

CANCER RESEARCH UK STRATEGY AND ACTIVITIES IN EARLY DETECTION RESEARCH

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EDRN SCIENTIFIC WORKSHOP
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AN INTRODUCTION TO CANCER RESEARCH UK

LARGEST FUNDRAISING MEDICAL
RESEARCH CHARITY IN THE WORLD

LARGEST FUNDER OF CANCER
RESEARCH IN EUROPE

AN ANNUAL INVESTMENT OF
APPROX. \$600M IN CANCER
RESEARCH

WE ARE ALMOST EXCLUSIVELY
FUNDED THROUGH PUBLIC
DONATIONS

THE MONEY WE RAISE IS SPENT ON
RESEARCH, INFORMATION,
ADVOCACY AND PUBLIC POLICY

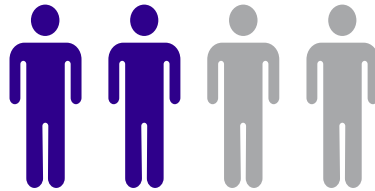
WE FUND 45% OF CANCER
RESEARCH ACTIVITY IN THE UK

OUR AMBITION

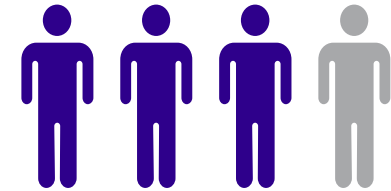
Our vision is to bring forward the day when all cancers are cured.



