

Defeating Cancer

Our strategy
to transform
the lives of
cancer patients

2022–27





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Mission

We will make the discoveries that defeat cancer.

Vision

We will transform the lives of cancer patients through world-class research and education, and by growing our impact on society.



Our new strategy to defeat cancer



Cancer patients are living longer and with a better quality of life. Many are now being cured. Research has improved the outlook for patients, by creating new treatments that target tumours more effectively and with fewer side effects. But there is still much work to do. While there have been big gains in survival for some cancers, that is not the case across the board. Cancer continues to claim far too many lives.

At The Institute of Cancer Research, London, our mission is to make the discoveries that defeat cancer. We work with our clinical partner The Royal Marsden NHS Foundation Trust, and organisations across the UK and internationally, to transform the lives of cancer patients and their families. As well as being a world-leading research institute and a charity, we are also a higher education institution, specialising in research and postgraduate education in cancer.

This is an exciting time for cancer research. We are moving forward with our new strategy at a time of incredible scientific and technological innovation, which is providing fresh ways of looking at cancer and new avenues for treatment.

At the same time, the wider landscape is challenging. The Government has committed to a long-term funding deal for science, but it remains difficult to deliver world-class research within the finances available. Our sector is still adapting to the UK's departure from the EU, and its impact on collaborative research and recruitment. And like the rest of

society, cancer research was greatly affected by the Covid-19 pandemic, which hit funding, lab studies and clinical trials. But we see opportunities too – with increased commercial interest in the life sciences and the chance to streamline the regulatory environment for medical research.

Our strategy, *Defeating Cancer*, aims to accelerate progress for cancer patients by harnessing the latest scientific knowledge and technology to drive innovation in treatment. Over the last few years, advances in science have given us a new understanding of cancer. We increasingly see the disease as a complex ecosystem, in which cancer cells evolve amid a mesh of cells and signals from surrounding tissue and the immune system. Our new strategy to defeat cancer rests on this understanding, and on the concept that **cancer research is an ecosystem** too.

We will carry out world-class research with ever closer connections between our discovery science to unravel the cancer ecosystem, translational research to diagnose and target cancer more effectively, and clinical studies to build evidence for advances in patient care. We will deliver our internationally renowned programme of education, to bring forward a new cadre of cancer research leaders and expert oncologists. And we will grow our impact for patients, by sharing our findings across society – including with life-science businesses, partners and the NHS – and increasing income for tomorrow's research.

Together, our fantastic research and teaching, and our knowledge exchange work to maximise our impact, form a vibrant, mutually supportive ecosystem. We will underpin these central elements of our strategy by further developing our organisation – ensuring our brilliant and diverse people work together as One ICR, supporting our science and embracing a sustainable future.

Kristian Helin

Professor Kristian Helin
Chief Executive
The Institute of Cancer Research, London

