## Thoracic Ultrasound and Integrated Imaging

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## **Preface**

Thoracic ultrasound provides critical diagnostic information in many conditions and situations, which can contribute to a correct diagnosis or therapeutic approach.

Thanks to portable and handheld ultrasound systems, thoracic ultrasound is now available not only at the patient's bedside but also outside healthcare facilities and even in wild and remote locations.

Today the method is part of any physician's primary diagnostic resources and doctors must be aware of its role, possibilities and limitations.

This volume collects the contributions of some of the most distingushed experts in this imaging technique, inevitably presenting different points of view due to the different kinds of training and experience of the authors.

Specific attention is paid to the principles governing the formation of images and the role of artefacts which are particularly important aspects in chest sonography because of the abundance of reflective and eco-impermeable elements like air and bone in this area.

Specific chapters are dedicated to thoracic ultrasound applications in neonatology, pediatrics, and emergency medicine as well as guided procedures and diaphragm function studies.

In many cases, the imaging findings are presented together with relevant clinical information and images provided by other imaging methods in order to highlight the role of thoracic ultrasound.

This integrated approach provides medical practitioners with essential know-how for using thoracic ultrasound as an extension of their physical examinations.

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