
Internal Medicine

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An Illustrated Radiological Guide

 **Springer**

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This book is dedicated to my mother, father, family, and my beloved country "Kuwait".

Preface

In any radiology department worldwide, around 60–70% of investigations deal with surgical cases: trauma, tumors, pre- and postsurgical assessment, surgical follow-ups, and more. In spite of that, radiology has a lot to offer in the field of internal medicine in terms of establishing, confirming, or rejecting diagnoses, or favoring differential diagnoses.

Before I joined radiology, I worked as an internal physician for almost a year and almost another year and half as a general surgeon. This clinical experience leads me to look at radiological images with the eye of a radiologist and the mind of a clinician when I examine patient radiological images. I even take a history and do a clinical examination if I have the chance when the patient is in the ultrasound, CT, or MRI room. I have always believed that the radiologist's role is not confined to writing reports, but it can be broadened to establish the diagnosis in the first hand in the same way as the clinician do.

In the medical library, there are books dedicated to the clinical signs of internal medicine diseases; interestingly, there are no such books in the radiology library. Radiology books concentrate on the radiological signs according to the system involved, not according to the disease or the specialty. For example, looking for signs of multiple myeloma follows the bone marrow tumors in a musculoskeletal radiology book, not a radiological book that discusses diseases of hematology, for example, which is the main target and idea of this book.

This book is designed to put the radiologist in the internal physician's shoes. It teaches radiologists how to think in terms of disease progression and complications, where to look for and to image these complications, and what are the best modalities used to reach a diagnosis. Also, the internal physicians can benefit from this book by learning what help radiology can offer them in establishing a diagnosis. The book also helps internal physicians to think like radiologists, in terms of what investigation they should request to confirm their diagnosis.

Each disease is mentioned with its pathophysiology, symptoms, clinical presentation, and how radiology can be used to establish the diagnosis or to look for the complications of this particular disease. Specialties covered in this book include gastroenterology, neurology, endocrinology, nephrology, cardiology, rheumatology, pulmonology, dermatology, hematology, diabetology, and tropical and infectious medicine.

The book works as a short textbook with an atlas of images. The book is not designed to serve as the only textbook for study. Doctors, or radiologists who are interested in more details about a certain disease, should refer to the standard medical or radiological textbooks.

Although the book's title is *Internal Medicine – An Illustrated Radiological Guide*, the book is not confined to medical diseases alone. Pediatrics, gynecology, genetics, and some surgical cases are discussed in the differentials. Although the world's new direction is toward subspecialties, this is not always the case in radiology. Internal medicine practitioners can refer a patient to a specialist when they feel the case requires it; this is unfortunately not always the case in radiology. Radiology residents may have a request involving an internal medicine case now, and the next case can be a pediatric or a surgical case. This situation of multispecialty diagnosis is faced by so many radiology residents around the world daily. Radiologists can refer the case to a senior, a more experienced, or a specialized radiologist, but again, this is not always the case, especially in hospitals with small radiology departments. I have tried in this book to summarize the diseases that can be in the differential diagnoses or related to a common disease. I have designed the book to mention only the diseases that can be ruled out by history and radiological images, which are the main tools for a radiology resident on duty in a hospital, or without a radiology specialist nearby. Moreover, the differentials are categorized as rare and uncommon diseases. I have specifically chosen these differentials to give the reader more insights and information about rare diseases that can have the same presentation as the disease discussed.

Finally, I hope that this modest work will be of assistance to residents and radiologists worldwide and will work as a quick useful tool to revise the most important signs of radiological diseases in a short time, which is the main goal that I would like to achieve with this book.

Munich, Germany

Dr. Jarrah Ali Al-Tubaikh

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Abbreviations

CBCT	Cone-beam computed tomography
CT	Computed tomography
CTA	Computed tomography angiography
DWI	Diffusion-weighted image
FLAIR	Fluid-attenuated inversion recovery sequence
FLASH	Fast low-angle shot sequence
HASTE	Half-Fourier acquisition single-shot turbo spin-echo
HRCT	High-resolution computed tomography
HU	Hounsfield unit
IVU	Intravenous urography
MRA	Magnetic resonance angiography
MRCP	Magnetic resonance cholangiopancreatography
MRI	Magnetic resonance image
PD	Power Doppler
STIR	Short-tau inversion recovery
True FISP	True fast imaging with steady-state procession
T1W	T1-weighted
T2W	T2-weighted
US	Ultrasound
3D FLASH	Three-dimensional fast low-angle shot images

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