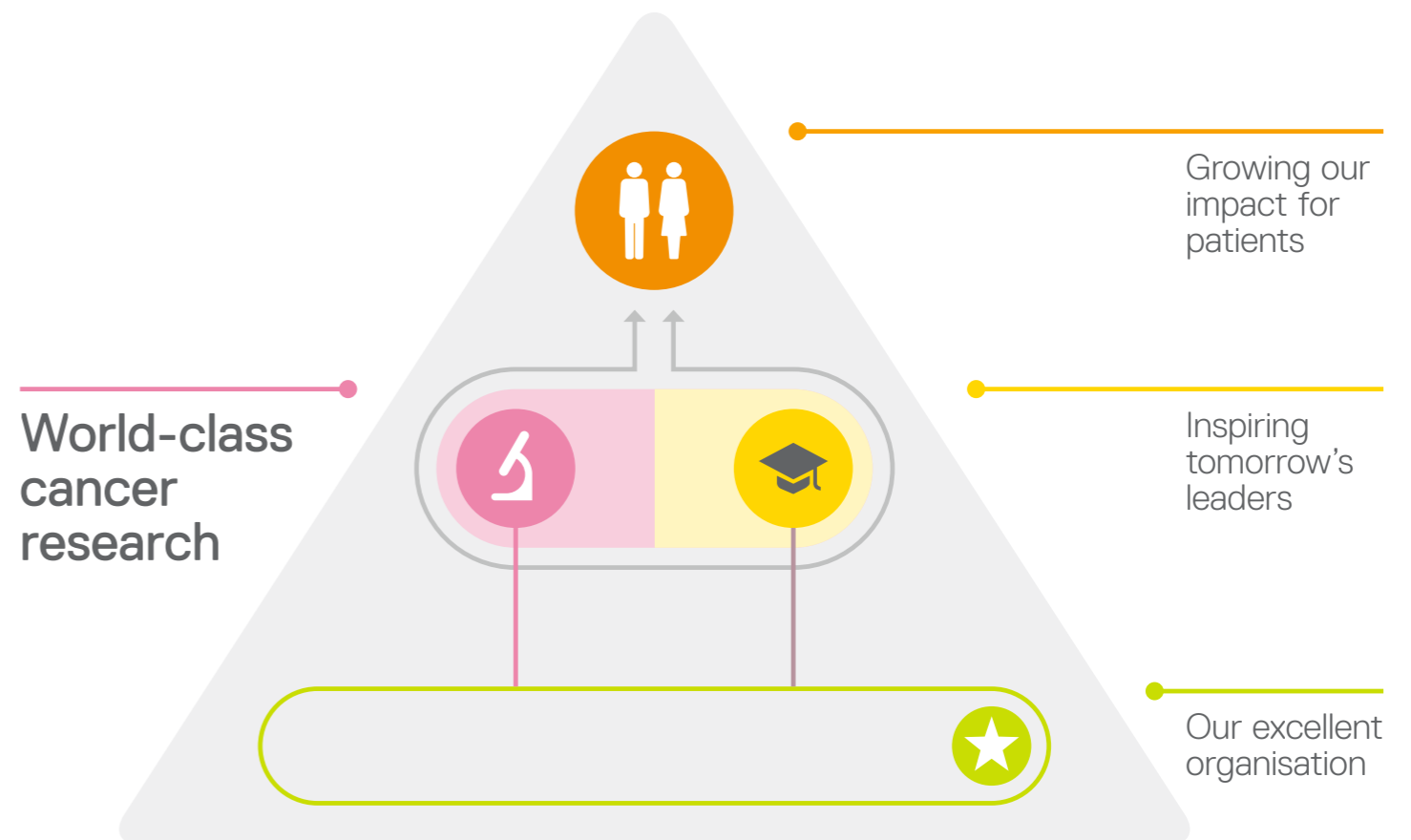


Our strategy has three pillars:

- World-class cancer research
- Inspiring tomorrow's leaders
- Growing our impact for patients

Underpinned by further developing:

- Our excellent organisation



World-class cancer research

Growing our impact for patients

Inspiring tomorrow's leaders

Our excellent organisation

World-class cancer research



Professor Ros Eeles leads the IMPACT study, to assess whether targeted screening for prostate cancer leads to earlier diagnosis.

Vision

We will unravel cancer's ecosystem, overcome drug resistance, and advance diagnosis and treatment for patients – through world-class fundamental, translational and clinical research.

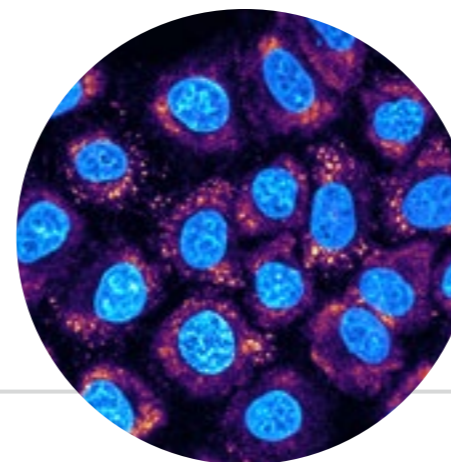
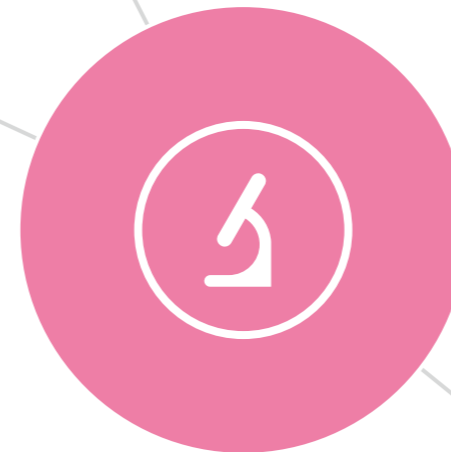
The ICR and The Royal Marsden have worked together on a joint strategy for world-class cancer research – motivated by the ambition of offering a long and healthy life for all people affected by cancer.

We will learn from the latest scientific understanding of cancer, which sees cancer cells evolving within a complex interconnected ecosystem. Our scientists and clinicians will draw on fundamental discoveries about cancer right across the ICR and beyond, find ways to diagnose and target cancer more effectively, and advance cancer treatment through our innovative programme of clinical trials. We will work through our wide network of research partners to improve the outlook for patients with cancer here in the UK and across the world.

Our joint programme of research is aligned to the strategy for our National Institute for Health and Care Research Biomedical Research Centre, and with the NHS Long Term Plan's ambitions for cancer – to save even more lives and ensure people with cancer can live as well as possible.



Now



Over the last decade, scientific discoveries have led to fundamental new insights into how cancer develops. That in turn has ushered in a new era of personalised, precision medicine, allowing many people with cancer to live longer and better, and increasingly to be cured. But while survival rates overall are improving, some cancers, such as pancreatic or brain cancer, remain extremely challenging to treat. And once the cancer has metastasised, or spread, the disease is very hard to cure.

We know the reason cancer can be so difficult to treat is that it is so complex and genetically diverse, and constantly adapts and evolves. Patients can initially respond to treatment, only for their cancer to come back, more resistant and aggressive. We now take into account our scientific understanding of how cancer evolves and becomes drug resistant every time we create a new treatment – aiming to predict how cancer will react, so that we can stay one step ahead.

In another layer of complexity, we now view cancer as part of an interconnected ecosystem, with cancer cells interacting through a tangle of signals with each other, the surrounding tissue and the immune system. Cancer cells acquire mutations and other changes which allow them to corrupt the normal tissue around them, coercing it into producing signals that sustain cancer growth and survival.

We now view cancer as part of an interconnected ecosystem.

