Communication from the ASGE Standards of Practice Committee

GUIDELINE

Race and ethnicity considerations in GI endoscopy

Prepared by: ASGE STANDARDS OF PRACTICE COMMITTEE

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This document was reviewed and approved by the Governing Board of the American Society for Gastrointestinal Endoscopy.

This is one of a series of statements discussing the use of GI endoscopy in common clinical situations. The Standards of Practice Committee of the American Society for Gastrointestinal Endoscopy (ASGE) prepared this text. In preparing this guideline, a search of the medical literature was performed by using PubMed. Additional references were obtained from the bibliographies of the identified articles and from recommendations of expert consultants. When little or no data existed from well-designed prospective trials, emphasis was placed on results from large series and reports from recognized experts. Guidelines for appropriate use of endoscopy were based on a critical review of the available data and expert consensus at the time the guidelines were drafted. Further controlled clinical studies may be needed to clarify aspects of this guideline. This guideline may be revised as necessary to account for changes in technology, new data, or other aspects of clinical practice. The recommendations were based on reviewed studies and were graded on the quality of the supporting evidence (Table 1)[1] The strength of individual recommendations is based on both the aggregate evidence quality and an assessment of the anticipated benefits and harms. Weaker recommendations are indicated by phrases such as "we suggest," whereas stronger recommendations are typically stated as "we recommend."

This guideline is intended to be an educational device to provide information that may assist endoscopists in providing care to patients. This guideline is not a rule and should not be construed as establishing a legal standard of care or as encouraging, advocating, requiring, or discouraging any particular treatment. Clinical decisions in any particular case involve a complex analysis of the patient's condition and available courses of action. Therefore, clinical considerations may lead an endoscopist to take a course of action that varies from these guidelines. For the purposes of this document, the terms African American, Hispanic, and Caucasian will be used for consistency.

The United States comprises a racially and ethnically diverse population that continues to differentiate. Over a 10-year period, the U.S. census observed a 43% increase in both Hispanic and Asian populations, whereas the Caucasian and African American populations increased at a smaller rate (5%-9%). In addition, the number of respondents reporting 2 or more racial backgrounds continues to rise.[2] Observations of differences in the prevalence or presentations of disease among racial and ethnic groups are important keys to disease diagnosis and management. This guideline will emphasize important differences in GI disease patterns among minority racial and ethnic groups in the United States, which may influence the practice of endoscopy in these patient populations. This guideline is not intended to serve as a comprehensive list of GI disease profiles for various racial and ethnic groups. Studies addressing the impact of modifying specific endoscopic standards of practice for conditions based on race and ethnicity are currently lacking. At the same time, it is important to recognize that these populations are not homogeneous and that additional factors, such as environment and behavior, also play important roles in disease.[3]

ESOPHAGUS

Barrett's esophagus and adenocarcinoma

Barrett's esophagus (BE) is recognized as a precursor lesion for esophageal adenocarcinoma (EAC), and screening

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TABLE 1. GRADE system for the quality of evidence for guidelines

Quality of evidence	Definition	Symbol
High quality	Further research is very unlikely to change our confidence in the estimate of effect.	⊕⊕⊕⊕
Moderate quality	Further research is likely to have an important impact on our confidence in the estimate of effect and may change the estimate.	⊕⊕⊕◯
Low quality	Further research is very likely to have an important impact on our confidence in the estimate of effect and is likely to change the estimate.	⊕⊕◯◯
Very low quality	Any estimate of effect is very uncertain.	⊕◯◯◯

GRADE, Grading of Recommendations Assessment, Development and Evaluation.
Adapted from Guyatt et al.[1]

for BE is a well-established practice among endoscopists.[4-6] In the United States, there has been a 3-fold to 5-fold increase in the incidence of EAC over the past 3 decades.[7-9] Among racial and ethnic groups, the prevalence of EAC in Caucasian men is much higher (5.4/100,000) than in African Americans (1.4/100,000), Native Americans/Alaska Natives (3.0/100,000), and Asian Americans/Pacific Islanders (0.8/100,000).[10] Population studies have demonstrated a similar trend, with an observational study of a Kaiser membership population demonstrating highest annual incidences of BE in both sexes among non-Hispanic Caucasians (39/100,000), with lower rates among Hispanics (22/100,000), Asians (16/100,000), and African Americans (6/100,000).[11] Studies outside of the United States also suggest an overall low prevalence of BE in Asian patients, with ranges of 0.4% to 2.0%,[12-16] and a rise of EAC paralleling that of the United States has not been consistently observed.[17-21] Although it is postulated that acclimation to Western lifestyle and diet will translate into increased rates of GERD and its adverse events among immigrants in the United States, there are no available data to support this assertion. As such, Caucasian race is a risk factor for development of BE and EAC, and a cost-effectiveness analysis has supported the practice of endoscopic screening of Caucasian men aged >50 years who have GERD symptoms.[22] Recent guidelines also support screening patients with chronic GERD symptoms and multiple risk factors regardless of race or ethnicity, but note that the maximal yield will be in Caucasian men aged >50 years.[5,23,24]

Esophageal squamous cell carcinoma

The incidence of esophageal squamous cell carcinoma (SCC) in the United States is very low and decreasing. Among men, it is the most frequent esophageal malignancy in African Americans, with an annual incidence of 9.3/100,000 compared with only 2.0/100,000 in Caucasians, 2.5/100,000 in Native Americans/Alaska Natives, and 3.0/100,000 in Asian Americans/Pacific Islanders.[25] A similar pattern is seen among women, although the incidence is much lower (range 0.5/100,000-2.8/100,000). Incidence rates among new immigrants from regions of the world such as Northern China, India, and Northern Iran (areas that encompass the "esophageal cancer belt") may be higher, because SCC is common in these areas, with an annual incidence rate of 100/100,000.[10] Screening for esophageal squamous dysplasia with chromoendoscopy by using Lugol's solution has been explored in these high-risk regions; however, widespread acceptance has been limited because of its invasiveness, low specificity, and high costs in low-resource communities.[26] There are no U.S. studies that investigate the use of endoscopic screening for SCC, and currently there are insufficient data to support race-specific or ethnicity-specific screening guidelines for this malignancy.

STOMACH

Gastric neoplasia and *Helicobacter pylori* infection

Gastric cancer is the 16th most common cause of cancer in the United States but remains one of the leading causes of cancer mortality worldwide.[27,28] The incidence of gastric cancer is high in Asia-Pacific regions including Japan, Korea, China, Taiwan, and Malaysia as well as South America, Central Europe, South Africa, and Russia.[29-31] The reported incidence of gastric cancer is much lower in the United States but is significantly higher among African Americans, Hispanics, and Native Americans compared with Caucasians.[4,32] Between 2007 and 2011, the incidence of gastric cancer in the United States per 100,000 men was 9.2 for Caucasians, compared with 15.3 for African Americans, 14.9 for Asians, 12.9 for Native Americans, and 14.8 for Hispanics. During the same period, the incidence of gastric cancer in the United States per 100,000 women was 4.5 for Caucasians, 8.5 for African Americans, 9.0 for Asians, 7.3 for Native Americans, and 8.3 for Hispanics.[32] The majority of gastric cancers are diagnosed late and are associated with a poor prognosis. Thus, screening and surveillance strategies for high-risk populations have been advocated.

In 1994, the World Health Organization classified *Helicobacter pylori* infection as a type I carcinogen in humans.[33] Systematic reviews of case-control studies suggest that 65% to 80% of non-cardia gastric adenocarcinomas can be attributed to this infection.[34,35] In Chinese, Korean,