

## Foreword to the Third Edition

This is the third edition of the book *Cranial Neuroimaging and Clinical Neuroanatomy*. There have been changes and improvements in all chapters. It is a useful addition to any library as it provides accurate anatomic correlation with easy to read and understand vascular and neurofiber track illustrations, which are of the highest quality. The over-sized pages and well-designed layout allow for easy reading of the text. Furthermore, the use of standard terminology aids understanding.

The introduction includes an expanded discussion of the variety of neuroimaging tests that are presently available as well as the indications for each of these tests. This guidance is particularly helpful to those practicing clinicians who are faced with the dilemma of which neuroimaging studies to request and in what order they should be performed. The advantages and disadvantages of each are highlighted.

This new edition contains additional images that include the vascular supply to the posterior fossa. The rapid development of MRI and neurofunctional imaging has made this type of anatomic correlation even more valuable and welcome.

Dr. Kretschmann is a senior neuroanatomist at the Hannover School of Medicine and Dr. Weinrich a neurologist and neuroradiologist; they work with a dedicated team of young enthusiastic neuroscientists. Together they have used the thin gross anatomic slices of the brain that are then traced and outlined for the various images included in their text. The line drawings in three planes—axial, coronal and sagittal—identify the slice positions that are used and their relationship to the normal anatomic structures. These line drawings, taken from anatomic specimens, provide a clearer picture of the anatomy than the actual MR images and allow ready correlation with the MR images. Each of these slices is then outlined and highlighted to identify the various anatomic structures that are then also annotated in great detail.

The present third edition adds to the excellence of the previous two editions by including actual MR images of volunteers that correlate with the enhanced and annotated line drawings. The excellent quality of the images allows for easy identification on the ana-

tomic structures on the MR images obtained in clinical practice. MR images and annotated line drawings are available in the axial, coronal and sagittal planes. This greatly aids in the three-dimensional localization of various anatomic structures.

As in the previous additions, there are also illustrations of the ventricles and cisterns and a discussion of CSF flow dynamics.

The clear, color-coded, identification of the vascular supply to various areas of the brain on individual slices is very instructive and especially helpful in today's practice where early stroke detection and localization of the areas of involvement are vital prior to interventional procedures.

The color-highlighted illustrations of the fiber tracts for the various neurological pathways are excellent. These can be used by the radiologist to understand the clinical setting and by neuroscientist to aid in the diagnosis and treatment. Many of the cranial nerve pathways and interconnections are complicated, and these illustrations greatly aid understanding of the anatomic locations and relationships. Those involved in functional imaging will find this chapter particularly helpful.

Every effort has been made to update and enliven the text. Consequently studying and learning is more fun and enjoyable. The images have been upgraded and improved throughout. There is also an up-to-date list of references for the reader who is interested in more in-depth reading.

Finally, the book is an excellent reference for day-to-day teaching on a wide variety of issues relating to neuroimaging, including vascular supply and neurofunctional studies. It is a pleasure to recommend this excellent text to students at any level who are interested in neuroimaging of the cranium.

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## Preface

Our book *Neuroanatomy and Cranial Computed Tomography* first appeared in 1984. At that time computed tomography revolutionized the field of medicine, particularly neurology and neurosurgery. The purpose of the illustrations and text of our book was to provide necessary neuroanatomic information using images of anatomic slices. Our aim was to enable the reader to identify the complex structure of the brain on the monitor for diagnostic purposes to correlate the loss of function with the localization of the cerebral lesion.

The technique of magnetic resonance imaging permitted multiplanar presentations in all desired planes. The second edition, published in 1992 under a new title *Cranial Neuroimaging and Clinical Neuroanatomy*, presented graphic illustrations of anatomic slices in three standard planes.

For this third edition the old MR and CT images of the atlas have been completely replaced with large-sized illustrations,

and the number of images has almost doubled. Therefore, the amount of cerebral structures described has increased considerably. In addition, friends of the former editions encouraged us to introduce the arterial territories of the infratentorial space. Nevertheless, this book is intended as a tool for everyday practice. It aids the physician to correlate the patient's symptoms with the neuroimaging findings. This information considerably facilitates diagnosis and can be of great importance for the choice of therapy. The target readership includes neurologists, neurosurgeons, neuropediatricians, neurophysiologists, anatomists, physicians, traumatologists, oncologists, as well as students interested in the neuro-oriented specialities and especially physicians undergoing further training in clinical neurology.

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Translation of new chapters and amendments to the third edition were undertaken by Mrs. Nicola van Dornick. Dr. Angela Krönauer kindly checked the complete text for any further changes required. For additional improvements we dedicate thanks to Mrs. Susanne Kretschmann and Dr. Anja Schmidt. The responsibility for the translation rests with the author (K) only.

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