

2024

Anticancer Research Support Association (ARSA)

MOLECULAR ANALYSIS FOR PRECISION ONCOLOGY

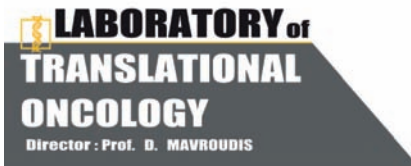
Assays - Challenges in
analysis, reporting and
interpretation of results -
Integration in Clinical Practice

School of Medicine University of Crete

23-24th February

WHO WE ARE

HOST



Dimitrios Mavroudis

Professor of Medical Oncology
Department of Medical Oncology
University General Hospital of
Heraklion Laboratory of Translational
Oncology, School of Medicine,
University of Crete

Sofia Agelaki

Professor of Medical Oncology
Department of Medical Oncology
University General Hospital of
Heraklion, Laboratory of Translational
Oncology, School of Medicine,
University of Crete

John Souglakos

Professor of Medical Oncology
Department of Medical Oncology
University General Hospital of
Heraklion Laboratory of Translational
Oncology, School of Medicine,
University of Crete

Post-doctoral Researchers

Kleita Michaelidou, MSc, PhD
Maria A Papadaki, PhD
Eleni Politaki, MSc, PhD
Maria Sfakianaki, PhD

Research Assistant

Despoina Aggouraki, MSc

Technicians

Georgia Saloustrou

PhD students

Chara Koutoulaki, BSc
Konstantinos Vogiatzoglou, MSc

MSc students

Anna Stylianou

Undergraduate

Ilias Boronikolas
Sofia Chatziavraam
Vasileios Vagiatis
Sofia Gounaki

ORGANISER



WELCOME ADDRESS

Dear Colleagues,

As we stand at the forefront of a transformative era in oncology, molecular diagnostics holds a key role in cancer diagnosis, risk assessment and treatment tailoring, thus empowering precision in cancer management.

The two-day masterclass entitled Molecular Analysis for Precision Oncology, organized by the Laboratory of Translational Oncology in collaboration with the Department of Medical Oncology of the University General Hospital of Heraklion, brings together distinguished experts in the field of Molecular Diagnostics and Medical Oncology aiming to bridge the gap in the understanding of the challenges associated with biomarker analysis and integration into clinical decision making.

Sessions are tailored to provide young oncologists with insights into key cancer genetics concepts and tumor profiling approaches, cutting-edge methods in biomarker testing and clinical applications, to cover existing gaps in navigating and interpreting reports and to highlight the pivotal role of biomarkers in tailoring individualized treatment strategies for cancer patients.

After attendance participants are anticipated:

- ✓ To get an inside look at tumor sequencing approaches
- ✓ To understand the opportunities and challenges of biomarker analysis and reporting
- ✓ To understand current paradigms of molecularly guided therapy options
- ✓ To integrate this knowledge into clinical decision making within molecular tumor boards

However, this workshop is not just about learning; it is an opportunity to have a hands-on experience in the Lab, to engage in knowledgeprovoking discussions with experts, share experiences, and build collaborative networks.

Wishing you an informative and inspiring experience!

Prof. Sofia Agelaki
Prof. Dimitrios Mavroudis

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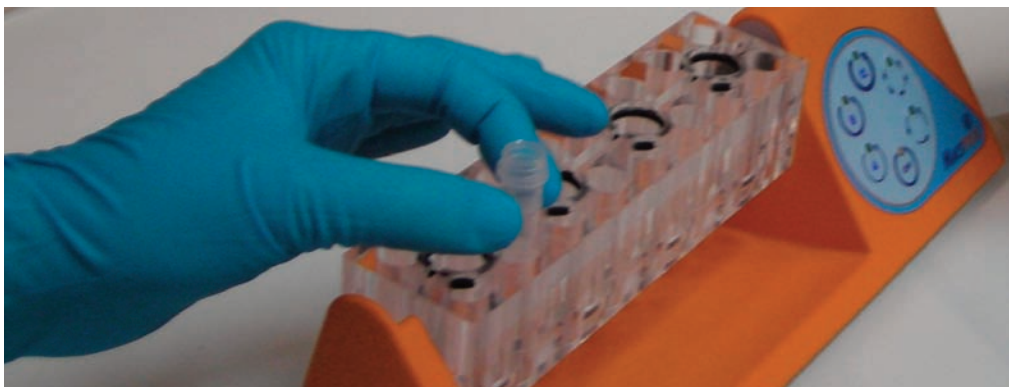
The Laboratory of Translational Oncology, has been established at the Faculty of Medicine, University of Crete (UoC) and operates in close collaboration with the Department of Medical Oncology, University General Hospital of Heraklion to bridge translational and clinical research activities.

