Preface

Advances in information and technology have seen medical education using conventional print medium evolve into web-based and cloud-centered knowledge transfer and sharing. Communication between medical professionals in clinical practice has changed accordingly, using electronic transfer of patient information, images, cine loops, and treatment regimes.

At the same time, advances in medical imaging equipment have resulted in the production of unprecedented, high resolution images of structures and pathology. This comes with the cost of overloading the viewer with data and information. The ability to review, and quickly sieve through the myriad of images in an imaging examination have become an essential survival skill in daily clinical practice.

It is with these challenges in mind that we wrote this book: an attempt to bridge the transition between and conventional print based learning and a web-based, interactive experience; and to familiarize the reader with assessing pathology by reviewing a complete set of cross-section medical images. Aside from the dissemination of knowledge with the selected key images in the book, we hope that the readers (medical students and junior doctors, paramedical personnel) will develop expertise in efficiently reviewing complete examinations with large stacks of digital images, something they would be required to do in routine clinical practice

There are new and specific challenges in implementing this interactive approach of teaching and learning. Firstly, in addition to key images, this project required the establishment of an archive of cine loops for different organs and pathologies, using current state-of-the-art Medical Imaging modalities. Secondly, to make the cine loops accessible to the reader, we have made the entire cine archive available online, ready to be viewed and reviewed with a mobile device by scanning the QR code printed in the relevant sections in each book chapter.

A problem orientated approach is used in this book, and each chapter begins with an illustrative case. A short clinical description and initial imaging are provided, followed by pertinent questions regarding the imaging findings to help the reader come to a diagnosis and list of differential diagnosis. The second part of each chapter contains the case diagnosis, a discussion of the pathology and related imaging signs, and information on differential diagnosis, complications, treatment, and follow up, all of which are accompanied by images and cine loops from other illustrative cases.

How to use this book and it's imaging archive

This book comes in two components:

The first component consists of the traditional print based, clinical case diagnosis and discussion in each chapter. The opening clinical history and imaging should help the reader to answer the relevant questions and come to a list of differential diagnosis

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The second component consists of a library of cine loops which can be accessed via a mobile device scanning the QR code printed at the bottom of each relevant page. The reader can review these cine loops while reading through the text, or use them at a later date to test or practice their interpretation skills.

These cine loops are from a complete Medical Imaging study for the illustrative cases. Each cine loop contains consecutive images covering the area scanned during the examination. In many cases, the cine loops are of scans in different planes (sagittal, coronal or oblique), in different phases of contrast enhancement (pre-contrast, post-contrast arterial/ venous/ equilibrium/ delayed), and for MRI in different sequences (T1W/ T2/ PD/ DWI etc.)

By presenting such sets of cine loops for each case, we hope to present to the readers a realistic experience of reviewing medical images, something they will encounter in their daily clinical practice. Developing the expertise to quickly and efficiently review a large amount of images and data is a valuable skill in modern medicine, & best learnt during medical school & early clinical practice.

This book is written by experienced radiologists who have acquired their skills & knowledge in a tertiary referral centre & University Hospital. The cases are a collection of teaching material acquired during their daily clinical practice. On behalf of all the authors involved with this book, we would sincerely like to thank our colleagues in the Department of Imaging & Interventional Radiology, Prince of Wales Hospital, The Chinese University of Hong Kong & Hospital Authority. The department has generously provided each of us the opportunity & resources to train & enhance our professional careers. We all started our careers here & wish the department & all our colleagues every success in their professional & personal lives. This book is but a small reflection of the excellent academic & clinical work of the department & it's commitment to medical education & state of the art clinical service to the community it serves.

On a personal note;
Greg would like to dedicate this work to his mother, Esther, and to his late father, Gabriel, whose unconditional love and unwavering support helped me ride through the ups and downs of life.
Anil would like to thank his late mum and dad, Laj & Tejbhan who taught me the value of hard work & perseverance (& my dad's futile attempt to teach me Anatomy!). Reann my wife who has patiently tolerated & supported me for over twenty years (& for her many attempts to keep me sane), my daughters Sanjali & Tiana who bring warmth and a huge smile to my heart & finally my sister Anita for the sacrifices she made to help me get to where I am.

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