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Nota di contenuto	Evaluation of Bagging Ensembles on Multimodal Data for Breast Cancer Diagnosis -- HF-Fed: Hierarchical based customized Federated Learning Framework for X-Ray Imaging -- DuEU-Net: Dual Encoder UNet with Modality-Agnostic Training for PET-CT Multi-Modal Organ and Lesion Segmentation -- One for All: UNET Training on Single-Sequence Masks for Multi-Sequence Breast MRI Segmentation -- Multimodal Breast MRI Language-Image Pretraining (MLIP): An

Exploration of a Breast MRI Foundation Model -- Enhancing the Utility of Privacy-Preserving Cancer Classification using Synthetic Data -- Efficient Generation of Synthetic Breast CT Slices By Combining Generative and Super-Resolution Models -- Exploring Patient Data Requirements in Training Effective AI Models for MRI-based Breast Cancer Classification -- Virtual dynamic contrast enhanced breast MRI using 2D U-Net -- Optimizing BI-RADS 4 Lesion Assessment using Lightweight Convolutional Neural Network with CBAM in Contrast Enhanced Mammography -- Mammographic Breast Positioning Assessment via Deep Learning -- Endpoint Detection in Breast Images for Automatic Classification of Breast Cancer Aesthetic Results -- Thick Slices for Optimal Digital Breast Tomosynthesis Classification with Deep-Learning -- Predicting Aesthetic Outcomes in Breast Cancer Surgery: a Multimodal Retrieval Approach -- Vision Mamba for Classification of Breast Ultrasound Images -- Breast Cancer Molecular Subtyping from H&E Whole Slide Images using Foundation Models and Transformers -- Graph Neural Networks for modelling breast biomechanical compression -- A generative adversarial approach to remove Moiré artifacts in Dark-field and Phase-contrast x-ray images -- MRI Breast tissue segmentation using nnUNet for Biomechanical modeling -- Fat-Suppressed Breast MRI Synthesis for Domain Adaptation in Tumour Segmentation -- Guiding Breast Conservative Surgery by Augmented Reality from Preoperative MRI: Initial System Design and Retrospective Trials -- ELK: Enhanced Learning through cross-modal Knowledge transfer for lesion detection in limited-sample contrast-enhanced mammography datasets -- Safe Breast Cancer Diagnosis Resilient to Mammographic Adversarial Samples.

Sommario/riassunto

This book constitutes the refereed proceedings of the First Deep Breast Workshop on Artificial Intelligence and Imaging for Diagnostic and Treatment Challenges in Breast Care, Deep-Breath 2024, held in conjunction with the 26th International Conference on Medical Imaging and Computer-Assisted Intervention, MICCAI 2024, in Marrakesh, Morocco, on October 10, 2024.The 23 regular papers presented in this book were carefully reviewed and selected from 51 submissions.The workshop provides an international platform for presentation of - and discussion on - studies related to AI in breast imaging. Deep-Breath aims to promote the development of this research area by sharing insights in academic research and clinical practice between clinicians and AI experts, and by exploring together the opportunities and potential challenges of AI applications in breast health. The deep-breath workshop provides, therefore, an unique forum to discuss the possibilities in this challenging field, aiming to create value that eventually truly leads to benefit for physicians and patients.