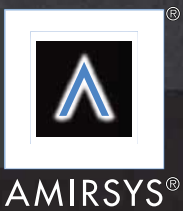
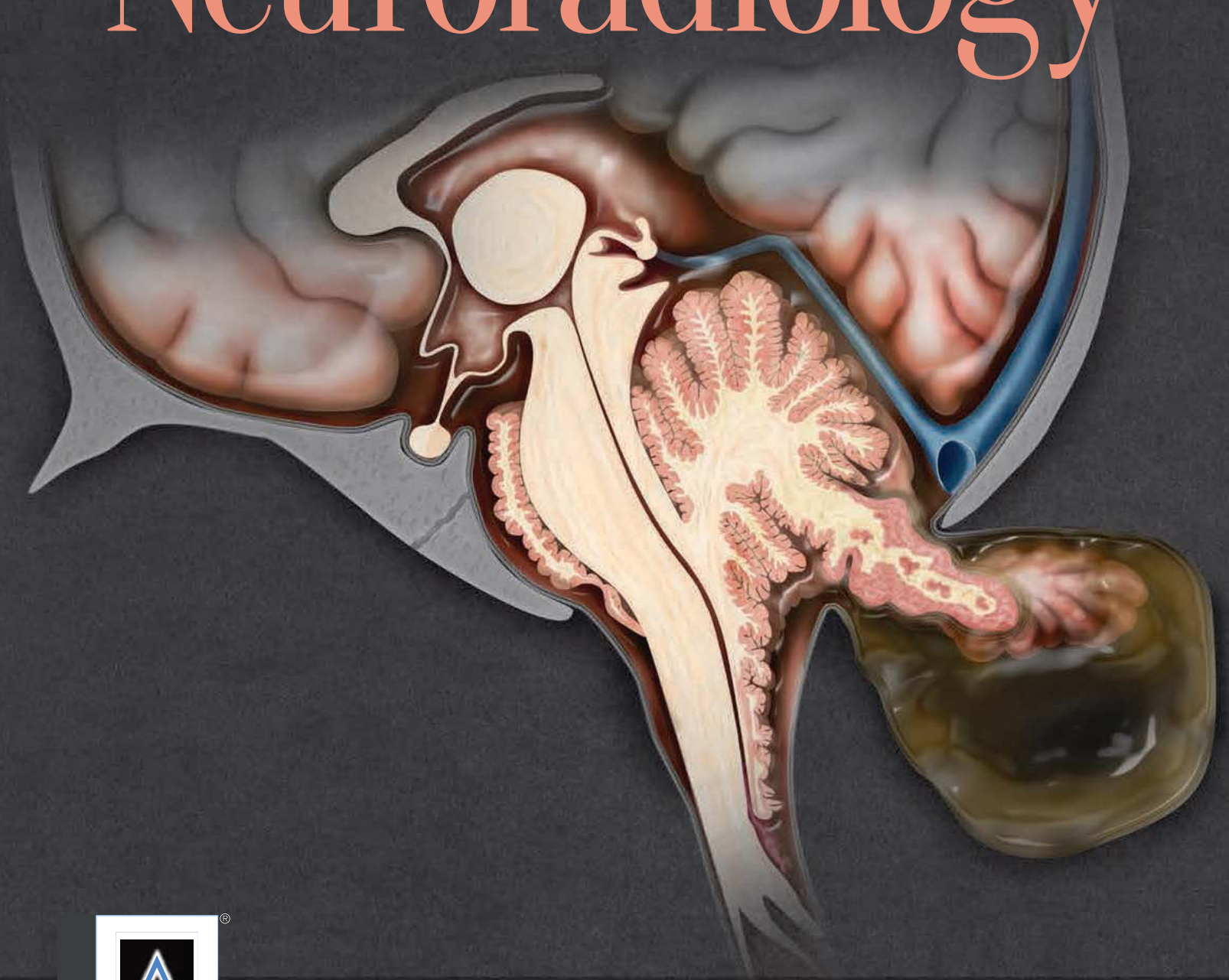


