



Title	Virtual Colonoscopy: Meta-Analysis of Diagnostic Accuracy, Indications and Conditions of Use
Agency	HAS, Haute Autorité de Santé 2, Avenue du Stade de France, F 93218 La Plaine CEDEX; Tél : +33(0) 1 55 93 71 12, Fax : +33(0) 1 55 93 74 35; contact.seap@has-sante.fr, www.has-sante.fr
Reference	www.has-sante.fr/portail/jcms/c_923754/coloscopie-virtuelle-meta-analyse-des-performances-diagnostiques-indications-et-conditions-de-realisation

Aim

To perform a new meta-analysis (MA) on the diagnostic accuracy of virtual colonoscopy (VC) in detecting polyps and colorectal cancer.

Conclusions and results

The diagnostic accuracy of virtual colonoscopy (VC) compared to optical colonoscopy (OC) remains questionable for two main reasons. First, conflicting results have been reported repeatedly in original and large studies. Secondly, meta-analyses (MA) published at the time of our assessment could not be used for health technology assessment (HTA) as they included studies in which the mode of use of VC did not correspond to current international standards.

Twenty-four studies involving 7202 patients were included. MA showed highly heterogeneous results, requiring the use of a mixed model (Markov chain Monte Carlo method).

Whatever the lesion size, OC had significantly higher sensitivity and specificity than VC. Complications were infrequent for both. Subgroup analyses helped to define optimal technical characteristics of VC: complete colonic cleansing with fecal tagging, high spatial resolution imaging, and expert reading combining 2D and 3D methods. The French National Authority for Health (HAS) concluded that VC cannot replace OC, except in the case of incomplete optical colonoscopy, serious comorbidities, or patient refusal.

Methods

All studies (MEDLINE, EMBASE, Pascal, 2001-2009) comparing the diagnostic accuracy of VC in detecting colorectal polyps and cancer against OC as the gold standard were identified. Unlike previous MA, only studies that used a VC with systematic prone and supine acquisitions and with slice collimation not greater than 2.5 mm were included. Methodological quality of included studies was assessed using the *Quality Assessment of Diagnostic Accuracy Studies*.

Additionally, 14 experts representing 5 medical specialties (radiology, gastroenterology, oncology, pathology, and public health) were consulted. Conclusions were appraised by a specialized committee of HAS (*Commission d'Evaluation des Actes Professionnels*).

Further research/reviews required

Further assessment should specify the attitude to be taken on discovery of polyps smaller than 6 mm. A medicoeconomic evaluation should also specify the place of VC in the event of OC refusal by a patient with a positive fecal test.