Monday 13th September AM

10:00-10:15 Welcome – Professor Charles Swanton

10:15-11:45 Session 1 – Early Detection
Chair: Professor Peter Sasieni, King’s College London
10:15-10:45 Lung cancer pathogenesis and early diagnosis
Professor Sam Janes, University College London
10:45-11:15 Can we monitor tumor plasticity in patients' circulation
Professor Francesca Demichelis, University of Trento
11:15-11:30 Short talk: Mapping field cancerisation and clonal evolution in IBD colons with dysplasia and CRC
Mehmet Yalchin, St. Mark’s Hospital/Barts Cancer Institute
11:30-11:45 Short talk: Comparative analysis of genes driving clonal expansions in cancer and healthy tissues
Reda Keddar, Francis Crick Institute/King’s College London

11:45-12:00 Break

12:00-13:30 Session 2 - Single Cell
Chair: Dr Mirjana Efremova, Barts Cancer Institute
12:00-12:30 Somatic evolution through the lens of single-cell multi-omics
Dr Dan Landau, Cornell University
12:30-13:00 The role of genomic instability in shaping immunophenotypes in ovarian cancer
Dr Sohrab Shah, Memorial Sloan Kettering Cancer Center
13:00-13:15 Short talk: CACTUS: integrating clonal architecture with genomic clustering and transcriptome profiling of single tumor cells
Shadi Darvish Shafighi, Cotutelle: University of Warsaw & Sorbonne University
13:15-13:30 Short talk: Evolutionary tracking of cancer haplotypes at single cell resolution
Dr Marc Williams, Memorial Sloan Kettering Cancer Center

13:30-14:45 Lunch and poster session
Monday 13th September PM

Session 3 - Mathematical Modelling
Chair: Professor Trevor Graham, Barts Cancer Institute

14:45-15:15  Evolutionary dynamics of breast tumorigenesis
Professor Franziska Michor, Dana-Farber Cancer Institute

15:15-15:45  Tracing the dynamics of preneoplasia in the mouse mammary gland epithelium
Professor Ben Simons, University of Cambridge

15:45-16:00  Short Talk: Principles of ecDNA random inheritance drive rapid genome change and therapy resistance in human cancers
Dr Benjamin Werner, Barts Cancer Institute

16:00-16:15  Short Talk: Cell lineage tracing with molecular clocks based on fluctuating DNA methylation
Calum Gabbutt, Barts Cancer Institute

16:15-16:30  Break

Session 4 - Cancer Systems
Chair: Dr Nicky McGranahan, UCL Cancer Institute

16:30-17:00  Genotype to phenotype mapping of tumorigenesis at single cell resolution
Professor Christina Curtis, Stanford University

17:00-17:30  Common germline immune variants contribute to selective constraint on tumor genomes
Dr Hannah Carter, University of California San Diego

17:30-17:45  Short Talk: Transient instability in TNBC examined via single cell DNA sequencing and mathematical modelling
Michael Nicholson, University of Edinburgh

17:45-18:00  Short talk: The RNA editing landscape of NSCLC
Dr Carlos Martinez Ruiz, University College London

18:00  End of day one - Drinks reception
Tuesday 14th September AM

Session 5 - Model Systems

Chair: Dr Ilaria Malanchi, Francis Crick Institute

10:15-10:45  Towards rational combination therapies: Understanding Tumor evolution during therapy response and resistance
Dr Anna Obenauf, Research Institute of Molecular Pathology

10:45-11:15  Understanding how spatial patterns of tumour growth impact clonal diversification and evolutionary trajectories
Dr Erik Sahai, Francis Crick Institute

11:15-11:30  Short talk: Developing adaptive therapy to suppress the evolution of treatment resistance in high-grade serous ovarian cancer
Dr Helen Hockings, Barts Cancer Institute

11:30-11:45  Short talk: Single-cell signalling analysis of CRC tumour microenvironment organoids in response to treatment
Maria Ramos, UCL Cancer Institute

11:45-12:00  Break

Session 6 - Cancer Genomes

Chair: Dr Simone Zaccaria, UCL Cancer Institute

12:00-12:30  Computational analysis of cancer genomes
Professor Núria López-Bigas, IRB Barcelona

12:30-13:00  Somatic mutation and clonal expansion in normal tissues
Dr Inigo Martincorena, Wellcome Sanger Institute

13:00-13:15  Short talk: Signatures of copy number alterations in human cancer
Christopher Steele, UCL Cancer Institute

13:15-13:30  Short talk: Genetic and immune landscape evolution defines subtypes of MMR deficient colorectal cancer
Dr Benjamin Challoner, Institute of Cancer Research

13:30-13:45  Short talk: Allele-specific expression in non-small cell lung cancer evolution
Dr James Black, UCL Cancer Institute

13:45-14:30  Lunch
Tuesday 14th September PM

Session 7 - Microenvironment

Chair: Professor Francesca Ciccarelli, King’s College London/Francis Crick Institute

14:30-15:00  Genomic triggers and cellular context of cancer dormancy
Dr Maria Secrier, University College London

15:00-15:30  Cancer rearranges the rules in tissue building blocks. A new class of targets for therapy?
Professor Garry Nolan, Stanford University

15:30-15:45  Short talk: Identification and impact of clonal and subclonal driver alterations during cancer progression at a single-patient resolution
Hrvoje Misetic, Francis Crick Institute/King’s College London

15:45-16:00  Short talk: Selection of metastasis competent subclones in the tumour interior
Dr Kevin Litchfield, UCL Cancer Institute

16:00-16:15  Closing remarks

16:15  End of Symposium