SEMINAR ANNOUNCEMENT

DEPARTMENT OF ELECTRICAL AND COMPUTER ENGINEERING
COLLEGE OF DESIGN AND ENGINEERING
Website: https://cde.nus.edu.sg/ece

Area: Signal Analysis and Machine Intelligence (SAMI)

Host: Assoc Prof Jimmy Chih-Hsien Peng

TOPIC	:	**Clinical Data vs. Radiomics: Evaluating Machine Learning for Liver Cancer Prognosis**
SPEAKER	:	**Ms Porcher Perrine Clotilde** **Graduate Student, ECE Dept, NUS**
DATE	:	**Wednesday, 18 November 2026**
TIME	:	**2:00PM-3:00PM**
VENUE	:	**EA-06-02**

ABSTRACT

Machine learning models combining clinical variables and medical imaging features have been increasingly investigated for predicting patient outcomes. However, the added predictive value of radiomic features and their generalizability across hospitals remain uncertain.

This seminar presents a machine learning study predicting two-year survival in patients with hepatocellular carcinoma treated with transarterial chemoembolization (TACE). Clinical models, radiomics-only models, and combined approaches are developed and compared.

The study investigates the impact of different anatomical scopes, including features extracted from multiple organs, and CT imaging phases on predictive performance. It also examines whether integrating radiomic features improves predictions compared with clinical variables alone.

The presentation covers the main steps of the machine learning pipeline, from image segmentation and feature extraction to model evaluation. Particular attention is given to external validation, the limited incremental value of radiomics, and the challenges of generalizing predictive models across hospitals.

BIOGRAPHY

Perrine Porcher is a Master of Engineering student in Electrical and Computer Engineering at the National University of Singapore. She has a background in mathematics, computer science, and machine learning, and her current research focuses on machine learning applications in medical imaging.

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