Next

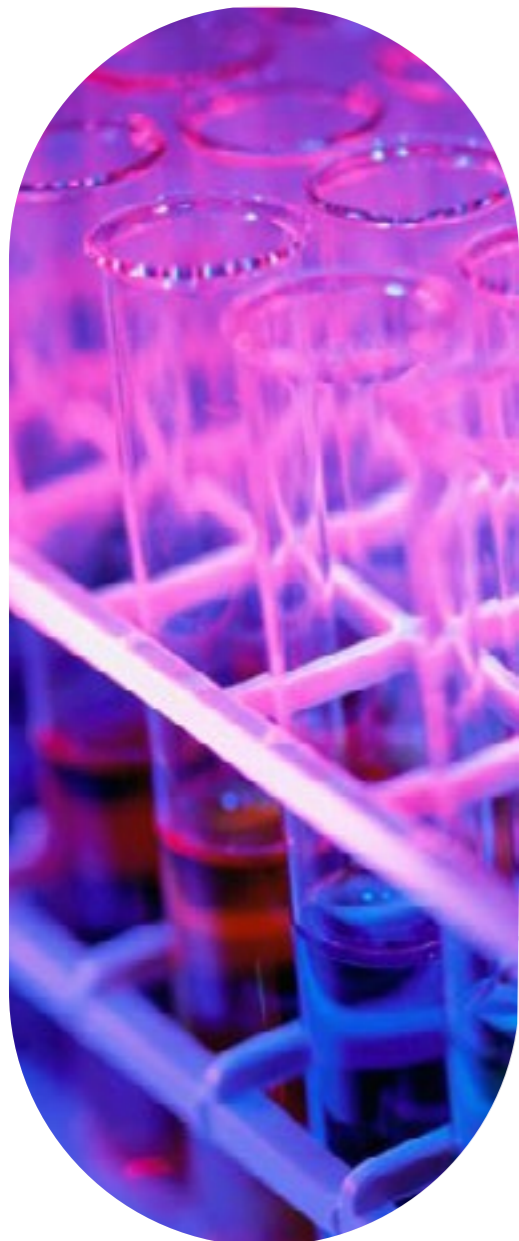
We plan to harness our increasingly detailed knowledge of cancer to design new ways of attacking it – transforming the outlook for people with cancer through new treatments that address cancer as a complex ecosystem.

We will design new treatments that exploit the genetic instability of cancer cells, and the way that they are sustained by growth and survival signals from the microenvironment. And we will develop new immunotherapies, which together with radiotherapy can disrupt the ecosystem balance between cancer and the immune system – provoking immune cells to hunt down and attack the tumour.

The ICR and The Royal Marsden will tackle cancer's complexity, evolution and ecosystem through the central insight of this strategy – that **cancer research is an ecosystem too**. Our world-class research will run from bench to bedside and back again – linking together fundamental discoveries from across the ICR to identify new weaknesses in cancer, create innovative new ways to target cancer, and through clinical studies with The Royal Marsden improve diagnosis and treatment for patients. We will learn from the experiences of patients, clinicians and the wider community, and use this information to develop new life-changing and life-saving therapies.

We will achieve our vision through four research themes:

- 1 **Unravel** the cancer ecosystem
- 2 **Diagnose** better and earlier
- 3 **Target** weaknesses in cancer
- 4 **Treat** cancer more precisely



Unravel the cancer ecosystem

We will reveal how cancers develop, adapt and evolve as part of a complex ecosystem of signals, cells, tissues and the microbiome.

Now



We are gaining an increasingly sophisticated understanding of cancer's complexity and the way it interacts with its environment as part of an interconnected ecosystem.

Cancers are genetically diverse, and our research is shedding new light on how they develop, evolve and become resistant to treatment. We are learning too the role played by a small proportion of cancer cells that behave like stem cells in shaping the way the tumour develops and how it responds to treatment.

We are starting to understand the controls cells have in place to protect their genomes, and the mechanisms that help to sustain cancer cells even as they accumulate DNA damage. And we now appreciate that cancer cells interact with the cells and tissues surrounding a tumour in complicated but important ways – feeding off normal tissue repair functions and stimulating cells to produce the growth and survival signals they need to thrive.

