Evidence based EU Guidelines on Quality Assurance in Cancer Screening:

Che impatto per i programmi di screening italiani?

Osservatorio Nazionale Screening

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NEREO SEGNAN

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Executive Agency for Health and Consumers

European guidelines for quality assurance in colorectal cancer screening and diagnosis

First Edition

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European Commission

Development of European Guidelines for Quality Assurance in Colorectal Cancer Screening* – Project Partners
Project 2005317 – EU Health Programme

- **International Agency for Research on Cancer**
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European Guidelines for Quality Assurance in Colorectal Cancer Screening – first edition *

Volume 1 – 10 Chapters, 400 pages

- Introduction
- Organisation
- Evaluation
- FOBT
- Endoscopy
- Training
- Pathology
- Clinical Management
- Surveillance
- Communication

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Volume 2 – Evidence1.000 pages,500 tables of evidence

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PROCESS

1. Definition of clinical questions and PICOS by the authors
2. Literature search, evidence tables and summary documents by the literature group
3. Chapter drafts based on the literature search results
4. Circulation of the drafts and meetings with chapters authors, editorial board and literature group to check and share the contents of the chapters and the format
5. External review and web consultation
6. Final revision and editing by the authors and the EB

QUESTIONS FORMULATION

All authors of the chapters have been invited to define, for each heading and subheading, one or more relevant clinical question to be answered by searching the literature

They have been also invited to compile the PICOS

P: characteristics of patients

I: intervention to be assessed

C: comparison

O: relevant outcomes

S: study designs to be considered

PICOS example

Evidence for accuracy of FOBt screening

Is immunochemical FOBT (I-FOBT) superior to guaiac FOBT (G-FOBT) in its test performance characteristics (sensitivity and specificity)?

- **P**: general population at average risk of colorectal cancer aged 50 years and older
- **I**: I-FOBT;
- **C**: G-FOBT
- **O**: sensitivity, specificity; likelihood ratio, PPV
- **S**: (systematic reviews of) diagnostic accuracy studies (RCT, prospective, retrospective or case control)

Number of PICOS by chapter

Chapter	1	2	3	4	5	6	7	8	9	10
N. of PICOS	22	13	12	8	15	9	20	9	8	3

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BIBLIOGRAPHIC SEARCH

- The literature group performed a comprehensive bibliographic search for each PICOS on Medline, Embase , Cochrane library,since 2000 or earlier
- The literature suggested by the authors have also been used
- As first resort systematic reviews have been considered. If not found, primary studies have been searched
- For some questions, also published guidelines have been considered

SUMMARY DOCUMENT

A SUMMARY DOCUMENT has been prepared for each clinical question reporting:

- **PICOS** question
- **Methods**: Search strategy used
- **Results**: n. and types of retrieved studies, summary of their characteristics and results, methodological quality
- **Conclusions** and overall level of evidence

LEVEL OF EVIDENCE

A grading of level of evidence was used and reported in each evidence table and summary documents

I: many randomized controlled trials (RCTs) or systematic reviews (SRs) of RCTs

II: one RCT

III: prospective cohort studies or SRs of cohort studies

IV: retrospective case-controls studies or SRs of case controls studies, time series analysis

V: case series; before after studies without control group, cross sectional surveys

VI: expert opinion

STRENGTH OF THE RECOMMENDATIONS

A intervention strongly recommended for all patients

B intervention recommended

C intervention to be considered but with uncertainty about its impact

D intervention not recommended

E intervention strongly not recommended

Correspondence LE – Recc

C: coherence between the level of evidence and the strength of recommendations

nc: no coherence between the level of evidence and the strength of recommendations.

If the authors score the recommendation without coherence with the level of evidence they are expected to justify their decision

	A	B	C	D	E
I	C	C		C	C
II	nc	C		C	C
III	nc	C	C	C	nc
IV	nc	nc	C	nc	nc
V	nc	nc	C	nc	nc
VI	nc	nc	C	nc	nc

prescriptive recommendation

Example:
- In the context of an organised program, personal invitation letters, preferably signed by the
general practitioner, should be used. A reminder letter mailed to all non-attenders increases attendance
rate and is therefore recommended **(I - A).**

- follow up intervals

Recommendation based on precautionary principle

example. Reduce waiting times, avoid contamination (VI A)