1970



2010

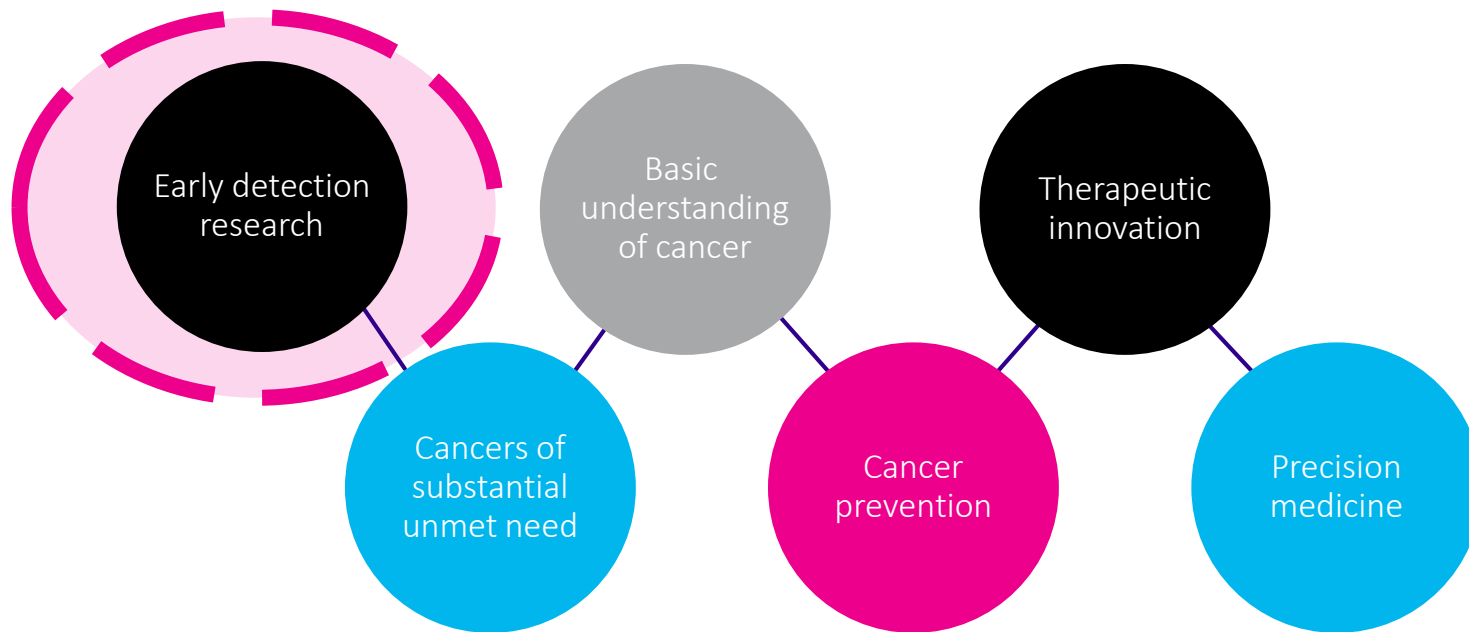


IN THE NEXT
20 YEARS

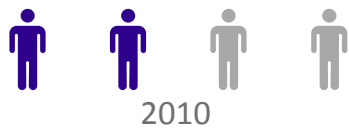
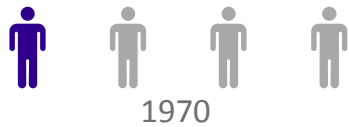
Over the last 40 years, cancer survival rates in the UK have doubled – in the 1970s just a quarter of people survived, today that figure is half

We want to accelerate progress and see three quarters of patients surviving the disease within the next 20 years

WE ARE FOCUSING OUR RESEARCH INVESTMENTS TO ACHIEVE THIS AMBITION



CRUK PRIORITY IN EARLY DETECTION (EDx) RESEARCH



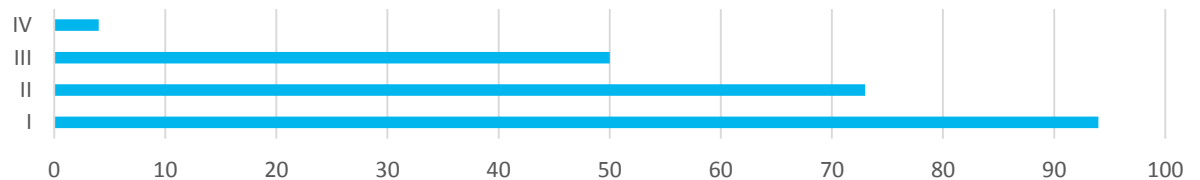
Early detection is crucial for achieving 3 in 4 people surviving cancer

Survival rates for many cancers improve dramatically when disease is detected earlier

Most existing therapies work better when used earlier in disease course

Understanding the biology of early cancer (and pre-cancer) may also underpin target ID, precision medicine and prevention

10 year relative survival for colorectal cancers by stage of diagnosis (%)



WHAT IS EARLY DETECTION OF CANCER?

Early Detection

Research which seeks to enable the detection of cancer, or pre-cancerous states, at the earliest possible time point at which an intervention might be made.

This includes:

- Biology that underpins pre-cancer/early disease
- Technologies which will enable detection of robust, informative signals
- discovery and validation of marker signatures which detect (and prognose/stratify)
- Bioinformatics and systems biology to understand and integrate signals
- Translational and clinical research

