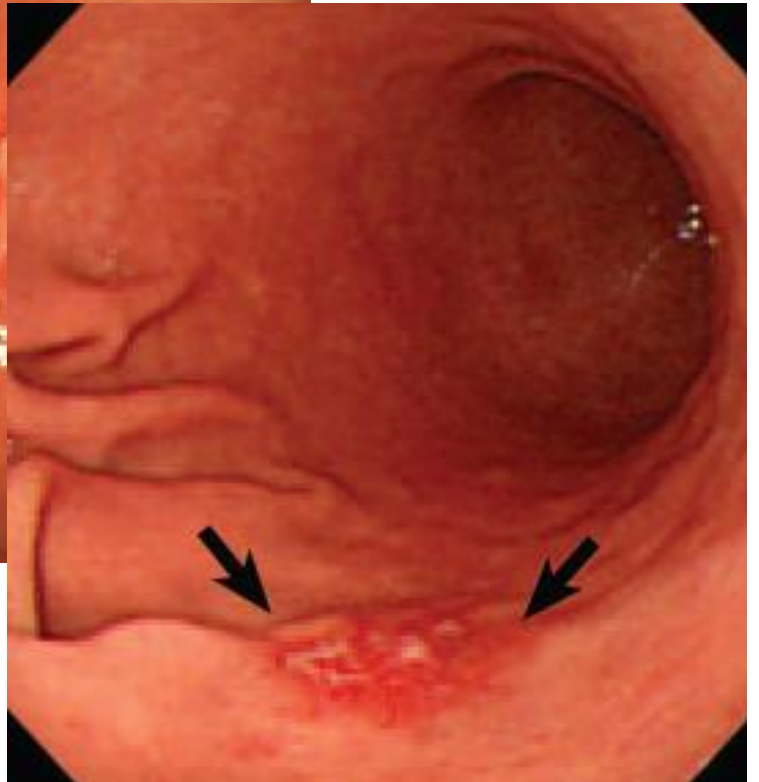
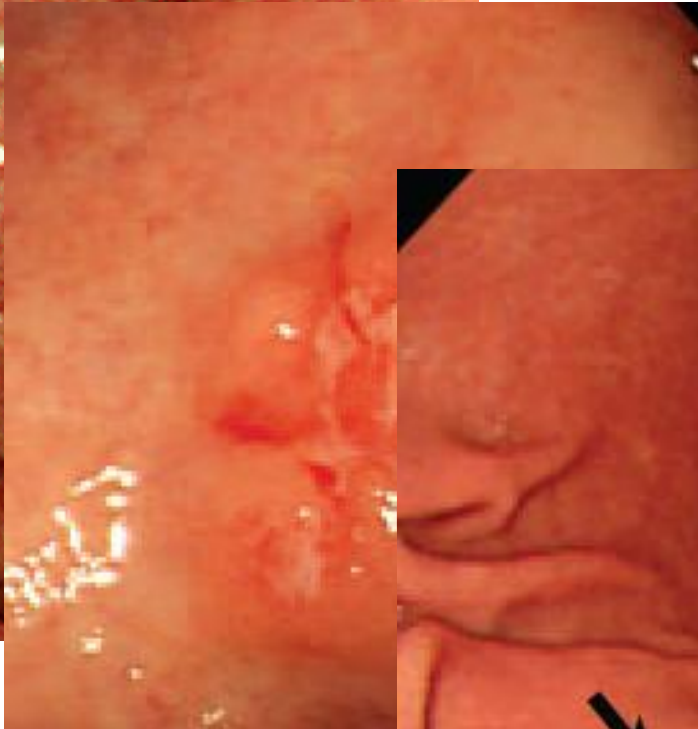
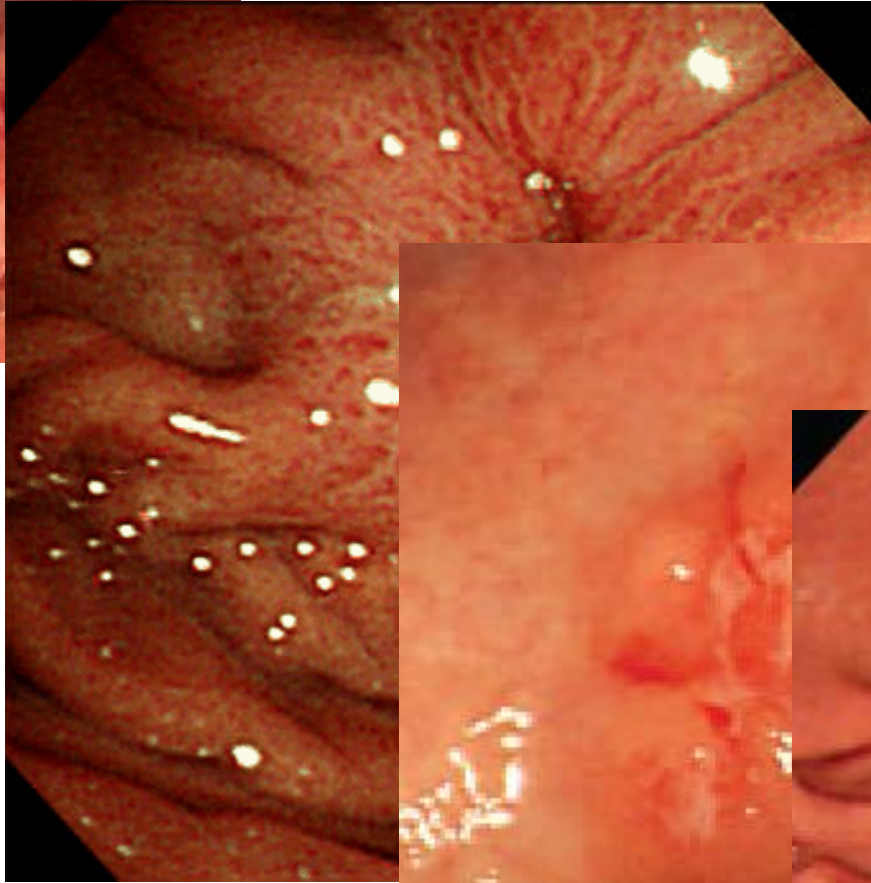
