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Nota di contenuto	-- Surgical Vision World Model. -- Overcoming Data Scarcity: Brain Tumor Segmentation in Pediatric and African Populations. -- PiMPiC: An Overlap-Aware Contrastive Learning Framework for 3D Patch-Based Medical Image Segmentation. -- DiffusionXRay: A Diffusion and GAN-Based Approach for Enhancing Digitally Reconstructed Chest Radiographs. -- SingleStrip: learning skull-stripping from a single labeled example. -- Kvasir-VQA-x1: A Multimodal Dataset for Medical Reasoning and Robust MedVQA in Gastrointestinal Endoscopy. -- Do Edges Matter? Investigating Edge-Enhanced Pre-Training for Medical

Image Segmentation. -- Enhancing Malaria-Infected Red Blood Cell Detection with Domain-Aware Generative Augmentation. -- Analysis of Transferability Estimation Metrics for Surgical Phase Recognition. -- Expert-Guided Explainable Few-Shot Learning for Medical Image Diagnosis. -- Lesion-Aware Visual-Language Fusion for Automated Image Captioning of Ulcerative Colitis Endoscopic Examinations. -- Zero-shot Monocular Metric Depth for Endoscopic Images. -- Robust Federated Anomaly Detection Using Dual-Signal Autoencoders: Application to Kidney Stone Identification in Ureteroscopy. -- RadSURF: Automated Synthesis of Radiographs and Surface Representation of Vertebrae for Single View Reconstruction. -- A Dataset and Benchmark for Enhancing Retained Foreign Object Detection Through Physics-based Image Synthesis. -- Unmasking Interstitial Lung Diseases: Leveraging Masked Autoencoders for Diagnosis. -- Robust Early Detection of Barrett's Neoplasia: Addressing Low-Prevalence Challenges with Generative Modeling. -- Instance-Balanced Patch Sampling for Whole-Body Lesion Segmentation. -- Calibrated Self-supervised Vision Transformers Improve Intracranial Arterial Calcification Segmentation from Clinical CT Head Scans. -- Estimating 2D Keypoints of Surgical Tools Using Vision-Language Models with Low-Rank Adaptation. -- Exploring Pre-training Across Domains for Few-Shot Surgical Skill Assessment. -- Effect of Data Augmentation on Conformal Prediction for Diabetic Retinopathy. -- Addressing Bias in VLMs for Glaucoma Detection Without Protected Attribute Supervision. -- Balancing Redundancy and Diversity: An In-Depth Analysis of Active Learning for Laparoscopic Video Segmentation.

Sommario/riassunto

This book constitutes the proceedings of the Third MICCAI Workshop on Data Engineering in Medical Imaging, DEMI 2025, held in conjunction with the 28th International conference on Medical Image Computing and Computer Assisted Intervention, MICCAI 2025, in Daejeon, South Korea, on September 27, 2025. The 24 full papers included in this book were carefully reviewed and selected from 33 submissions. These papers focus on the topic of data engineering in medical imaging and address open questions in the field. The workshop welcomes various approaches such as data and label augmentation, active learning and active synthesis, federated learning, multimodal learning, self-supervised learning, and large-scale data management and data quality assessment.