



Precision Medicine in Cancer

May 6–10, 2018 | Clarion Hotel Sign | Stockholm | Sweden

Scientific Organizers:

Richard Rosenquist, Uppsala University, Sweden

Elaine Mardis, Nationwide Children's Hospital, Ohio State University, USA

Charles M. Perou, University of North Carolina at Chapel Hill, USA

Organized in collaboration with Knut and Alice Wallenberg Foundation and Science for Life Laboratory

Thanks to next-generation sequencing, we have started to unravel the genomic landscape that contributes to the pathogenesis and/or evolution of several major cancer entities. For the majority of cancer subtypes, a quite diverse and complex mutation pattern is observed, with a limited number of frequently mutated genes accompanied by a long tail of genes with low-frequency mutations. Some of these genes have already been implied to have diagnostic, prognostic/predictive and even therapeutic impact, while most mutations still require functional validation. In parallel, large efforts have been made to design novel strategies targeting key cellular pathways and processes, which in turn has led to introduction of targeted therapy in selected entities. However, there is still a gap-of-knowledge and urgent medical need to determine how to combine the genetic information with risk-stratification and treatment algorithms in the individual patient, i.e., precision medicine. This symposium will highlight large-scale sequencing efforts carried out in different cancer types, including both solid tumors and hematological malignancies, which have paved the way for the incorporation of next-generation sequencing-based approaches into routine clinical diagnostics and every-day patient care. It will also cover the rapidly evolving field of disease monitoring by ultra-sensitive sequencing of tumor-specific mutations, as well as introduce novel approaches, other omics technologies and functional studies that will aid future efforts in precision medicine. Finally, successful examples of how genomic findings have spurred development of targeted therapies will be presented. In summary, the symposium will bring together basic scientists, translational researchers and clinicians to meet and discuss concerted action toward precision medicine in cancer.

Session Topics:

- Clinical Genomics in Solid Tumors
- Workshop 1: Deciphering Cancer by Next-Generation Sequencing
- Precision Diagnostics in Solid Tumors
- Clinical Genomics in Hematological Malignancies
- Workshop 2: Circulating Cell-Free Nucleic Acid Sequencing and Detection of Minimal Residual Disease
- Precision Diagnostics in Hematological Malignancies
- Disease Monitoring in Cancer Patients
- Novel Approaches in Cancer Genomics
- Novel Targets, Novel Therapies I & II
- Workshop 3: Identifying Novel Targets and Therapies

Scholarship Application & Discounted Abstract Deadline: January 9, 2018

Abstract Deadline: February 6, 2018

Discounted Registration Deadline: March 6, 2018



Note: Scholarships are available for graduate students and postdoctoral fellows and are awarded based on the abstract submitted. Submitting an abstract is an excellent opportunity to gain exposure for your work. Abstracts submitted by the abstract deadline will also be considered for short talks on the program.

Upper image courtesy of National Cancer Institute, NIH

Meeting Hashtag: #KScancer

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KEYSTONE SYMPOSIA

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SUNDAY, MAY 6

Arrival and Registration

MONDAY, MAY 7

Welcome and Keynote Address

Charles M. Perou, University of North Carolina at Chapel Hill, USA
Charting the Cancer Genome Landscape: Lessons, Opportunities and Challenges

Clinical Genomics in Solid Tumors

Arul M. Chinnaiyan, University of Michigan, USA
Clinical Genomics for Precision Medicine in Prostate Cancer

Serena Nik-Zainal, University of Cambridge, UK
Landscape of Somatic Mutations in Breast Cancer: Clinical Implications

Charles Swanton, Francis Crick Institute, UK
Cancer Evolution and Immune Escape: TRACERx

Fabrice André, Gustave Roussy, France
Genomic Profiling of Metastatic Breast Cancers

Poster Session 1

Workshop 1: Deciphering Cancer by Next-Generation Sequencing

Short Talks Chosen from Abstracts

Precision Diagnostics in Solid Tumors

Michael F. Berger, Memorial Sloan Kettering Cancer Center, USA
Integrated Genomic Assays for Precision Cancer Diagnostics

Lillian Siu, Princess Margaret Hospital, Canada
A Decade of Precision Medicine: Reality or Myth?