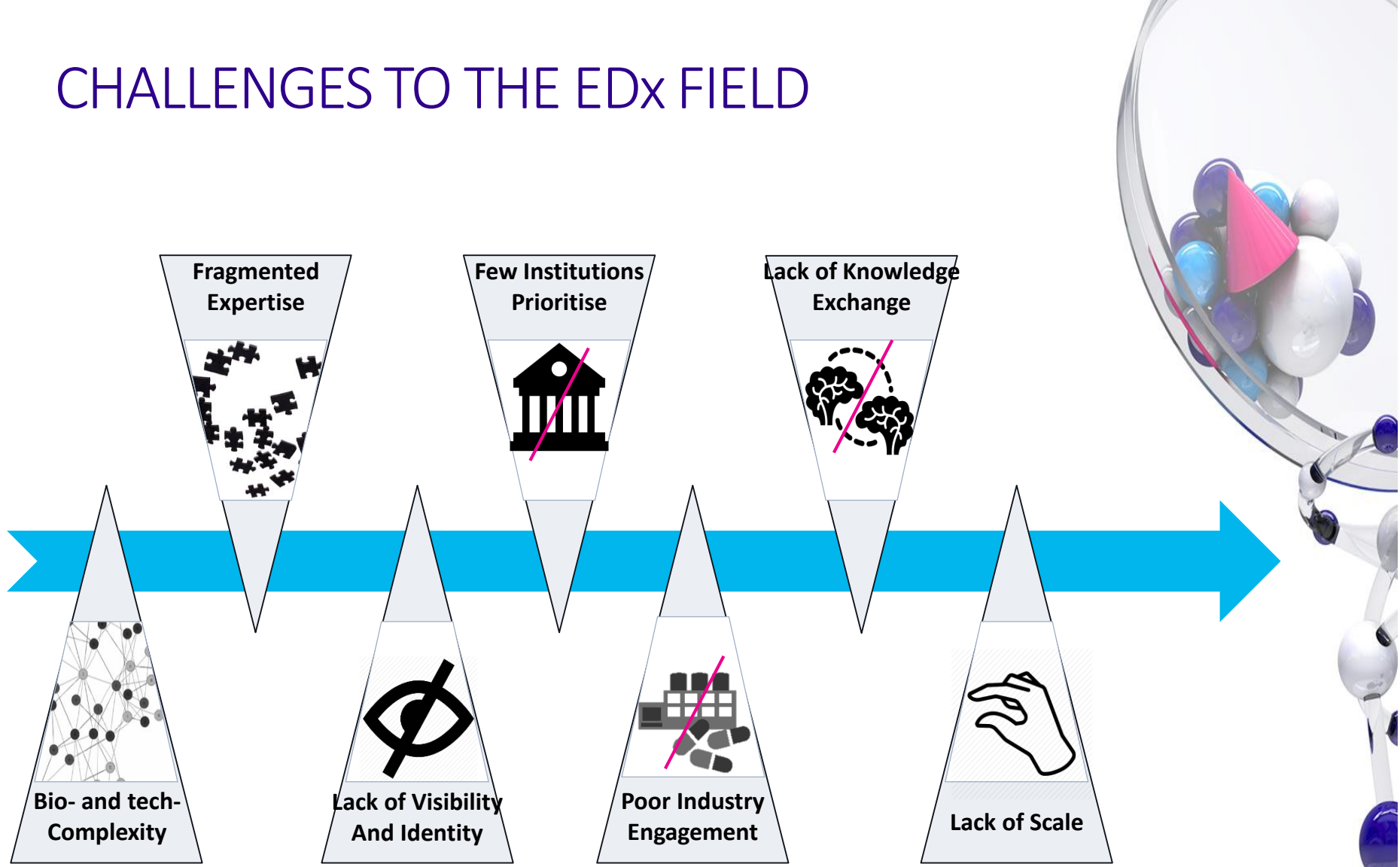
Early diagnosis

Seeks to understand the role of patients, healthcare professionals and healthcare providers, and to develop diagnostics in a population or clinical context.

This includes:

- utility and health economic impact
- Influence patient/clinician behaviour
- policy/health system delivery.

CHALLENGES TO THE EDx FIELD



KEY PRIORITIES

EARLY & PRE-CANCER BIOLOGY

An improved understanding of early tumour development is essential. This includes defining lethal vs non-lethal cancers.

SYSTEMS BIOLOGY

Novel approaches are required for understanding interactions within cells, between cells and with the early tumour microenvironment.

COLLABORATION

Combining the expertise and experience of academia, clinicians, industry, patients and multidisciplinary fields, in the UK and globally, will help solve our biggest problems.



MODELS OF EARLY DISEASE

Better models of early disease are urgently needed to inform our understanding of early tumorigenesis.

MARKERS & INFORMATICS

Assays and analytics for identifying biomarkers and integrating results will reveal the detectable signatures of early disease.

