



# Wireless Capsule Endoscopy

## Clinical Coverage Criteria

### **Overview**

Wireless capsule endoscopy, also called capsule endoscopy, is a noninvasive endoscopic procedure which allows visualization of the small intestine without sedation or anesthesia. As the name implies, capsule endoscopy makes use of a swallowable capsule that contains a miniature video camera. It has been clearly demonstrated that capsule endoscopy is superior to traditional radiological techniques (small-bowel follow through and small bowel enteroclysis) and push enteroscopy in the diagnosis of obscure gastrointestinal bleeding.

Capsule endoscopy is not without limitations however. Capsule endoscopy has no therapeutic capabilities therefore it does not obviate the need for other tests or procedures in some cases, and it is contraindicated in patients with small bowel strictures or swallowing disorders. Patients with established small bowel Crohn's disease, chronic usage of non-steroidal anti-inflammatory drugs and abdominal radiation injury are at high risk of capsule retention. Patients should be fully informed about the risk of capsule retention before consent for capsule endoscopy is given. Patients should be advised that further intervention, including surgery, may be required if passage of the capsule is impeded.

### **Policy**

Fallon Health requires Prior Authorization for Wireless Capsule Endoscopy. Medical records from the primary care physician and other providers who have diagnosed or treated the symptoms prompting this request are also required.

Fallon Health covers wireless capsule endoscopy for evaluation of the small bowel, when ordered by a gastroenterologist or surgeon, for all plan members with:

1. Obscure GI bleeding or unexplained iron deficiency anemia, when EGD and colonoscopy are negative or non-diagnostic, and if no contraindications exist.
2. Suspected Crohn's disease and or known Crohn's disease (outside of the small bowel) with suspected small bowel involvement or a suspected recurrence, undetected by colonoscopy or ileocolonoscopy. It is recommended that these patients have radiological imaging to exclude strictures prior to capsule endoscopy.
3. Suspected small bowel neoplasm, when the diagnosis has not been previously confirmed by other studies. The patient must be symptomatic for a neoplasm (e.g., partial bowel obstruction, GI bleeding), and other diagnostic testing to assess these symptoms (i.e., EGD and colonoscopy) must have been performed.

The use of a Patency Capsule requires additional authorization as part of the request.

## Exclusions

- Wireless capsule endoscopy for other small bowel indications, including but not limited to colorectal screening, suspected celiac disease, polyposis syndromes, etc.
- Wireless capsule endoscopy is not covered for the investigation of pathologies of the gastrointestinal tract within the reach of conventional EGD or colonoscopy.
- Wireless capsule endoscopy of the esophagus (e.g., PillCam™ COLON) (CPT code 91111) is experimental / investigational and will deny vendor liable.

## Codes

Code type	Code	Description
CPT	91110	Gastrointestinal tract imaging, intraluminal (e.g., capsule endoscopy); esophagus through ileum, with physician interpretation and report
	91299	Unlisted diagnostic gastroenterology procedure

