

38th AICC International Meeting

***PRECISION MEDICINE IN THE BIG DATA AGE:
from basic science to clinically relevant
insights through AI***



4-6th November 2026
University of Calabria
"B. Andreatta" Conference Center
Rende - Cosenza

38th AICC International Meeting
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Rende (Cosenza)

**Precision Medicine and the Big Data Age:
From Basic Science to Clinically Relevant Insights through AI**

Conference overview

The rapid evolution of precision medicine increasingly relies on the effective interpretation of big data and the development of fast, accurate diagnostic methods. Artificial intelligence (AI) is central to this transformation, enhancing the precision, personalization, and efficiency of healthcare interventions while enabling advanced bioinformatic analyses.

The 38th AICC International Conference will examine key applications of AI across the precision medicine landscape. In drug discovery and development, computational tools are accelerating target identification, molecular design, and candidate prioritization, while multi-omics approaches characterize drug mechanisms, uncover metabolic vulnerabilities, and monitor treatment-induced cellular reprogramming.

The conference will also highlight AI's role in predictive and preventive medicine, demonstrating how models integrate clinical histories, genetic data, metabolomic signatures, and environmental factors to forecast disease risk and guide early, personalized interventions. In parallel, novel nanomaterial-based platforms for point-of-care detection of metabolic and molecular markers will be presented.

Advances in radiomics, imaging, and surgery will be discussed, showing how AI enhances early detection, refines disease characterization, and supports precision-guided interventions. Biomarker discovery through multi-omics integration will be addressed as a key strategy for identifying clinically meaningful diagnostic and prognostic signatures.

In immuno-oncology, computational tools combined with metabolomic profiling, are revealing how metabolic crosstalk in the tumor microenvironment influences immune responses and therapy outcomes, improving patient stratification and enabling more effective treatments. Finally, the convergence of big data, AI, and multi-omics will be explored as a driver for next-generation predictive models, leveraging large-scale clinical and real-world datasets to support informed, patient-centered care.

Together, these discussions will emphasize that AI empowers evolution of precision medicine, bringing healthcare closer to a model that is accurate, proactive, and deeply individualized.

We look forward to welcoming you to this inspiring and insightful event!

Scientific Coordinators
Maria Teresa Di Martino, UMG
Rosamaria Lappano, UMG
Marcello Maggiolini, UNICAL

The AICC President
Michele Caraglia

Maria Raffaella Ambrosio, UniCal, Rende, Cosenza, Italy

Ivano Amelio, University of Konstanz, Germany

David Chang, University of Glasgow, UK

Stefano Cinti, University of Naples Federico II, Naples, Italy

Vincenzo Desiderio, University of Campania L. Vanvitelli, Naples, Italy

Luca De Stefano, Unit of Naples-National Research Council, Naples, Italy

Craig Anthony Glastonbury, University of Oxford, Oxford, UK

Laura Letchuga, Institut Català de Nanociència (ICN2), Barcellona, Spain

Franca Melfi, UniCal, Rende, Cosenza, Italy

Alberto Paderno, Humanitas University, Milan

Giuseppe Palmieri, University of Sassari and IRGB, CNR, Sassari, Italy

Federica Papaccio, University of Salerno, Salerno, Italy

Antonio Pea, University of Verona, Italy

Jonathan Pol, INSERM, Centre de Recherche des Cordeliers, Paris

Stefan Schmidt, University of Mannheim, Germany

Nicole Soranzo, The Wellcome Sanger Institute, Cambridge, UK

Silvano Sozzani, Sapienza University of Rome, Italy

Pierosandro Tagliaferri, Magna Graecia University of Catanzaro, Italy

Domenico Talia, UniCal, Rende, Cosenza, Italy

Pierangelo Veltri, UniCal, Rende, Cosenza, Italy

Antonello Vidiri, IRCSS Regina Elena, Rome, Italy

Opening Session

12.00 – 14.00 Registration

14.00 – 14.15 Opening and Greetings:

Rector of Unical

Marcello Maggiolini

Maria Teresa Di Martino

Michele Caraglia

14.30 – 15.15 OPENING LECTURE – **Laura Letchuga (ICN2, Barcellona)**

Real-time multiplexed clinical diagnostics with ultrasensitive nanophotonics biosensors