Next

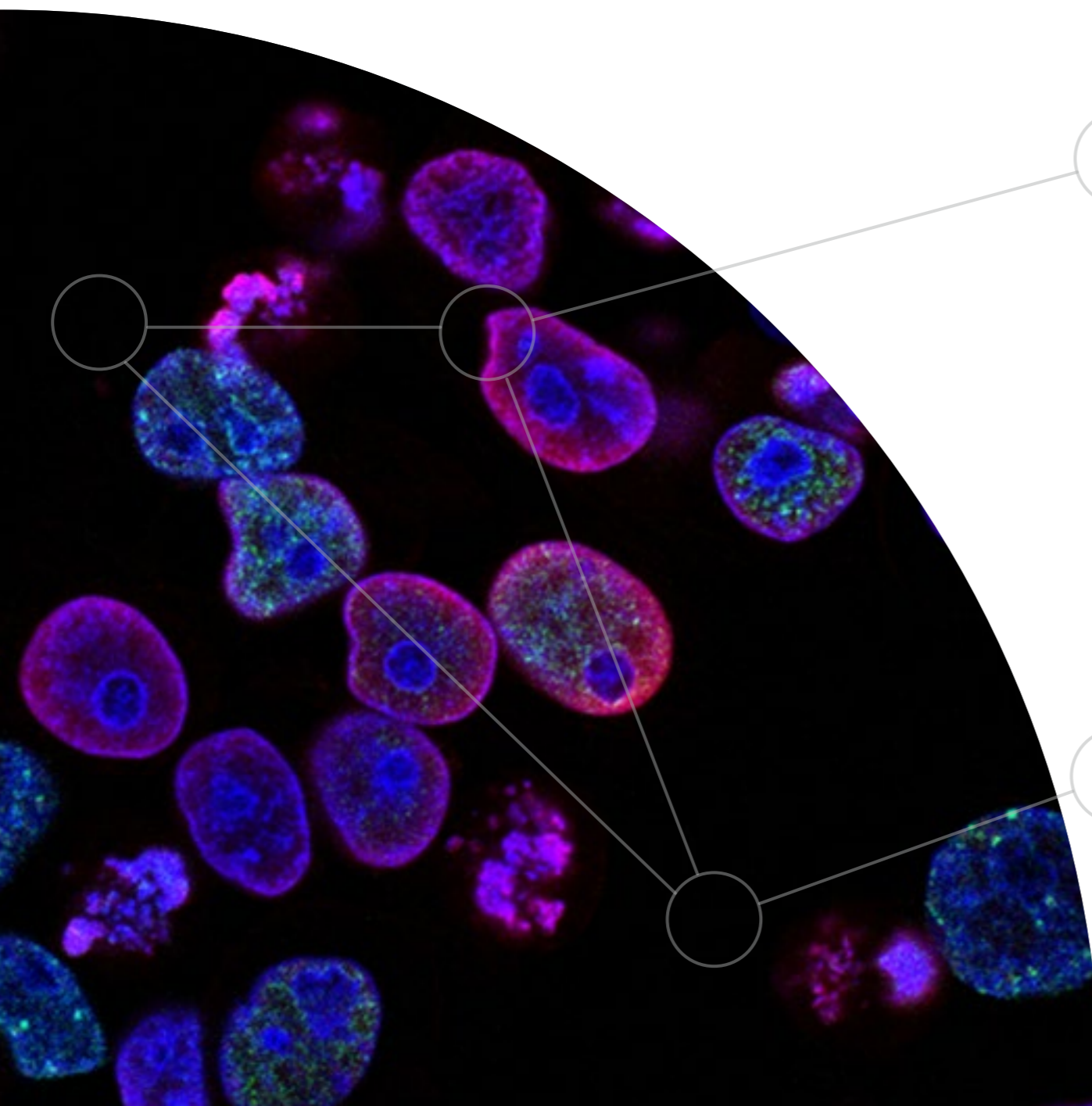


As we look to the future, there will be an increasing focus on how tumours interact with the immune system – and how some cancer cells can suppress the immune response. We also need to understand more about how the delicate balance between tumour and tissue environment is influenced by the body's microbiome – the population of microbes that lives within it.

Our challenge is to unravel cancer's complexity, evolution and ecosystems, and reveal new weaknesses that can be targeted by treatment.

To achieve that, we will need to examine and understand cancer at unprecedented resolution.

Our research is shedding new light on how cancers develop, evolve and resist treatment.



We will



“My team is working to unravel the relationship between DNA damage and kidney cancer, to point us towards more effective treatments for people with the disease.”

“Our research has revealed why some kidney cancer patients with mutations in a gene called PBRM1 – which normally prevents cells from dividing when they contain damaged DNA – sometimes respond better to immunotherapy than other patients. This suggests that deliberately damaging DNA in cancer cells – for instance with radiotherapy – might enhance the effects of immunotherapy in some patients.”

Professor Jessica Downs, Deputy Head of the Division of Cancer Biology.

- **Understand** how normal cells become cancerous, by studying the role of genetic and epigenetic changes, and how tumour initiating cells shape genetic evolution and 'phenotypic plasticity'.
- **Decipher** the fundamental mechanisms that drive cancer and how mutations affect the structure and function of key proteins within cancer cells.
- **Investigate** how normal cells preserve the integrity of their genomes, and how genetic instability can leave cancer cells vulnerable.
- **Examine** the role that 'stem-like' cells play within the cancer ecosystem – including how these cells progress, influence surrounding cells and resist treatment.
- **Learn** how to predict and shape the path of cancer evolution – as a means of preventing or overcoming resistance to treatment.
- **Explore** how we can use the immune system against cancer – investigating crosstalk between innate and adaptive immune responses, interactions between immune cells and cancer cells, and the effect of targeted treatment, chemotherapy and radiotherapy on the immune response.
- **Unravel** the complex interactions between cancer cells and their tissue environment, and how cancers shape and exploit normal tissue repair activities to support their survival and growth.
- **Understand** the biological processes that occur in irradiated cancer and normal cells and how radiation affects the inflammatory landscape.

How



The convergence of different scientific disciplines and recent revolutionary advances in the field of electron microscopy means it is now possible to study cancer at unprecedented resolution. This presents an opportunity that **Professor Sebastien Guettler**, Deputy Head of the Division of Structural Biology, is keen to capitalise on to unravel the precise molecular and cellular processes that help the body to regenerate and repair tissues, many of which are hijacked by cancer. Professor Guettler's team combines biochemistry, structural biology and cell biology approaches to study how cancer cells override molecular controls to replicate themselves time and time again.

He said: “At the ICR, we want to understand how cancer functions 'under the hood' and in its ecosystem surrounded by other cells, blood vessels and the immune system. In this way we can inform new therapeutic strategies that can help patients in the clinic.”