Matthew J. Ellis, Baylor College of Medicine, USA
Integrated Proteogenomics for Biomarker Discovery in Breast Cancer

Levi A. Garraway, Eli Lilly and Company, USA
Dissecting the Microenvironment in Melanoma by Single Cell

TUESDAY, MAY 8

Keynote Address

Elaine R. Mardis, Nationwide Children's Hospital, Ohio State University, USA
Clinical Cancer Genomics in the Diagnosis of Pediatric CNS Tumors

Clinical Genomics in Hematological Malignancies

Charles G. Mullighan, St. Jude Children's Research Hospital, USA
Advances in Genetics and Therapy in Pediatric Acute Lymphoblastic Leukemia

Richard Rosenquist, Karolinska Institutet, Sweden
The Molecular Landscape of Chronic Lymphocytic Leukemia: Prognostic and Therapeutic Implications

Riccardo Dalla-Favera, Columbia University, USA
Genomics of Diffuse Large B Cell Lymphoma

Elli Papaemmanuil, Memorial Sloan Kettering Cancer Center, USA
Genomic Drivers and Prognosis in Acute Myeloid Leukemia

Workshop 2: Circulating Cell-Free Nucleic Acid Sequencing and Detection of Minimal Residual Disease

Short Talks Chosen from Abstracts

Precision Diagnostics in Hematological Malignancies

Maria Luisa Sulis, NewYork-Presbyterian Hospital/Columbia University Medical Center, USA
Clinical Implementation of Sequencing in Pediatric Hematology-Oncology Practice

Luca Malcovati[†], Università degli studi di Pavia, Italy
Talk Title to be Announced

Speaker to be Announced

Short Talk Chosen from Abstracts

Poster Session 2

WEDNESDAY, MAY 9

Disease Monitoring in Cancer Patients

Catherine Alix-Panabières, University Medical Centre, France
Functional Analyses of CTCs in Cancer Patients

Alberto Bardelli, University of Torino, Italy
Cancer Evolution as a Therapeutic Target

Eva Hellström-Lindberg, Karolinska Institute, Sweden
High-Throughput Mutational Screening Improves Risk Stratification in Myelodysplastic Syndromes

Catherine Ju-Ying Wu, Dana-Farber Cancer Institute, USA
Intracлонаl Dynamics in Chronic Lymphocytic Leukemia

Short Talks Chosen from Abstracts

Novel Approaches in Cancer Genomics

David T. Miyamoto, Massachusetts General Hospital, USA
Molecular Characterization of Circulating Tumor Cells for Precision Cancer Medicine

Olli Kallioniemi, Science for Life Laboratory, Sweden
Precision Systems Medicine to Tailor Cancer Treatments

Short Talk Chosen from Abstracts

Poster Session 3

THURSDAY, MAY 10

Novel Targets, Novel Therapies I

Gerald P. Linette, University of Pennsylvania, USA
Melanoma Neoantigen Discovery and Clinical Validation

Winette T. Van Der Graaf, Institute of Cancer Research, UK
Targeting the Kinome in Cancer: The Need for Return Tickets from Bench to Bedside, Exemplified by the Progress in Understanding Gastrointestinal Stromal Tumors (GIST)

Terry Fry[†], University of Colorado School of Medicine, USA
Talk Title to be Announced

Thomas Helleday, Karolinska Institutet, Sweden
Targeting the DNA Damage Response in Cancer

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Short Talk(s) Chosen from Abstracts

Workshop 3: Identifying Novel Targets and Therapies

Short Talks Chosen from Abstracts

Novel Targets, Novel Therapies II

Renier Brentjens, Memorial Sloan Kettering Cancer Center, USA

Talk Title to be Announced

Eric Tran, Providence Cancer Institute, USA

*Immunogenicity and Immunotherapeutic Targeting of Mutated
Neoantigens in Human Cancer*

Laurence Zitvogel, Institut Gustave Roussy, France

Resistance to Immune-Checkpoint Blockade in Cancer

Meeting Wrap-Up

Jonas Bergh, Karolinska Institutet, Sweden

A Clinical Oncologist Perspective

FRIDAY, MAY 11

Departure