

## Preface

Perhaps more than in any other setting, the interpretation of radiological images in postoperative and intensive care patients requires an interdisciplinary exchange of information, and cooperation between the radiologist and the clinical team. The low specificity of many findings—especially in bedside chest radiographs and postoperative abdominal studies—does not diminish the value of intensive care radiology. Regular and active interdisciplinary information sharing will contribute greatly to accurate image interpretation and resulting management decisions. This book places special emphasis, therefore, on the differential diagnosis of morphologic findings and their interpretation within the clinical context, and on accurately discriminating between normal and abnormal findings.

The quality of radiographic images has improved dramatically in recent years as a result of digital technology. Computed tomography (CT) has assumed an expanding role owing to its rapid availability, short examination times, new indications, and its unrivaled diagnostic accuracy and efficiency. This efficiency results not only from short scan times, but also from the ability to image the body in arbitrary planes of section.

Consistent with my own interests, the reader will notice a particular emphasis on illustrative radiographic and CT images. I am indebted to all my friends and colleagues who contributed to this book, whether in the form of manuscripts or images. I thank the staff at Thieme Medical Publishers—especially Dr. S. Steindl and Dr. C. Urbanowicz—for their patience and help in bringing this project to completion. I am grateful to Prof. U. Moedder for his personal support. I thank my husband, and especially my children, for their support, their patience, and their understanding for the many hours of hard work.

I hope that this book will help radiologists, residents in radiology, and even clinicians to interpret the often difficult and nonspecific findings in children and adults, and that it will help to advance interdisciplinary cooperation in the diagnostic imaging of intensive care unit patients.

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# Abbreviations

<b>ALI</b>	acute lung injury	<b>HPS</b>	hypertrophic pyloric stenosis
<b>AP</b>	anteroposterior	<b>HRCT</b>	high-resolution computed tomography
<b>ARDS</b>	adult (acute) respiratory distress syndrome	<b>IAPB</b>	intra-aortic balloon pump
<b>ATS</b>	American Thoracic Society	<b>ICD</b>	implantable cardioverter defibrillator
<b>AV</b>	arteriovenous	<b>ICRP</b>	International Commission on Radiological Protection
<b>BAL</b>	bronchoalveolar lavage	<b>ICU</b>	intensive care unit
<b>BPD</b>	bronchopulmonary dysplasia	<b>IPPB</b>	intermittent positive pressure breathing
<b>BPF</b>	bronchopleural fistula	<b>IRDS</b>	infantile respiratory distress syndrome
<b>CAP</b>	community-acquired pneumonia	<b>IVP</b>	intravenous pyelogram
<b>CAPD</b>	chronic abdominal peritoneal dialysis	<b>LDH</b>	lactate dehydrogenase
<b>CCAM</b>	congenital cystic adenomatoid malformation	<b>LIS</b>	Lung Injury Score
<b>CDH</b>	congenital diaphragmatic hernia	<b>MAS</b>	meconium aspiration syndrome
<b>CK</b>	creatine kinase	<b>MCL</b>	midclavicular line
<b>CLL</b>	chronic lymphoblastoid (lymphocytic) leukemia	<b>MPR</b>	multiplanar reformation
<b>CMV</b>	cytomegalovirus	<b>MRI</b>	magnetic resonance imaging
<b>COP</b>	cryptogenic organizing pneumonia	<b>MRSA</b>	methicillin-resistant <i>Staphylococcus aureus</i>
<b>COPD</b>	chronic obstructive pulmonary disease	<b>NEC</b>	necrotizing enterocolitis
<b>CPAP</b>	continuous positive airway pressure	<b>NOMI</b>	nonocclusive mesenteric ischemia
<b>CPIS</b>	Clinical Pulmonary Infection Score	<b>NSIP</b>	nonspecific interstitial pneumonia
<b>CR</b>	computed radiography	<b>PA</b>	posteroanterior
<b>CT</b>	computed tomography	<b>PBB</b>	protected brush bronchoscopy
<b>CTDI</b>	computed tomography dose index	<b>PCN</b>	percutaneous nephrostomy
<b>CVC</b>	central venous catheter	<b>PCP</b>	pneumocystis pneumonia
<b>DAD</b>	diffuse alveolar lavage	<b>PD</b>	pancreaticoduodenectomy
<b>DAP</b>	dose–area product	<b>PE</b>	pulmonary embolism
<b>DLP</b>	dose–length product	<b>PEEP</b>	positive end-expiratory pressure
<b>DR</b>	digital radiography	<b>PEG</b>	percutaneous endoscopic gastronomy
<b>DSA</b>	digital subtraction angiography	<b>PG</b>	prostaglandin
<b>EBV</b>	Epstein–Barr virus	<b>PIE</b>	pulmonary interstitial emphysema
<b>ECG</b>	electrocardiography	<b>RAO</b>	right anterior oblique
<b>ECMO</b>	extracorporeal membrane oxygenation	<b>RSV</b>	respiratory syncytial virus
<b>EPF</b>	esophagopleural fistula	<b>SDD</b>	surfactant deficiency disease
<b>ETT</b>	endotracheal tube	<b>SLE</b>	systemic lupus erythmatosus
<b>FFD</b>	film–focus distance	<b>TTN</b>	transient tachypnea of the newborn
<b>FRC</b>	functional residual capacity	<b>TUR</b>	transurethral resection
<b>GI</b>	gastrointestinal	<b>UAC</b>	umbilical artery catheter
<b>GvHD</b>	graft-versus-host disease	<b>UVC</b>	umbilical vein catheter
<b>HFV</b>	high-frequency ventilation	<b>VAP</b>	ventilator-associated pneumonia
<b>HIV</b>	human immunodeficiency virus	<b>VILI</b>	ventilator-induced lung injury
<b>HMD</b>	hyaline membrane disease	<b>VZV</b>	varicella-zoster virus