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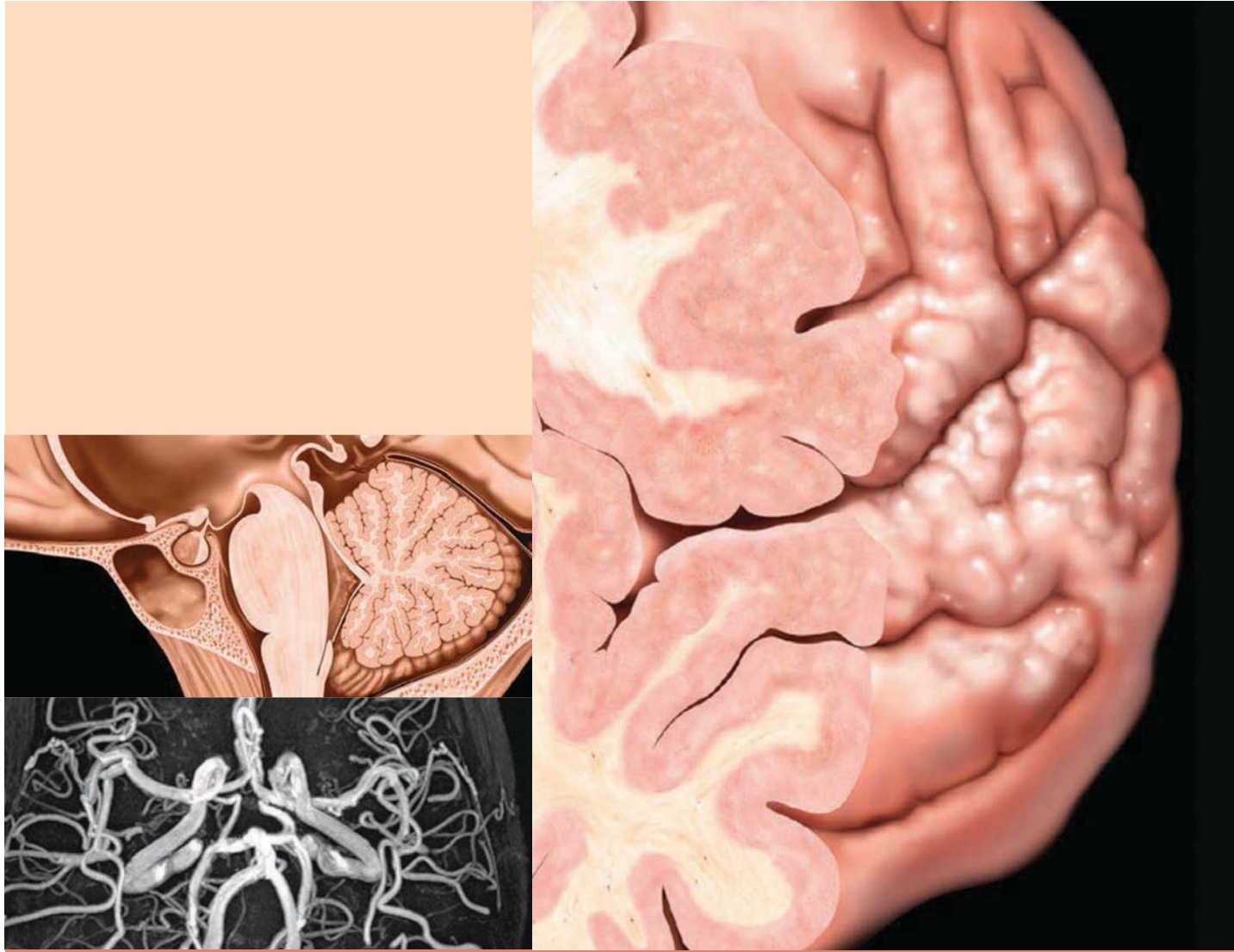
# Pediatric Neuroradiology