- **Invest** in cutting-edge genomic, proteomic, epigenetic and microscopy technologies to examine cancer cells and ecosystems at unprecedented resolution.
- **Establish** world-leading expertise and infrastructure in developing new mouse models, to help us understand the role of proteins in cancer, assess how tumours interact with their environments, and identify new drug targets.
- **Create** other enhanced models of disease using patient-derived organoids and *ex-vivo* co-culture.
- **Develop** the new Centre for Genome Stability to further enhance our understanding of how cells maintain their genomes and respond to DNA damage – and the implications for cancer and its treatment.
- **Bring** together expertise in immuno-oncology and the tumour microenvironment through the Centre for Translational Immunotherapy.
- **Grow** our scientific expertise and leadership in computational biology to unravel and model cancer's complexity, ecosystems and evolution.
- **Develop** a federated model for data science across the ICR.
- **Further** connect the ICR's Centre for Evolution and Cancer with fundamental cancer biology to find ways to map and disrupt the cancer ecosystem.

Diagnose better and earlier

We will diagnose cancer more precisely, detect the disease earlier and identify initial signs of recurrence or resistance – through new biomarkers, diagnostics and understanding of cancer risk.

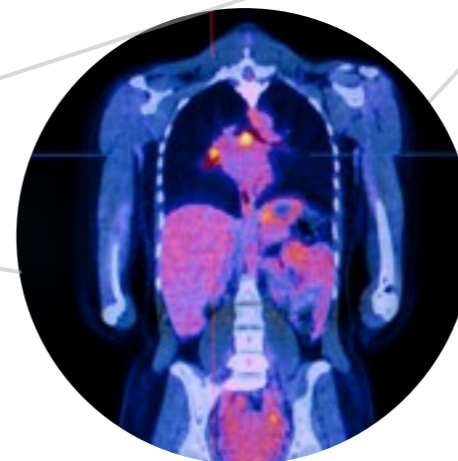
Now



Cancer is an incredibly diverse disease, consisting of hundreds of different types and sub-types, and genetic variation even within an individual tumour. Cancers interact with their environment and the immune system in a wide variety of ways. All of this means that apparently similar cancers can respond very differently to treatment. Diagnosing cancer as precisely as possible is critical to allow treatments to be tailored for each patient. It is also important to detect cancer as early as possible in the course of the disease, since cancer is much easier to treat when it is still within its primary site than when it has spread to other parts of the body.

Advances in technology are having a transformative effect on cancer diagnosis. We can now classify cancers based on their patterns of mutation and molecular biomarkers. New 'liquid biopsies' can detect cancer DNA in the bloodstream, and pick up early signs of recurrence or drug resistance. Sophisticated data analysis is teaching us more about the factors which determine cancer risk, so those at the highest risk can potentially be screened to detect their cancers earlier.

Next



We now have an opportunity to exploit the latest advanced technologies to create a new generation of cancer diagnostics, taking into account not just molecular data but also the cancer's interactions in its ecosystem.

Analysing molecular, immune and imaging data can identify new biomarkers for cancer's recurrence, treatment response or drug resistance. We aim to use artificial intelligence and other computational techniques to integrate genetic and biomarker data with imaging and clinical records, to provide a comprehensive, highly personalised picture of an individual patient's cancer. And we will develop new techniques to detect cancer cells and DNA more sensitively, to diagnose cancer earlier, detect early signs of recurrence, or pick up residual disease when a cure is still possible. These approaches will help us exploit our knowledge of cancer risk to develop new strategies for targeted screening and early detection.



We will



Tony McHale, a screenwriter, discovered he was at higher risk of aggressive prostate cancer after being convinced by his sister to get a test for an alteration in the BRAC2 gene. He was invited to take part in the IMPACT study, led by Professor Ros Eeles, which is aiming to improve targeted screening in men at higher risk of prostate cancer to diagnose patients earlier.

Tony said: "Nine months into the IMPACT study they discovered I had developed prostate cancer. I was treated with multiple rounds of radiotherapy and have been clear ever since. I was lucky, if I hadn't got the genetic test for the BRAC2 gene and been aware of my risk of developing prostate cancer, my diagnosis might have been missed. Being involved in the IMPACT study saved my life."

- **Characterise** different cancer subtypes by recognising patterns of genetic mutations and protein expression.
- **Identify** and validate biomarkers giving information about a cancer's behaviour, prognosis and likely response to treatment.
- **Develop** new approaches to imaging a tumour's behaviour, metabolism, microenvironment and interactions with the immune system.
- **Understand** how early cancer mutations arise and when it is first possible to detect them.
- **Detect** cancer's initial onset, disease recurrence and residual disease as early as possible through use of liquid biopsies and advanced imaging.
- **Create** next-generation diagnostics, tools and algorithms to help guide treatment in the clinic.
- **Improve** predictions of cancer risk by analysing how genetic, epigenetic and modifiable lifestyle factors interact in the development of cancer.
- **Assess** the benefits and potential harms of risk-stratified approaches to early detection of cancer.
- **Examine** the role of metabolism and the microbiome in the cancer ecosystem, and whether they open opportunities to detect cancer or reduce risk.

How



The new Integrated Pathology Unit (IPU) is a state-of-the-art tissue-based laboratory, incorporating computational pathology analysis, headed by **Professor Manuel Salto-Tellez**. The unit is a joint project between the ICR, The Royal Marsden and other collaborators.

