

Radiology Fundamentals

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Radiology Fundamentals

Introduction to Imaging & Technology

Fifth Edition



Springer

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To all those that ever wrote a book, I can now empathize. To my family and wonderful wife, Lindsey, for their endless love, encouragement, and prayers.

– Jonathan R. Enterline

Are we there yet?! Thanks to the team and to my family for staying the course in this incredible journey.

– Janet A. Neutze

Thank you to the 5th edition team. I couldn't have done it without you. To my family, thank you for the support and encouragement. To Dad, thanks for watching over me.

– Harjit Singh

To my lovely wife, Melissa, thank you for your love, encouragement and boundless support. To all of those who have worked so hard on this project over the years, thank you. Your contributions will be appreciated for years to come.

– Joseph S. Fotos

To all contributors, both past and present, whose hard work made this book what it is, thank you. To my family and incredible wife, Elia, thank you for your patience, understanding, and love.

– Brian Bentley

PREFACE TO THE FIFTH EDITION

The fifth edition of the *Radiology Fundamentals: Introduction to Imaging & Technology* is directed towards medical students, non-radiology housestaff, physician assistants, nurse practitioners, radiologist assistants and other allied health professionals as a curriculum guide to supplement their radiology education. This book serves only as an introduction to the dynamic field of radiology. The goal of this text is to provide the reader with examples and brief discussions of basic radiographic principles that should serve as the foundation for further learning. We hope that it will foster and further stimulate the process at the heart of medical education: self-directed learning.

Each edition continues to expand upon the first edition of the photocopied pages and films, written and organized by the original authors, Dr. William Hendrick and Dr. Carlton “Tad” Phelps. As mentors, Dr. Hendrick and Dr. Phelps of Albany Medical Center wanted a curriculum guide to reinforce the teaching concepts of their radiology elective. Dr. Harjit Singh, editor and author of much of the text of the first print edition, formalized the material in 1988. Our third edition, updated by faculty and students at Penn State Hershey, was a first effort at organizing and digitizing the information for publication. The fourth edition was an effort to expand and reinforce the original authors’ work. Dr. Joseph Fotos and Dr. Jonathan Douc were new additions to the writing, illustrating, and editing side.

The fifth edition expands on the positive aspects of the fourth edition. The chapter lineup has changed and there is a new Pediatrics section.

Radiology continues to expand in breadth and depth. As consultants to our clinician colleagues, and from both cost and safety standpoints, radiologists need to know what they are doing. We hope this book, used in conjunction with lectures, electives, and discussions, is a start.

Hershey, Pennsylvania
July 2014

Harjit Singh, MD
Janet A. Neutze, MD
Jonathan R. Enterline, MD

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