About the Book

This book is an ideal manual on the use of modern ultrasound in the diagnosis of breast pathology. It provides a comprehensive overview of current ultrasound techniques and explains the advantages and pitfalls of various ultrasound imaging modalities. Detailed attention is devoted to breast carcinoma, with guidance on differential diagnosis and presentation of pre- and postoperative ultrasound appearances. The most important benign breast diseases are also described and illustrated. Age-related features, including those seen in children and adolescents, are carefully analyzed, and an individual chapter is devoted to breast abnormalities in men. All aspects of lymph node appearances are reviewed in detail, with a special focus on the role of ultrasound in the evaluation of lymph node status. Ultrasound-guided breast interventions and imaging of breast implants are discussed in depth. This up-to-date and richly illustrated book will interest and assist specialists in ultrasound diagnostics, radiologists, oncologists, and surgeons.

Preface

Breast cancer is one dominating malignancy in women all over the world. The incidence of breast cancer is about 68 cases per 100,000 women (Rozhkova et al. 2008; Chissov et al. 2011) and is associated with high mortality. Late diagnosis of breast cancer is registered in 40 % despite seeming availability and the simplicity of breast examination: 25.5 % of patients have stage III and 12.3 % stage IV.

Methods of diagnostic imaging are of great value for breast pathology. US is now widely applied in mammology along with x-ray mammography. Modern US technologies, such as Doppler mapping, 3D, US elastography, and others permit brand new diagnostic possibilities.

The authors hope that this publication will help practical doctors to improve the quality of diagnostics and treatment of breast diseases.

Contents

Abbreviations

3D	three-dimensional image reconstruction
3DPD	three-dimensional image reconstruction in vascular regimen
ARFI	acoustic radiation force impulse
CDI	color Doppler imaging
CT	computed tomography
EDV	end diastolic blood flow velocity
FBD	fibrocystic breast disease
FNAB	fine needle aspiration biopsy
MRI	magnetic resonance imaging
PDI	power Doppler imaging
PET	positron-emission tomography
PI	pulsatility index
PSV	peak systolic blood flow velocity
RI	resistive index
US	ultrasound