One of the goals of the IPU is to develop complex and highly quantitative approaches to tissue analysis. By combining artificial intelligence and the latest computational techniques to process and analyse pathological images from tumour samples, the unit will open up new avenues for diagnosis and treatment.

"Our vision is to offer excellence in digital pathology to benefit patients, and to drive research across academia, healthcare and industry."

- **Develop** the Integrated Pathology Unit at the ICR and The Royal Marsden, supported by a framework for systematic access to clinical material and data.
- **Advance** use of 'multi-omics' techniques to profile cancers – using artificial intelligence to integrate data from genomics, proteomics and metabolomics.
- **Use** state-of-the-art profiling of tissue biomarkers, analysed using artificial intelligence, to understand better how cancers respond to treatment and develop drug resistance.
- **Bring** together functional imaging biomarkers with novel precision sampling to create 'virtual biopsies'.
- **Develop** novel methods and technologies for molecular detection of cancer.
- **Evaluate** new imaging modalities, including molecular, functional MRI and ultrasound-based approaches, in preclinical studies and drive their translation into the clinic.
- **Pioneer** diagnostic technologies that exploit connections between cancer researchers, engineers, physicists and mathematicians in the Cancer Research UK Convergence Science Centre at the ICR and Imperial College London.
- **Take** forward the new Early Diagnosis and Detection Centre at The Royal Marsden and the ICR to expand research into early detection of cancer.
- **Advance** understanding of cancer risk through the Cancer Epidemiology and Prevention Research Unit at the ICR and Imperial, and the Breast Cancer Now Generations Study.
- **Develop** new trial methodologies to assess the effectiveness of targeted early detection and prevention strategies for cancer.

Target weaknesses in cancer

We will exploit our understanding of cancer's complexity, ecosystems and evolution to create innovative new ways to target the disease – drawing on ideas from across the ICR's discovery science.

Now



As we understand more about cancer, we are able to identify new weaknesses that can be targeted with innovative new drugs and technologies. Attacking cancer in radical new ways is essential if we are to make step-change progress against the disease – and to allow us to bring treatments with different mechanisms of action together in innovative combinations for even greater impact.

The ICR has established itself as a world leader in the discovery of novel molecularly targeted treatments for cancer, identifying 21 new drug candidates since 2005. Our last research strategy drove a major change in our approach to discovering new treatments – by putting at its heart an understanding of how cancers adapt, evolve and become drug resistant. We now monitor cancer's evolution over time, so we can find ways of combining treatments to keep resistance at bay. Our researchers are increasingly evaluating new drug combinations to hit multiple targets at once in cancers to prevent or overcome resistance. We are even working to target the evolutionary process itself.

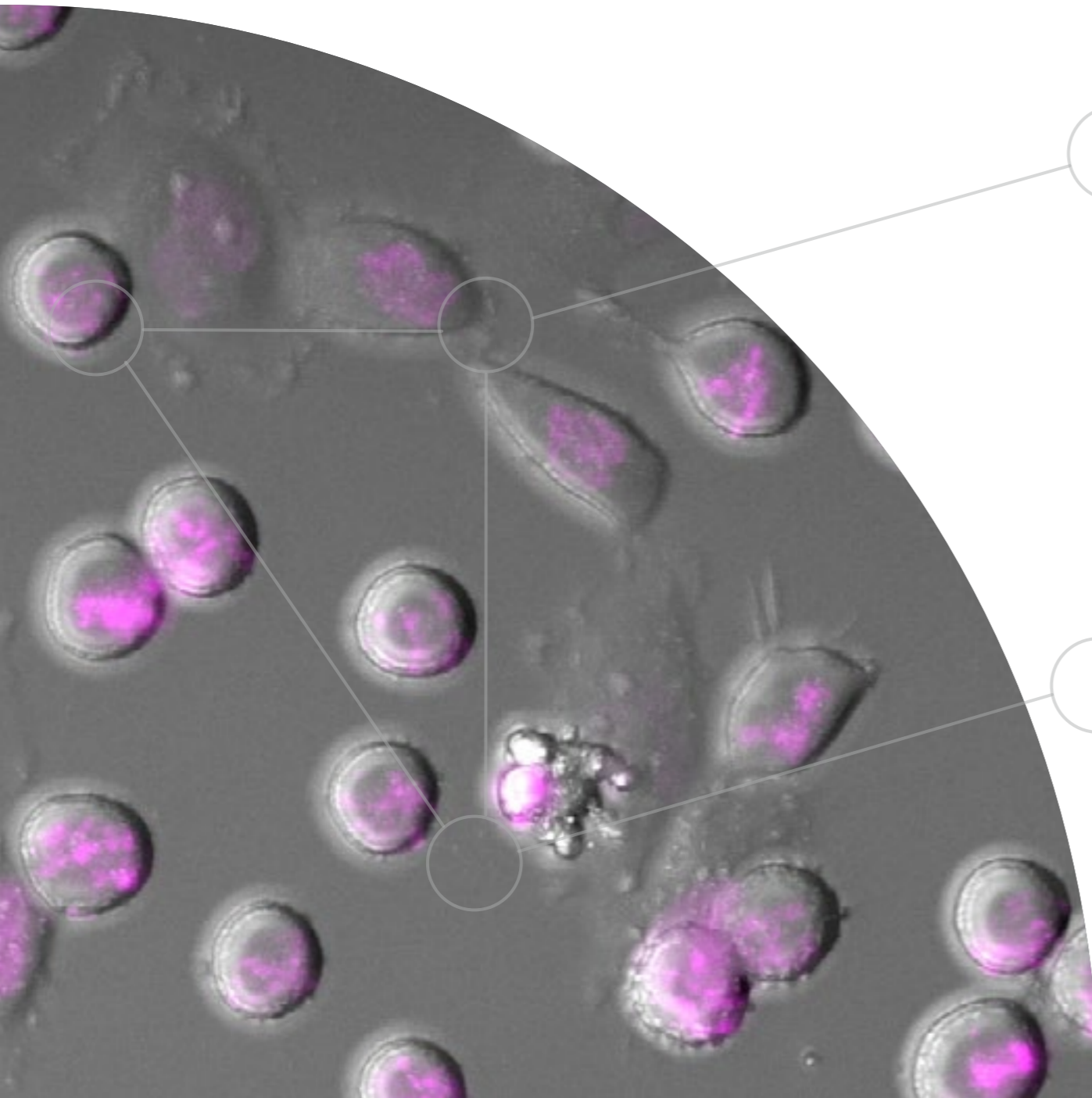
We also understand that the most successful treatments target cancer before it has progressed and metastasised, and we are world leaders at using advanced physics and imaging to create new ways to deliver high-precision radiotherapy.