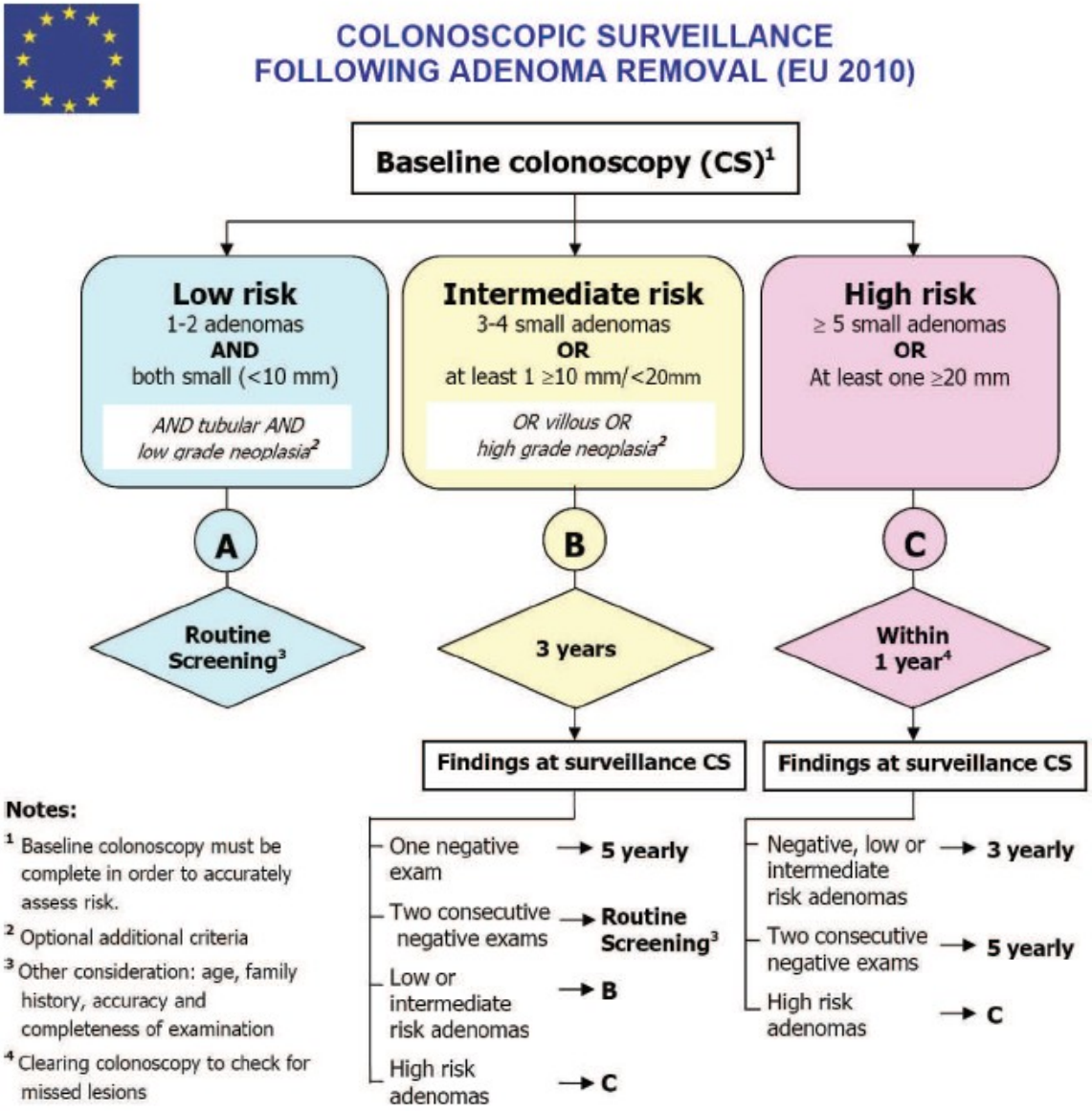
prescriptive recommendation

LEVEL OF EVIDENCE BASED ON EXPERIMENTAL STUDIES(RCTs)

Recommendation based on precautionary principle
(no human experimental evidence)

LEVEL OF EVIDENCE FROM OBSERVATIONAL STUDIES (SUFFICIENT, INSUFFICIENT INADEQUATE EVIDENCE) :

Figure 9.1: Recommended surveillance following adenoma removal. (For explanation see Recommendations 9.1–9.20 and Sections 9.3–9.5)



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Stopping surveillance

9.10 The decision to undertake each colonoscopic surveillance examination should depend not only on adenoma characteristics, but also on the patient's age and wishes, and the presence of significant co-morbidity. The patient status should be established prior to attendance for each examination **(VI - A).Sect 9.4.2**

9.11 The cut-off age for stopping surveillance is usually 75 years, but this should also depend upon patient wishes and co-morbidity **(VI - A).Sect 9.4.2**

9.12 Following cessation of surveillance, individuals should be returned to the population screening programme **(VI - C).Sect 9.4.2**

Family History

9.13 Recommendations should not differ for patients with a family history who are found to have adenomas, unless it is suspected that they have one of the dominantly inherited conditions.

