What: iCAN retreat is an **internal iCAN meeting** with a keynote talk by Fox Chase Cancer Center Director Jonathan Chernoff, PhD, presentations from the iCAN subprojects and affiliated studies, a poster session, and social activities. Come and share your research and strengthen your networks within the iCAN community!

When: Thursday 3.10.2024
Where: [Hilton, Helsinki, Kalastajatorppa, Conference and Events Center,](#) Kalastajatorpantie 1, 00330 HELSINKI, and online.
Registration
iCAN retreat is **an internal event** for iCAN Flagship Project researchers and board members, and the students of the doctoral education pilot iCANDOC.

Program

08:15 Registration opens, coffee & poster set-up

09:00 – 09:10 Opening of the retreat, iCAN Scientific Director **Satu Mustjoki**

09:10 – 09:15 Program and logistics, **Elena Kremneva**, organising committee chair
09:15 – 09:45 *iCAN overview: iCAN National Program, iCANDOC, iCAN Discovery Platform, sample pipeline*, **Executive Officer Tomi Mäkelä**
Patient and public involvement, Patient and Citizen Advisory Board/**Marketta Liljeström**, Coordinator

---

09:45 – 10:30 **Keynote talk**
Not all KRAS mutations are created equal, Director **Jonathan Chernoff**
Host: **Markku Varjosalo**

10:30 – 11:00 Break

Session 1: "Tumor profiling and preclinical models"
Chair: **Pirjo Laakkonen** and **Elena Kremneva**

iCAN subproject presentations (poster number after the name of the speaker)
11:00 – 11:15 *Genomic subtypes of acute myeloid leukemia define sensitivity to NK cell cytotoxicity*, **Hanna Duàn** (iCAN-IMMPROF) 3

11:15 – 11:30 *Molecular profiling and ex vivo drug screening of soft tissue sarcomas*, **Piia-Riitta Karhemo** (iCAN-RARE) 17

11.30 – 11:45 *Leveraging single-cell information in treatment selection for hematological cancers and solid tumors*, **Mitro Miihkinen** (iCAN-MULTIDRUG) 25

11:45 – 12:00 *Precision approaches to combat drug resistance in non-small cell lung cancer*, **Heidi Haikala** (iCAN-LUNG) 36

12:00 – 12:15 *Unravelling diagnosis and personalized drug vulnerabilities in pediatric solid tumors – from bedside to bench and back*, **Vilja Pietiäinen** (iCAN-PEDI) 37
12:15 – 12:45 **3-minute poster teasers** (poster number after the title)

Aparna Ganesan (iCANDOC): "Cross-platform comparison study of ddPCR and NGS-based technology (Geno1®) for the detection of KRAS mutations in liquid biopsies from metastatic colorectal cancer patients" 1

Joseph Saad (iCAN-HEMADRUG2): "Predictors of response and rational combinations for the novel MCL-1 inhibitor MIK665 in acute myeloid leukemia" 5

Susanna Holmström (iCANDOC): "FUSE – FUnctional SEgmentation of the methylome" 7

Jefim Brodkin (iCAN-PaCa): "Cell-type specific apoptotic priming patterns in pancreatic cancer stromal-tumor co-culture organoids" 8

Daniela Mendoza Ortiz (iCAN-HEMADRUG2): "Efficacy of the JAK2/FLT3 inhibitor pacritinib in NPM1 mutated acute myeloid leukemia" 9

Srividhya Sundaresar (iCAN-OVCA): "Unmasking a Potential Weakness : Leveraging Endogenous DNA damage in Homologous Recombination Proficient – High Grade Serous Carcinoma" 11

Jacopo Chiaro (iCAN-COMPORG): "Exploring Immunopeptidomics for Personalized Immunotherapy in Malignant Pleural Mesothelioma: Insights from the iCAN-Lung Cohort" 18

Yvonne Giannoula (iCANDOC): "Exploiting Cellular Senescence to Enhance Precision Oncolytic Immunotherapy" 20

12:45 – 13:45 Lunch
13:45 Group photo

Greetings from the University of Helsinki
14:00 **–** 14:30 Vice-rector **Anne Portaankorva**

Session 2: "Towards clinical trials"
Chairs: **Toni Seppälä** and **Julia Kolikova**

14:30 – 14:45 **3-minute poster teasers** (poster number after the title)

Gantugs Atarsaikhan (iCAN-DIP): "iCAN-DIP: AI-Driven Deep Image-Based Profiling of Pan-Cancer Tumor Microenvironment" 22

Pauliina Filppu (iCAN-BRAIN): "Modulation of tumor microenvironment by malignant brain tumors" 23

Salvatore Russo (iCAN-COMPORG): "Omics Integration for Enhanced Peptide Discovery for Cancer Immunotherapy" 26

Sanna Pikkusaari (iCAN-OVCA): "Challenging the paradigm of CCNE1 amplification as a poor-prognosis biomarker in high-grade serous ovarian carcinoma" 27

Alexey Ryzhenkov (iCAN-SHARE): "Harmonizing and visualizing clinical lung cancer data for robust evidence generation in local and network studies" 28
iCAN subproject presentations (poster number after the name of the speaker)

14:45 – 15:00 *CDK4/6 Inhibitor Palbociclib Induces Blast Cell Differentiation and Death in Acute Myeloid Leukemia*, **Rhiannon Newman** (iCAN-HEMADRUG2) 14