Next

Attacking cancer in radical new ways is essential if we are to make step-change progress.

We increasingly understand that cancers evolve within a complex ecosystem, made up of cancer cells, the immune system, other cells and signals of the surrounding tissue microenvironment, and the microbiome.

This insight is providing exciting new approaches to treating cancer by targeting its weaknesses and dependencies. We aim to discover novel treatments which exploit our understanding of the way cancers evolve within an ecosystem, the interactions between cancer cells and the immune system, and the reliance of a tumour on the tissue and growth signals that surround it. To do this, our strategy seeks to draw more effectively from ideas generated by discovery research across the ICR, and from clinical observations.



We will



The ICR's Centre for Protein Degradation will accelerate research in one of the most promising new areas of drug discovery – targeted protein degradation. The centre hopes to discover new research tools and new treatments for hard-to-treat cancers by hijacking the natural process for protein destruction in cells.

“The Centre for Protein Degradation aims to create the next generation of therapies that can exploit cancer cells' own protein disposal process. Hijacking the disposal process allows us to target proteins once considered 'undruggable' by most targeted drugs, and can open exciting new strategies to target cancer, and potentially other diseases too.”

Swen Hoelder, Professor of Medicinal Chemistry and Drug Design

- **Create** treatments to overcome drug resistance by targeting evolutionary mechanisms within the cancer ecosystem – such as cancer's ability to cope with genetic instability.
- **Work** with partners to create innovative new cancer immunotherapies – including cellular therapies, oncolytic viruses and ways of combining checkpoint inhibitors.
- **Identify** approaches to using existing immunotherapies more effectively and extend their use to new cancer types.
- **Explore** ways of targeting cancers indirectly by disrupting their ecosystems and the support they receive from surrounding tissue.
- **Develop** ways to exploit our understanding of cell death to drive the immune system to attack surviving cancer cells.
- **Select** patients for targeted therapies by identifying and using biomarkers of treatment response and drug resistance.
- **Develop** new approaches to targeted protein degradation to create new treatments and study how particular proteins help to drive cancer.
- **Exploit** advances in physics, engineering and computer science to create advanced imaging technologies for targeting cancer with precision radiotherapy and surgery, and novel radiation dosing strategies.
- **Create** new forms of precision radiotherapy and investigate how they might be combined with other treatments.

How



We are creating a Centre for Target Validation, which will bring together the deep biological insights of our discovery scientists and the therapeutic expertise of our drug discovery researchers. By creating joint project teams, the centre hopes to draw on ideas from across the ICR and rapidly translate discoveries into treatments for patients.

Dr Olivia Rossanese, the ICR's Director of Cancer Drug Discovery, said: “We can think about targeting weaknesses in cancer in two ways. First it is about doing the deep basic science to understand what those weaknesses are. Second, it is about hitting them with small molecules and drugs to find new ways to treat cancer. The Centre for Target Validation will bridge those two approaches – translating the fundamental discoveries in cancer biology being made across the ICR into drug discovery programmes.”

- **Realise** the potential of fundamental discoveries across the ICR by streamlining interactions with our drug discovery activity – including through joint project teams and positions.
- **Create** a Centre for Target Validation to draw from scientific insights and discoveries across the ICR and to generate the key decision-making data that will inform new drug discovery programmes.
- **Develop** the new Centre for Protein Degradation to establish and apply protein degradation approaches across drug discovery research at the ICR.
- **Pioneer** innovative new technologies and therapies to target cancer involving biologists, chemists, physicists, engineers and mathematicians at the Cancer Research UK Convergence Science Centre.
- **Perform** comprehensive immune profiling to identify biomarkers of response and resistance in different cancer types.
- **Lead** through the UK-wide RadNet network to marshal expertise and invent new forms of curative radiotherapy.
- **Exploit** advances in physics, engineering and computer science to develop innovative patient imaging technologies to target radiotherapy more precisely.

Treat cancer more precisely

We will deliver benefits for cancer patients by developing smarter, kinder treatments through innovative clinical trials and taking advances into NHS care.

