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Stacked BCDU-net with semantic CMR synthesis: application to Myocardial PathologySegmentation challenge -- EfficientSeg: A Simple but Efficient Solution to Myocardial Pathology Segmentation Challenge -- Two-stage Method for Segmentation of the Myocardial Scars and Edema on Multi-sequence Cardiac Magnetic Resonance -- Multi-Modality Pathology Segmentation Framework: Application to Cardiac Magnetic Resonance Images -- Myocardial Edema and Scar Segmentation using a Coarse-to-Fine Framework with Weighted Ensemble -- Exploring ensemble applications for multi-sequence myocardial pathology segmentation -- Max-Fusion U-Net for Multi-Modal Pathology Segmentation with Attention and Dynamic Resampling -- Fully automated deep learning based segmentation of normal, infarcted and edema regions from multiple cardiac MRI sequences --CMS-UNet: Cardiac Multi-task Segmentation in MRI with a U-shaped Network -- Automatic Myocardial Scar Segmentation from Multi-Sequence Cardiac MRI using Fully Convolutional Densenet with Inception and Squeeze-Excitation Module -- Dual Attention U-net for Multi-Sequence Cardiac MR Images Segmentation -- Accurate Myocardial Pathology Segmentation with Residual U-Net -- Stacked and Parallel U-Nets with Multi-Output for Myocardial Pathology Segmentation -- Dual-path Feature Aggregation Network Combined

Sommario/riassunto

Multi-layer Fusion for Myocardial Pathology Segmentation with Multi-sequence Cardiac MR -- Cascaded Framework with Complementary CMR Information for Myocardial Pathology Segmentation -- CMRadjustNet: Recognition and standardization of cardiac MRI orientation via multi-tasking learning and deep neural networks.

This book constitutes the First Myocardial Pathology Segmentation Combining Multi-Sequence CMR Challenge, MyoPS 2020, which was held in conjunction with the 23rd International Conference on Medical Image Computing and Computer-Assisted Intervention, MICCAI 2020, in Lima, Peru, in October 2020. The challenge took place virtually due to the COVID-19 crisis. The 12 full and 4 short papers presented in this volume were carefully reviewed and selected form numerous submissions. This challenge aims not only to benchmark various myocardial pathology segmentation algorithms, but also to cover the topic of general cardiac image segmentation, registration and modeling, and raise discussions for further technical development and clinical deployment.