JETS JAG Endoscopy Training System

Colon Capsule Endoscopy Training
Position Statement

Part of the JAG programme at the RCP

JAG Joint Advisory Group on GI Endoscopy

Royal College of Physicians

Introduction

Colon capsule endoscopy (CCE) has been avaialble for clinical use for some time with the first colon capsule brought to market in 2006.[1] However, uptake has been limited. Indications for CCE have been poorly defined; but in general, CCE has been considered appropriate in patients with an incomplete colonoscopy and for those who refuse colonoscopy or other alternatives such as CT colonography (CTC). In patients with a prior incomplete colonoscopy, CCE has been shown to be equally efficacious in completing the colonic evaluation compared to CTC.[2] Recent data has also been published to suggest CCE has a high sensitivity for size significant polyps, especially at a 10mm cut off[3]; and in a FIT positive population in the detection of advanced neoplasia.[4] CCE was superior to CTC for detection of polyps ≥6 mm and non-inferior for identification of polyps ≥10 mm in the recent TOPAZ study.[5]

Technical evaluation

Technical evaluation for use in FIT positive patients referred on the Urgent Cancer Pathway (2ww rule)

Commissioned by NHSEI, the National Cancer Programme is currently undertaking a technical evaluation of the use of CCE in a risk stratified group of patients referred via the Lower Gastrointestinal Suspected Cancer Pathway (CCE clinical guidance document) to the symptomatic service. In this evaluation, the use of CCE is being evaluated in patients, who have no contra-indications to CCE, who have:

- a FIT score between 10-100 ug/gm
- a FIT score of <10 ug/gm who have been referred on an urgent cancer pathway due to concerning symptoms

Ensuring a trained workforce

Although small bowel capsule endoscopy (SBCE) is well established, with a defined training and certifcation process there is no comparable process for CCE. Each Cancer Alliance and employer will therefore be responsible for ensuring local clinical governance arrangements are in place to assure the clinical quality of the procedures that are undertaken and for ensuring the staff delivering the service are adequately trained and have sufficient performance monitoring in place.

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[1] Pillcam Colon CCE1

[2] Spada C, Hassan C, Barbaro B*, et al*. Colon capsule versus CT colonography in patients with incomplete colonoscopy: a prospective, comparative trial. *Gut* 2015;64:272-281. DOI: https://gut.bmj.com/content/64/2/272.info

[3] Spada C, Pasha S, Gross S et al. Accuracy of First- and Second-Generation Colon Capsules in Endoscopic Detection of Colorectal Polyps: A Systematic Review and Meta-analysis. Clin. Gastroenterol. Hepatol. 2016;14:11 p1533-1543. DOI: https://www.cghjournal.org/article/S1542-3565(16)30151-3/fulltext

[4] Pecere S, Senore C, Hassan S, et al. Accuracy of colon capsule endoscopy for advanced neoplasia. Gastrointestinal Endosc 2019; 91:2 p406-414 DOI: https://doi.org/10.1016/j.gie.2019.09.041

[5] Cash B, Fleisher M, Fern S et al. Multicentre, prospective, randomised study comparing the diagnostic yield of colon capsule endoscopy versus CT colonography in a screening population (the TOPAZ study). Gut. 2021 Nov;70(11):2115-2122. doi: 10.1136/gutjnl-2020-322578.

For those wishing to undertake CCE, in the absence of a defined training pathway JAG recommends individuals are able to demonstrate evidence against the criteria in table 1 below.

