



Does a second reading of a capsule endoscopy increase diagnostic yield

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Aims

- Diagnostic yield (DY) of capsule endoscopy (CE) has a wide range (44.2% in occult bleeding to 92.3% in active bleeding) with a moderate to substantial interobserver agreement among experts (kappa 0.48-0.61). False negatives of CE are around 9%.

Objective

- The intention of this study is to identify whether a second CE reading by another endoscopist can increase DY.

Pennazio M, et al. Endoscopy 2015;47:352-376

Pezzoli A, et al. Dig Liver Dis 2011;43:126-131

Jang BI, et al. Scand J Gastroenterol 2010;45:370-374

Van de Bruaene C, et al. Acta Gastroenterol Belg 2016;79:405-413



Methods

- 100 CE already read with different indications were reread by a second blinded endoscopist. When the results of the readings were different, the images were discussed between both endoscopists, taking into account the opinion of a third endoscopist if there was no agreement between both. All the participating endoscopists have experience in reading CE (> 50 CE/year). The CE findings were divided in positive (vascular lesions, ulcers and tumors), equivocal (erosions or red spots) and negative. The interobserver agreement and the increase in DY were assessed, as well as the percentage of false negatives in the CE initially read.

Results

Table 1. Result by indications

	SBB	CD	Other causes	Total
N	48	30	22	100
Agreement between endoscopists (<i>k</i>)	0.79	0.78	0.74	0.79

SBB: small bowel bleeding; CD: Crohn's disease; Other causes (iron-deficiency anemia, search for small bowel tumors and diarrhea).

- False negatives of the first CE reading were reported in 6% of cases (SBB = 4.2%, CD = 6.6%, Other causes = 9%).

Table 1. Diagnostic yield in both readings

	Positive	Equivocal	Negative	<i>P</i>
First reading (DY)	60%	20%	20%	0.429
Second reading (DY)	66%	18%	16%	

DY: Diagnostic yield

Conclusions

- A second reading increases the diagnostic yield of the capsule endoscopy by 6% without a statistically significant difference.