ESMO
GOOD SCIENCE
BETTER MEDICINE
BEST PRACTICE

European Society for Medical Oncology

PERSONALISED MEDICINE SYMPOSIUM

SIGNALLING PATHWAYS SYMPOSIUM

Targeting the PI3K/AKT/ mTOR pathway in cancer

Sitges, Barcelona **28 February - 1 March 2014**

ESMO Personalised Medicine TF created in 2012

To steer the ESMO strategy in developing in depth scientific and educational resources about personalised medicine for oncologists to improve patient care:

Scientific Symposium on dissecting molecular pathways

Section in ESMO guidelines where appropriate

E-learning modules and **webinars**

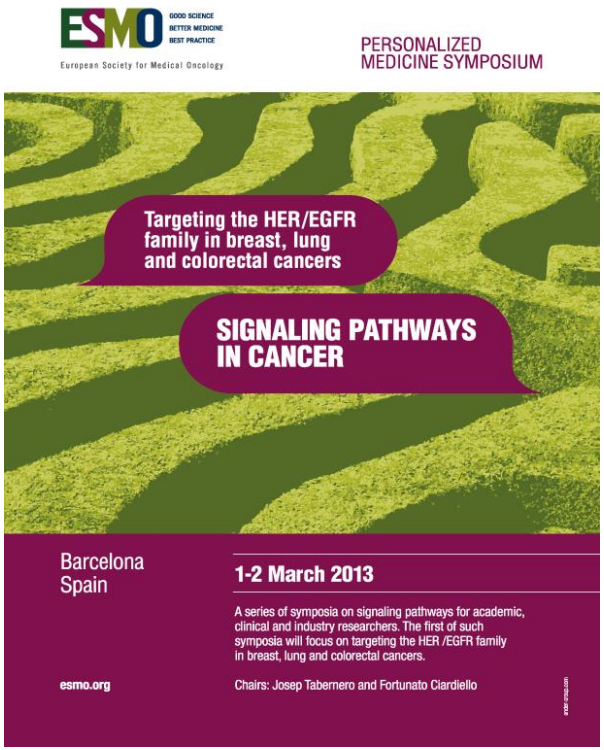
Section on PM in new **OncologyPro Tumour knowledge portal**

Personalized medicine focused **video series** with KOLs

Educational material to support work with patients **(Guide for patients in PM)**

To liaise with ESMO Public Policy Committee on positioning ESMO, and the MO profession, in the PM public policy sector, monitor PM developments, strive for realistic and achievable EU initiatives to support medical community objectives and support the accelerated adoption of PM.

First Scientific Symposium in 2013 on targeting EGFR/HER receptors



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Objectives

To review HER targeting in breast, lung and colorectal cancer and discuss on challenges for best clinical use

To introduce the HER family of structurally related cellular receptors and the methods in which they interact

To understand a role of HER family receptors dysregulation in cancer development

To understand which tumor types are influenced by HER pathways and subsequent potentials for therapeutic targeting

To understand how HER signaling pathways complexity allows targeting by using several different strategies