NOVEL TECHNOLOGY

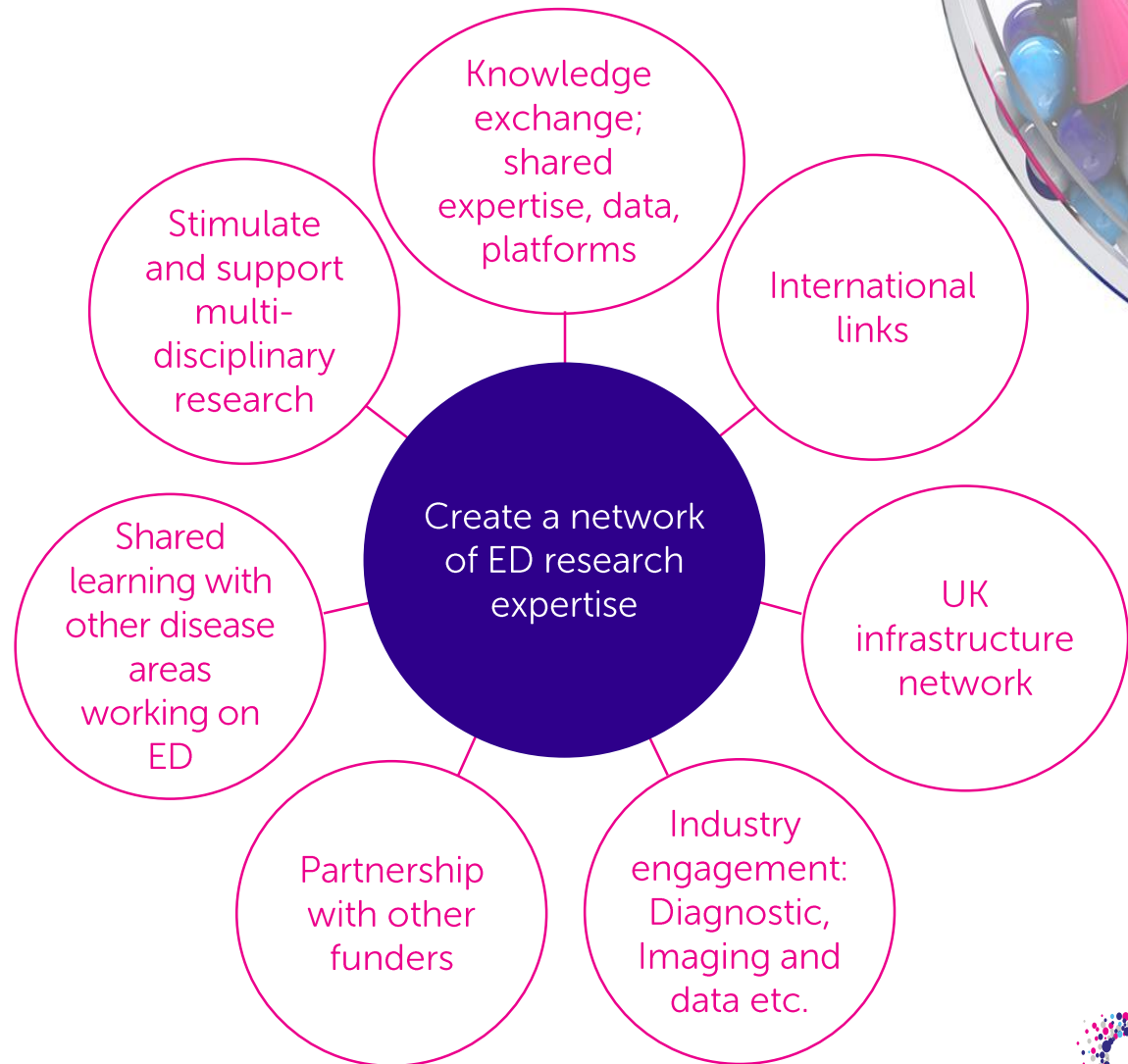
Sensors, probes, nanotechnology, imaging; new technology will change how and when we detect cancer.

Discovery and translational research with line of sight to clinical and population implementation

A NEED TO CREATE AN EARLY DETECTION COMMUNITY

Cancer early detection does not have an established identity or research community.

CRUK can act to foster this, drawing together relevant expertise to create a sustainable research field.



CRUK IS BUILDING TO A MAJOR PROGRAMME OF INVESTMENT IN A MULTIFACETED APPROACH TO TACKLE CHALLENGES IN EDx RESEARCH

Community building, consultations & networking

CRUK-OHSU Early Detection of Cancer Conference



A Road Map for EDx



EDx Sandpit Workshops



Funding Research

EDx Project and Programme Awards



Grand Challenge



Investing in capabilities & infrastructure

International Collaboration in EDx Research



HARP/ISCF???

