

AIPHA/LIAM 2026 Summer Program

Distinguished Lecture By:



Dr. Agnese Maria Fioretti
Cancer Research Institute of Bari

Title: Artificial intelligence for risk prediction of cancer-associated venous thromboembolism: a systematic review and meta-analysis

Date: Thursday, Sept 24, 2026

Time: 12:00 PM - 13:30 PM

Location: Rm 277, LIAM, Kinsmen Building

Abstract

Venous thromboembolism (VTE) represents a major complication among patients with cancer, resulting in increased morbidity and mortality. Cancer-associated VTE (CAT) risk is driven by interacting patient-, cancer-, and treatment-related factors. The multifactorial and dynamic nature of CAT risk makes individual risk stratification particularly challenging. VTE risk prediction is crucial to guide thromboprophylaxis decisions, as advocated by current guidelines. Risk assessment models (RAMs) stratify patients according to their estimated VTE risk, potentially identifying those who may derive greater benefit from thromboprophylaxis while avoiding unnecessary anticoagulation in those at lower risk. To date, several RAMs have been developed to stratify the risk of VTE in patients with cancer, although their discriminative performance remains suboptimal across cancer types, treatment settings, and patient populations, limiting their generalizability and clinical applicability. Therefore, modified versions of traditional risk scores have been developed by incorporating additional variables to improve VTE prediction; however, their superiority compared with the original versions has not been conclusively demonstrated. In recent years, artificial intelligence (AI) has emerged as a potential complementary approach to traditional RAMs for identifying patients at risk of VTE. Its capacity to handle high-dimensional, heterogeneous, and longitudinal data and to capture non-linear relationships may help address the complexity of CAT risk. Nevertheless, whether these methodological opportunities translate into improved predictive performance or clinical utility remains uncertain. This systematic review and meta-analysis aims to provide a critical and up-to-date overview of the existing evidence on AI-based approaches for predicting VTE risk among patients with cancer, including conventional machine learning and deep learning approaches.

Dr. Agnese Maria Fioretti's Short Bio

Agnese Maria Fioretti, MD, is a cardiologist and cardio-oncologist at the Cancer Research Institute of Bari, "Giovanni Paolo II", Italy. She obtained her Medical Degree in 1997 and Specializations in Cardiology (2001) and Anesthesiology (2009). She has extensive clinical experience in Cardiology and has been working in Oncology since 2005. She was certified as a Cardio-Oncologist by the International Cardio-Oncology Society (ICOS) from 2021 to 2026. Her research interests include Cardio-Oncology, cardiovascular complications of cancer and venous thromboembolism in patients with cancer. She has undertaken visiting research experiences in Canada, including Ottawa and Toronto.