Session I

Innovative Devices for Precision Medicine

Chairs: CD or CTS members

15.15 **Luca De Stefano**, Unit of Naples-National Research Council

Small sensors, Early Cancer Detection: From diagnosis to Screening

15.35 **Stefano Cinti**, University of Naples Federico II

Exploiting point-of-care devices to boost diagnosis, treatment and follow-up in cancer

15.55 **Federica Papaccio**, University of Salerno

Patient-derived organoids for precision oncology

16.15 **Vincenzo Desiderio**, University of Campania L. Vanvitelli

Metabolic plasticity and intercellular communication in tumour microenvironment

16.35 Selected Oral #1

16.45 Selected Oral #2

16.55 Company talk # 1

17.10 – 17.40 Elevator pitch presentations (8 x 3 min)

17.40 – 19.30 Welcome cocktail & Poster Session

Session II

AI-driven multiomics: from metabolomics to radiomics

Chairs: CD or CTS members

9.00 **Antonio Pea, University of Verona**

Application of AI to clinical practice in pancreatic cancer and future directions

9.20 **Stefan Schmidt, University of Mannheim, Germany**

Single-cell and tissue spatial lipidomics, multi-omics, oncology and neuropathology related topics

9.50 **Antonello Vidiri, IRCSS Regina Elena, Rome**

Synergy of Radiomics and Machine Learning: from non-invasive diagnosis to predicting treatment response

10.10 Company talk #2

10.25 Selected Oral #3

10.35 – 11.05 Coffee Break & Poster Session

Session III

Accelerating Innovation in Precision Medicine

Chairs: CD or CTS members

11.05 **David Chang, University of Glasgow**

Self-supervised learning identifies clinically important histomorphological features in Pancreatic Ductal Adenocarcinoma

11.35 **Craig Anthony Glestonbury, University of Oxford, UK**

Spatial Transcriptomic characterisation of Inflammatory bowel disease

12.05 **Ivano Amelio, University of Konstanz, Germany**

Epigenetic control of Genomic Integrity: BAP1 in Gene–Environment Interplay

12.35 Selected Oral #4

12.45 Selected Oral #5

12.55 Selected Oral #6

13.05 – 14.30 Light Lunch & Poster Session

Session IV

Biomarkers and AI: Driving the Future of Precision Medicine

Chairs: CD or CTS members

14.30 **Maria Raffaella Ambrosio**, UniCal, Rende, Cosenza

Bridging Morphological Diagnosis and Treatment Response Prediction in Oncology

14.50 **Pierosandro Tagliaferri**, Magna Graecia University of Catanzaro

non-coding RNAs in oncology: a translational perspective in the era of AI

15.10 **Franca Melfi**, UniCal, Rende, Cosenza

Predictive Analytics and AI in robotic surgery: new frontiers and challenges

15.30 Company talk #3

15.45 Selected talk #7

15.55 – 16.25 Coffee break & Poster Session

Session V

**The Power of AI in Immuno-Oncology:
Opportunities and Challenges**

Chairs: CD member or CTS

16.25 **Jonathan Pol**, INSERM, Centre de Recherche des Cordeliers, Paris

Mechanisms of immunogenic cell death

16.55 **Silvano Sozzani**, Sapienza University of Rome

Targeting of chemotactic receptors in the context of lung immunotherapy

17.15 **Giuseppe Palmieri**, University of Sassari and IRGB, CNR, Sassari

Correlation among (Epi)genomic profiling and clinical outcome in cancer patients treated with immunotherapy

17.35 Selected talk #8

17.45 – 19.30 AICC assembly

20.00 Social Event

Session VI

BIG DATA and AI for Next-Generation Medicine

Chairs: CD or CTS members

9.20 **Domenico Talia**, UniCal, Rende, Cosenza

Data analysis and AI techniques and models in Medicine

9.40 **Alberto Paderno**, Humanitas University, Milan

Foundation models in medicine: how to integrate big data and AI for clinical insights

10.10 **Pierangelo Veltri**, UniCal, Rende, Cosenza

AI-driven biomedical data manipulation: uncovering hidden secrets

10.30 Selected talk #9

10.40 Selected talk #10

10.50– 11.20 Coffee break

11.20–11.50 Elevator pitch presentations (8 x 3 min) session #2

Closing Session

Chairs: CD or CTS members

11.50 Closing Lecture - **Nicole Soranzo**, The Wellcome Sanger Institute, Cambridge, UK

Longitudinal genomic prediction of chronic metabolic diseases

12.35 -13.00 Awards Ceremony and Closing Remarks