

SYSTEMATIC META-REVIEW: DIAGNOSTIC ACCURACY OF COLON CAPSULE ENDOSCOPY FOR COLONIC NEOPLASIA WITH META-META-ANALYSIS

Anastasios Koulaouzidis

UEG Week Berlin 2025

Poster

Colorectal

October 7, 2025

Meta-meta-analysis of 28 unique studies (3472 participants) demonstrates second-generation colon capsule endoscopy achieves high diagnostic accuracy for polyp and colorectal cancer detection compared to colonoscopy or CT colonography.

KEY POINTS

- Second-generation colon capsule endoscopy (CCE2) showed sensitivity of 0.90 (95% CI: 0.79–0.96) and specificity of 0.81 (95% CI: 0.70–0.89) for detecting polyps of any size, with low heterogeneity across studies.
- For clinically significant polyps $\geq 10\text{mm}$, CCE2 achieved sensitivity of 0.86 (95% CI: 0.75–0.93), specificity of 0.96 (95% CI: 0.94–0.97), and AUC of 0.94.
- Pooled colorectal cancer detection sensitivity was 0.96 (95% CI: 0.73–1.00) after excluding cases with capsule battery exhaustion before excretion.
- Second-generation technology substantially outperformed first-generation capsules, which showed sensitivity of only 0.68 for any-size polyps and 0.69 for polyps $\geq 6\text{mm}$.
- Authors conclude CCE2 may serve as a complementary diagnostic tool to address increasing endoscopy service demands, though technical challenges persist and limited clinical uptake continues due to historical scepticism about diagnostic accuracy.

VIEW THIS CONTENT ON GUTFLIX

<https://gutflix.eu/search/d/ee272a7c-a812-11f0-91cd-0242ac140006>



AI-generated summary

This summary was generated by an AI large language model based on the content transcript. It is for informational purposes only and should not be considered a substitute for clinical judgment. Always rely on your professional expertise and the full clinical context when making clinical decisions.