2025

Anticancer Research Support Association (ARSA)

MOLECULAR ANALYSIS FOR PRECISION CANCER THERAPY

Assays - Challenges in analysis, reporting and interpretation of results- Integration in Clinical practice

21-22 February 2025

WHO WE ARE

HOST

LABORATORY of TRANSLATIONAL ONCOLOGY
Director : Prof. D. MAVROUDIS

ORGANISER

ARSA ANTICANCER RESEARCH SUPPORT ASSOCIATION

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Research Assistant
Despoina Aggouraki, MSc

Technicians
Georgia Saloustrou

PhD students
Chara Koutoulaki, BSc
Konstantinos Vogiatzoglou, MSc
Sofia Chatziavraam, BSc

WELCOME ADDRESS

MOLECULAR ANALYSIS FOR PRECISION CANCER THERAPY

We are delighted to welcome you to the second **Molecular Analysis for Precision Cancer Therapy Workshop 2025**, organized by the Laboratory of Translational Oncology in collaboration with the Department of Medical Oncology at the University General Hospital of Heraklion.

The rapidly advancing field of molecular oncology enabled the identification of novel biomarkers and therapeutic targets and transformed cancer care. In this dynamic landscape, the role of medical oncologists has expanded significantly. Nowadays, oncologists must possess a robust understanding of the molecular mechanisms of disease and of advanced analytical methods to effectively interpret current knowledge into effective cancer treatment plans.

This year's workshop is designed to address these needs, featuring a comprehensive program tailored specifically for young oncologists and researchers. Participants will gain valuable insights into key cancer genetics concepts and tumor profiling approaches while exploring cutting edge methods in biomarker testing and their clinical applications. Additionally, the program will delve into transformative innovations such as tumor-agnostic therapies and antibody-drug conjugates (ADCs), highlighting their critical roles in shaping the evolving landscape of precision oncology.

We look forward to a workshop filled with opportunities for knowledge-sharing and the development of valuable collaborative networks.

Prof. Sofia Agelaki
Prof. Dimitrios Mavroudis

LABORATORY OF TRANSLATIONAL ONCOLOGY

The Laboratory of Translational Oncology, has been established at the Faculty of Medicine, University of Crete (UoC) and operates in close collaboration with the Department of Medical Oncology, University General Hospital of Heraklion to bridge translational and clinical research activities.

The Department of Medical Oncology (DMO) is the reference center for patients with cancer for the area of Crete, Greece, since it receives approximately 1.000 new cancer patients per year and follows more than 10.000 cancer patients. The mission of the DMO is to provide clinical care to patients with cancer, to perform basic and clinical research, and to provide education and training to the next generation of scientists who are focused on the biology and treatment of cancer.

In the Laboratory of Translational Oncology (LTO) clinical and translational researchers and clinical oncologists interact, collaborate, and pool their expertise towards advancing cancer care and research. The Laboratory has all the equipment needed for its research activities aiming for a better understanding of the molecular mechanisms underlying cancer development and progression and for the development of novel issue and liquid biopsy-based prognostic and predictive biomarkers to advance precision medicine in Oncology.

LTO is part of the Hellenic Molecular Oncology Network (EDIMO), with the aim to enhance the prevention, diagnosis, and treatment of cancer patients and to develop new techniques for personalizing health care services offered to cancer patients.

LTO has actively participated in several EU-funded projects, as well as in National funded research projects.

GENERAL INFORMATION

MOLECULAR ANALYSIS FOR PRECISION CANCER THERAPY

Workshop Venue

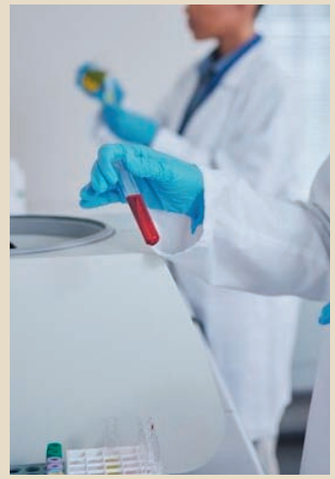
Institute of Molecular Biology and Biotechnology of the Foundation for Research and Technology Hellas (IMBB-FORTH)