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

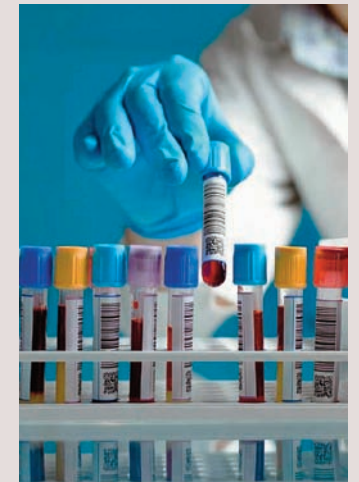
Workshop Venue

School of Medicine, University of Crete
Auditorium of Postgraduate Studies,
Wing 7A

This rst workshop, organised by
Anticancer Research Support Association (ARSA)
on 23-24 February 2024

TARGET AUDIENCE

Oncology Fellows/Residents
Researchers and others involved in the
care of cancer patients.



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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).

LIST OF PARTICIPANTS

Agelaki Sofia	Professor of Medical Oncology, Department of Medical Oncology, University General Hospital of Heraklion, Laboratory of Translational Oncology, School of Medicine, University of Crete	Mala Anastasia	Medical Oncologist, University General Hospital of Heraklion
Aggouraki Despoina	Research Assistant, Laboratory of Translational Oncology, School of Medicine, University of Crete	Manolakou Stavroula	Medical Oncologist, cooperator IASIS General Clinic (Chania), outpatient office in Chania and Rethymno, Crete
Androulakis Nikolaos	Head Department of Medical Oncology, General Hospital of Heraklion "Venizeleio and Pananio"	Mavroudis Dimitrios	Professor of Medical Oncology, Department of Medical Oncology, University General Hospital of Heraklion, Laboratory of Translational Oncology, School of Medicine, University of Crete
Bompolaki Iliada	Medical Oncologist, General Hospital of Chania "Agios Georgios"	Michaelidou Kleita	Post-doctoral Researcher, Laboratory of Translational Oncology, School of Medicine, University of Crete
Boukouris Aristeidis	Oncology Resident, Department of Medical Oncology, University General Hospital of Heraklion	Papadaki Maria	Post-doctoral Researcher, Laboratory of Translational Oncology, School of Medicine, University of Crete
Bozionelou Vassiliki	Medical Oncologist, University General Hospital of Heraklion	Papageorgiou Foteini	Diagnostics Lead Oncology, AstraZeneca, Greece
Chatzaki Ekaterini	Professor of Pharmacology, Laboratory of Pharmacology, Faculty of Medicine, Democritus University, Greece	Politaki Eleni	Post-doctoral Researcher, Laboratory of Translational Oncology, School of Medicine, University of Crete
Dimaras Pantelis	Oncology Resident, Department of Medical Oncology, University General Hospital of Heraklion	Rovithi Maria	Medical Oncologist, General Hospital of Agios Nikolaos, Crete
Drositis Ioannis	Visiting Professor, Medical Oncologist, General Hospital of Heraklion "Venizeleio and Pananio"	Saetta Angeliki	Professor, First Department of Pathology, Medical School, National and Kapodistrian University of Athens
Ferfadis Evaggelos	Medical Oncologist, Metaxa Cancer Hospital - Department of Medical Oncology	Saloustris Emman.	Associate Professor, General University Hospital of Larissa
Fotsitzoudis Charal.	Oncology Resident, Department of Medical Oncology, University General Hospital of Heraklion	Saloustrou Georgia	Technician, Laboratory of Translational Oncology, School of Medicine, University of Crete
Georgiadou Maria	Medical Oncologist, University General Hospital of Heraklion	Sfakianaki Maria	Post-doctoral Researcher, Laboratory of Translational Oncology, School of Medicine, University of Crete
Joose Simon	Assoc. Professor, Head of research group, Department of Tumor Biology, University Medical Center Hamburg-Eppendorf, Germany	Siametis Athanasios	Post-doctoral Researcher, Institute of Molecular Biology and Biotechnology, Foundation for Research and Technology-Hellas
Kalbakis Konst.	Medical Oncologist, University General Hospital of Heraklion	Souglakos Ioannis	Professor of Medical Oncology, Department of Medical Oncology, University General Hospital of Heraklion, Laboratory of Translational Oncology, School of Medicine, University of Crete
Kalykaki Antonia	Medical Oncologist, University General Hospital of Heraklion	Stoupis Ioannis	Medical Oncologist, General Hospital of Heraklion "Venizeleio and Pananio"
Kamaratou Maria	Oncology Resident, Department of Medical Oncology, University General Hospital of Heraklion	Svoliantopoulos Konst.	Oncology Resident, Department of Medical Oncology, University General Hospital of Heraklion
Karachaliou Niki	Medical Director, Global Clinical Development, Merck KGaA, Darmstadt, Germany	Tsaknakis Grigoris	Post-doctoral Researcher, Haemopoiesis Research Laboratory, School of Medicine, University of Crete
Keklikoglou Ioanna	Assistant Professor, Department of Biology, University of Crete	Vamvakas Lambros	Medical Oncologist, University General Hospital of Heraklion
Kontopodis Emm.	Medical Oncologist, General Hospital of Heraklion "Venizeleio and Pananio"	Vardakis Nikolaos	Medical Oncologist, University General Hospital of Heraklion
Koutoulaki Chara	PhD student, Laboratory of Translational Oncology, School of Medicine, University of Crete	Vasilakopoulou Maria	Assistant Professor, School of Medicine, University of Crete
Koutsopoulos Anast.	Professor of Pathology, School of Medicine, University of Crete	Vogiatzoglou Konst.	PhD student, Laboratory of Translational Oncology, School of Medicine, University of Crete
Kyriakidou Athina	Oncology Resident, Department of Medical Oncology, University General Hospital of Heraklion	Zairi Eleni	Medical Oncologist, St Luke's Hospital Thessaloniki Greece
Linardaki Emman.	PhD, FORTH-IMBB Diagnostic Genetics and Precision Medicine (DIGENIA)	Zarkavelis George	Medical Oncologist, Medical Oncology Clinic -University Hospital of Ioannina
Linardopoulos Spiros	Director, Translational Science, Oncology, AstraZeneca	Zioudas Chrysostomos	Oncology Resident, Department of Medical Oncology, University General Hospital of Heraklion
Liontos Michail	Assistant Professor, Department of Clinical Therapeutics, National and Kapodistrian University of Athens	Zoumpourlis Vassilis	Research Professor, Biomedical Applications Unit, Institute of Chemical Biology, National Hellenic Research Foundation, Athens
Lydaki Danae	Oncology Resident, Department of Medical Oncology, University General Hospital of Heraklion		