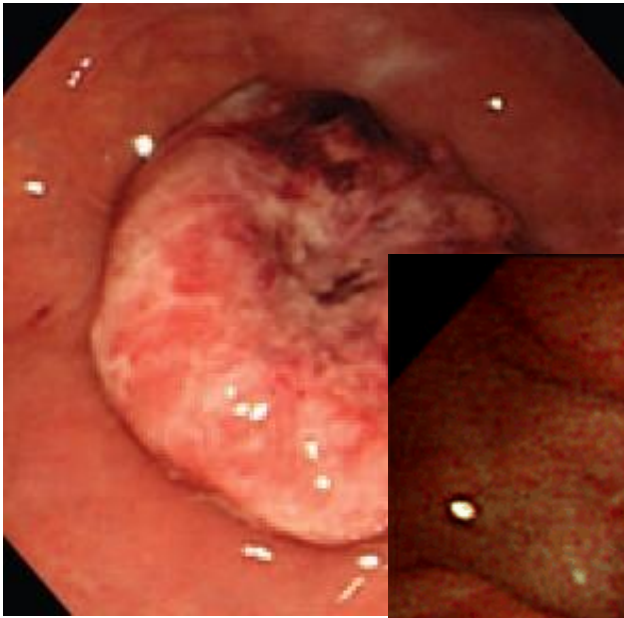
## The role of endoscopy in the management of patients with peptic ulcer disease

