Screening for Colorectal Cancer: European Guidelines

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According to the most recent estimates by the International Agency for Research on Cancer (IARC), colorectal cancer (CRC) is the most common cancer in Europe, accounting for 432,000 new cases of cancer each year, and it is the second most common cause of death due to cancer in Europe, with 212,000 deaths reported in 2008 [Ferlay J et al. *Eur J Cancer* 2010]. Worldwide, CRC ranks third in incidence and fourth in mortality.

Screening is an important tool for controlling CRC, provided the screening process is of high quality. The IARC recently published multidisciplinary evidence-based guidelines for quality assurance in colorectal cancer screening and diagnosis [Karsa LV et al. Endoscopy 2012; http://bookshop.europa.eu/en/european-guidelines-for-quality-assurance-in-colorectal-cancer-screening-and-diagnosis-pbND3210390/]. Volume 1 of the guidelines contains 279 recommendations classified using the standard classification of level of evidence (I through VI) and recommendation strength (A through E). Volume 2 contains the systematic literature review that supports the recommendations. Nero Segnan, MD, MSc, Piedmont Centre for Cancer Prevention and San Giovanni Università degli Studi di Torino, Turin, Italy, gave an overview of the guidelines development process and reviewed several of the recommendations to provide a sense of the scope of the document.

Of particular interest is a summary table that presents recommended performance standards in CRC screening. The writing group believes it reflects the most generally appropriate professionally agreed upon levels in a pan-European setting (Table 1). For example, endoscopists participating in CRC screening programs should perform a minimum of 300 procedures per year. New recommendations for quality assurance in pathology include the following:

- Use of the Vienna classification in a format modified for lesions detected in screening is recommended to ensure consistent international communication and comparison of histology of biopsies and resection specimens (IV–B)
- Only 2 grades of colorectal neoplasia (low grade and high grade) should be used, to minimize intra- and inter-observer error (V–B)
- The terms intra-mucosal adenocarcinoma or in-situ carcinoma should not be used (VI–B)

There are also new recommendations regarding criteria for cancer polyp removal, surveillance following adenoma removal, when to stop surveillance, and how to treat patients with a family history of adenomas. Prof. Segnan believes that following these recommendations may enhance the control of CRC through improvement in the quality and effectiveness of screening programs and services.

Table 1. Summary Table of Performance Standards in CRC Screening.

Indicator	Acceptable Level	Desirable Level
1. Invitation coverate (Rec 3.7; Sect 3.3.1)	95%	>95%
2. Uptake rate (Rec 3.8; Sect 3.3.1)	>45%	>65%
3. Rate of inadequate FOBT (Rec 3.9; 4.21; Sect 3.3.2; 4.3.4)	<3%	<1%
4. Maximum time between test and receipt of result should be 15 days (Rec 3.15; Sect 3.3.4)	>90%	
5. Rate of referral to follow-up colonoscopy after positive test (Rec 3.10; Sect 3.3.2, 3.3.3)	90%	>95%
6. Maximum time between referral after positive screening (any modality) and follow-up colonoscopy should be 31 days (Rec 3.16, 5.19; Sect 3.3.4, 5.3.5)	>90%	>95%
7. Compliance with follow-up colonoscopy after after any positive screening test (Rec 3.14; Sect 3.3.2, 3.3.3)	85%	>90%
8. Rate of complete colonoscopies. Follow-up and screening colonoscopies to be recorded separately (Rec 3.11; Rec 5.41; Sect 3.3.2, 3.3.3, 5.4.5.1)	>90%	>95%
9. Time interval between positive colonoscopy/FS and definitive management should be within 31 days (Rec 3.17, 8.2; Sect 3.3.4, 8.2)	>95%	
10. Endoscopists participating in CRC screening program should perform a minimum number of procedures per year (Rec 5.38; Sect 5.4.5.1)	300	>300
11. Biopsies and lesions identified in the screening program and the subsequent resection specimen should be reported on a proforma (Rec 7.11; Sect 7.6.5.2, 7.8)	>90%	
12. Rate of high-grade neoplasia reported by pathologists in a colonoscopy screening program (Rec 7.21; Sect 7.7)	<5%	
13. Rate of high-grade neoplasia reported by pathologists in a FOBT screening program (Rec 7.21; Sect 7.7)	<10%	

CRC=colorectal cancer screening; FOBT=fecal occult blood test; FS=flexible sigmoidoscopy; Sect=refers to the section/s of the Guidelines dealing with the respective indicator; Rec=refers to the number of the corresponding recommendation in the Guidelines.