

SIIM

CAIMI26

OCT | Penn Medicine
26-27 | Philadelphia, PA



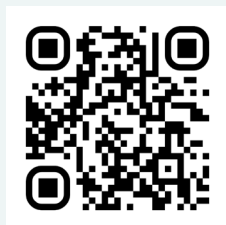
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Monday, Oct 26

7:00 – 7:50 AM	Registration & Continental Breakfast
7:50 – 8:00 AM	Welcome Remarks Pari V. Pandharipande, MD, MPH, FACR, <i>University of Pennsylvania</i> Eliot L. Siegel, MD, FSIM, PhD, <i>University of Maryland & United Theranostics</i> , Conference Co-Chair
8:00 – 9:00 AM	Opening Keynote Address 1001 Multimodal Foundation Models for Biomedical AI Faisal Mahmood, PhD Associate Professor of Pathology <i>Harvard Medical School, Brigham and Women's Hospital</i>
9:00 – 10:30 AM	Large Language Models & Report Generation Scientific Abstract Presentations 1002 Chair: Katherine P. Andriole, PhD, FSIM, <i>University of California, Los Angeles</i> , Conference Co-Chair A Schema-Constrained Hybrid Regex-Large Language Model Pipeline for Reliable Structured Extraction of Interventional Radiology Reports Seema Singh Saharan, PhD, <i>University of California, San Francisco</i> Large Language Model-Based Automated Detection and Turnaround Time Monitoring of Critical Results in a Pediatric Radiology Workflow Pooja Pathak, MS, <i>Lucile Packard Children's Hospital Stanford</i> Personalizing Radiology Impression Generation to Radiologist Style and Subspecialty with Auditable, Auto-Generated Playbooks Ushanandini Raghavan, PhD, <i>DeepHealth</i> Residents as a Proxy for AI Draft Reporting: LLM-based Analysis Steven Rothenberg, MD, <i>Thomas Jefferson University</i> SpineGraph: Vertebral-Level-Aware Evaluation for Automated Cervical Spine Report Generation Sydney A. Levin, <i>Tulane University</i> What Automated Radiology-Report Metrics Can and Cannot Detect: A Controlled Simulation Study of Single-Word Clinical Changes Mohammadreza Chavoshi, MD, <i>Emory University School of Medicine</i>

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the abstracts



Monday, Oct 26

10:30 – 10:45 AM

Coffee Break

10:45 AM – 12:15 PM

Vision-Language & Foundation Models Scientific Abstract Presentations | 1003

Chair: Peter D. Chang, MD, *University of California, Irvine*
Conference Co-Chair

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the abstracts



Agents can Segment Too: Assessing Out-of-the-Box Performance of Multimodal Tool-Equipped LLMs for Tumor Segmentation
Sameed Khan, *Cleveland Clinic Lerner College of Medicine*

Benchmarking Foundation Vision-Language Models for Gastrointestinal Contrast Extravasation Detection on CT
Michael Fei, *Creighton University School of Medicine*

ConTEXTual Net CT: A 3D Visual Grounding Model for Abdominal CT
Samuel D. Church, MS, *University of Wisconsin – Madison*

From Narrative Radiology Reports to Vision-Language Model Training Labels: Transparent Physician Validation Using Evidence-Grounded Visualization
Mohammed Ayman Habib, PhD Student, *University of Utah*

Inducing False Positive Diagnoses in a Radiology Vision Language Model: Comparative Vulnerability of User Prompts, System Instructions, and Image Embedded Labels
Ebubechukwu D. Enwerem, *University of Pennsylvania*

SPARC-Rad: A Multimodal Benchmark Dataset and Evaluation Pipeline for Spatial and Anatomical Reasoning in Radiology Vision-Language Models
Sativik Tripathi, *University of Pennsylvania*

12:15 – 1:00 PM

Lunch & Visit Scientific Posters + AI Builder Showcase Video Display



Monday, Oct 26

1:00 – 1:45 PM

Hip vs Hype: Research Frontiers in Agentic AI and Foundation Models | 1004

Katherine P. Andriole, PhD, FSIIIM, *University of California, Los Angeles*
Tessa S. Cook, MD, PhD, CIIP, FSIIIM, *University of Pennsylvania*
Dania Daye, MD, PhD, *University of Wisconsin*
Sativik Tripathi, *University of Pennsylvania*, Moderator

1:45 – 3:15 PM

Oncology, Radiomics & Segmentation Scientific Abstract Presentations | 1005

Chair: Eliot L. Siegel, MD, FSIIIM, *University of Maryland & United Theranostics*, Conference Co-Chair

