



<b>Title</b>	<b>Capsule Endoscopies of the Small Intestine – A Health Technology Assessment</b>
<b>Agency</b>	<b>DACEHTA, Danish Centre for Evaluation and Health Technology Assessment</b> National Board of Health, 67 Islands Brygge, DK-2300 Copenhagen S, Denmark; Tel: +45 72 22 75 48, Fax: +45 72 22 74 07; <a href="http://www.dacehta.dk">www.dacehta.dk</a>
<b>Reference</b>	Medicinsk Teknologivurdering – puljeprojekter 2007; 7(1). ISBN 978-87-7676-461-3 (online). <a href="http://www.sst.dk/publ/Publ2007/MTV/Kapselendoskopi/Kapselendoskopi.pdf">www.sst.dk/publ/Publ2007/MTV/Kapselendoskopi/Kapselendoskopi.pdf</a>

## Aim

To evaluate the use of capsule endoscopy for obscure gastrointestinal bleeding (OGB) in Denmark.

## Conclusions and results

Although patients with OGB account for only a few percent of the patients with gastrointestinal bleeding, these patients often undergo repeated diagnostic investigation. This health technology assessment (HTA) report investigates the use of capsule endoscopy as a diagnostic procedure of the small intestine. The report includes 100 consecutive patients with OGB. Over 90% of the patients are satisfied with the procedure, which is similar to other studies of capsule endoscopy and indicates a higher level of satisfaction than other diagnostic procedures. Approximately one third of the patients state that their health condition improved after capsule endoscopy, and 30 patients report not having had any new endoscopic procedures or blood transfusions.

In general, repeated endoscopy decreased significantly within the first year after capsule endoscopy compared to the year previous. Additionally, only 2 radiological examinations of the small intestine were performed in the 100 patients. Hence, there is a significant overall decline in imaging after capsule endoscopy, most pronounced for standard diagnostic procedures of the small intestine.

Abdominal CT scans after capsule endoscopy have increased after capsule endoscopy. This is either due to directing the diagnostics toward extra intestinal reasons for the anemia, or due to limited access to CT and MR scanning of the small intestine. However, less than 20% of the patients are subjected to additional CT scanning. Average hemoglobin levels were similar prior to and after capsule endoscopy.

Regarding the financial consequences of capsule endoscopy, the diagnostic-related group (DRG) value of the hospital contacts related specifically to examination of OGB were reduced by approximately 50% during the postperiod compared to the preperiod.

In conclusion, patient satisfaction with the procedure is high. The health condition is improved for about 30% of the patients, and another 30% of patients are not subjected to additional diagnostics of the gastrointestinal system. Capsule endoscopy examination significantly reduces endoscopic procedures.

## Recommendations

Five years after its introduction, capsule endoscopy has proven to be an important diagnostic tool for patients with OGB. Meta-analysis showed capsule endoscopy to be superior in detecting abnormalities in the small intestine compared to other noninvasive procedures, with an overall diagnostic yield of approximately 50%. As the procedure is easily performed, with minimum patient discomfort and few contraindications and complications, it is recommended internationally that capsule endoscopy be performed as a primary examination of the small intestine in OGB patients without contraindications. This strategy should also be implemented in Denmark based on the significant diagnostic yield, but also to avoid radiation from conventional barium follow-through, which for this group of patients has a diagnostic yield below 10%.

## Methods

The following methods were used: quasiexperimental pre-post design, literature reviews, journal reviews, questionnaires regarding patients, questionnaires regarding hospitals, semistructured telephone interviews, and value assessments.