Preliminary Program

This program is subjected to changes. Also, we will select additional talks based on incoming abstracts.

Wednesday, May 31
10—11.00 Registration, setting up posters, and welcoming coffee.

SESSION 1
Clinical status and perspectives for hereditary breast and ovarian cancer (HBOC) risk prediction.

Fergus Couch
The Mayo Clinic Cancer Center and the Center for Individualized Medicine, USA
Diana Eccles
University of Southampton, UK
Rita Schmutzler
University Hospital Cologne, Germany
Sabine Linn
The Netherlands Cancer Institute, The Netherlands
+Talks selected from incoming abstracts

DISCUSSION
The unmet needs in the clinic for genetic counselling of HBOC.

Key Questions:
— *At what point are we safe to decide whether a VUS is pathogenic or not?*
— *How do different countries deal with VUS with respect to the use of prediction programs, conjoint databases, the offer of intensified screening and a recall system?*
— *How to fill in the gap between research and clinic?*
— *What are the important measurements for risk prediction?*
— *Infrastructure and databases for germline and tumour material.*

Chair: Diana Eccles
Panel: Rita Schmutzler, Sabine Linn, Jan Schellens, Marjanka Schmidt, and Fergus Couch

SESSION 2
Identification of novel HBOC genes and variants

Claus Storgaard Sørensen
Biotech Research and Innovation Centre, University of Copenhagen, Denmark
"New mechanisms guarding genome integrity"
Bjarni Jóhann Vilhjálmsson
Center for Bioinformatics (BiRC), University of Aarhus, Denmark
"Joint re-analysis of GWAS summary statistics identifies new variants associated with human traits and diseases"
Stefano Annunziato
The Netherlands Cancer Institute, The Netherlands
"Somatic engineering of the mammary gland for the development of novel mouse models of breast cancer."
+Talk selected from incoming abstracts

Thursday, June 1

SESSION 3
Analysis of the effects of HBOC gene variants on treatment response.

Lisa Wiesmüller
University Hospital Ulm, Germany
"Error-prone DNA repair signature for detection of breast and ovarian cancer risk"
Violeta Serra
Vall d'Hebron Institute of Oncology, Spain
"Functional homologous recombination DNA repair as a major in vivo mechanism of PARP inhibitor resistance in germline BRCA1/2-mutated breast tumors."
Oded Kopper
Hubrecht Institute, The Netherlands.
"Organoids representing human ovarian cancer"
+Talks selected from incoming abstracts

SESSION 4
Model systems and assays for the functional classification of HBOC gene variants.

Bas Vroling
Bio-Prodict, The Netherlands
Joey Riepsaame
Sir William Dunn School of Pathology, University of Oxford, UK
Michel Cannieux
Integrated DNA Technologies, USA
"Strategies for optimization of CRISPR editing and HDR using Cas9 and Cpf1 ribonucleoproteins (RNPs) "
Peter Bouwman
The Netherlands Cancer Institute, The Netherlands
"Functional analysis of BRCA1 variants and domains using genetically engineered mouse model systems"
Maaike Vreeswijk
Leiden University Medical Center, The Netherlands
"Functional characterization of variants of uncertain significance in BRCA2"
Haico van Attikum
Leiden University Medical Center, The Netherlands
Sean Tavtigian
Huntsman Cancer Institute, University of Utah, USA
Alvaro NA Monteiro
Moffitt Cancer Center, USA
"Incorporating Functional Data into Clinical Annotation."
+Talks selected from incoming abstracts

Friday, June 2

SESSION 4 (CONT.)

DISCUSSION
How to push forward the gene variant classification from functional assay into the clinic?

Key Questions:
— What are the requirements for gene models and functional assays to have clinical impact on diagnostic and treatment decision?
— Consequences for assay design and biological controls.
— Current status and the road forward for genetic variant risk prediction.
— Cancer risk associated with hypomorphic variants.
— How to incorporate functional data into multifactorial likelihood models.

Chair: Maaike Vreeswijk
Panel: Lisa Wiesmüller Peter Bouwman, Fergus Couch, and Alvaro NA Monteiro

SESSION 5
Novel insights in HBOC suppression and consequences for functional assays.

Shyam Sharan
Center for Advanced Preclinical Research, National Cancer Institute, USA
"Synthetic viability: how cells overcome BRCA2-loss induced cell-lethality"
Ralph Scully
Beth Israel Deaconess Medical Center, Harvard University, USA
Arnab Ray Chaudhuri
National Cancer Institute, USA
"Remodelling DNA replication forks – From synthetic viability to chemoresistance "
+Talks selected from incoming abstracts

14.30—15.00 Concluding remarks by Jos Jonkers.