15:00 – 15:15 *Stratification of B-cell lymphoma patients using circulating tumor DNA risk profiles: an iCAN-LBTRIAL subproject*, **Maare Arffman** (iCAN-LBTRIAL) 42
15:15 – 15:45 **3-minute poster teasers** (poster number after the title)

Romika Kumari (iCAN-DPM): "A Comprehensive Clinical Decision Support Tool: integrative Molecular Tumor Board" 29

Samuel Leppiniemi (iCANDOC): "Identifying genetic variants explaining variation in gene expression data in high-grade serous carcinoma patients" 30

Prima Sanjaya (iCAN-DPM): "Mutation-Attention 2: joint tumour type and subtype classification using deep learning on somatic variants of 14,527 tumour whole genomes" 31

Michaela Feodoroff (iCAN-COMPORG): "Functional Precision Medicine for Clear Cell Renal Cell Carcinoma – from omics data and drug testing of patient -derived ex vivo models to clinical translation" 33

Daniyar Karabayev (iCAN-EDECA): "Cell-free DNA methylation signatures for diffuse large B-cell lymphoma subtyping with whole-genome enzymatic methyl sequencing" 39

Joona Jäntti (iCANDOC/iCAN-OCVA): "Single Cell Readable Signal Recording System" 41

J. Rene Wong (iCANDOC/iCAN-OVCA): "Analysis and machine-learning based prediction of cellular adaptation during ovarian cancer treatment" 40

Kerttu Kalander (iCAN-CART): "Host response in large B-cell lymphoma patients treated with CAR-T cell therapy" 43

15:45 – 17:15 POSTER SESSION
Coffee served during the poster session

Posters without teasers (poster number after the title):

Oussama Krami Senhaji (iCAN-OVCA): "Impact of bacteria on DNA damage in high grade serous ovarian carcinoma" 2
Narges Moradi (iCAN-LUNG): "Next-generation Lung Cancer Therapy: Harnessing Tumor specific Immune Effects for Improved Outcomes" 4
Minttu Polso (iCAN-PEDI): "Functional Precision Medicine Uncovers New Drug Vulnerabilities in Adult Wilms' Tumor with Personalized Therapy Approaches" 6
Gabriella Antignani (iCAN-COMPORG): "Development of Patient-Derived Tumor Organoids (PDTOs) as preclinical testing platform for personalized cancer immunotherapy" 12
Katri Maljanen (iCAN-DPM): "Modeling effects of the epigenome on somatic variant formation" 15
Laura Langohr (iCAN-IRICAN): "Single cell transcriptome analysis on ERCC6L2 disease patients' bone marrow samples" 16
Anu Anil (iCAN-OVCA): "Unveiling the hidden threat: Pre-existing polypoid giant cancer cells and therapy resistance in high-grade serous ovarian cancer" 21
Johannes Smolander (iCAN-IMMPROF): "The spectrum of clonal hematopoiesis mutations in blood and tumor samples identified from iCAN whole-exome sequencing data" 24
Michaela Feodoroff (iCAN-COMPORG): "Adenoviruses Encoding Cytokines Enhance T-cell Infiltration in Renal Cell Carcinoma Tumors" 32
Bassel Alsaed (iCAN-LUNG): "Ex vivo modeling of precision immuno-oncology responses in lung cancer" 34
Isabel Mogollon (iCAN-COMPORG): "Advancing our understanding of cancer heterogeneity through 3D imaging: single-cell profiling of renal cancer co-cultures using deep learning" 35
Alexey Ryzhenkov (iCAN-SHARE): "Detecting and describing stem-cell-like tumor cell populations in NSCLC single-cell data using machine learning" 38

iCAN pipeline, **Marion Henriksson** 44
iCAN National Program, **Satu Koskinen** 45
Patient and Public Involvement in iCAN, Patient and citizen Advisory Board **POTKU** 46

Session 3 "Omics approaches and data platform"
Chair: **Kimmo Porkka**

iCAN subproject presentations (poster number after the name of the speaker)

17:15 **–** 17:30 *Comprehensive drug profiling and CRISPR screening reveal essential pathways for NK cell cytotoxicity,* **Jonas Bouhlal** (iCAN-IMMPROF) 10

17:30 **–** 17:45 *Functional precision medicine approach to identify novel treatment strategies for pediatric sarcomas*, **Sara Kuusela** (iCAN-PEDI) 13

17:45 **–** 18:00 *iCAN SHARE – Swarm Learning for predictive modelling: infrastructure development and a first use case*, **Eric Fey** (iCAN-SHARE) 19
18:00 – 18:20 **Closing remarks & poster awards** (SIAB)

18:30 – Dinner & evening program

We are delighted to have the *Surplus Joy Quintet* providing music during dinner and the evening's festivities.

Our partners

Contact

Organising committee: Elena Kremneva (chair), Julia Kolikova, Pirjo Laakkonen, Sakari Vanharanta, Markku Varjosalo

iCAN core: Helene Wahl, Satu Sankkila, Marketta Liljeström
We are happy to answer your questions at ican-retreat@helsinki.fi

iCAN is part of the Research Council of Finland Flagship Programme with the University of Helsinki and HUS Helsinki University Hospital as founding partners.