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AI-Assisted Radiologist Curation of PANORAMA for PDAC Tumor Segmentation Benchmarking
Khurram Khaliq Bhinder, MBBS, *Mayo Clinic*

Class-Conditional Conformal Prediction for Three-class WHO 2021 Glioma Molecular Subtyping: Development and External Validation of an MRI Radiomics Model
Ramkumar Rajabathar Babu Jai Shanker, MS, *University of Chicago*

Comparative Performance of Deep Learning Architectures for Breast Tumor Segmentation on Multicenter DCE-MRI
Loyani Loyani, PhD Candidate, *Emory University*

DBSI-Net: Artificial Intelligence Detection of Clinically Significant Prostate Cancer Using Diffusion Basis Spectrum Imaging and Biparametric MRI
Govind Mattay, MD, MBA, *Mallinckrodt Institute of Radiology*

Distinct Interpretable Prostate-Specific Membrane Antigen Positron Emission Tomography Phenotypes Predict Depth of Response and Durability After Lutetium-177 Radioligand Therapy
Nicolas Atwood, *Oregon Health & Science University*

Peritumoral CT Radiomics Encodes Tumor Biology Across Molecular, Immune and Clinical Endpoints in NSCLC
Morteza Razanejad, PhD, *Genmab*

3:15 – 3:30 PM

Coffee Break

Monday, Oct 26

3:30 – 4:30 PM

Beyond the Benchmark: What It Takes for Medical AI to Work in Practice | 1006

Pranav Rajpurkar, PhD

Associate Professor, Biomedical Informatics, *Harvard University*

Co-founder, *a2z Radiology AI*

4:30 – 6:00 PM

Clinical Workflows, Auditing & Analytics AI Builder Showcase | 1007

Chair: Peter D. Chang, MD, *University of California, Irvine*

Conference Co-Chair

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the builder
showcase
submissions



Beyond Deployment: An In-House System for Continuous Quality

Assurance of Deployed Auto-Segmentation Models

Jonathan Cheng, *University of Pennsylvania*

Closing the Loop: A Standardized End-to-End Digital Workflow for
Reconciling ED Wet Read Discrepancies Across a Large Integrated
Healthcare Network

Austin Young, MD, *Northwell Health*

Closing the Radiology Reporting Loop with Open Source: A Contract-First
Multi-Agent System from Worklist Triage to Critical-Results
Communication

Lalitha Pranathi Pulavarthy, *Indiana University Indianapolis*

De-identify Once, Research Forever: Turning a Compliance Chore into an
Institutional Registry

Rahul Krish, *IBIS*

ITK-SNAP as an Agent-Callable Tool: Expert Human Correction as a
Resumable, Audited Pipeline Step

Jilei Hao, MS, *University of Pennsylvania*

RVU Insight: An Integrated Scheduling and Productivity Analysis Platform
for an Academic Neuroradiology Section

David Fussell, MD, *University of California, Irvine*

VERITAS — Auditing the Ground Truth, Not Just the Model

Akash Stephen, *Dr. Somervell Memorial CSI Medical College & Hospital*

6:00 – 7:00 PM

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poster abstracts &
AI Builder
Showcase
submissions



Scientific Poster Presentations + AI Builder Showcase Video Display & Networking Reception

AI Builder Showcase Video Display

A Rule-Validated Editing Tool for Faster, More Reliable Oncology Radiology Report

Igor Austin Martins, MD, MBA, *UT Southwestern Medical Center*

An Immersive Spatial Anatomy Learning Platform Using High-Fidelity 3D Photogrammetry, Visage Ease VP, and Apple Vision Pro

Edouard Aboian, MD, *Yale School of Medicine*

AnnotationBridge: Student Volunteers for Medical Image Annotation

Mason Williams & Ajay Sutaria; *DuPont Manual High School*

Automated Sagittal MRI Morphometry for Signs of Intracranial Pressure Dysregulation

Isaac Anthony, *University of Utah*

CXR Insight Lab: An Auditable Multimodal AI Workbench for Transparent Chest X-Ray Interpretation

Seema Singh Saharan, PhD, *University of California, San Francisco*

NeuroMetrics: Automated Registration and Subtraction for Longitudinal Brain Imaging Assessment

Lucas I. Becker, MD MSc, *University Medical Center Freiburg*

NeuroQC-Assist: AI-Assisted Neuroimaging Quality Control

Sai Krishna C. Annavazala, MS, *University of Pennsylvania*

Neurorad Lecturer LLM Agent: Evaluation and Development of a Neuroradiology Teaching LLM Agent for Trainee Case Practice