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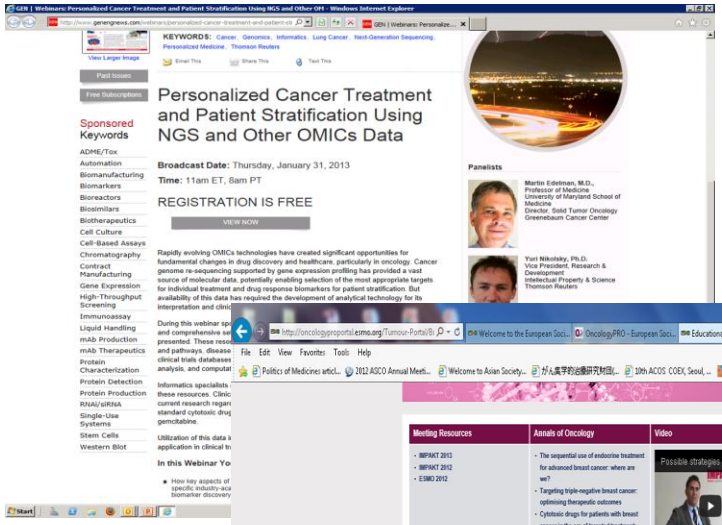
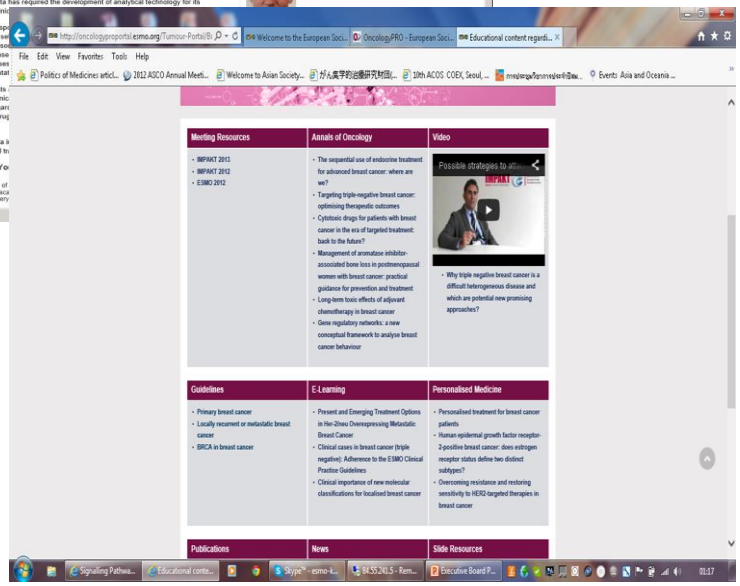
Educational activities: Webinar, Tumour Knowledge Portal; PM section in guidelines





Biomarker	Prognostic	Predictive	Technical validation	Clinical validation	Test and scoring recommendations	Patient selection
ER	++	+++	YES LOE Ib	YES	IHC	Hormonal treatment
PgR	+++	+	YES LOE Ib	NO	IHC	If negative, chemotherapy in some cases
HER2	++	+++	YES LOE Ib	YES	IHC ≥10% cell +	Anti-HER2 treatment
Ki67	++	+	NO	NO	IHC no consensus	Chemotherapy if elevated
Intrinsic subtypes	++	++	YES	YES	Gene expression profile (not for IHC surrogates)	Different responses to neoadjuvant chemotherapy according to the subtype
First generation signatures (MammaPrint, Oncotype Dx)	+++	+	YES	Validated retrospectively, prospective validation ongoing	Gene expression profile, RT-pCR	Chemotherapy if high risk or high score
Second generation signatures	+	+	NO	NO	Gene expression profile	None yet

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Educational activities for **professionals**: Editorials in AoO; videos in PM

For **patients**: Patient guide on essential concepts in PM;

Educational seminar and videos for pts


editorials

Personalised cancer management: closer, but not here yet

Personalised cancer management—giving patients optimum treatment according to their individual circumstances (including genetics) and the molecular characteristics of their tumours—is a key theme of the European Society for Medical Oncology (ESMO) in 2013. Indeed, it is a key theme for oncologists in general, and in all aspects of medicine. Integrating research and innovation directed towards personalised care is also an objective of the European Union's *Horizon* 2020 science funding programme [1].

In cancer, personalised medicine is particularly crucial. In no other specialty are the margins between benefit and toxicity so small and the differences between patients so large. Given the narrow therapeutic index of the drugs we use, individual risk factors for toxicity (notably comorbidities and the extent and nature of prior treatments) are crucial in deciding the appropriateness of different interventions. This is evident, for example, with the risk of cardiotoxicity accompanying the use of trastuzumab [2].

We have to deal with profound differences between tumours

Video learning modules

Sharing goals and resources with TRWG: More structured learning opportunities to educate physicians on molecular pathways