### Role of endoscopic surveillance

## Ulcera gastrica

- da decidere caso per caso
- eziologia non chiara
- importante l'aspetto endoscopico dell'ulcera
- biopsie ma 2-5% falsi negativi all'istologia
- sintomi persistenti nonostante la terapia acido-soppressiva
- controllo a 8-12 settimane





## The role of endoscopy in the management of patients with peptic ulcer disease

### Role of endoscopic surveillance

## Ulcera refrattaria

no guarigione dopo 8-12 settimane

SI

## Ulcera sanguinante

pz che risanguinano dopo  
terapia endoscopica/medica,  
prima di un intervento  
chirurgico/ radiologico

SI



# The Current Spectrum of Gastric Polyps: A 1-Year National Study of over 120,000 Patients

*Am J Gastroenterol* 2009; 104:1524–1532

**Table 1.** Gastric polyp prevalence studies, including year published and number of years during which polyps were collected

Authors	Country	Pub. year	Years	No. of polyps	Hyperplastic	Fundic gland	Adenoma	Carcinoma	Inflammatory
Morais <i>et al.</i> (8)	Brazil	2007	5	153	71.30%	16.30%	12.40%	2%	NR
Gencosmanoglu <i>et al.</i> (6)	Turkey	2003	5	150	64% <sup>a</sup>	14%	3%	NR	2%
Ljubicic <i>et al.</i> (7)	Croatia	2002	1	42	50%	7%	17%	NR	NR
Sivelli <i>et al.</i> (14)	Italy	2002	6	164	44.50%	NR	16.40%	0.60%	4.9%
Attard <i>et al.</i> (5)	USA-pediatric <sup>b</sup>	2002	18	41	42%	40%	5%	NR	NR
Papa <i>et al.</i> (10)	Italy	1998	7	121	55.4%	3.3%	9.90%	0.8%	28.9%
Archimandritis <i>et al.</i> (4)	Greece	1996	4	258	75.6%	NR	6.60%	NR	17.8%
Stolte <i>et al.</i> (13)	Germany	1994	20	5,515	28.3%	47%	9%	7.20%	3.1% (IFP)
Rattan <i>et al.</i> (11)	Israel	1993	8	188	45.2%	NR	3.2%	5.3%	29.3%
Roseau <i>et al.</i> (12)	France	1990	4	191	25.1%	9.9%	3.1%	NR	61.8%
Deppisch <i>et al.</i> (15)	USA	1989	10	121	75%	17%	8.60%	NR	NR
Niv <i>et al.</i> (9)	Israel	1985	8	99	23.2%	17.2%	10.1%	NR	25.3%
Laxen <i>et al.</i> (3)	Finland	1982	10	357	55% <sup>a</sup>	NR	8%	NR	36%

## Gastric polyps: last literature review version, maggio 2011

Polyp type	Usual number and size	Usual site	Malignant potential of polyp	Malignant potential of background mucosa	Management
<b>Sporadic Fundic Gland Polyp</b>	Multiple 1-5mm	Upper and lower body	Very low	Very low	Biopsy to confirm nature of polyp <b><u>No follow-up</u></b>
<b>Inflammatory Fibroid Polyp</b>	Single 1-5cm	Antrum	Very low	Very low	Biopsy to confirm nature of polyp Remove if causing obstruction <b><u>No follow-up</u></b>
<b>Hyperplastic</b>	Single 1-2cm	Antrum	Low but significant	Low	Remove polyp <b><u>Eradicate <i>H pylori</i></u></b> <b><u>OGD at 1 year</u></b>
<b>Hyperplastic</b>	Multiple <1cm	Lower body	Low but significant	Low	<b><u>Eradicate <i>H pylori</i></u></b> <b><u>OGD 1 year</u></b>
<b>Adenoma</b>	Single 1-2cm	Antrum	High	Significant	Remove polyp Sample rest of gastric mucosa <b><u>OGD at 1 year and 2 yearly thereafter</u></b>
<b>FAP associated Fundic Gland Polyp</b>	Multiple 'carpet' <1cm	Upper and lower body	low	Low	Biopsy to confirm nature of polyp <b><u>OGD every 2 years</u></b>



## Revising consensus in portal hypertension: Report of the Baveno V consensus workshop on methodology of diagnosis and therapy in portal hypertension