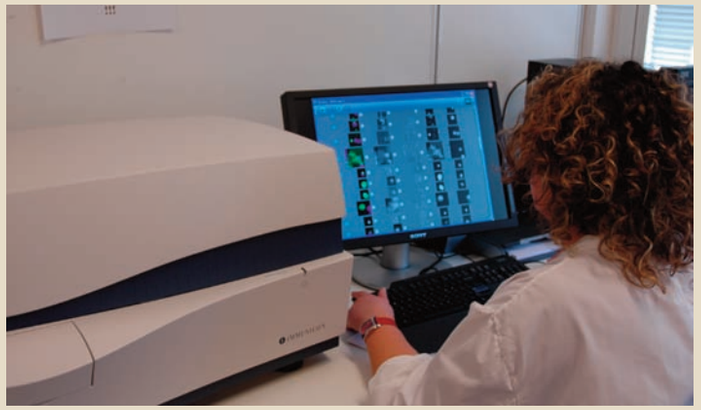
Organised by Anticancer Research Support Association (ARSA), 21-22 February 2025

TARGET AUDIENCE

Oncology Fellows/Residents

Researchers and others involved in the care of cancer patients.





CME Accreditation

EACCME
European Accreditation Council for Continuing Medical Education

This course has been accredited by the European Accreditation Council for Continuing Medical Education (EACCME®) with 16 European CME credits (ECMEC®s).

Molecular analysis for precision cancer therapy

Meeting at Auditorium “Georgios Lianis”, FORTH Main Building

08:30 - 09:00 Welcome

09:00 - 10:00 **Introduction to Basics** D. Mauri, D. Mavroudis

- 09:00 - 09:30 Historical retrospection in the research of the genetic basis of cancer V. Zoumpourlis
- 09:30 - 10:00 The hallmarks of cancer I. Keklikoglou

10:00 - 10:30 **Keynote Lecture** P. Theodoropoulos, D. Mauri

- Cancer stem cells and Precision Oncology S. Baritaki

10:30 - 12:00 **Currently available sequencing technologies for the Identification of Targetable Molecular Alterations in Cancer** A. Saetta, A. Magklara

- 10:30 - 10:45 Types of molecular alterations and their relevance in oncology K. Michaelidou
- 10:45 - 11:00 Next Generation Sequencing (terminology, platforms, chemistry) G. Tsaknakis
- 11:00 - 11:20 Analysis of sequencing results: Biological and clinical classification of genetic variants E. Tzagkaraki
- 11:20 - 11:35 Quality assessment of NGS testing F. Papageorgiou
- 11:35 - 12:00 Discussion

12:00 - 12:30 Coffee Break

day 1 Friday February 21

12:30 - 13:30 **Tumor Sequencing in the clinic** E. Linardaki, A. Magklara

- 12:30 - 12:45 The NGS report: structure and minimal content requirements A. Saetta
- 12:45 - 13:05 Recommendations on the use of NGS for patients with metastatic cancer in 2024 I. Stoupis
- 13:05 - 13:20 The ESMO Scale for Clinical Actionability of molecular Targets (ESCAT) M. Georgiadou
- 13:20 - 13:30 Discussion

13:30 - 14:00 **Keynote Lecture** D. Mavroudis

- The Implementation of Precision Oncology in HealthCare C. Stratakis

14:00 - 15:00 Lunch break

15:00 - 16:15 **Liquid Biopsy in the Clinic** E. Chatzaki, S. Agelaki

- 15:00 - 15:20 Recommendations on the use of ctDNA analysis in clinical decision-making G. Zarkavelis
- 15:20 - 15:40 Reporting of molecular test results from cell-free DNA analyses: Expert consensus recommendations from the 2023 European Liquid Biopsy Society ctDNA workshop S. Agelaki
- 15:40 - 16:00 Clinical significance of circulating tumor cells (CTCs) in patients with solid tumors M. Papadaki, S. Chatziavraam
- 16:00 - 16:15 Discussion

16:15 - 16:45 **Keynote Lecture** S. Agelaki, A. Chatzaki

- Circulating Tumor DNA: Advances, Pitfalls and Opportunities S. Joosse

16:45 - 17:15 Coffee break

Workshop

17:15 - 19.30 **How to read an NGS report: Tips for oncologists in clinical practice** A. Saetta, A. Magklara, S. Agelaki

Trainers: G. Zarkavelis, I. Papadopoulou, E. Tzagkaraki, E. Vorgia, K. Michaelidou

Organizing Team: K. C. Fotsitzoudis, M. Kamaratou, A. Kyriakidou, D. Lydaki, K. Svoliantopoulos, Ch. Zioudas

