

Young Investigators Day on Liquid Biopsy and Translational Biomarkers

Inclusive Approaches in Precision Oncology

Concept and Rationale

This one-day workshop is conceived as a highly interactive “Young Investigators Day” dedicated primarily to PhD students, medical residents, postdoctoral fellows, early-career clinician scientists. The initiative will be organized in partnership with the Società Italiana di Biopsia Liquida (SIBIL) and multiple institutions affiliated with A_IATRIS.

6th October 2026

9:30-10:00 Opening Remarks: Dr.Giovanni Blandino

10:00-11:10 SESSION I *Alessandra Dall’Acqua and Maria Serena Roca*

ctDNA and Clinical Decision-Making: From early cancer detection to disease monitoring

Topics: This session will explore the clinical applications of circulating tumor DNA (ctDNA) across the continuum of cancer care, from early disease detection and cancer interception strategies to minimal residual disease assessment and treatment response monitoring. Particular attention will be dedicated to the opportunities and challenges associated with implementing ctDNA-based approaches in routine clinical practice, ensuring equitable access to molecular diagnostics and improving patient stratification in precision oncology.

10:00-10:30: *Lara Paracchini* : “Beyond ctDNA: from monolayer to multilayer analysis for enhanced cancer detection and disease monitoring”

10:30-10:40 Lorena Musco

10:40-10:50 Elisabetta Molteni

10:50-11:00 Alice Volpato

11:00-11:10 Laura Cavazzuti

11:10-11:25 Coffee Break

11:25-12:55 SESSION II *Luigi Fattore and Matteo Allegretti*

Emerging biomarkers for translational oncology: non coding RNA and Circulating Tumor Cells

Topics: This session will discuss the translational potential of circulating miRNAs and circulating tumor cells (CTCs) as minimally invasive biomarkers for cancer diagnosis, prognosis and therapeutic monitoring. Speakers will address their role in resistant disease, biological heterogeneity and personalized medicine, with attention to sex-related differences and underrepresented patient groups in biomarker research.

Format:

11:25-11:55: *Gennaro Ciliberto* “Liquid Biopsy for microRNAs: promises and challenges”

11:55-12:05 Giulia Siciliano

12:05-12:15 Ilaria Aberico
12:15-12:25 Gloria Laudato
12:25-12:35 Mafalda Rocco
12:35-12:45 Giulia Lencioni
12:45-12:55 Maria Chiara Cappelletto

12:55-14:00 Networking Lunch

14:00-15:40 SESSION III *Chiara Ciardiello and Orazio Fortunato*

Extracellular Vesicles and Intercellular Communication: Clinical perspectives and translational opportunities

Topics: This session will focus on extracellular vesicles (EVs) as emerging tools for non-invasive cancer diagnostics and disease monitoring. Presentations will cover their role in tumor–microenvironment communication, immune modulation and translational applications, highlighting current challenges in standardization, reproducibility and clinical implementation.

Format:

14:00-14:30: *Lucia Catani* “Shaping the future of liquid biopsy: a dual vision for basic and translational extracellular vesicle research”

14:30-14:40 Zaira Boussadia

14:40-14:50 Rachele Frigerio

14:50-15:00 Tiziana Raia

15:00-15:10 Patrizia Ghidotti

15:10-15:20 Adriana Rosa Gambardella

15:20-15:30 Sara Bruschini

15:30-17:00 SESSION IV *Francesca Romana Auciello and Giulia Brisotto*

Proteomics, Metabolites, Multi-Omics and Artificial Intelligence: Integrating metabolic signatures and AI-driven biomarkers into precision oncology

Topics: This session will explore how proteomics, metabolomics and multi-omics approaches can complement liquid biopsy technologies to improve disease detection, patient stratification and therapeutic monitoring. Particular emphasis will be placed on the integration of artificial intelligence and machine learning tools for the analysis of complex biomarker datasets, enabling the identification of clinically actionable signatures and supporting more equitable and data-driven precision medicine strategies while also addressing the influence of biological variables such as sex, aging and frailty on biomarker discovery and translational research.

Format:

15:30-16:00: *Lorenzo Gerrata*: “Making sense of complexity: unlocking the clinical value of multi-omics through artificial intelligence”

16:00-16:10 Stefano Giuliani

16:10-16:20 Valeria Garzarelli

16:20-16:30 Alessia Foscarini

16:30-16:40 Sabela Nikkoli

16:40-16:50 Diego Iacuone

16:50-17:00 Anna Zanghì

17:00-17:30 Closing Remarks and Young Investigator Awards

Three Young Investigator Awards will be presented to the best oral presentations delivered by PhD students, medical residents and early-career researchers during the workshop. Presentations will be evaluated by a scientific committee composed of the session chairs, based on scientific quality, translational relevance, innovation and clarity of communication, with the aim of promoting excellence and supporting the next generation of researchers in precision oncology and liquid biopsy.