



# 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

on Molecular and Cellular Biology

## Precision Medicine in Cancer (E1)

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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**, Wellcome Trust Sanger Institute, UK  
*Landscape of Somatic Mutations in Breast Cancer: Clinical Implications*

**Victor E. Velculescu**, Johns Hopkins University, USA  
*Defining Progression in Colorectal Cancer: Current Status and Beyond*

#### Short Talk(s) Chosen from Abstracts

#### 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*

#### Short Talk(s) Chosen from Abstracts

#### 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*

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

**Ross L. Levine**, Memorial Sloan Kettering Cancer Center, USA  
*Integrated Genomic/Transcriptomic Profiling of Hematologic Malignancies*

#### Short Talk Chosen from Abstracts

#### Poster Session 2

### WEDNESDAY, MAY 9

#### Disease Monitoring in Cancer Patients

**Pasi A. Jänne**, Harvard Medical School, USA  
*Cell-Free DNA as Precision Markers for Cancer Detection*

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

**Catherine Ju-Ying Wu**, Dana-Farber Cancer Institute, USA  
*Intraclonal dynamics in chronic lymphocytic leukemia*

#### Short Talk(s) Chosen from Abstracts

#### Novel Approaches in Cancer Genomics

**Charles Swanton**, Francis Crick Institute, UK  
*Targeted Therapies and Resistance in Lung Cancer*

**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*

**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)*

#### Speaker to be Announced

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**Thomas Helleday**, Karolinska Institutet, Sweden

*Targeting the DNA Damage Response in Cancer*

**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**