Sevcan Turk, MD, *University of Pennsylvania*

RadFeedback: Generate Individualized Trainee Feedback using Large Language Models for Analysis of Preliminary-to-Final Radiology Report Changes

Piyush Goyal, DO, *University of Utah*

Smart Atlas – Search Your Archive with Visual Index

Barbara Klaudel, PhD Student, *Emory University*

Monday, Oct 26

6:00 – 7:00 PM

Scientific Poster Presentations + AI Builder Showcase Video Display & Networking Reception (continued)

Spinning the Data Engine: From Data Curation, to Model Validation, to Clinical Trials with an In-House Review Portal
Nicholas Molina, *Penn Medicine*

Scientific Posters

A 3D Merlin-Based Vision-Language Model for Multi-Injury Detection in Trauma CT Using Report-Grounded Supervision
Mehrdad Salimitari, PhD, *University of Maryland Baltimore*

Analysis of Histopathology Data Drift in an Eight-year Cohort Reveals Laboratory and Instrumentation-induced Variability
Mathew Francis, PhD, *Perelman School of Medicine, University of Pennsylvania*

Anatomy-Grounded CT Report Generation Guided by Organ-Hierarchical Clinical Knowledge
Guoliang You, PhD, *University of Pennsylvania*

Bridging the Gap Between Anatomy and Structural Connectivity: Synthetic Generation of Fractional Anisotropy Maps from T1 MRI
Darren L. Yang, *Memorial Sloan Kettering Cancer Center*

Clinical Validation of Commercial AI Prostate SBRT Planning: Dosimetric Equivalence with Deficiencies Isolated to Institution-Specific Organ-at-Risk Objectives
Nayoon J. Lee, *University of Pennsylvania*

Concordance of Qualitative Aortic Descriptors with Diameter and Aortic Height Index: An LLM-Based Analysis of 1,000 CT Angiography Reports
Trent J. Levy, MD; *Perelman School of Medicine, University of Pennsylvania*

Deep-Learned Beam Imputation for Cardiac Color Doppler
Aditya Mantha, *Johns Hopkins University*

Deep Learning Architectures for Stroke Lesion Segmentation on Non-Contrast CT in a Low-Resource Setting
Taofeeq Oluwatosin Togunwa, MD, *University of Michigan Medical School*

Monday, Oct 26

6:00 – 7:00 PM

Scientific Poster Presentations + AI Builder Showcase Video Display & Networking Reception (continued)

Development and Implementation of a Criteria-Based Radiology Imaging Selection Platform (CRISP-AI)
Othria Ahmed, MD, *Northwell Health*

General-Purpose Large Language Models Outperform Domain-Specific Models for High-Resolution CT Report Feature Extraction
Darron King, *Thomas Jefferson University*

Global Data Governance and Equitable Innovation in Medical Imaging AI: A Comparative Legal Analysis
Lars Lindgren, JD, *Perelman School of Medicine, University of Pennsylvania*

Large Language Model-Assisted Analysis of Preliminary-to-Final Radiology Report Changes for Resident Feedback
Piyush Goyal, DO, *University of Utah*

Multi-Agent Reasoning Enhances Local Small-Model Performance in Medicine
Austin Lin, *University of Pennsylvania*

Overturn of Advanced Imaging Prior Authorization Denials at Independent Review in Medicare Advantage
James Tyler Ng, MS, *Geisinger Commonwealth School of Medicine*

Patient-Specific Volumetric CT Synthesis from Routine Biplanar Knee Radiographs
Amirali Khosravi, MD, *Mayo Clinic*

Retrieval Augmented Generation Enables an AI-Powered Radiology Institutional Knowledge Assistant
Amol Sinha, MS, *Stanford Medicine Children's Health*

Rightsizing the Concept of Work Relative Value Units (wRVU) through Incorporation of an Automated Cognitive Burden Metric: A Feasibility Study
Adam E. Flanders, MD, CIIP, FSIIM, *Thomas Jefferson University*

Scaling Vision-Language Models for Radiology Caption Prediction: A Cross-Scale Comparison of Parameter-Efficient Fine-Tuning Methods and Their Attention-Based Explanations
Mahmudul Hoque & Raisa Nusrat Chowdhury, *Morgan State University*

Monday, Oct 26

6:00 – 7:00 PM

Scientific Poster Presentations + AI Builder Showcase Video Display & Networking Reception (continued)

The Invisible Feedback Loop: Quantifying Uncompensated Site Labor in Post-Market Evaluation of Diagnostic AI