Cancer Genomics and Tumor Sequencing

09:00 Meeting at University of Crete, School of Medicine

09:00 - 10:30 **The genetics of cancer**

J. Souglakos, D. Mavroudis

- 09:00 - 09:20 • The hallmarks of cancer **I. Keklikoglou**
- 09:20 - 10:00 • Historical retrospection in the research of the genetic basis of cancer **V. Zoumpourlis**
- 10:00 - 10:20 • Molecular alterations in cancer **K. Michaelidou**
- 10:20 - 10:30 • Q and A

10:30 - 12:30 **Sequencing Methods for the Identification of Targetable Molecular Alterations in Cancer**

A. Saetta, J. Souglakos

- 10:30 - 10:50 • NGS terminology **G. Tsaknakis**
- 10:50 - 11:20 • Available platforms and sequencing chemistry **A. Saetta**
- 11:20 - 11:50 • Analysis of sequencing results: Biological and clinical classification of genetic variants **A. Saetta**
- 11:50 - 12:10 • Quality assessment of NGS testing **F. Papageorgiou**
- 12:10 - 12:30 • Q and A

12:30 - 13:00 Coffee Break

Friday

February/2024



13:00 - 14:30 **Tumor Sequencing in the clinic**

E. Linardaki, N Androulakis

- 13:00 - 13:15 • The ESMO Scale for Clinical Actionability of molecular Targets (ESCAT) **M. Georgiadou**
- 13:15 - 13:45 • Update on the recommendations on the use of NGS for patients with metastatic cancer **M. Rovithi**
- 13:45 - 14:05 • The NGS report: minimal content requirements **E. Linardaki**
- 14:05 - 14:20 • How to read genomics reports for clinical practice? **A. Saetta**
- 14:20 - 14:30 • Q and A

14:30 - 15:30 **Lunch break**

15:30 - 16:00 **D. Mavroudis, A. Saetta**

- 15:30 - 15:50 • Biomarkers for Breast Cancer: epigenetic classifiers implemented in Liquid Biopsy **E. Chatzaki**
- 15:50 - 16:00 • Q and A

16:00 - 17:30 **Liquid Biopsy for Precision Oncology: Circulating Tumor DNA**

E. Chatzaki, S. Agelaki

- 16:00 - 16:30 • Detection and Analysis of Circulating Tumor DNA (ctDNA): Challenges and Pitfalls **S. Joesse**
- 16:30 - 17:00 • Reporting molecular results from cfDNA testing **S. Joesse**
- 17:00 - 17:20 • Recommendations on the use of ctDNA analysis in clinical decision making **S. Agelaki**
- 17:20 - 17:30 • Q and A

17:30 - 18:30 **Liquid Biopsy for Precision Oncology: Circulating Tumor Cells (CTCs)**