## References

1. American Society for Gastrointestinal Endoscopy. ASGE Technology Status Evaluation Report: Wireless Capsule Endoscopy. Gastrointestinal Endoscopy Last Reviewed August 2014.
2. Muhammad A, Pitchumoni CS. Newly Detected Celiac Disease by Wireless Capsule Endoscopy in Older Adults with Iron Deficiency Anemia. *J Clin Gastroenterol*. 2008 Oct;42(9):980-3.
3. Apostolopoulos P, Liatsos C, Gralnek IM et al., The Role of Wireless Capsule Endoscopy in Investigating Unexplained Iron Deficiency Anemia After Negative Endoscopic Evaluation of the Upper and Lower Gastrointestinal Tract. *Endoscopy*. 2006 Nov;38(11):1127-32.
4. Moy L, Levine J. Wireless Capsule Endoscopy in the Pediatric Age Group: Experience and Complications. *J Pediatr Gastroenterol. Nutr*. 2007 Apr;44(4):516-20.
5. Saperas E, Dot J, Videla S, et al. Capsule Endoscopy versus Computed Tomographic or Standard Angiography for the Diagnosis of Obscure Gastrointestinal Bleeding. *Gastroenterol*. 2007 Apr;102(4):731-7.
6. Saurin JC, Delvaux M, Vahedi K, et al. Clinical Impact of Capsule Endoscopy Compared to Push Enteroscopy: 1-Year Follow-up Study. *Endoscopy*. 2005 Apr;37(4):318-23.
7. Hindryckx P, Botelberge T, De Vos M et al. Clinical Impact of Capsule Endoscopy on Further Strategy and Long-Term Clinical Outcome in Patients with Obscure Bleeding. *Gastrointest Endosc*. 2008;68:98-104.
8. Van Gossum A, Navas MM, Fernandez-Urien I, et al. Capsule Endoscopy Versus Colonoscopy for the Detection of Polyps and Cancer. *N Engl J Med*. 2009;361(3):264-70.
9. Redondo-Cerezo E, Sánchez-Capilla AD, De La Torre-Rubio P, De Teresa J. Wireless capsule endoscopy: perspectives beyond gastrointestinal bleeding. *World J Gastroenterol*. 2014 Nov 14;20(42):15664-73. doi: 10.3748/wjg.v20.i42.15664.

10. Neumann H, Fry LC, Nägel A, Neurath MF. Wireless capsule endoscopy of the small intestine: a review with future directions. *Curr Opin Gastroenterol*. 2014 Sep;30(5):463-71. doi: 10.1097/MOG.000000000000101.
11. Song HJ, Shim KN. Current status and future perspectives of capsule endoscopy. *Intest Res*. 2016 Jan;14(1):21-9. doi: 10.5217/ir.2016.14.1.21. Epub 2016 Jan 26.
12. Choi M, Lim S, Choi MG, Shim KN, Lee SH. Effectiveness of capsule endoscopy compared with other diagnostic modalities in patients with small bowel Crohn's disease: a meta-analysis. *Gut Liver*. 2017;11(1):62-72.
13. Enns RA, Hookey L, Armstrong D, et al. Clinical practice guidelines for the use of video capsule endoscopy. *Gastroenterology*. 2017;152(3):497-514.
14. Chetcuti Zammit S, Sanders DS, Sidhu R. Capsule endoscopy for patients with coeliac disease. *Expert Rev Gastroenterol Hepatol*. 2018 Aug;12(8):779-790. doi: 10.1080/17474124.2018.1487289.
15. Sealock RJ, Thrift AP, El-Serag HB, Sellin J. Long-term follow up of patients with obscure gastrointestinal bleeding examined with video capsule endoscopy. *Medicine (Baltimore)*. 2018 Jul;97(29):e11429. doi: 10.1097/MD.00000000000011429.
16. Hosoe N, Takabayashi K, Ogata H, Kanai T. Capsule endoscopy for small-intestinal disorders: Current status. *Dig Endosc*. 2019 Jan 17. doi: 10.1111/den.13346.

## **Policy History**

Origination date: 03/01/2004  
 Approval(s): Technology Assessment Subcommittee: 06/23/2009, 07/28/2009  
 Technology Assessment Committee: 02/23/2004, 09/30/2009, 6/25/2013, 09/24/2014 (updated criteria to have consistent across all plans and updated references, removed patency capsule exclusion) 09/23/2015 (updated references) 09/15/2016 (updated references), 09/27/2017 (updated references), 08/22/2018 (updated references), 09/10/2019 (removed definitions, updated references)

*Not all services mentioned in this policy are covered for all products or employer groups. Coverage is based upon the terms of a member's particular benefit plan which may contain its own specific provisions for coverage and exclusions regardless of medical necessity. Please consult the product's Evidence of Coverage for exclusions or other benefit limitations applicable to this service or supply. If there is any discrepancy between this policy and a member's benefit plan, the provisions of the benefit plan will govern. However, applicable state mandates take precedence with respect to fully-insured plans and self-funded non-ERISA (e.g., government, school boards, church) plans. Unless otherwise specifically excluded, federal mandates will apply to all plans. For Medicare and Medicaid members, this policy will apply unless Medicare and Medicaid policies extend coverage beyond this policy.*