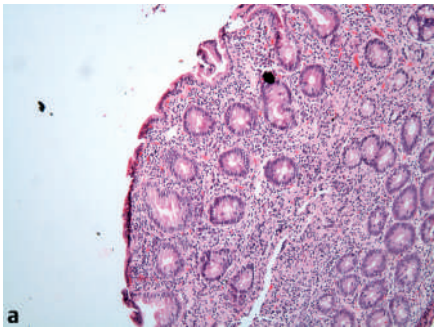
Capsule endoscopy diagnosis of radiation enteritis in a patient previously considered to have celiac sprue

A 65-year-old woman, who had been diagnosed with celiac sprue, presented with chronic diarrhea, fatigue, anorexia, and impaired night vision despite following a strict gluten-free diet. Diarrhea began 10 years earlier, around the time she underwent hysterectomy followed by pelvic radiation for endometrial cancer. Five years later, celiac sprue was diagnosed based on a positive gliadin IgG antibody and small-bowel biopsies revealing villous atrophy, crypt hyperplasia, and increased intraepithelial lymphocytes.

The patient's persistent symptoms, despite a 5-year gluten-free diet, prompted further evaluation. On physical exam she was a comfortable, well-developed, thin white female (body mass index [BMI] 17.2). She exhibited bitemporal wasting, and rectal exam was trace heme positive. Repeat gliadin antibodies revealed a positive IgG (106; < 20 negative) and negative IgA. Tissue transglutaminase IgG and IgA, and endomysial IgA, were negative. Serum IgA was normal. Human leukocyte antigen (HLA)-DQ2 and HLA-DQ8 were negative. Upper endoscopy revealed mild scalloping and duodenal nodularity. Small-bowel biopsies were consistent with celiac sprue with villous blunting and numerous intraepithelial lymphocytes (Figure **1**). Wireless capsule endoscopy confirmed scalloping and nodularity in the proximal small bowel (Video **1**). The distal small bowel (Video **2**) was notable for marked edema, erythema, and neovascularization. A colonoscopy to the cecum demonstrated minimal right colon and rectal telangiectasias. A diagnosis of radiation enteritis was established.

Celiac sprue was originally diagnosed based on small-bowel histology that was characteristic, but not specific, for this disease [1]. The patient also had a positive gliadin IgG antibody, which is the least specific of the celiac antibodies (sensitivity 80%, specificity 80%) [2]. Upon re-evaluation, the combined result of negative serological findings and absence of HLA-DQ2 or HLA-DQ8 was approximately



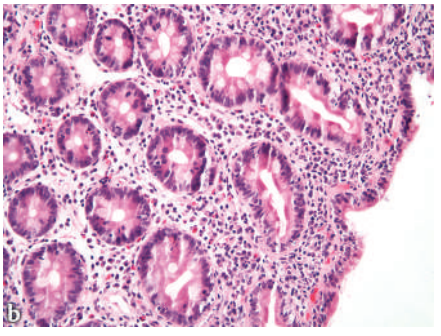


Figure **1** Histological appearance of duodenal biopsy specimen. **a** Marked blunting of the villi is seen (hematoxylin and eosin [H&E] stain; × 10) and, **b** an increased number of intraepithelial lymphocytes in the crypts and surface epithelium (H&E stain; × 20).

98% specific for excluding celiac sprue [3, 4].

The new technology of wireless capsule endoscopy was crucial in establishing an accurate diagnosis of radiation enteritis, a disorder that can be similar to celiac sprue in both clinical and histological presentation.

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Video 1

Proximal jejunum: scalloping and nodularity.

Video 2

Ileum: features consistent with radiation enteritis – edema, erythema, and neo-vascularisation.

online content including video sequences viewable at:
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