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The essence of management of Barrett's esophagus

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The management of Barrett's esophagus is supported by high-quality evidence in certain areas such as the performance of ablation therapy for high-grade dysplasia. However, in many areas of management of this condition, it is not practical to conduct prospective randomized controlled trials. New methods have evolved in the attempt to address specific questions regarding clinical practice when there isn't good evidence. One time-honored means is to ascertain best practices, using experts who presumably have shown that they have expertise. This presumes that physicians practicing in major centers would evolve clinical management decision models that can be translatable to current practice. The second means is to determine the standard of care in the community by surveying practicing gastroenterologists about their clinical protocols. A third is simply to ask a self-declared expert for an opinion—which is the basis of this editorial.

The essence of management of Barrett's esophagus is the prevention of the development of esophageal adenocarcinoma and its well-known associated mortality. Randomized controlled studies using radiofrequency ablation and photodynamic therapy have both demonstrated significant reduction in the subsequent cancers.^{1,2} These well-designed multicenter prospective studies have set the benchmarks for ablation therapy. However, these studies entailed careful patient selection, meticulously planned treatment sessions, and scrupulous patient follow-up. Translating these studies into clinical practice has always been difficult because the same resources are not readily available, and the clinician is often asked to treat in difficult clinical situations that would not be eligible in studies. A good example is provided by the limitations in clinical studies: patients who had segment lengths of 8 cm or more were excluded. In practice, we obviously must offer therapy to this group of patients even while recognizing that the available information is scant and the results are unlikely to be the same as in patients with shorter segments.

The 2 studies presented in this issue of *Gastrointestinal Endoscopy* represent surveys of gastroenterologists who have been practicing ablation therapy in the treatment of Barrett's esophagus. The first, from Singh et al,³ examines the practices of 236 predominantly community gastroenterologists who attended courses given by the American Society for Gastrointestinal Endoscopy (ASGE) in 2 different locations. This select group may not be typical of the average community gastroenterologist, inasmuch as most of these individuals had attended previous courses, had more than 10 years in practice, and most likely had been recently exposed to Barrett's management guidelines through the course they were attending. Interesting findings from this survey are that most gastroenterologists practice according to guidelines, with ablation targeted toward high-grade dysplasia as recommended by the recent ASGE and American College of Gastroenterology guidelines.^{4,5} However,

there were still 12% who admitted to treating nondysplastic Barrett's esophagus although there are no guidelines that specifically advocate for treating nondysplastic Barrett's esophagus, nor are there studies demonstrating the efficacy of treating this group of patients for the goal of cancer prevention. A recent guideline discusses ablation therapy in potentially "high-risk patients" with Barrett's esophagus without dysplasia, but this strategy has never been clinically validated.⁶

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Ablation in patients with low-grade dysplasia is now much more common (26%) than in the past, although the cost-effectiveness models on the use of ablation in this setting have found it to be dependent on the cancer risk that varies substantially in this cohort of patients.⁷ Prospective studies on ablation in patients with low-grade dysplasia that have the development of cancer as an endpoint are lacking. This very heterogeneous group probably does contain patients who are likely to experience progression similar to high-grade dysplasia. At present, this group might be differentiated from lower-risk patients by the use of biomarkers such as the presence of abnormal p53 on immunohistochemistry, validation of the diagnosis with other expert pathologists, the number of dysplastic glands present, or the use of fluorescent in situ hybridization techniques that demonstrate a potential increased risk of progression.⁸⁻¹¹

Almost all of the participants agreed that endoscopic treatment of high-grade dysplasia is a standard of care; this is a major decision change in the past decade. The study from Bedi et al¹² surveyed 42 experts in Barrett's esophagus for their opinion regarding how patients with high-grade dysplasia or early cancer should be treated. It is interesting to note that almost all of the experts performed EUS in the setting of high-grade dysplasia and early cancer, although it is unclear whether this technology actually influences the management of these conditions. Surveillance after ablation seems to be relatively uniform, as has been advocated by early guidelines.¹³ Postablation surveillance is performed by all of the experts, with the majority of patients undergoing endoscopy and biopsies every 3 months for the first year, every 6 months for the second, and then yearly, although there is some variation in the time intervals. Biopsies of the squamous mucosa and of the gastroesophageal junction were routine. This seems appropriate, given the increased number of recurrences found in the first year after complete responses have been achieved.

In clinical practice, the physician can be certain regarding the depth of invasion only when an endoscopic resection has been performed, and this leads to a conundrum. Performance of EUS after a resection leads to less information, with reactive lymph nodes potentially clouding the issue of existing metastatic lymph nodes. My personal practice is to perform EUS before resection, given that metastatic lymph nodes would preclude the need for resection. The ability of EUS to actually determine depth of invasion into the submucosa is not great.¹⁴ It seems interesting that once an intramucosal cancer is removed, a third of the experts obtain CT scans during follow-up and only a fifth perform EUS. Most recurrences after endoscopic therapy would be regional, and the advantage of a CT scan in detecting distal metastasis theoretically would not be very apparent unless there were perhaps high-risk features of the cancer, such as invasion of the muscularis mucosae, presence of a high-

grade cancer, or lymphovascular invasion. These factors are not often found in early adenocarcinoma but have been extrapolated from the squamous cancer literature. It is unclear whether adenocarcinomas truly behave the same as squamous cell cancers of the esophagus. Existing information seems to suggest that adenocarcinomas of the same stage as squamous cell cancers do somewhat better in terms of survival.

These surveys do help to reinforce or reexamine our practices, especially when there is no existing guidance. Although the value of what we may be doing may not be proved, it always helps to know that others who practice in our community or who are acknowledged experts manage Barrett's esophagus in a similar fashion. However, there is a tendency to answer surveys in a fashion that is more in keeping with the established norms rather than what might actually be practiced. It is more important than ever for physicians to scrutinize what is being published and determine the "essence" of the message.

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