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Daniel Y. F. Chung, Dipanjali Mondal, Erskine J. Holmes and Rakesh R. Misra
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I dedicate this book to my parents and my sister, Dona, for their continual support and sacrifices. **D. Y. C.**

To my dear parents, sister and brother, who have nurtured me from a young age. For their eternal guidance and support. **D. M.**

For my children, Alex and Amber, for the happiness they bring into our lives. **E. J. H.**

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Abbreviations

AAA	Abdominal aortic aneurysm
AAST	American Association for the Surgery of Trauma
ABC	Airways, breathing, circulation
ACL	Anterior cruciate ligament
ACom	Anterior communicating
ADC	Apparent diffusion coefficient
AO	Aorta
AP	Anteroposterior
APP	Appendicolith
ARDS	Acute respiratory distress syndrome
AVM	Arteriovenous malformation
AXR	Abdominal x-ray
BLD	Bladder
B-mode	Brightness mode
BP	Blood pressure
bpm	Beats per minute
CBD	Common bile duct
COPD	Chronic obstructive pulmonary disease
CSF	Cerebrospinal fluid
CT	Computed tomography
CTPA	Computed tomography pulmonary angiogram
CVA	Cerebrovascular accident
CXR	Chest x-ray
DVT	Deep vein thrombosis
DWI	Diffusion-weighted imaging
ECA	External carotid artery
ECG	Electrocardiogram
eFAST	Extended focused assessment with sonography in trauma
ERCP	Endoscopic retrograde cholangiopancreatography
FAST	Focused assessment with sonography in trauma
Fat Sat	Fat saturation
FLAIR	Fluid-attenuated inversion recovery
GCS	Glasgow coma scale
GI	Gastrointestinal
HII	Hypoxic-ischaemic injury
HIV	Human immunodeficiency virus
HU	Hounsfield unit
ICA	Internal carotid artery
i.m.	Intramuscular
IMA	Inferior mesenteric artery
i.v.	Intravenous
IVC	Inferior vena cava
JVP	Jugular venous pressure
LA	Left atrium
LBO	Large-bowel obstruction
LK	Left kidney
LP	Lumbar puncture
LUQ	Left upper quadrant
LV	Left ventricle
MCA	Middle cerebral artery
MCL	Medial collateral ligament
MHz	Megahertz
M-mode	Modulation mode
MRCP	Magnetic resonance cholangiopancreatography
MRI	Magnetic resonance imaging
NF	Neurofibromatosis
NIH	National Institutes of Health
OMEN	Omentum
PCL	Posterior cruciate ligament
PCom	Posterior communicating
PCR	Polymerase chain reaction
PD	Proton density
PE	Pulmonary embolism
PUJ	Pelvi-ureteric junction
RA	Right atrium
RF	Radio-frequency
RIF	Right iliac fossa

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RK	Right kidney
RUQ	Right upper quadrant
RV	Right ventricle
SAH	Subarachnoid haemorrhage
SBO	Small-bowel obstruction
SDH	Subdural haemorrhage
SMA	Superior mesenteric artery
SPL	Spleen
STIR	Short tau inversion recovery
T1W	T1-weighted
T2W	T2-weighted
TB	Tuberculosis
TE	Time to echo
TEMS	Transanal endoscopic microsurgery
TIA	Transient ischaemic attack
t-PA	Tissue plasminogen activator
TR	Time to repetition
V/Q	Ventilation/perfusion scan
VB	Vertebral body
VUJ	Vesico-ureteric junction

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Preface

Cross-sectional imaging – namely ultrasound, computed tomography and magnetic resonance imaging – is playing an ever more important role in the management of the acutely ill patient. There is a growing demand for radiologists at all levels of training to interpret complex studies and, alongside this, an increasing expectation that physicians should be able to recognize the important features of cross-sectional anatomy and pathology in order to expedite patient management.

Emergency Cross-Sectional Radiology aims to address both these expectations. Section 1 – 'Fundamentals of cross-sectional imaging' – aims to demystify cross-sectional imaging techniques for acute-care physicians who may be unfamiliar with the technical aspects of these modalities. Section 2 – 'Pathology' – describes a wide range of emergency conditions in an easy-to-read bullet-point format, with a large number of high-quality axial images used throughout. In addition, high-quality multiplanar reformats have also been included, where necessary, to illustrate and reinforce the findings, making this an invaluable rapid reference in everyday clinical practice. Recognizing the value of point-of-care ultrasound in the acute setting, a discussion of suitable applications and ultrasound findings has been included in the relevant chapters.

We hope that this book will be an invaluable practical aide-memoire for emergency-medicine physicians, surgeons, and acute-care physicians as well as radiologists in everyday reporting and in the emergency on-call environment to aid decision making.

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