Inga Edwin, MD, *Valley Radiology and Methodist University Cape Fear Valley Medical School*

Tissue-Aware Distributional Matching for JPEG 2000: 1.7× Storage Reduction in Whole-Slide Histopathology at JPEG-80-Equivalent Quality
Ritika Agarwal, MSE, *Perelman School of Medicine, University of Pennsylvania*

Tuesday, Oct 27

7:00 – 8:00 AM

Registration & Continental Breakfast

8:00 – 9:00 AM

Education Platforms & Triage | AI Builder Showcase | 2001

Chair: Peter D. Chang, MD, *University of California, Irvine*
Conference Co-Chair

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submissions



Afri CXR- A Chest Xray Triage for African Hospitals

Aniekanabasi Umoh, MBBS; *University of Calabar Teaching Hospital*

Radaptive: From Case Exposure to Actionable Feedback
in Radiology Training

Ebubechukwu D. Enwerem, *University of Pennsylvania*

ResEd: A Platform for Radiology Resident Education

Steven Rothenberg, MD, *Thomas Jefferson University*

Self-Developed Imaging Algorithms Authoring Platforms

Mohamed Shoura, PhD, *PaxeraHealth, Johns Hopkins University*

9:00 – 10:15 AM

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Cardiovascular & Procedural AI Scientific Abstract Presentations | 2002

Chair: Eliot L. Siegel, MD, FSIM, *University of Maryland School of Medicine & United Theranostics*, Conference Co-Chair

AI-Enabled Prediction of Postoperative Sepsis in Hemodialysis Patients Undergoing IR Interventions
Sativik Tripathi, *University of Pennsylvania*

An Automated, Open-Source Pipeline for Quantitative Pulmonary Vascular Phenotyping from Chest CT: Detection of Vascular Remodeling in Dermatomyositis
Graham E. McPhail, *North Carolina State University*

Automated Aortic Strain Mapping with Spectral Robustness Quantification from 4D CT
Tricia Lobo, MS, *University of Pennsylvania*

Closing the Loop at the Bedside: Real-Time AI Feedback Design for Cardiac Ultrasound Guidance in a Multi-Team Medical-AI Platform
Jilei Hao, *University of Pennsylvania*

Fully Automated Left Ventricular Segmentation with LoRA-Adapted UltraSAM and Learned Prompt Generation
Ryan Chang-Wu, *Belmont Hill School*

10:15 – 10:30 AM

Coffee Break

10:30 – 11:45 AM

Workflow Operations, Triage & Artifacts Scientific Abstract Presentations | 2003

Chair: Katherine P. Andriole, PhD, FSIM, *University of California, Los Angeles*, Conference Co-Chair

Anatomy-Aware ROI Input Outperforms In-Domain Self-Supervised Pretraining for MRI-Based Adenomyosis Classification
Delaram Ghadimi, MD, *Mayo Clinic*

Impact of AI-Based Triage on Downstream Clinical Communication and Emergency Department Disposition
Ai Phuong Tong, MD, PhD, *University of Washington*

Tuesday, Oct 27

10:30 – 11:45 AM

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Workflow Operations, Triage & Artifacts **Scientific Abstract Presentations | 2003** (continued)

Open-Source Artificial Intelligence Orchestration for Dual Pediatric Imaging Pipelines: Design, Deployment and Five-Month Operational Experience

Amol Sinha, MS, *Stanford Medicine Children's Health*

Uncertainty-Aware Triaging for Pediatric Bone Age Assessment

Bryan Luna, *Cincinnati Children's Hospital Medical Center*

Zero-Shot Series-Level MRI Artifact Localization Using Pretrained Foundation Model Embeddings and Weak Study-Level Supervision

Dvij Sharma, MS, *University of Wisconsin – Madison*

11:45 AM – 12:30 PM



Lunch & Visit Scientific Posters + AI Builder Showcase **Video Display**

12:30 – 2:00 PM

From Data to Evidence with Research Agents **Hands-on Vibe-coding Workshop | 2004**

Peter D. Chang, MD, *University of California, Irvine*

Steven Rothenberg, MD, *Thomas Jefferson University*

2:00 – 3:00 PM

Closing Keynote | 2005

The Real Test of AI: Value, Workforce, and What Comes Next

Nabile Safdar, MD, MPH, FSIIM

Chief AI Officer, Endowed Professor and Vice Chair of Informatics
Emory University

3:00 – 3:30 PM

Excellence in AI Research Awards Presentation **Closing Remarks**

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