E. Chatzaki, S. Joesse

- 17:30 - 17:55 • Detection and characterization of CTCs **M. Papadaki**
- 17:55 - 18:20 • Clinical utility of CTC analysis **M. Papadaki**
- 18:20 - 18:30 • Q and A

18:30 - 20:30 **CTC isolation and phenotypic analysis in the laboratory**

M. Papadaki, E. Politaki

Trainers: **D. Aggouraki, C. Koutoulaki, K. Michaelidou, M. Papadaki, E. Politaki, M. Sfakianaki, K. Vogiatzoglou**

Precision Oncology - Therapeutic Targets

- 09:00 – 10:00 **Rare EGFR mutations – HER2 mutations**
 N. Vardakis, G. Zarkavelis, E. Fergadis
- 09:00 - 09:15 • Testing (Assays, Techniques and Challenges) K. Michaelidou
 - 09:15 - 09:35 • Clinical Efficacy of Approved Targeted Agents: Indications, Efficacy and Toxicity A. Boukouris
 - 09:35 - 09:55 • An interesting Clinical Case K. Svoliantopoulos
 - 09:55 - 10:00 • Q and A
- 10:00 – 11:00 **MET**
 M. Rovithi, V. Bozionelou
- 10:00 - 10:20 • Testing (Assays, Techniques and Challenges) N. Karachaliou
 - 10:20 - 10:40 • Clinical Efficacy of Approved Targeted Agents: Indications, Efficacy and Toxicity E. Zairi
 - 10:40 - 10:50 • An interesting Clinical Case E. Zairi
 - 10:50 - 11:00 • Q and A
- 11:00 – 12:00 **Gene fusions: RET, ROS, ALK**
 L. Vamvakas, A. Koutsopoulos
- 11:00 - 11:20 • Testing (Assays, Techniques and Challenges) A. Saetta
 - 11:20 - 11:40 • Clinical Efficacy of Approved Targeted Agents: Indications, Efficacy and Toxicity J. Stoupis
 - 11:40 - 11:50 • An interesting Clinical Case M. Kamaratou
 - 11:50 - 12:00 • Q and A
- 12:00 – 12:30 **Coffee Break**

Saturday

February/2024



- 12:30 – 14:00 **Targeting homologous recombination deficiency in cancer**
 E. Saloustros, M. Liontos
- 12:30 -12:50 • Mechanisms of DNA Damage Repair (DDR) S. Siametis
 - 12:50 -13:30 • Homologous recombination deficiency: Concept, Assays and targeting S. Linardopoulos
 - 13:30 -13:50 • Current status of PARP inhibitors in the clinic M. Liontos
 - 13:50 -14:00 • Q and A
- 14:00 – 14:30 **I. Bobolaki, K. Kalbakis**
- 14:00 -14:20 • Molecular testing in the treatment of patients with breast cancer A. Mala
 - 14:20 -14:30 • Q and A
- 14:30 - 15:30 **Lunch break**
- 15.30 - 16:30 **Rare targets: A. Kalykaki, I. Drositis, M. Vasilakopoulou**
- 15:30 -15:55 • FGFR, IDH, NRTK: Testing and clinical efficacy of approved agents E. Kontopodis
 - 15:55 -16:10 • BRAF Non-V600: an interesting clinical case D. Lydaki
 - 16:10 -16:25 • FGFR2: an interesting clinical case A. Kyriakidou
 - 16:25 -16:30 • Q and A
- 16.30 - 17:30 **Molecular tumor boards: current and future considerations for precision oncology**
 G. Zarkavelis, S. Manolakou
- 16:30 -17:00 • The molecular biologist's perspective A. Saetta
 - 17:00 -17:30 • The medical oncologist's perspective G. Zarkavelis
- 17.30 - 18:00 **Oncology training and Precision Oncology: the trainees' perspective**
 E. Saloustros, M. Liontos
 Ch. Zioudas, K. C. Fotsitzoudis, P. Dimaras
- Open discussion with participants
- 18:00 – 20:30 **Tumor molecular Analysis workflow**
 K. Michaelidou, M. Papadaki
- 18.00 - 18:30 **Tumor sample preparation: M. Sfakianaki, D. Aggouraki**
- 18:00 -18:15 • Microdissection
 - 18:15 -18:30 • DNA extraction
- 18.30 - 19:30 **NGS workflow: Ch. Koutoulaki, K. Michaelidou**
- 18:30 -18:50 • Library preparation
 - 18:50 -19:10 • Sequencing
 - 19:10 -19:30 • Data analysis
- 19.30 - 20:30 **PCR based Analysis: A. Boukouris, P. Dimaras**
- Detection of KRAS and ESR1 mutations using the ddPCR

2024

Laboratory of Translational Oncology, University of Crete, Greece

INFO: <https://oncopog.com> CONTACT: protypoevents@gmail.com

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