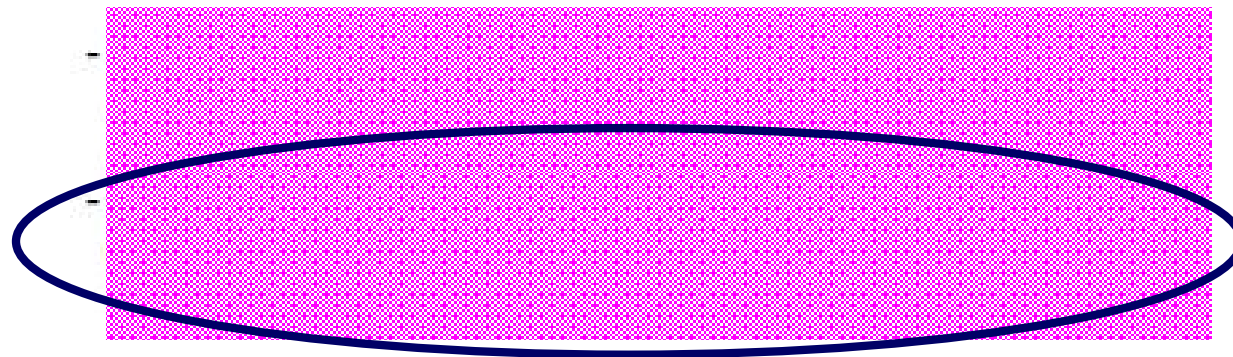
### Endoscopic treatment

- Endoscopic therapy is recommended in any patient who presents with documented upper GI bleeding and in whom esophageal varices are the cause of bleeding (1a;A).
- Ligation (EVL) is the recommended form of endoscopic therapy for acute esophageal variceal bleeding, although sclerotherapy may be used in the acute setting if ligation is technically difficult (1b;A).
- Endoscopic therapy with tissue adhesive (e.g. N-butyl-cyanoacrylate) is recommended for acute bleeding from isolated gastric varices (IGV) (1b;A) and those gastro-esophageal varices type 2 (GOV2) that extend beyond the cardia (5;D).
- EVL or tissue adhesive can be used in bleeding from gastro-esophageal varices type 1 (GOV1) (5;D).

### Prevention of re-bleeding

Combination of beta-blockers and band ligation is the preferred therapy as it results in lower re-bleeding compared to either therapy alone (1a;A).

### Management of treatment failures



# Baveno V Recommendations

## Prevention of late rebleeding

### Confirmed

**Secondary prophylaxis (beta-blockers, band ligation) should start as soon as possible from day 6 of the index variceal bleeding episode (5, D)**



# **Baveno V Recommendations**

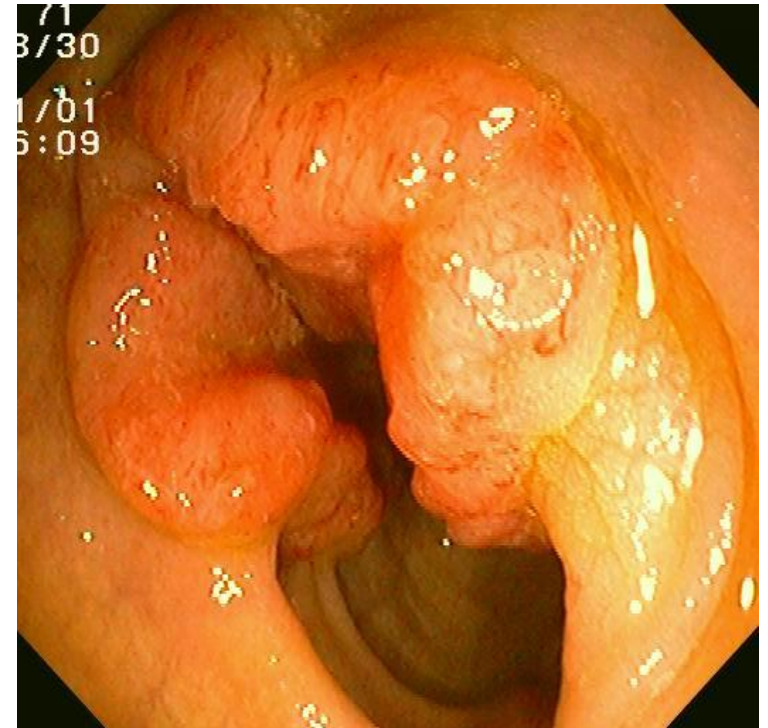
## **Prevention of late rebleeding**

### **Confirmed**

**In patients with cirrhosis who have contraindications or intolerance to beta-blockers, band ligation is the preferred treatment (5;D)**



# COLONSCOPIA DI FOLLOW-UP



## **la colonscopia di follow-up non è indicata**

- **Sorveglianza periodica di malattie benigne** (diverticolosi)
- Controllo di **patologie “funzionali”** (stipsi cronica, colon irritabile), a meno che non compaiano sintomi d'allarme
- Sorveglianza dopo **dilatazione di stenosi benigne** a meno che non intervenga un cambiamento della sintomatologia

## **la colonscopia di follow-up è indicata**

- **Operati** di cancro del colon e del retto
- Dopo **polipectomia**
- **M.I.C.I.** in particolare R.C.U., a partire dagli 8-10 anni dalla comparsa della malattia

# Utilization and Yield of Surveillance Colonoscopy in the Continued Follow-Up Study of the Polyp Prevention Trial

*Clin Gastroenterol Hepatol.* 2009 May ; 7(5): 562–497

**Conclusions—**Surveillance colonoscopy was over-utilized for low-risk subjects and under-utilized for high-risk subjects.

