Anatomy for Plastic Surgery of the Face, Head, and Neck

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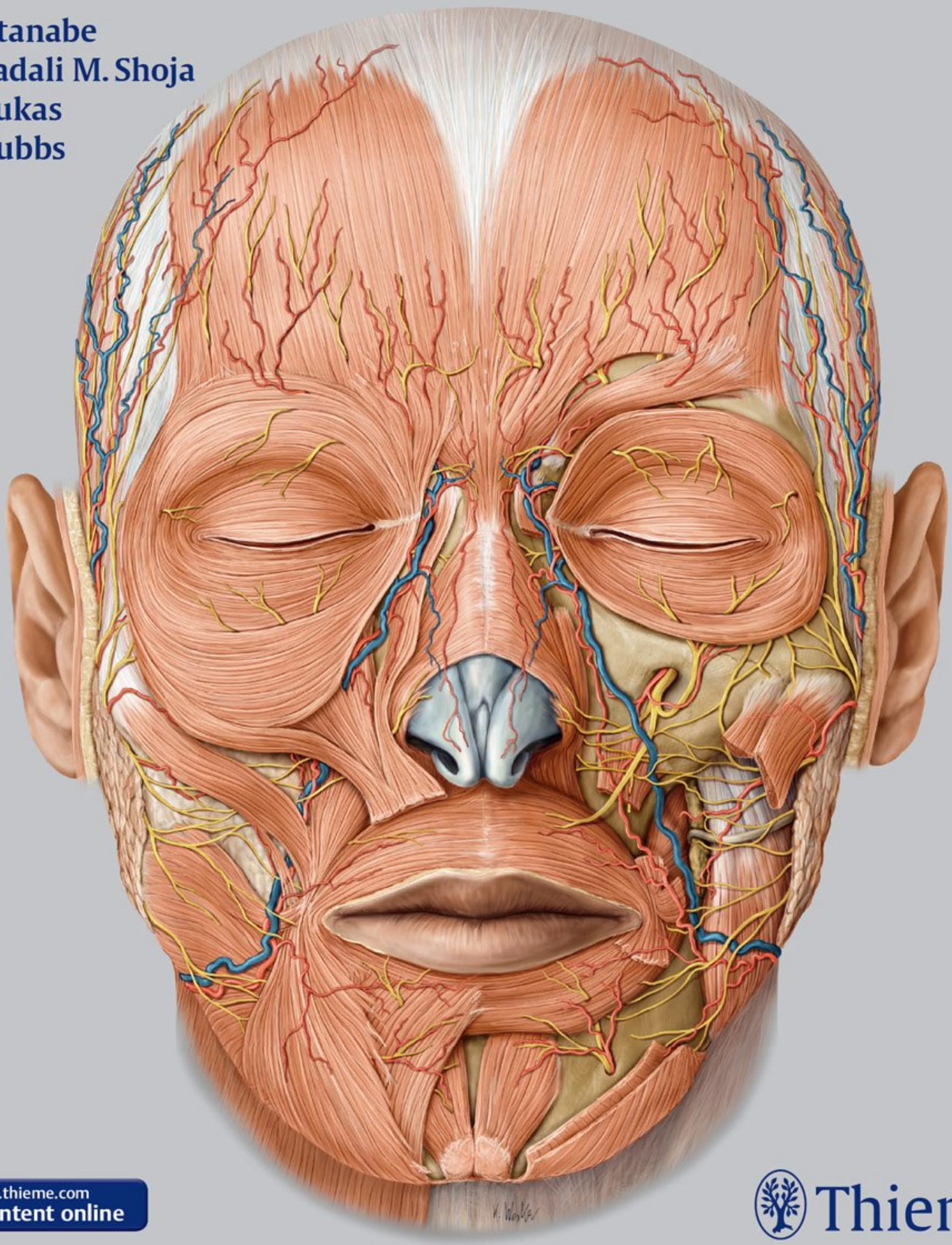

