Table 2. Grading of Recommendations Assessment, Development and Evaluation Definitions for Strength of Recommendation

Strength of recommendation	For the patient	For the clinician
Strong	Most individuals in this situation would want the recommended course of action and only a small proportion would not.	Most individuals should receive the recommended course of action. Formal decision aids are not likely to be needed to help individuals make decisions consistent with their values and preferences.
Conditional	The majority of individuals in this situation would want the suggested course of action, but many would not.	Different choices will be appropriate for different patients. Decision aids may be useful in helping individuals in making decisions consistent with their values and preferences. Clinicians should expect to spend more time with patients when working towards a decision.

might be missed. However, there are potential downsides or harms associated with evaluation of IDA, including adverse events from endoscopic procedures and higher health care utilization and cost. Therefore, the chosen threshold level also needs to have adequate specificity to minimize the number of false-positive diagnoses.

As outlined in the technical review, based on a systematic review of 55 studies, a ferritin threshold value of <45 ng/mL has a sensitivity for iron deficiency of 85% (95% confidence interval [CI], 82%–87%) with a specificity of 92% (95% CI, 91%–94%).[7] In contrast, a ferritin value of <15 ng/mL has a sensitivity of only 59% (95% CI, 55%–62%) and specificity of 99% (95% CI, 89%–99%). A ferritin threshold value of <45 ng/mL was believed to maximize sensitivity for the diagnosis of IDA with an acceptable number of false-positive diagnoses. The tradeoff between higher sensitivity and lower specificity using a threshold of 45 ng/mL instead of 15 ng/mL was believed to provide an acceptable balance of benefits of fewer missed diagnoses compared with potential harms of additional diagnostic evaluations.

In some patients, such as those with chronic inflammatory conditions or chronic kidney disease, ferritin levels may not accurately reflect body iron stores. In these situations, other clinical tests, such as the serum iron, transferrin saturation, soluble transferrin receptor, or C-reactive protein, may be useful adjunctive tests to assist in the diagnosis of iron deficiency. We did not specifically address threshold ferritin values to diagnose iron deficiency in non-anemic patients. In addition, some patients with or without iron deficiency may have gastrointestinal symptoms that would necessitate endoscopic evaluation regardless of the diagnosis of iron deficiency.

The overall quality of evidence for this recommendation was rated as high. The underlying studies are potentially at risk for bias because of the patient populations included, which did not clearly differentiate between symptomatic and asymptomatic patients.

In asymptomatic postmenopausal women and men with iron-deficiency anemia, the AGA recommends bidirectional endoscopy over no endoscopy. *Strong recommendation, moderate-quality evidence*.

The AGA recommends bidirectional endoscopy, including both esophagogastroduodenoscopy and colonoscopy, over no endoscopy to evaluate asymptomatic postmenopausal women and men with IDA. Bidirectional endoscopy should be performed at the same setting in these patients. This recommendation does not apply to patients who may have gastrointestinal symptoms; these patients should be evaluated by integrating the symptoms into the clinical picture. In addition, this recommendation assumes there is no other unequivocal explanation for IDA, particularly in young men, after a thorough history and physical examination. Underlying etiologies, such as frequent blood donation, nutritional deficiencies (eg, vegan or vegetarian diet), nongastrointestinal blood loss, and malabsorption syndromes should be considered and evaluated as indicated.

The Technical Review Panel identified no comparative studies of the outcomes of bidirectional endoscopy vs simple clinical observation or empiric oral iron therapy alone in any patient population. Therefore, the Guideline Panel relied on indirect evidence in formulating this recommendation. Evidence was derived from observational cohort and cross-sectional studies of the frequency of gastrointestinal findings in patients with IDA, randomized studies of endoscopic screening for colorectal cancer, and studies evaluating the risks of complications after endoscopic procedures. Pooled estimates from 18 studies on the diagnostic yield of bidirectional endoscopy in postmenopausal women and men with IDA showed detection of lower gastrointestinal malignancy in 8.9% (95% CI, 8.3%–9.5%) and upper gastrointestinal malignancy in 2.0% (95% CI, 1.7%–2.3%) of individuals.[1] These studies likely overestimate the underlying prevalence of malignancy because of referral bias and inclusion of symptomatic as well as asymptomatic patients. However, the overall evidence strongly suggests that the underlying risk of malignancy is several-fold higher than in an asymptomatic colorectal cancer screening cohort. As a