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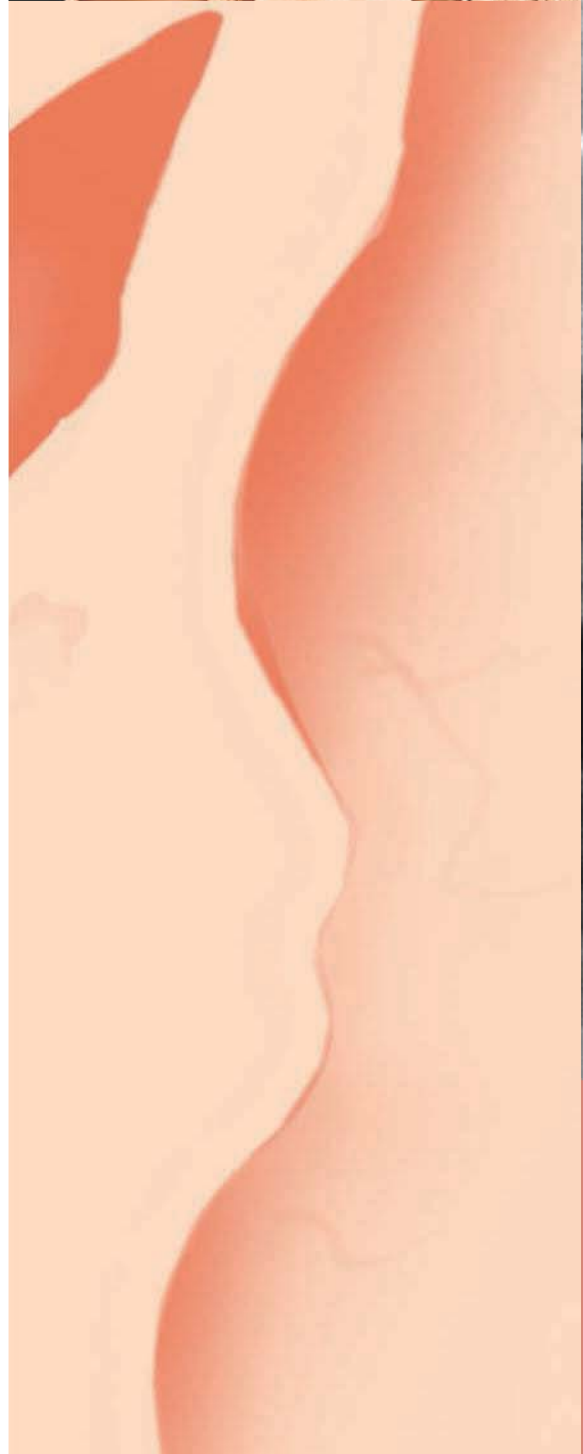
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*Diagnostic Imaging*

# Pediatric Neuroradiology





*Diagnostic Imaging*

# Pediatric Neuroradiology

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# Dedications

*To my wife Karen, our sons, our families, and our friends,  
who keep me focused on what is really important.*

**AJB**

*Thank you, Drs. Barkovich and Moore, it was an honor to walk beside you on this journey. Thank you to the fabulous Amirsys production team for all of their hard work, and to my colleagues and superb trainees at CCHMC who inspire me to learn each and every day. And finally, to my family, for their endless love, encouragement, and support.*

**BLK**

*To Margaret, who married me a quarter century ago and still patiently puts up with my professional and hobby distractions. To Hannah and Andrew, who grew up believing that people working on computers at night were writing books. To my (many) mentors who have nurtured and opened doors for me; I hope that I have been worthy of your trust and belief in me. Lastly, thank you to the readers who have sought me out to discuss (or quibble with!) my contributions to the first edition.*

