INTERNATIONAL ALLIANCE FOR CANCER EARLY DETECTION VIRTUAL SUMMER SCHOOL

PRECISION EARLY DETECTION FOR ALL

9th - 12th August 2021
We cannot overestimate the power of early detection to beat cancer sooner. It can help to intervene before the disease spreads, deliver more effective, curative treatments and ultimately improve outcomes for all patients around the globe.

We invite you to join us in the third annual ACED Virtual Summer School. Building upon the learnings of previous Summer Schools, we will delve into the topics of early detection science, set against the backdrop of the COVID-19 pandemic and the wider health inequalities it has highlighted.

Through a rich and diverse range of talks, interactive sessions and panel discussions involving members of the academic community, industry, public, patients and clinicians, we aim to cover the following themes:

- The science and technology behind cancer early detection innovations and diagnostics
- Case studies of early detection in healthcare systems
- Health inequalities and the effects on early detection
- The barriers in implementing precision early detection initiatives

This summer school is open to academic, healthcare, corporate and trainee delegates. The programme will provide valuable insight into early detection science and is therefore well suited to PhD students from across the UK and US member centres.

An early agenda is available on the following pages detailing the confirmed speakers and learning objectives for each day. All timings are subject to change, and are in British Summer Time.

Registration is still open, please follow this link to the Eventbrite page, or contact your local ACED Programme Manager for further information. We look forward to welcoming you all on the 9th of August.
MONDAY 9TH AUGUST

SESSION 1 | INTRODUCTION TO EARLY DETECTION OF CANCER (16:00 - 17:15)

Objectives
- To introduce participants to the Summer School
- To understand the urgent and unmet need for early cancer detection
- To understand ways to overcome unique challenges of early detection research

Welcome, Housekeeping and Introduction
ACED Manchester team

The Unique Need for Early Detection Research
Prof. Rob Bristow
The University of Manchester, UK

Cancer Screening as a Public Health Policy Challenge
Prof. Bob Steele
The University of Dundee, UK

Language of Early Detection
Dr Kelly Fagan-Robinson
The University of Cambridge, UK

Networking and Discussion

SESSION 2 | INTRODUCTION TO HEALTH INEQUALITIES (17:30 - 19:00)

Objectives
- To understand the challenges in delivering precision early detection for all
- To develop an appreciation for the complexity of health inequalities
- To understand the role of patient and public involvement in research

Interactive Networking Session

Health Inequalities and Early Detection
Dr Bella Starling
VOCAL, UK

Patient Experience Talk

Addressing inequalities - Wigan Case study
Prof. Kate Ardern
Wigan Council

Health Inequalities and Research - Funders Perspective
Dr Ian Walker
Cancer Research UK

Networking and discussion
## TUESDAY 10TH AUGUST

### SESSION 3 | INTRODUCTION TO AI TECHNOLOGIES IN THE EARLY DETECTION SPACE (16:00 - 17:30)

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<tr>
<td>To understand the role of AI: its advantages and limitations</td>
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<td>To understand the new advances in text mining when applied to ‘messy’ diagnosis data</td>
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<td>To facilitate discussion on academic career options and networking</td>
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<tr>
<th>Welcome, Housekeeping and Introduction</th>
<th>Session Chair</th>
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<tr>
<td>The Grail Model</td>
<td>Sir Harpal Kumar</td>
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<td>AI Data Driven Early Detection</td>
<td>Prof. Sue Astley</td>
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<td>The University of Manchester, UK</td>
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<td>Networking and Discussion</td>
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<td>Interactive Networking Session</td>
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### SESSION 4 | DATA AND STATISTICS OF EARLY DETECTION (17:40 - 19:00)

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<td>To understand how health inequalities impact cancer diagnosis</td>
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<td>To understand how big data sets used in early detection can be biased</td>
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<td>To explore how access to healthcare impacts early detection</td>
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| The Lung Health Check - A Community Model for Early Detection Screening | Dr Haval Balata |
| Manchester University NHS Foundation Trust |  |
| Big Data in Early Detection | Dr Ellie Badrick |
| The University of Manchester, UK |  |
| Health Statistics: The Disproportionate Nature of Access and the Impact on Outcomes | Dr Ryan Petteway |
| OHSU, US |  |
| Discussion |  |
### SESSION 5 | SCIENCE OF EARLY DETECTION (16:00 - 17:30)

**Objectives**
- How to identify those people at higher risk
- How to apply new tests in real world settings
- To understand the role of imaging in identifying cancer at early stages
- How novel cancer models are mapping the generation of tumours

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| Genetic Risk                           | **Prof. Gareth Evans**  
The University of Manchester, UK |
| Gynaecological Cancer Early Detection  | **Dr Vanitha Sivalingam**  
The University of Manchester, UK |
| Imaging in Early Detection             | **Prof. Shonit Punwani**  
University College London, UK |
| The Role of Cancer Models in Early Detection | **Dr Ellen Langer**  
OHSU, US |
| Discussion                             |               |

### SESSION 6 | SCIENCE OF EARLY DETECTION (17:50 – 19:00)

**Objectives**
- To understand how ethnicity and genomics contribute to differences in cancer early detection
- The role of exosomes in cancer development
- How nanotechnology is working with cancer models

| Ethnicity and Genomics                  | **Prof. David Wedge**  
The University of Manchester, UK |
|-----------------------------------------|-------------------------|
| Exosomes                                | **Prof. Utkan Demirci**  
Stanford, US |
| Nanotechnology in Early Detection       | **Dr Marilena Hadjidemetriou**  
The University of Manchester, UK |
| Discussion                              |               |
### THURSDAY 12TH AUGUST

#### SESSION 7 | CANCER EARLY DETECTION LOOKING OUTSIDE OF THE US/UK (16:00 - 17:30)

| Objectives | To understand some of the challenges in delivering diagnostic tests within different communities  
To understand how to implement early detection initiatives on an international scale |
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| Challenges of Implementing Early Detection in India | Prof. Rajiv Sarin  
Tata Memorial Centre, India |
| Kenya and Manchester | Dr George Njoroge  
Kenya University Teaching Referral and Research Hospital |
| MADCAP Study | Prof. Tim Rebbeck  
University of Harvard, US |
| Discussion | |

#### SESSION 8 | SUMMARY SESSION (17:50 - 19:00)

| Objectives | What is needed to develop cancer early detection programmes  
Explore how to reduce health inequalities |
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<td>Audience Engagement Session</td>
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<td>Feedback from attendees</td>
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| Summary of the ACED Summer School | Dr Martin Bone  
The University of Manchester, UK |
| Close of the Summer School | |
ENHANCEMENT

Register for the Summer School

Link to Eventbrite

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@Manchester Cancer Research Centre
@Cancer Research UK Manchester Centre

For general information about the Summer School

ACEDcomms@manchester.ac.uk