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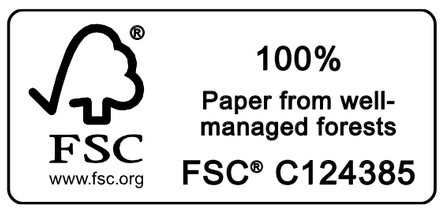

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Preface

This book was planned as a head and neck surgical anatomy book for plastic surgeons, head and neck surgeons, and surgeons who practice in related fields. Unfortunately, few surgical textbooks emphasize anatomy, especially textbooks in the field of plastic surgery. In most surgical textbooks, the procedures are described only in minute detail. Conversely, traditional anatomical textbooks do not provide adequate information on the regional anatomy, preventing surgeons from obtaining the knowledge necessary to expertly perform various surgical procedures. One reason for this is that although the basic anatomy of the human body was almost completely described more than 100 years ago, the anatomy in the head and neck region, especially that applicable to plastic surgery, is still developing. Additionally, anatomical textbooks often do not provide the most up-to-date information. Therefore, we have attempted to include the latest anatomical understanding of the head and neck anatomy from a plastic surgeon's perspective.

In writing this preface, I (KW) discussed head and neck anatomy with my mentors in two specialties: gross anatomy and plastic surgery. This allowed me to consider anatomy from two different viewpoints.

First, my mentor in gross anatomy made the following observations: The anatomy of the head and neck is extremely complicated and the details differ among individuals and during different stages of life. These differences include the thickness of the tissues, their changes in response to aging, and even anatomical variations in vessels, nerves, and muscles. Each organ in the head and neck region has a very distinct function. Consequently, pathologies involving the head that require surgery will be operated on by surgeons specializing in neurosurgery, otorhinopharyngolaryngology, ophthalmology, dental medicine, and plastic surgery. While in-depth knowledge in the anatomical area of specialization is extremely important in treating patients, the surgeon as well as the medical staff must also be highly familiar with not just related regions of the body but also with unrelated regions. In medical education, unfortunately, the importance of anatomical education has been downplayed globally in recent years. This may be because nowadays medical students have less time to study anatomy, given the many new fields of medicine that they are expected to be familiar with. Apparently, some medical schools no longer offer anatomical dissection. Thus, not surprisingly, the number of anatomists, especially gross anatomists, is decreasing. This tendency has critical, negative implications for surgery. Gross anatomy is the basis of knowledge for every surgeon. Surgeons must be experts in gross anatomy if they hope to acquire the surgical skills to become experts in surgery.

My second mentor, a specialist in plastic surgery, offered the following: The most important aspect of performing plastic surgery is knowledge of three-dimensional regional anatomy. For example, each nerve and blood vessel takes up space three dimensionally. It is important to recognize how these structures travel on the surface plane, but it is more important for the success of the actual surgery to know which tissue layers these structures run through. Anatomical atlases and textbooks provide detailed images of these structures, but the knowledge gained from them is two-dimensional. Novice surgeons typically memorize the two-dimensional image of their surgical field. Because of this, surgical results are sometimes unsatisfactory, or unexpected surgical complications may occur. To perform surgeries with a high degree of difficulty, a surgeon has to be able to vividly visualize the three-dimensional regional anatomy of the surgical field. Plastic surgery residents have to study the regional anatomy in anatomical atlases and textbooks, and confirm their anatomical knowledge in practical operations. By repeating this pattern many times, a resident is able to establish and practice three-dimensional anatomical knowledge. By having surgical training based on accurate anatomical knowledge, a surgeon will be better equipped to perform high-degree operations.

We hope that our textbook will not only help to improve the surgical skill of individual surgeons, but will also promote the development of head and neck surgery. I would like to thank Dr. Koh-ichi Yamaki, Professor of Anatomy, and Dr. Kensuke Kiyokawa, Professor of Plastic Surgery, for kindly contributing the above comments to the preface.

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