**KRM**

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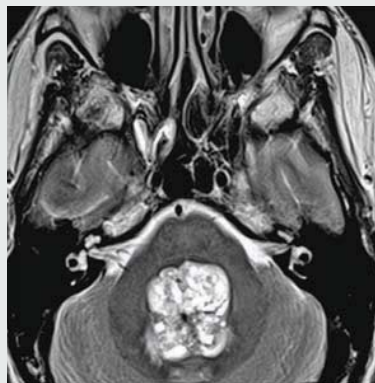
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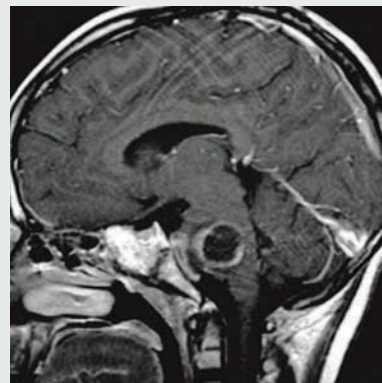
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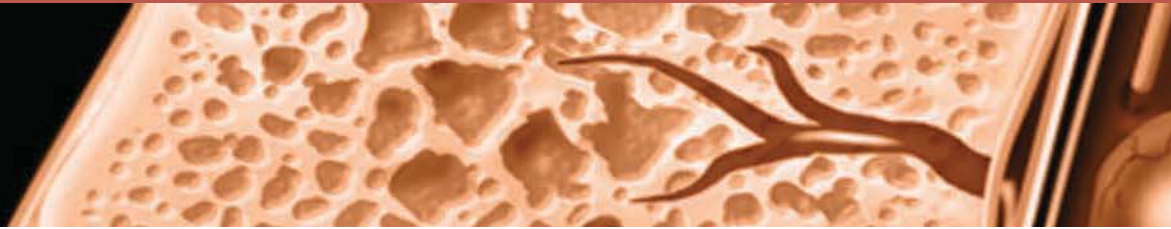
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# Preface



This second edition of *Diagnostic Imaging: Pediatric Neuroradiology* has been significantly modified from the first edition, which was published in 2007, and rightfully so. Our concepts of many of the disorders that were described in that book have significantly changed due to advances in our understanding of many disorders, reclassification of other disorders, and discoveries of entirely new disorders and groups of disorders. Changes are particularly profound in metabolic disorders and malformations; the molecular or genetic basis of many disorders has been revealed whereas other disorders have turned out to have etiologies far different than previously suspected. Despite these changes, many aspects of the book remain the same. Information remains concise with ample references, while figures remain plentiful and of high quality. A new feature has been added, consisting of introductions to sections that give embryologic, anatomic, and physiologic background to help readers understand fundamental concepts of the disorders described in the sections.

Hopefully, this information will make the disorders that are described in these sections easier to understand and, thereby, easier to diagnose. In all, the book remains extremely useful for practicing radiologists and child neurologists or pediatricians who see a lot of children with developmental delay.

The preparation of any book is quite challenging and, as was the case in the previous edition, this book is largely the result of the many colleagues (too numerous to name) who helped us to write the many chapters, and we are indebted to one another for sharing precious hours and extensive expertise to ensure the completed project met the high standards of the authors and publisher. The contribution of all of these people, with the tireless aid and direction of the Amirsys staff, cannot be quantified. The result is an excellent textbook that describes a large number of disorders, both common and uncommon, that affect the brains, heads, necks, and spines of children. In disorders that affect both adults and children, the diagnoses have been written and figures selected to emphasize the pediatric aspects of the disorders. The imaging findings of these disorders are well illustrated with representative MR studies as well as CT, ultrasound, angiography, and proton MR spectroscopy, as appropriate.

The contributors hope that the readers will find this second edition of *Diagnostic Imaging: Pediatric Neuroradiology* to be a useful tool, both as a learning tool about the topic and as a handy reference source in their daily practices.



