Table III. Diagnostic tests for ischemic colitis

Test	Notes
Complete blood count	Leukocytosis might be indicative of severe disease or infarction (PMID:25911119). The hemoglobin levels should be compared to baseline levels as an indicator of volume of blood loss. If a significant decrease in the hemoglobin is seen alternative causes of bloody diarrhea should be considered, including multiple causes of lower gastrointestinal bleeding.
Comprehensive electrolyte panel	Electrolyte abnormalities as a result of ischemic colitis only occur in severe disease or infarction (PMID: 25911119)
Lactate level	Elevations seen in the setting of severe ischemia or infarction (PMID: 25911119)
Lactate dehydrogenase	Elevations seen in the setting of severe ischemia or infarction (PMID: 25911119)
Creatine kinase	Elevations seen in the setting of severe ischemia or infarction (PMID: 25911119)
Stool culture	Assess for *E. coli* O157:H7 as an etiology of ischemic colitis or a separate diagnosis (PMID:26446556). *Salmonella*, *Shigella* and *Campylobacter* are all associated with bloody diarrhea but are not usually an etiology of ischemic colitis
Stool ova and parasites	Assess for *E. histolytica* as an etiology of ischemic colitis or a separate diagnosis (PMID: 264465566)
C. difficile Toxin assay	Assess for *C. difficile* infection as a cause of abdominal pain and diarrhea.
Arterial blood gas	In severe and gangrenous disease may indicate a metabolic acidosis secondary to elevated lactate levels

Abdominal x-ray	Most useful to exclude other serious conditions (e.g., perforation). Findings such as bowel dilation, gas-filled loops of bowel, wall thickening, and loss of colonic features (i.e., haustra) are usually non-specific in mild to moderate colonic ischemia. Classic "thumbprinting" in the colonic wall is seen in 20% of cases. Severe cases might show pneumoperitoneum or pneumatosis coli (PMID:12510457)
Computed tomography	Should be first imaging modality of choice to detect wall thickening, disease distribution, phase of colitis, pneumatosis coli, or pneumoperitoneum (PMID:10228517)
Ultrasound	Ultrasound is able to detect segmental involvement with colonic abnormalities in a high percentage of patients with non-gangrenous ischemic colitis (PMID:15728597)
Barium enema	Detected thumbprinting in 75% of a series of patients with non-gangrenous ischemic colitis. This modality's ability to detect other lesions depends on the severity of the disease (PMID:3961164)
Mesenteric angiography	Usually not indicated in patients with colonic ischemia because at the time of presentation normal blood flow to the colon has returned. This should be considered when the patient appears acutely ill, the diagnosis of acute mesenteric ischemia is being entertained or when isolated right sided ischemic colitis is considered (PMID:10784596)
Colonoscopy/flexible sigmoidoscopy	Early colonoscopy (within 48 hours of presentation) should be considered if the diagnosis is in question. Colonoscopic findings of mucosal and submucosal hemorrhage with or without ulceration and edema might be seen. These findings in a segmental distribution are consistent with ischemic colitis. The colonoscopy might show a single linear ulcer along the longitudinal axis that supports the diagnosis of ischemic colitis (PMID:14499781). Mucosal gangrene seen on colonoscopy confirms the diagnosis (PMID:16168242)

Biopsy	Important method to diagnose ischemic colitis and differentiate it from inflammatory bowel disease. Ischemic colitis will have iron-laden macrophages and submucosal fibrosis. Although biopsy is confirmatory of the disease it is not necessary if the clinical presentation and radiologic or endoscopic visualization are consistent with this disease. Biopsies should not be taken of gangrenous appearing bowel.