Molecular pathways: **First module on c-MET** with emphasis on NSCLC

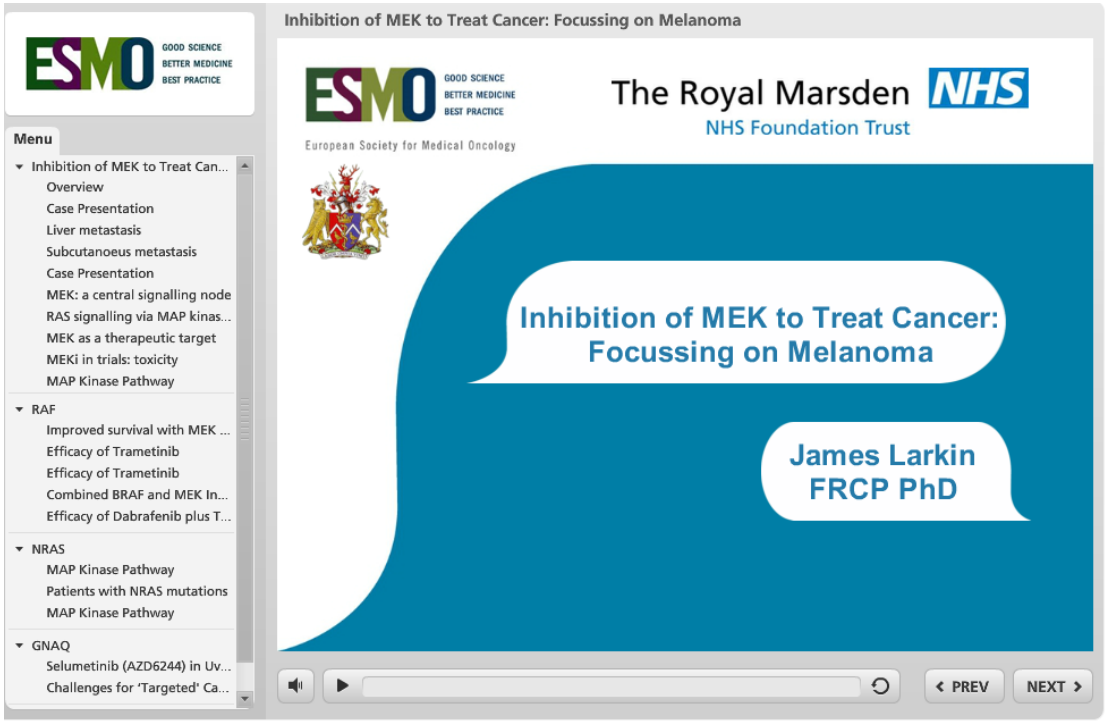
- First ESMO video-learning module on c-MET

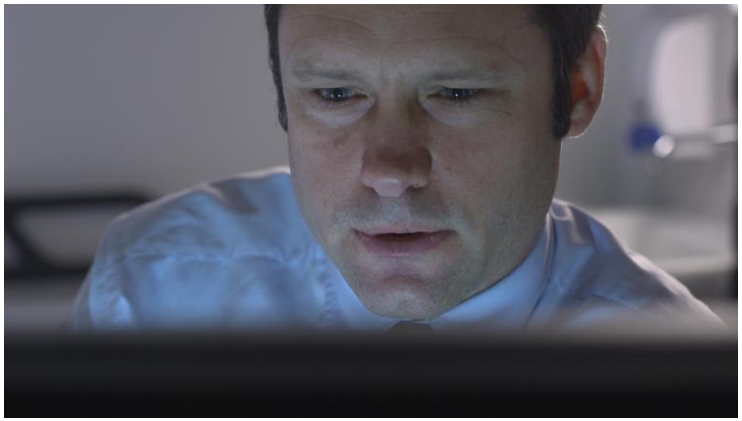
Structure of the module:

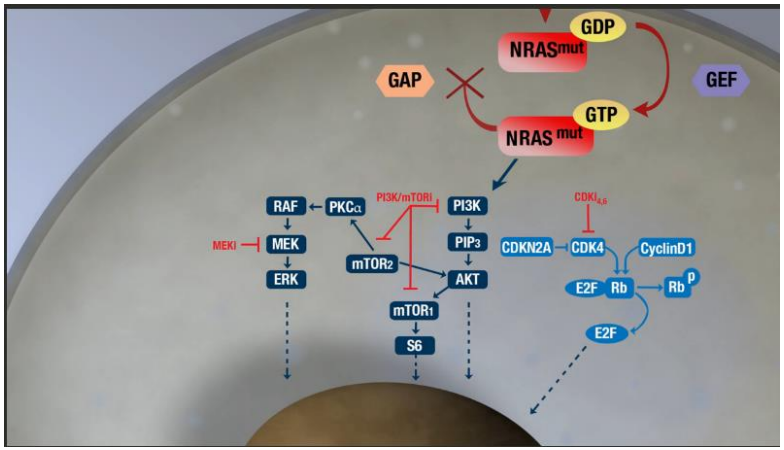
- Video material on mechanistic aspects of signalling cascade (video is embedded in the slide set, separtely uploaded at ESMO iTunes University channel, and further dissected for ESMO YouTube channel)
- PowerPoint Presentation for E-module (voice synchronization)
- A list of cancers correlated with c-MET
- A list of drugs with c-MET as a target
- Links to key references on the subject for further reading