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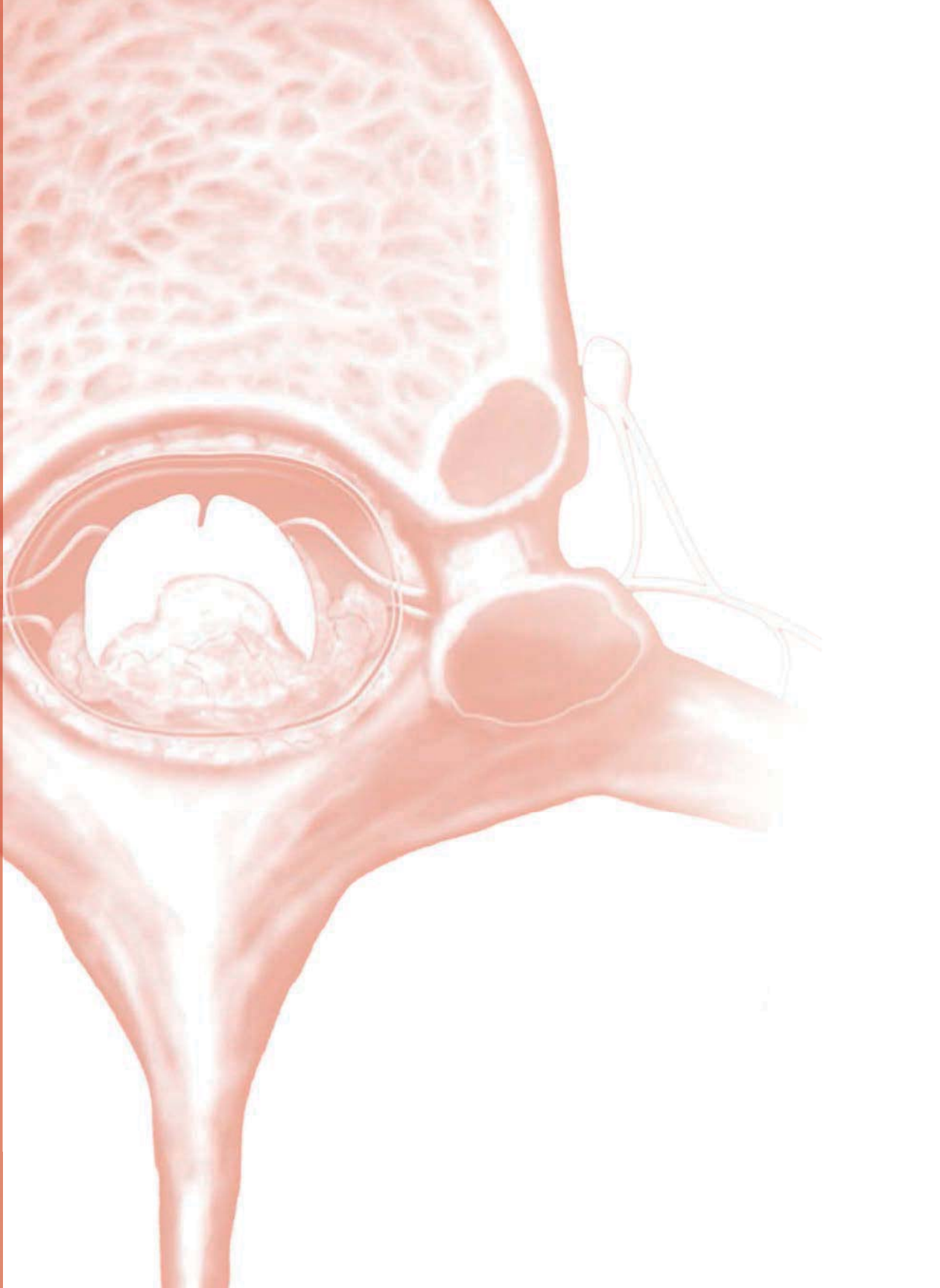
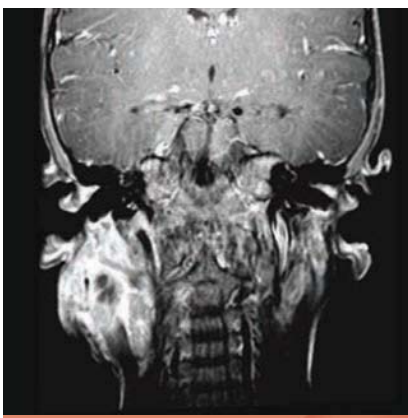
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