

Preface

Multidimensional Diagnosis and Treatment Planning
in Maxillofacial Surgery



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Guest Editor

We are now at the point where we must educate people (surgeons) in what nobody knew yesterday, and prepare in our schools (training programs) for what no one knows yet but what some people must know tomorrow. —Margaret Mead

Minimally invasive surgery is defined as “the discipline of surgical innovation combined with modern technologies” [1]. It is only during the past 10 years that oral/maxillofacial surgeons have become interested in altering our “maximally invasive” procedures with the use of novel minimally invasive techniques.

At the Massachusetts General Hospital, our initial interest in minimally invasive surgery was driven by our research and clinical work in distraction osteogenesis. This interest quickly broadened to include the development of “totally buried, remotely activated miniature devices” to be placed through minimally invasive endoscopic approaches. The realization that totally buried devices did not allow for midcourse corrections led us to pursue the development of three-dimensional (3-D) treatment planning imaging and software. Our group envisions a day when patients requiring maxillofacial reconstruction will have detailed 3-D computed tomographic images, a treatment plan developed with 3-D virtual modeling, skeletal expansion through endoscopically placed miniature totally buried distraction devices remotely or continuously activated, and, when necessary, tissue-engineered grafts.

Currently, the range of new technologies developing in our specialty includes new imaging modalities and applications, surgical navigation, and advanced treatment planning and modeling. These are aspects of evolving technologies and are the subject of this issue of the *Atlas of the Oral and Maxillofacial Surgery Clinics of North America*. Advances are not limited to these areas, however, and the future is without limits. It is with great excitement that I pursue research and the clinical use of advanced technologies with my mentor, Leonard B. Kaban, and our entire Massachusetts General Hospital team.

I hope that this issue, which is dedicated to diagnosis and treatment planning using advanced technologies, stimulates interest in novel treatments for our patients. I want to take this opportunity to thank the contributing authors for their enthusiasm, their expertise, and their

commitment to minimally invasive surgery and imaging. I am sure you as the reader will agree that these articles are exciting and of high quality.

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Reference

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