Coming soon:

New V-learning module on MEK







ESMO Glossary in Molecular Biology of Cancer

From A-to-Z in translational research

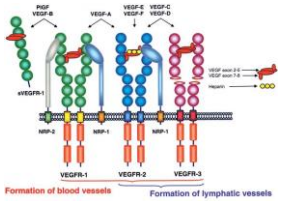
Electronic copy available under Publications section of OncologyPro, due to high demand a second printed edition is available for distribution, material is accompanied with a slide set available to ESMO members to download

- A common terminology to enable oncology practitioners to speak the same language with basic scientists and translational researchers when analyse research findings and apply the cancer biology into cancer medicine.
- An aid for practicing oncologists when acquiring knowledge and developing an awareness and appreciation of the molecular processes underlying the development of cancer.
- A tool for practicing oncologists to understand basic requirements for common laboratory techniques used to demonstrate molecular features of malignancy when critically evaluate and interpret research findings.
- Selected terms accompanied with image consisting of two panes, one on the structure of the gene, and the second one on its network.

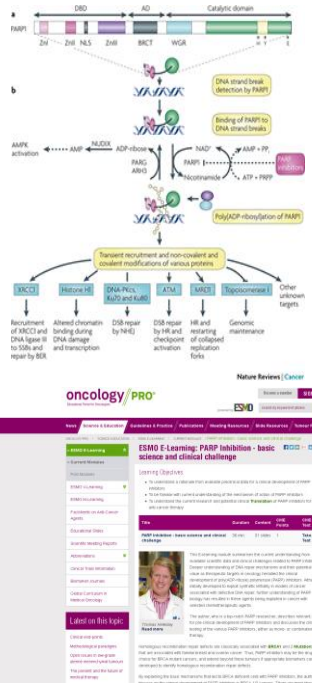
E-Learning modules in TR topics

CME accredited activity

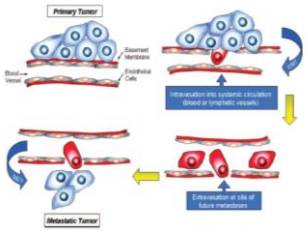
Biomarkers of anti-VEGF therapy



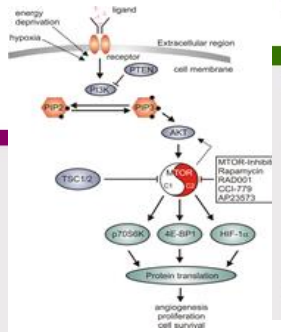
PARP

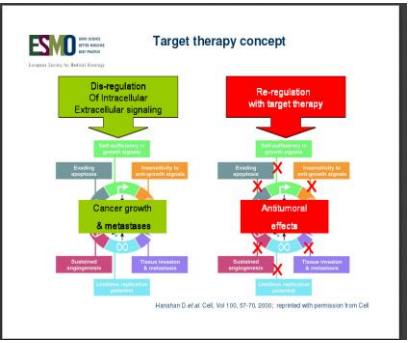


Circulating tumor cells

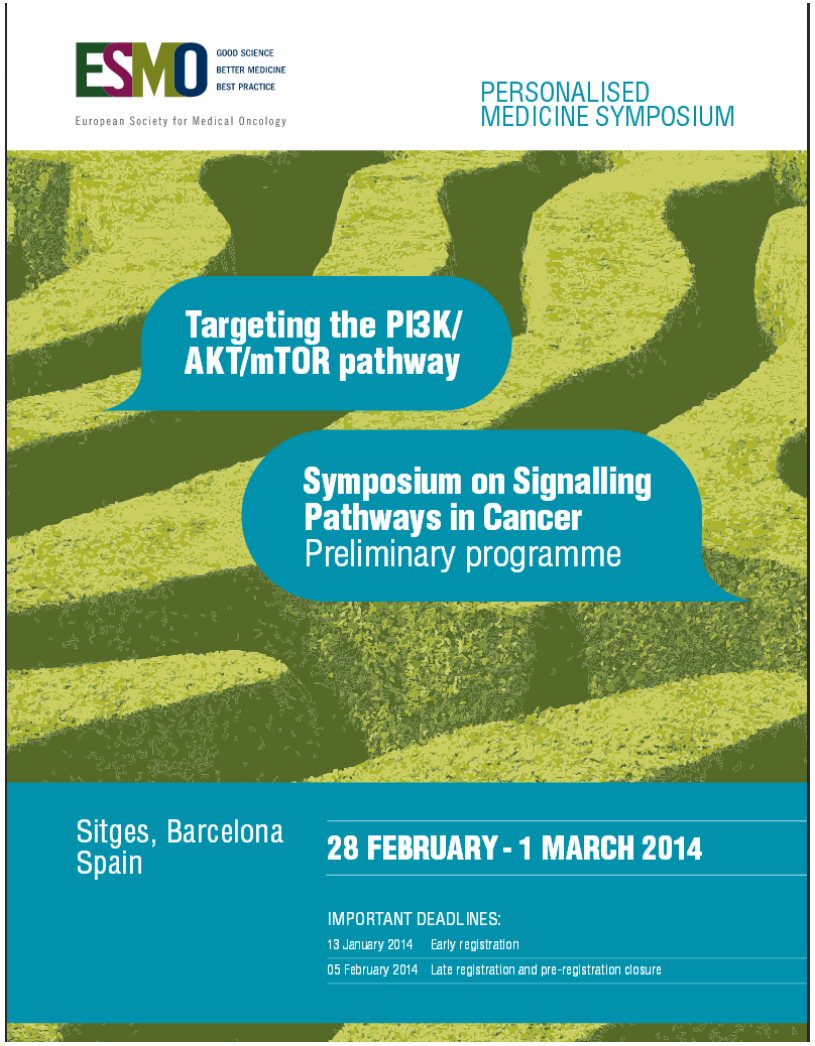


mTOR inhibition/targeting in solid tumors





The use of biomarkers for treatment decisions in oncology



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The second ESMO Personalised Medicine Symposium aims to enhance understanding of PI3K/AKT/mTOR signalling pathway and complexities related to its targeting in a range of tumour types.

Symposium objectives:

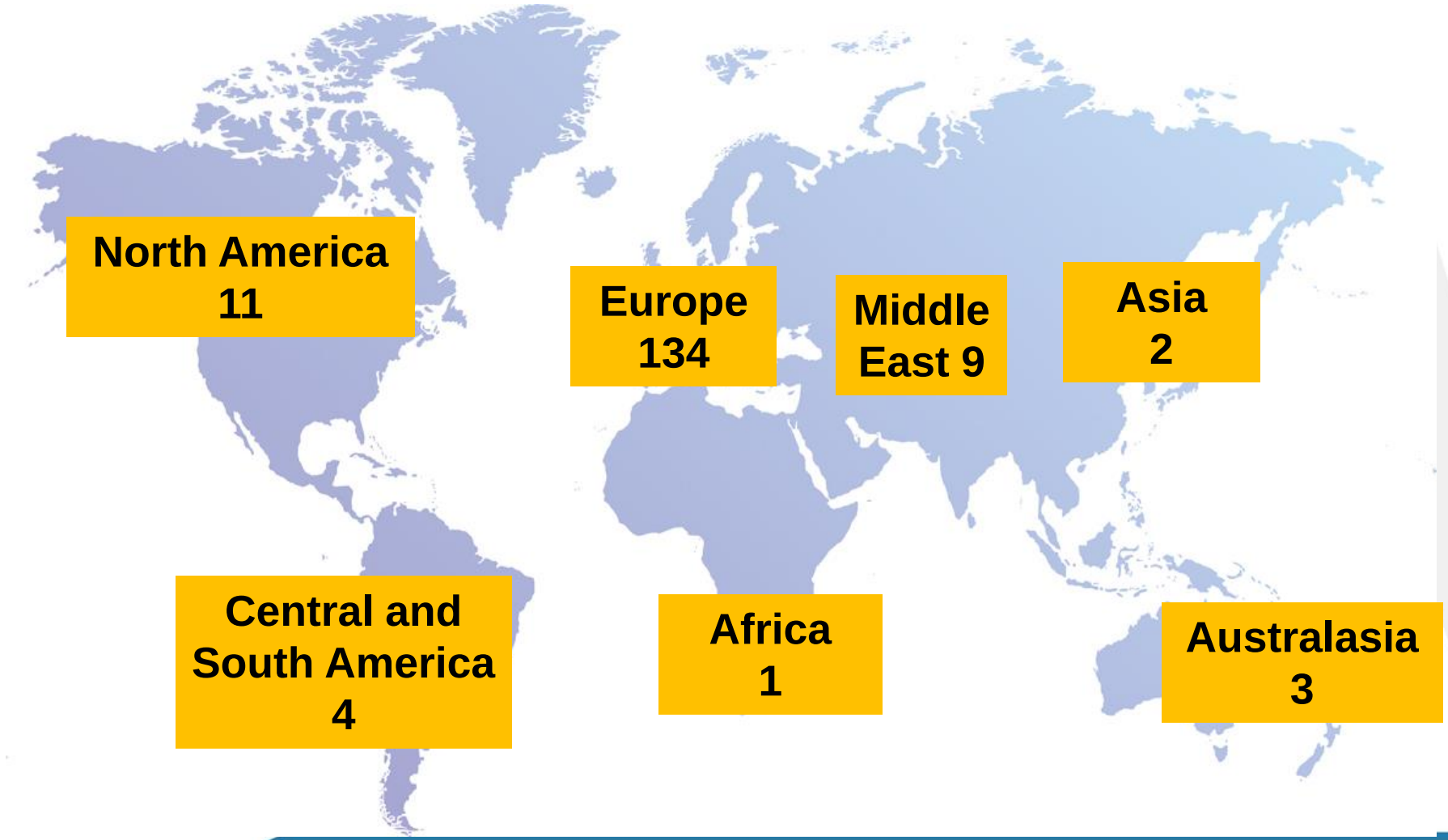
To provide a basic introduction in preclinical data relevant for understanding of functional mechanisms in the PI3K/AKT/mTOR pathway