Trainees: S. Chrysoglou, M. Giannakakou, Ch. Karachalios, V. Keramisanou, V. Kolintzikis, E. Koustas, K. Lallas, Ch. Laspa, E. Marton, A. Michas, M. Moutafi, N. Syrigos, S. Talagani, J. Trontzas, A. Svarna, V. Tzouda, E. Zazas, M. Yerolatsite

Molecular analysis for precision cancer therapy

day 2 Saturday February 22

09:00 - 10:15 **Targeting hormone receptors in cancer (I)**
E. Saloustros, K. Kalbakis

- 09:00 - 09:20 • Advances in Estrogen Receptor Signaling and Biology K. Thomopoulou
- 09:20 - 09:40 • Personalizing therapy for Hormone Receptor (HR)-Positive, HER2-Negative Metastatic Breast Cancer M. Vasilakopoulou
- 09:40 - 10:00 • Next generation anti-estrogen agents under development A. Mala
- 10:00 - 10:15 Discussion

10:15 - 11:15 **Targeting hormone receptors in cancer (II)**
N. Androulakis, N. Vardakis

- 10:15 - 10:35 • Current advances in targeting AR: Biology of the receptor and the importance of ARI's structure D. Papanikolaou
- 10:35 - 11:00 • ADTs in castration sensitive metastatic prostate cancer therapy: main efficacy results E. I. Perdikouri
- 11:00 - 11:15 Discussion

11:15 - 11:45 **Keynote Lecture** D. Mavroudis
Unlocking the potential of ADCs A. M. Abajo Guijarro, F. Tsokanos

11:45 - 12:15 Coffee Break

12:15 - 13:30 **Tumor-agnostic therapeutics: an expanding landscape**
P. Economopoulou, I. Bompolaki

- 12:15 - 12:35 • Tumor-agnostic targets and clinical targeting (I): NTRK inhibitors, BRAF V600E, HER2 A. Boukouris
- 12:35 - 12:55 • Tumor-agnostic targets and clinical targeting (II): RET fusions, TMB, dMMR S. Manolakou
- 12:55 - 13:15 • ESMO Tumor-Agnostic Classifier and Screener (ETAC-S) M. Rovithi
- 13:15 - 13:30 Discussion

13:30 - 14:30 **Rare Targets: ALK** L. Vamvakas, E. Kontopodis, A. Koutsopoulos

- 13:30 - 13:50 • Testing for ALK rearrangements: challenges and pitfalls A. Spathis
- 13:50 - 14:10 • Key factors that determine treatment choice D. Nasi
- 14:10 - 14:30 • Management of adverse drug reactions with ALK inhibitors P. Karadaglis

14:30 - 15:30 Lunch break

15:30 - 16:20 **Tumor-agnostic therapies: A paradigm shift in oncology**
S. Agelaki, A. Koutsopoulos

- 15:30 - 15:55 • Challenges in tissue agnostic therapeutics N. Karachaliou
- 15:55 - 16:20 • Tumor-agnostic oncology: transforming clinical trial design A. Tsimberidou

16:20 - 16:30 **Discussion and Conclusions**

16:30 - 18:00 **Molecular tumor board: Interesting Cases**
G. Zarkavelis, A. Saetta, F. Fostira

- 16:30 - 16:48 • CASE1: VHL mutant Paraganglioma patient D. Lydaki
- 16:48 - 17:06 • CASE2: A patient with colorectal cancer and MUTYH-Associated Polyposis M. Papadakis
- 17:06 - 17:24 • CASE3: Loss of heterozygosity (LOH) in a patient with sarcoma treated with Olaparib M. Yerolatsite
- 17:24 - 17:42 • CASE4: A patient with an exon 20 EGFR mutation M. Kamaratou
- 17:42 - 18:00 • CASE5: TBA TBA

Workshop

18:00 - 19:30 **Organizing Team:** K. C. Fotsitzoudis, G. Koronakis, A. Kyriakidou, M. Papadakis, K. Svoliantopoulos, Ch. Zioudas

Trainees: S. Chrysoglou, M. Giannakakou, Ch. Karachalios, V. Keramisanou, V. Kolintzikis, E. Koustas, K. Lallas, Ch. Laspa, E. Marton, A. Michas, M. Moutafi, N. Syrigos, S. Talagani, J. Trontzas, A. Svarna, V. Tzouda, E. Zazas, M. Yerolatsite

Open discussion with participants

2025

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