## Likelihood of missed and recurrent adenomas in the proximal versus the distal colon

Volume 74, No. 2 : 2011 GASTROINTESTINAL ENDOSCOPY

### Take-home Message

- Missed lesions tend to occur in the proximal colon, and there is also an increased tendency for adenoma recurrence in the proximal colon. This may contribute to the explanation of why colonoscopy is not as effective in the proximal colon compared with the distal colon.

A repeat colonoscopy after 1 year in our cohort of patients with a history of adenoma detected additional adenomas in 34.6% of patients and advanced adenomas in 6% of patients. Per the design of the PPT, these were regarded as missed lesions. However,

However, the current postpolypectomy surveillance guidelines<sup>21</sup> do not take adenoma location into consideration for surveillance interval recommendations.

# Il problema dei "missed cancers" del colon-retto

Giorn Ital End Dig 2010;33:113-118

	Anno pubblicazione	N° pazienti con CCR	"miss rate"
Indiana, US (5)	1997	941	5.2%*
Giappone (6)	2003	233	6.4%*
New Zeland (7)	2004	286	5.9%*
South Wales, UK (8)	2009	570	5.0%^

\* % pazienti sottoposti a colonscopia risultata "negativa" nei 3 anni precedenti

^ % pazienti sottoposti a colonscopia risultata "negativa" nei 5 anni precedenti

Singh H et al,  
Am J Gastroenterol 2010



**66% dei K diagnosticati entro 3  
anni dopo colonscopia  
negativa situato nel colon dx**



Gastrointest Endosc 2006 Apr;63(4 Suppl):S16-28.

