
It is exciting for me to go through the newer version of the classic neuroradiology textbook that I encountered 17 years back during my first year of radiology residency, and which I have since observed reach even higher levels of accomplishment with each subsequent edition. Scott W. Atlas’ Magnetic Resonance Imaging of the Brain and Spine has always been my favorite go-to source for all things neuroradiology. With the fifth edition dedicated to the “critical thinkers,” the editor and authors have tried to condense and consolidate the two-volume fourth edition, while thoroughly updating the contents and appearance of the book.

Although this edition appears trimmed down at the outset, it still abundantly meets the objectives as outlined by the author in the preface. It delivers a thorough evidence-based review of neuroradiological disorders based on “the known”—a term used by the author in reference to evidence. The core of this textbook continues to be understanding the basics of diagnosing neurological disorders based on a comprehensive knowledge of physics, anatomy, neuropathology, genetics, clinical history, and proven imaging findings.

The single volume, compact 5th edition is divided into four parts: Principles of MR Imaging; Brain and Skull Base; Spine and Spinal Cord; and Advanced Applications. Major sections of the fourth edition are now condensed to reduce the number of pages to 1504, compared with 2000 pages for the fourth edition. Specifically, the Brain and Skull base are now one section, instead of two separate sections, as in the previous edition.

Recent expansion in subspecialty training in neuroradiology training as well as increasing number of specialized studies pose a substantial challenge to anyone attempting to produce a major compendium of this magnitude. However, the editor has been successful in expanding on a vast collection of authors who are experts in their subspecialized areas of neuroradiology, thus maintaining the relevance of this textbook.

To reduce the overall size of the book, chapters have been reduced to 31 from 36. The quality of the images continues to be outstanding. An additional feature of this volume is the enhanced eBook, available with this edition, which provides the readers an opportunity to utilize digital technology to access and enhance the viewing experience.

Magnetic Resonance Imaging of the Brain and Spine continues to be an all-inclusive contemporary review of neuroradiology, targeting physicians and scientists with interest in neuroradiology. The condensed single-volume fifth edition is in keeping with the minimalistic modern perspective and the accompanying enhanced eBook offers a level of sophistication that would be attractive to trainees as well as seasoned practicing neuroradiologists.

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Level of Evidence: 4
Technical Efficacy: Stage 2
Magnetic resonance imaging (MRI) of the nervous system uses magnetic fields and radio waves to produce high quality two- or three-dimensional images of nervous system structures without use of ionizing radiation (X-rays) or radioactive tracers. One advantage of MRI of the brain over computed tomography of the head is better tissue contrast and it has fewer artifacts than CT when viewing the brainstem. MRI is also superior for pituitary imaging. It may however be less effective at identifying early cerebritis. Magnetic resonance imaging (MRI) is a diagnostic procedure that uses a combination of a large magnet, radiofrequencies, and a computer to produce detailed images of organs and structures within the body. Unlike X-rays or computed tomography (CT scans), MRI does not use ionizing radiation. Some MRI machines look like narrow tunnels, while others are more spacious or wider. Otherwise, there is no special type of care required after a MRI scan of the spine and brain. You may resume your usual diet and activities, unless your doctor advises you differently. Your doctor may give you additional or alternate instructions after the procedure, depending on your particular situation.