To understand basic concepts of translating preclinical observations in the PI3K/AKT/mTOR signalling into cancer clinics

To provide an essential update on different aspects important for rational clinical development of the PI3K/AKT/mTOR inhibitors

To elaborate from the clinical perspective, in a range of malignant diseases, on recent achievements and the data from currently ongoing clinical trials in targeting all axes of the PI3K/AKT/mTOR pathway

164 participants from 37 countries



What to expect from the programme

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Symposium Officers

Fabrice André, Villejuif, France, **Co-Chair**

Cristiana Sessa, Bellinzona, Switzerland, **Co-Chair**

Scientific Committee members:

Andrea Alimonti, Bellinzona, Switzerland

Monica Arnedos, Villejuif, France

Fortunato Ciardiello, Naples, Italy

Johann de Bono, Sutton, UK

Bryan Hennessy, Dublin, Ireland

Josep Tabernero, Barcelona, Spain

Education on preclinical and clinical issues relevant for targeting all axis of PI3K/AKT/mTOR pathway

Starting from the principles of signal transduction, discussion will evolve around rationale and strategies to inhibit the PI3K/AKT/mTOR pathway

Explanation for interactions with other systems at the molecular level
Updates on drugs in development or already approved indications

Different aspects important for drugging of this pathway in a range of malignant diseases

Digging into mechanisms of primary and secondary resistance

A profile of side effects

Overview of clinical trials that examine the emerging pathway inhibitors

Faculty

Targeting the PI3K/AKT/mTOR pathway in cancer

Fabrice André
Andrea Alimonti
Monica Arnedos
Thomas Bachelot
Philippe Bedard
Massimo Broggini
Fortunato Ciardiello
Johann de Bono
Sylvie Guichard
Bryan Hennessy
Yasir Ibrahim
James Larkin
Sibylle Loibl
Cristian Massacesi
Christophe Massard
Marianne Pavel
Jordi Rodón
Violeta Serra
Cristiana Sessa
Anastasios Stathis
George Thomas

MADRID 2014 ESMO congress

Madrid, Spain

26-30 September 2014

PRECISION MEDICINE IN CANCER CARE

IMPORTANT DEADLINES

7 May 2014	Abstract submission
18 June 2014	Early registration
20 August 2014	Late-breaking abstract
20 August 2014	Late registration