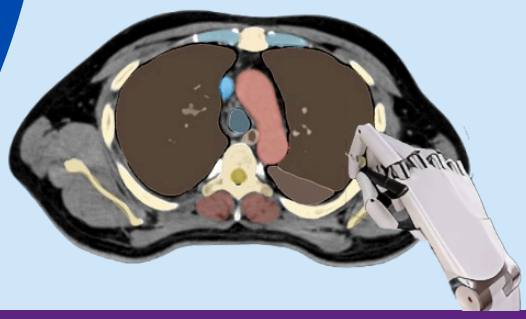
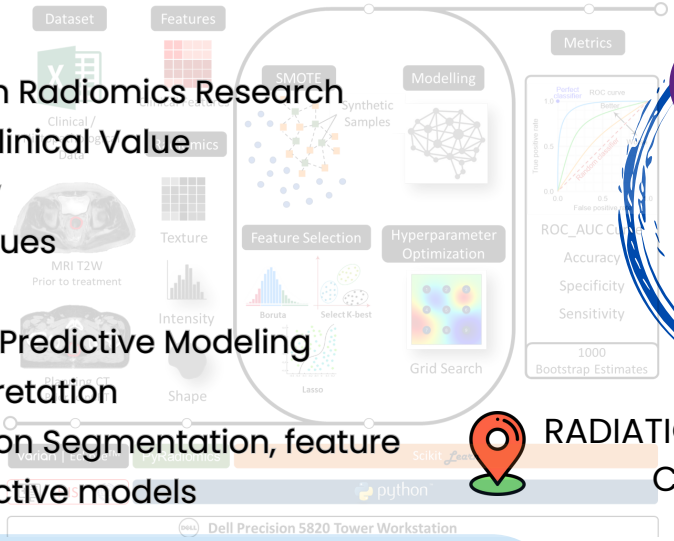
WORKSHOP ON
RADIOMICS AND AUTO SEGMENTATION
14 & 15TH NOVEMBER 2025



This two-day workshop is to introduce clinicians, medical physicists and imaging researchers to radiomics and autosegmentation with an emphasis on practical implementation and critical understanding. Participants will learn how to extract and analyze quantitative imaging features to improve diagnosis, prognosis, and treatment planning. The workshop includes hands-on sessions using accessible tools for image segmentation and radiomics feature extraction, model building using machine learning and interpretation, with minimal coding skills requirement.

KEY TOPICS COVERED

- How to Formulate Questions in Radiomics Research
- Radiomics Fundamentals & Clinical Value
- Radiomics Workflow Overview
- Image Segmentation Techniques
- Radiomics Feature Extraction
- Machine Learning Basics and Predictive Modeling
- Limitations and Critical Interpretation
- Hands-On Practical Sessions on Segmentation, feature extraction, and building predictive models



SAVE THE DATE

Time
9:00 AM to 4:30 PM

RADIATION ONCOLOGY UNIT 2
CMC VELLORE, RANIPET

Who Should Attend?

Clinicians (e.g Oncologists, Radiologists, etc) physicists, and medical imaging researchers who are interested in integrating quantitative imaging analytics into health care decision making.

Prerequisites

Basic familiarity with medical imaging (Radiology, DICOM etc) recommended.
Laptops should be brought for the hands-on workshop with Google Colab setup completed before the workshop. Instructions will be provided.

Registration

Send an email to cmcbmiuconnect@cmcvellore.ac.in .
First-come first serve basis. **Limited seats available.**
Payment link will be provided and through other means not allowed.
Registration fee: Rs 5000 (Rs 2500 - CMC staff) excluding GST.
Last date of registration **October 30th, 2025**

ORGANIZED BY

Christian Medical College
Vellore
Radiation Oncology Unit 2

QIRAIL
(Quantitative Imaging Research and AI Lab)

Biomedical Informatics Unit

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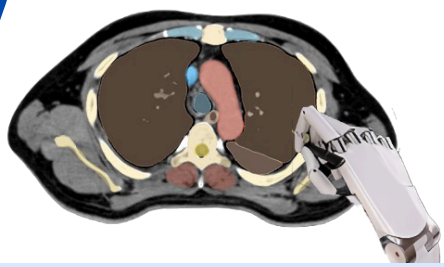

DAY 1 - 14/11/2025

Time	Session Title	Facilitator(s)	Key Focus/Description
09:00 AM - 09:15 AM	Prayer & Welcome	Dr Joy Mamman	Welcome, Introduction
09:15 AM- 09:45 AM	Brief Introduction to Radiomics and Autosegmentation	Dr Hannah Mary Thomas	Review of basic concepts
09:45 AM- 10:30 AM	Research Planning: How to Formulate the Question	Dr Balu Krishna S	Hypothesis design, Data preparation, Curation, Model evaluation
10:30 AM - 11:00 AM	Segmentation of Medical Images	Dr Jenny Rajan, NIT Suratkal	Review of techniques
11:00 AM- 11:30 AM	Break		
11:30 AM - 12:15 PM	Radiomics - Feature Extraction	Dr Varsha Gouthamchand, Maastrict University	Feature settings, IBSI standards, filters
12:15 PM - 01:15 PM	Lunch + Group Photo		
01:15 PM - 01:45 PM	What it takes to do Radiomics ?	Dr Rajendra Benny K	Practical considerations about data. Prospective vs Retrospective
1:45 PM -02:00 PM	Set-up check		3D Slicer, Google Colab
02.00 PM - 03:45 PM	Hands-On: Segmentation on 3D Slicer + PyRadiomics		Reading/manipulating images, Segmentation, Feature extraction
03:45 PM - 04:00 PM	Interactive Q&A		
04:00 PM - 04:15 PM	Tea		

Note : Schedule is subject to change

DAY 2 - 15/11/2025

Time	Session Title	Facilitator(s)	Key Focus/Description
09:00 AM - 09:15 AM	Recap	Dr Simon Pavamani Dr Balu Krishna S	Highlights from Day 1
09:15 AM- 09:45 AM	Radiomics Feature Reproducibility	Dr Hannah Mary Thomas	Reproducibility, Center/population effect, Harmonization, ComBat
09:45 AM- 10:15 AM	Building a Radiomics Model	Mr Sathya A	Feature selection, Classification vs Prediction, ML basics
10:15 AM - 10:45 AM	Model Evaluation	Mr Hasan Shaikh	Metrics, Cross-validation, External validation
10:45 AM- 11:15 AM	Break		
11:15 AM - 11:45 PM	Explainability of Models	Mr Praveenraj C	Need for explainability, Methods to improve Explainability, (Uncertainty , SHAP, LIME)
11:45 PM - 12:15 PM	Model Interpretation and Reporting	Dr Hannah Mary Thomas	Published study walkthrough, Checklist (TRIPOD AI, CLEAR, CLAIM etc, quality gaps)
12:15 PM - 01:15 PM	Lunch		
01.15 PM - 02:15 PM	Hands-On Part 1: Data Curation, Pre-processing		
02:15 PM - 03:45 PM	Hands-On Part 2: Model Building & Evaluation		
03:45 PM - 04:00 PM	Interactive Q&A		
04:00 PM - 04:15 PM	Tea		

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