Certification Standard	Evidence required
Evidence of core knowledge	Workplace based assessments or a reflective practice portfolio demonstrating an understanding of the procedure, including indications, risks, and identification and management of colonic pathologies. Attendance at local or regional teaching on luminal gastroenterology, colonic pathology and the role of capsule endoscopy To meet this requirement an appropriate, recent example should be uploaded to an appraisal, training or CPD platform. This could be a supervisor report, a record of attendance at local teaching, or reflection/WBPA from portfolio
Course requirement – attend basic skills in colon capsule endoscopy course or online alternative*	Course attendance certificate covering • Indications, risks, alternatives, patient assessment/selection • Ability to ooutline the relative benefits and risks of each diagnositic colonic imaging test (Colonoscopy, CTC, CCE) • Describe the procedure • Use of reader and reporting software • Recognition of the key landmarks indicating a complete procedure • Recognition of normal colonic mucosa and pathology • Ability to report on the ongoing management of any abnormaility seen
Knowledge based competency - complete eLearning modules**	Certificates evidencing completion of JAG approved eLearning modules
Procedural competency***	Lifetime minimum number of 15 cases Double reading of videos with feedback via C-RX DOPS from an expert in CCE
Procedural skills assessment	A minimum number of 5 C-RX CCE DOPS with demonstrable ability to define normal and abnormal and understanding of the need to seek appropriate advice if there is diagnostic doubt.

Table 1.

* JAG recognises that the IMIGe course is widely used for colon capsule training. While it is not a JAG course, the learning objectives meet the requirements detailed above.
** Any course (face-face or online) should obtain JAG approval to ensure delivery of agreed Learning Objectives.
*** This number is considered the minimum experience required to undertake an assessment by the Advisory Group to the National Cancer Programme, and is appropriate to those already certified as independent in lower GI endoscopy or SBCE, but would increase it if they had no endoscopic experience – an indicative clinical training in this circumstance would be 'double reading' of 50 procedures for the complete novice in order to support identification of normal and abnormal pathology and ensure the ability to correctly diagnose abnormal findings and therefore provide a management plan.

Trainers should have sufficient CE and training experience to deliver training and sign off as defined locally. This could be evidenced by:

- Lifetime experience of >200 SB procedures or >50 CCE
- Active capsule reader
- Completed educational appraisal
- Evidence of ongoing CPD in capsule endoscopy
- Evidence of maintaining training competence
- Experience of DOPS based feedback to trainees.

Audit and quality assurance

All individuals and units undertaking CCE should comply with the requirements of the technical evaluation programme and provide a minimum dataset for quality assurance.