## Quality indicators for colonoscopy

Clean colon



Operator experience  
Cecal Intubation Rates

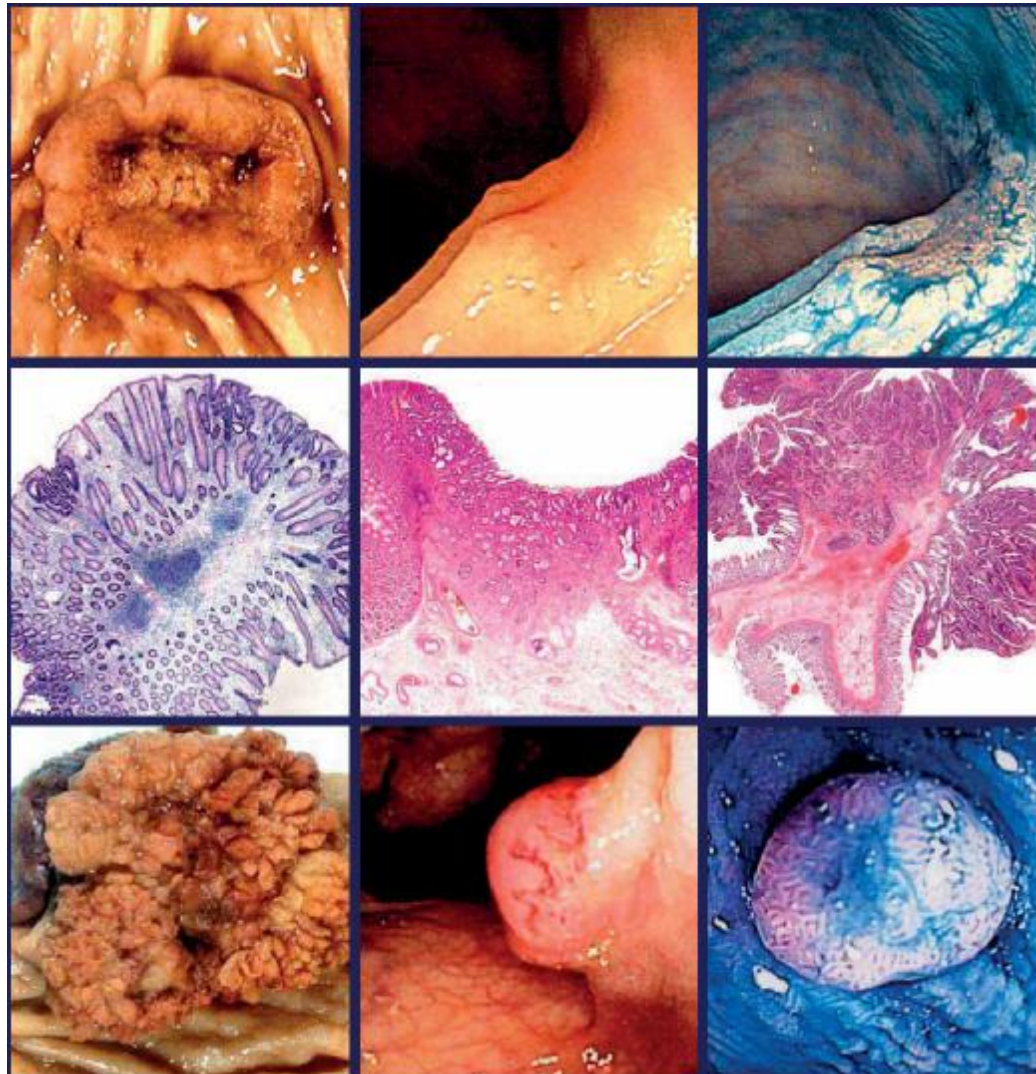


Withdrawal times



Detection of adenomas





**European guidelines for quality assurance in colorectal  
cancer screening and diagnosis** *First Edition*

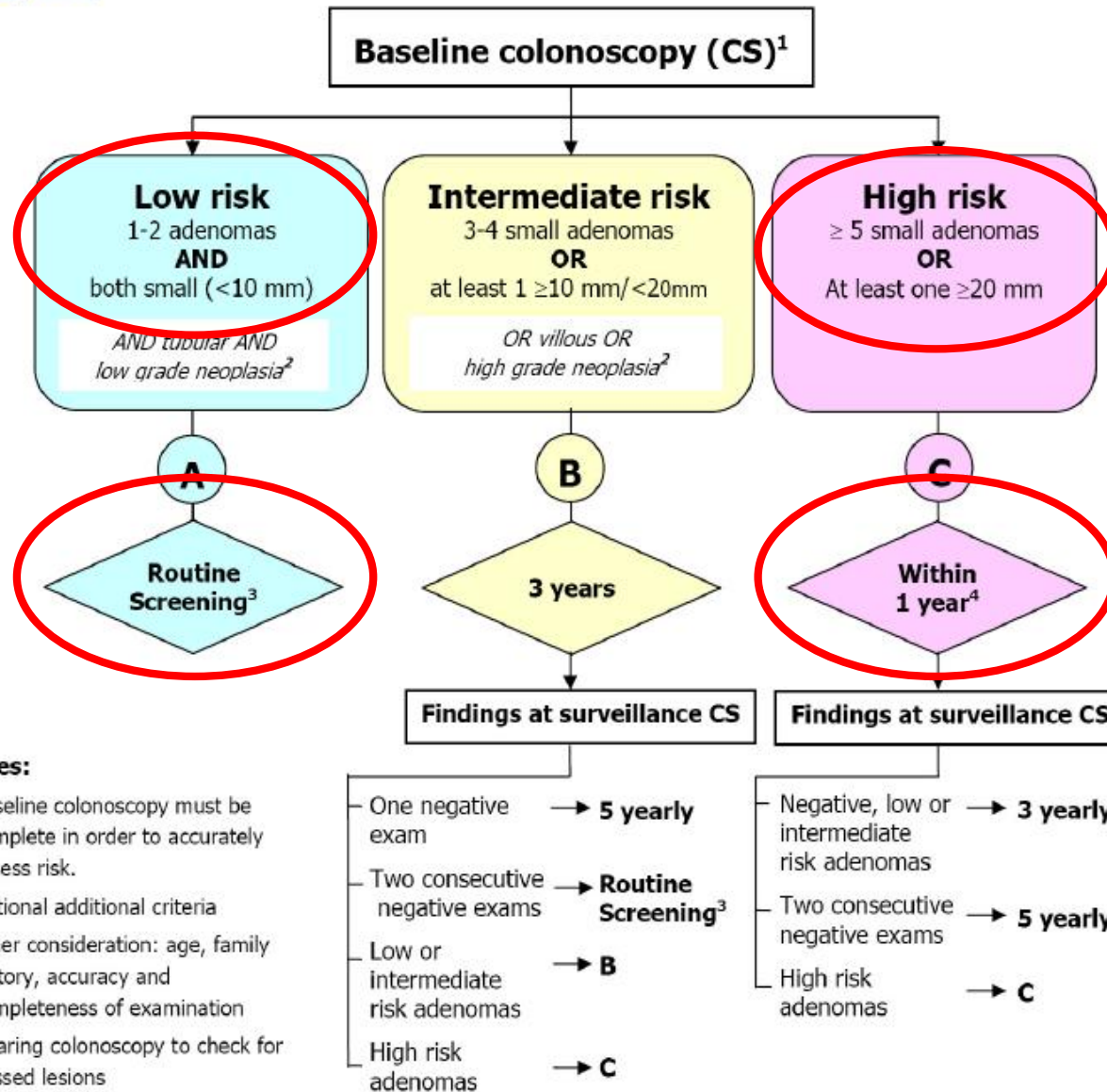


European Commission

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## COLONOSCOPIC SURVEILLANCE FOLLOWING ADENOMA REMOVAL (EU 2010)



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# follow-up post-chirurgia

	<b>AIOM</b>	<b>ESMO</b>	<b>ASCO</b>	<b>NCCN</b>
<b>Physical Examination</b>	Every 4 months for 3 years, then every 6 months up to 5 years	Every 3-6 months for 3 years then every 6-12 months up to 5 years	Every 3-6 months for the first 3 years; every 6 months up to 5 years; and subsequently at the discretion of the physician	Every 3-6 months for 2 years, then 6 months up to 5 years
<b>CEA</b>	Every 4 months for 3 years, then every 6 months up to 5 years	Every 3-6 months for 3 years, then every 6-12 months up to 5 years	Every 3 months for at least 3 years if the patient is a candidate for surgery or systemic therapy	Every 3-6 months for 2 years, then 6 months up to 5 years in stage II and III Every 3 months for the first 2 years and then every 6 months up to 5 years for stage IV NED
<b>Abdominal Ultrasound</b>	Every 6 months for 3 years	Restricted to patients with suspicious symptoms	Not recommended	Not recommended
<b>Chest-abdominal CT-scan</b>	Every 6 months for 3 years (only abdominal CT)	Every 6 months for 3 years in patients who are at higher risk for recurrence	Annual CT of the chest and abdomen for 3 years after primary therapy for patients who are at higher risk of recurrence and who could be candidates for surgery with curative-intent	Annually for the first 3-5 years in stage II and III Every 3-6 months in the first 2 years after adjuvant treatment and then every 6-12 months up to a total of 5-7 years for stage IV NED