(III - B).Sect 9.2.3.2

QUALITY ASSURANCE IN PATHOLOGY

Recommendations

7.1 Due to the improved diagnostic reproducibility of the revised Vienna classification, use of this classification in a format modified for lesions detected in screening is recommended to ensure consistent international communication and comparison of histopathology of biopsies and resection specimens **(IV – B).**

Only two grades of colorectal neoplasia (low grade and high grade) should be used, to minimise intraobserver and interobserver error **(V - B).**

The terms intra-mucosal adenocarcinoma or in-situ carcinoma should not be used **(VI - B).**

7.2 The WHO definition of colorectal adenocarcinoma should be used: “an invasion of neoplastic cells through the muscularis mucosae into the submucosa” **(VI - A). Sect 7.5.1**

Capitolo 5 Endoscopia

To help in the planning of location of endoscopic services for screening, the following five levels of competency are proposed.

- **Level 0:** The operator does not remove any lesions, referring on all patients with any detected lesions. The operator will be able to biopsy lesions, and pathological material may inform the decision to refer. Basic level of competency for diagnostic FS but not recommended for screening FS.
- **Level 1:** Removing lesions <10 mm in diameter at FS. Rationale: larger lesions will indicate a need for colonoscopy and can be removed when the colonoscopy is performed. Tissue is required from smaller lesions to decide whether colonoscopy is necessary. Thus any person performing FS screening should have this level of competency.
- **Level 2:** Removing polypoid and sessile lesions <25 mm providing there is good access. All colonoscopists should have this level of competency.
- **Level 3:** Removing smaller flat lesions (<20 mm) that are suitable for endoscopic therapy, larger sessile and polypoid lesions, and smaller lesions with more difficult access. Some flat lesions <20 mm with poor access might be unsuitable for this level. Any person doing colonoscopy for positive FOBT in a screening programme should have this level of competency.
- **Level 4:** Removing large flat lesions or other challenging polypoid lesions that might also be treated with surgery. This is the type of lesion that would not be removed at the first colonoscopy because of time constraints, if applicable, or because the surgical option needs to be discussed with the patient. If the patient chooses to have endoscopic therapy, then he/she should be referred to a level 4 competent endoscopist. This level of competency would be expected of only a small number of regionally based colonoscopists.

Table 3.2: Evidence on performance indicators for guaiac based FOB testing.

	Range from RCTs[1]	Range from population-based programmes[2]
Uptake rate 1st round	49.5%–66.8%	17.2%–70.8%
Subsequent round	60%–94%	22.3%–52.1%
Inadequate rate	-	0.4%–4.5%
Positive rate for FOBT	1.2%–3.8% (1.7%–15.4%) (with rehydration)	1st screen 1.5%–8.5% Subsequent screen 0.8%–1.8%
Colonoscopy compliance rate	73%[3]–95%	87.8%–91.7%
Colonoscopy completion rate	89%–100%	72%–95%
Adenoma detection rate 1st screen	5–14.5‰	5.2–10.5‰
Subsequent screen	3.8‰	3.3–4.7‰
Cancer detection rate 1st screen	1–2.5‰	1.2–2.3‰
Subsequent screen	1.1–1.4‰	0.9–0.94‰
Proportion of screen detected cancers that are stage A	26%–36%	-
PPV for adenoma as the most severe lesion	14.6%–54.8% (6.0%–11.0%) (with rehydration)	30.3% 26.8%
PPV for cancer	5.2%–18.7% (0.9%–6.1%) (with rehydration)	1st screen 6.2%–8.5% Subsequent screen 5.3%–10.6%
Adverse effects (perforation, serious haemorrhage)	0.5%–1.6% of subjects undergoing colonoscopy	-

Quali conseguenze?

- Gruppi disciplinari (patologi, GE,…..) GISCOR-ONS di discussione per l'aggiornamento degli standard e dei protocolli del processo di screening
- Revisione delle procedure di quality assurance in uso nei programmi di screening
- Inserimento delle linee guida nei programmi di training

Quali conseguenze?

- Orientare la ricerca sulle aree di incertezza
- Adeguare il sistema informativo ai fini di monitoraggio del sistema di quality assurance
- Valutare se l'adozione delle linee guida aumenta l'impatto sulla salute

Varie

- Risorse per il quality assurance
- No quality assurance no screening (?!)
- Aggiornamento regolare delle linee guida
- Aggiornamento delle linnee guida per il carcinoma della cervice uterina (2 capitoli:HPV come test primario di screening e vaccini anti HPV
- Aggiornamento delle Linee Guida per il quality assurance nello screening del carcinoma mammario (V edizione)

Quali conseguenze

- Classificazione patologica e trattamento
- Follow up dei casi positivi allo screening
- Training dei gastroenterologi endoscopisti
- Organizzazione dei servizi di colonscopia a livello regionale

Consequences

- **Improve and refine the methodology of GL**
- **Improve the consultation process and establish the index of GL contents with consumers and providers**
- **Regularly update the evidence on GL for Quality Assurance and Quality Improvement in cancer screening (breast, cervix and colon, other?)**
- **Update chapters and publish on the WEB, instead of publishing a complete new edition**
- **Project the dissemination and the implementation of GL**
- **Project the evaluation of the impact of GL on screening**
- **Provide the resources and define the context for regular updating of GL**