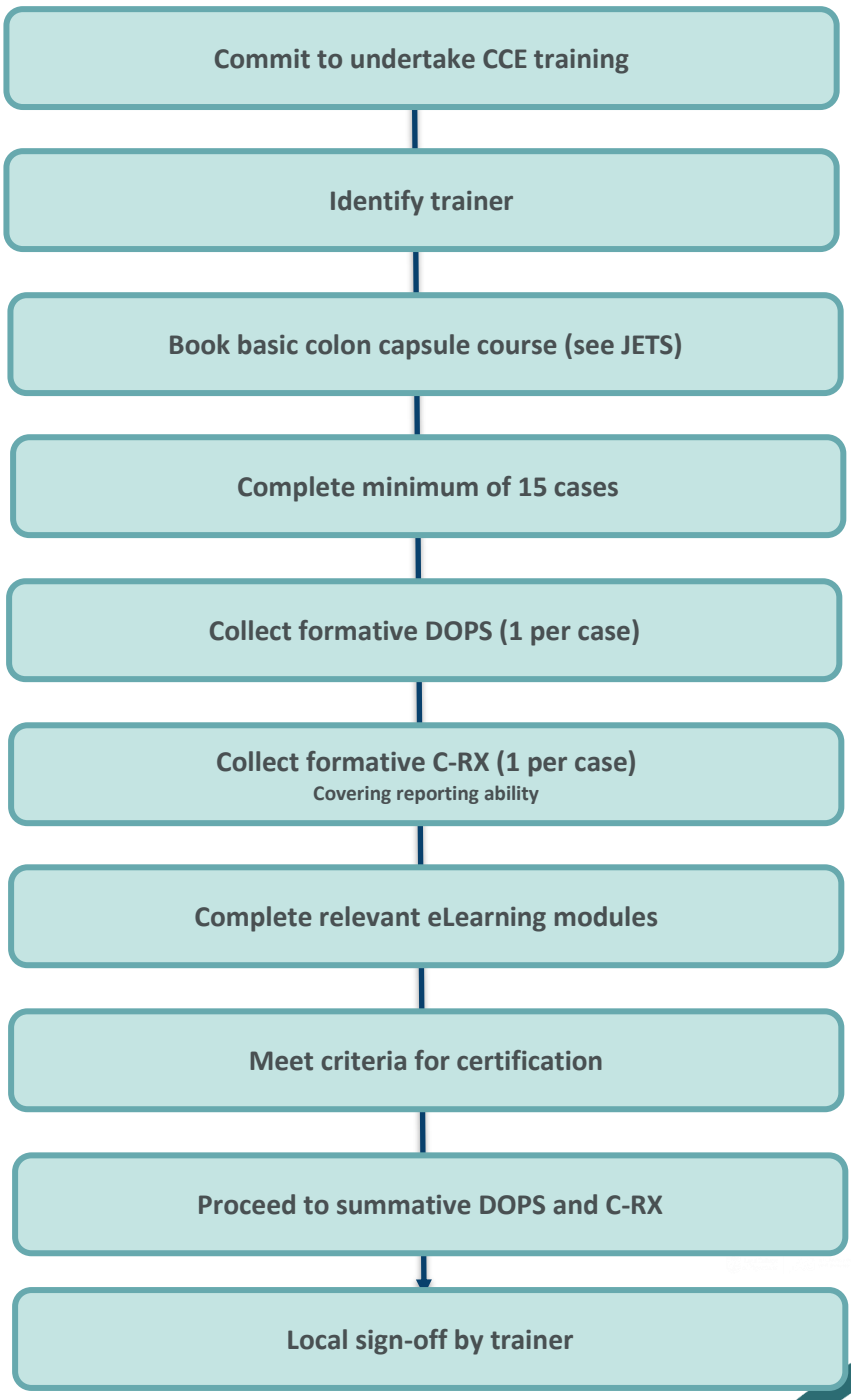
Learning objectives

Capsule course learning objectives for face-face or online delivered courses:

Learning outcome	Content	Trainee group
Technology Knowledge and competent handling of the video capsule system, software functionality and accessories	Technical specifications, performance characteristics of system components: Video capsules Sensor array/wearable antennas Data recorder, real time viewing Workstation, software, network application	1. Capsule endoscopist 2. Nursing staff performing the procedure
Assessment and consent Appropriately assess, select and consent patients for procedure, identify risk, recognize and manage special needs	Indications, fields of application, alternatives Absolute and relative contraindications Capsule retention, risk reduction strategies Special needs requiring modification of the procedure including the critically ill, swallowing disorder, impaired motility Endoscopic placement Consent issues	1. Capsule endoscopist
Procedure Understand requirements for preparation and perform procedure	Patient preparation: Dietary / fasting, bowel purgatives, prokinetics, anti-foaming agent Management of co-morbidity Video capsule procedure, video download Complications Patient discharge	1. Capsule endoscopist 2. Nursing staff performing the procedure

(Pre) Reading Navigate software to read videos, recognize a normal study. Detect and save abnormal and clinically relevant findings	Software functionality Practical methods of reading and image analysis Anatomical landmarks, variants of normal. Normal CE mucosal appearances Pathologic findings, clinical relevance	1. Capsule endoscopist 2. Reader extender
Reporting and Diagnosis Accurately document findings including clinical relevance with integration of findings into management plans	Interpretation of abnormal findings Report components CE Standard Terminology Integration of CE findings in deriving an endoscopic diagnosis Recommendations to direct patient management	1. Capsule endoscopist

Indicative pathway



Further information regarding this report may be obtained from the JAG office at the Royal College of Physicians.

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