<b>Chest x-ray</b>	Every 6-12 months	Restricted to patients with suspicious symptoms	Yearly chest x-rays are not recommended	Not recommended

Abbreviations: AIOM = Associazione Italiana di Oncologia Medica; ASCO = American Society of Clinical Oncology; CEA = carcinoembryonic antigen; CT = computed tomography; ESMO = European Society for Medical Oncology; NED = not evidence disease; NCCN = National Comprehensive Cancer Network.

# The Follow-up After Radical Surgery of Colorectal Cancer: Is it Time for a “Tailored” Strategy?

Margherita Nannini,<sup>1</sup> Maria Abbondanza Pantaleo,<sup>1</sup> Guido Biasco<sup>1,2</sup>

*Clinical Colorectal Cancer*, Vol. 10, No. 2, 81-4 © 2011

## *Toward the “Tailored” Follow-up*

Highlighting these considerations, the concept of colorectal cancer follow-up should be construed from a dynamic point of view, taking into account all the variables that may influence and the cancer natural history. The available clinical and pathological parameters now seem to be inadequate for the classification and prognostic stratification of cancers due to the great biologic and genetic heterogeneity of this disease. Therefore, in the light of new molecular biology technologies, the way of thinking should shift from a clinical-pathological to a molecular prognostic system to better assess the risk of developing recurrence. Specific gene signatures have been found to discriminate good from poor prognosis better than pathological staging systems, or to predict the metastatic potential of the primary tumor.<sup>43</sup>

