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Preface

Premalignant disorders of the gastrointestinal tract



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What is the role of the medical oncologist in managing premalignant disorders of the gastrointestinal tract, and why should medical oncologists be conversant with this subject? This important issue is addressed in this issue of the *Hematology/Oncology Clinics of North America*. The editors felt that this issue, which was previously published in the *Gastroenterology Clinics of North America*, was so relevant to the field of medical oncology that it has now been reprised and updated for this audience.

The clinical scope of the medical oncologist with an interest in gastrointestinal (GI) malignancies continues to expand at a rapid pace. In the last decade, at least four important new drugs—irinotecan, oxaliplatin, gemcitabine, and the molecularly targeted agent Gleevec—have been added to the armamentarium against GI cancers. Effective adjuvant therapies in rectal cancer and, more recently, gastric cancer, as well as effective primary multimodality therapies in esophageal, head and neck, and anal cancer have made the medical oncologist a firm member of the multidisciplinary team, along side the surgeon and radiation oncologist. With the cloning of the human genome and the rapid expansion of microarray technology, the knowledge base of the medical oncologist must now extend to fundamentals of molecular biology, with at least a rudimentary understanding of the prognostic potential of assays for c-kit, p53, her2/neu, and microsatellite instability.

Finally, as the role of medical oncology continues to broaden, oncologists are being consulted more frequently on clinical cases before the diagnosis of cancer

is made. With the development of new diagnostic modalities such as positron emission tomography scanning and dynamic contrast enhanced (DCE)-MR imaging, the opinion of the medical oncologist is sought before making a definitive diagnosis to assist in sorting through and prioritizing the plethora of new diagnostic findings. In addition, the medical oncologist's opinion is sought not just for the patient, but for other members of families with strong histories of familial cancer, such as Lynch syndrome I and II or the hereditary nonpolyposis coli syndrome, or for patients with a personal history of a premalignant condition, which is the focus of this issue.

The intent of this issue is to provide a comprehensive overview of premalignant lesions of the GI tract and their management for the medical oncologist. Four introductory articles by Katz and Reynolds, Katz and Kaestner, Mariadason and colleagues, and Haber review current recommendations for cancer screening, the molecular mechanisms of carcinogenesis, the new technique of microarray analysis, and the histologic precursor lesions that are found throughout the GI tract. The submission by Mariadason and colleagues that describes microarray analysis of tumors is a new addition to this issue; it provides the reader with a thorough description of the theoretical foundations and potential applications of this powerful new tool for establishing molecular classifications of both premalignant and malignant states.

Following this introduction, four articles by El-Serag, Reynolds and colleagues, Beilstein and Silberg, and Katzka review premalignant conditions of the esophagus. The epidemiologic overview by El-Serag provides insights into the factors that have made adenocarcinoma of the esophagus, the most rapidly increasing malignancy in white men. The other three articles analyze Barrett's esophagus in detail. This important premalignant condition is of interest not only because it represents a disorder in which medical intervention can potentially reverse the trend toward cancer, but because of the molecular insights that can potentially explain the mechanism of carcinogenesis in the lower esophagus.

The next set of articles by Faraji and Frank and one by Sepulveda and Graham discuss premalignant conditions of the stomach. The second article details the important links between *Helicobacter* infection and gastric cancer. Like Barrett's esophagus, *Helicobacter* studies offer an opportunity for novel insights into stomach carcinogenesis and unveil an important avenue for prevention.

The next set of four articles focuses on the greatest public health hazard among the GI malignancies: colon carcinogenesis. Colorectal cancers affect 155,000 patients annually in the United States, with nearly half dying of their cancer. Multiple windows for intervention occur before the development of frank cancer, including familial and genetic screening, early diagnosis, and prevention strategies. Therefore, understanding these conditions has important public health implications. The first article by Cruz-Correa and Giardiello discusses the management of familial colon cancer, including both polyposis and nonpolyposis syndromes. While this represents a minority of patients with colon cancer, it nevertheless presents an important management challenge to physicians involved in the care of these patients and their families, which often includes the medical

oncologist. The second article, by Murthy and colleagues, discusses the clinical and molecular features of colorectal cancer occurring in the context of inflammatory bowel disease, and the etiologic role of inflammatory changes in colon cancer. The next two articles, by Loren and colleagues and Gatof and colleagues, discuss the role of screening and prevention in colorectal cancer with a thorough discussion of the multiple controversies surrounding these questions.

The final three articles in this issue describe the precursor lesions for the less common but nevertheless clinically important diseases: small bowel carcinoma, hepatocellular carcinoma, and pancreatitis. The central theme of chronic inflammation and its role in carcinogenesis runs through all three. The story in hepatocellular carcinoma remains particularly intriguing because of the known role of hepatitis virus in the cause of this disease.

In summary, this issue of the *Hematology/Oncology Clinics of North America* offers medical oncologists a comprehensive review of the topic of premalignant conditions of the GI tract and their medical management. The scope of this issue encompasses molecular biology to epidemiology to clinical management. It offers medical oncologists a solid foundation from which to approach the subject, both with patients and their families, with colleagues in other subspecialties, and with house staff and fellows, who may be eager for knowledge in this complex area.

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