Now



The ICR and The Royal Marsden play a crucial role in driving advances in cancer treatment for patients through innovative clinical trials. Our work has helped embed a new era of precision medicine in which patients receive treatment that is tailored for them and their disease. New targeted drugs and immunotherapies attack specific weaknesses within a patient's tumour, while advanced forms of radiotherapy shape beams to the precise dimensions of a tumour and deliver doses in streamlined regimens. Smarter treatments like these are not only more effective than older forms of chemotherapy and radiotherapy, but usually also have fewer side effects. Patients are living longer with a better quality of life, and many more are being cured.

Increasingly, our work to treat cancer more precisely is informed by the latest understanding of its complexity and evolution. Our trials use biomarker tests to select patients for treatment and assess cancer over time to monitor for early signs of resistance. We run trials that test combinations of precision medicines hitting different cancer targets, as a means of overcoming drug resistance. And we have led the clinical development of exciting new immunotherapies, which stimulate the immune system to keep pace with cancers as they evolve.

Next

Smarter treatments are not only more effective, they usually have fewer side effects.

We will develop a new generation of smarter, kinder treatments for patients – driven by the latest discoveries in cancer science and innovations in clinical research and data analysis.

New trial methodologies will allow us to direct patients to the most suitable of a range of drugs, introduce treatment arms as new options become available, or adjust treatment over time to keep one step ahead of cancer. We will enhance our ability to assess targeted drugs, radiotherapy and immunotherapy together in combination.

We want everyone affected by cancer to benefit from advances in precision medicine. We will work through national and international networks to ensure we can make trials available not only for patients with the most common cancers, but also for those with hard-to-treat or rarer kinds. And we will see it as our responsibility to develop a persuasive evidence base for new treatments and interventions, to increase the chances that they will become embedded in routine healthcare to benefit people with cancer.

Treating more precisely cannot only extend lives and cure more people, but also offer gentler treatment with fewer side effects. And by learning more about patients' risk of side effects, we can give treatments as kindly as possible, and learn how best to control symptoms in those patients who sadly cannot be cured.



We will



“Every patient is genetically unique, and so are their cancers. This means people can respond very differently to the same treatment. By assessing the genetics and other biological characteristics in a patient’s cancer, we can identify those who are most likely to respond to particular treatments.

“At the Drug Development Unit, we have had great successes in using such ‘biomarkers’ to drive clinical trials investigating new cancer treatments. In the future, I hope we will be able to offer tailored treatments to cure more patients with cancer.

Professor Udai Banerji, Deputy Director of the Drug Development Unit at the ICR and The Royal Marsden

- **Develop** new smarter, kinder cancer drugs and combinations that aim to molecularly target cancer while reducing side effects.
- **Assess** new treatments that target cancer’s evolutionary mechanisms such as DNA repair defects or mechanisms for coping with genomic instability.
- **Work** with partners to test immunotherapies that exploit our understanding of cancer as a complex ecosystem – including cellular therapies, oncolytic viruses, and combinations with targeted drugs and radiotherapy.
- **Carry** out experimental, biomarker-driven early-phase trials of novel cancer drugs and combinations in both adults and children.
- **Lead** innovative later-stage clinical trials that maximise analysis of data from multiple sources to generate practice-changing evidence.
- **Develop** trials of molecularly targeted precision medicines for patients with cancers of high unmet need.
- **Develop** innovative localised treatments for cancer, such as precision radiotherapy, robotic surgery and novel injectable treatments, to increase cure rates and reduce side effects.
- **Test** novel approaches to treatment for cancers that have only a small amount of regional spread or metastasis, and which could therefore be curable using precision radiotherapy and surgery.
- **Work** through networks to demonstrate evidence of cost-effectiveness and societal benefit for new cancer treatments.
- **Improve** outcomes for people living with and beyond cancer through research into risk-stratified follow-up and personalised care, and support for mental health and wellbeing.

How



Dr Susana Banerjee is clinical lead for the phase II ATARI trial for women with relapsed gynaecological cancers. It stems from ICR lab research showing that an ATR inhibitor drug called ceralasertib can kill cancer cells that have a change in a gene called ARID1A. Researchers think it could be a potential treatment for rare types of gynaecological cancers, which often have this change in ARID1A. She said: “Our goal is to find out if we can deliver more precise and targeted therapy to women with cancers who have limited treatment options.”

ATARI is a ‘platform’ trial, designed by and led with the ICR Clinical Trials and Statistics Unit in partnership with The Royal Marsden. This kind of trial means ceralasertib can be assessed, alone or with olaparib, in groups of patients with or without ARID1A changes, and new lab evidence can be built in as it emerges.

- **Develop** innovative clinical trial methodologies which respond to our latest understanding of cancer by matching patients to the most suitable drugs and adapting treatment over time.
- **Design** trials using liquid biopsies to detect early signs of disease, recurrence or drug resistance, as a means of expanding their use in routine practice.
- **Modernise** our clinical trial infrastructure so we can analyse a more diverse range of data and integrate trial data with other sources of information including clinical records and patient experience.
- **Work** in partnership with those affected by cancer to ensure our trials are equitable, address key questions for patients and maximise use of their data, including through use of patient-reported outcome measures.
- **Work** through the Centre for Paediatric Oncology Experimental Medicine and collaborations in the UK and internationally to set up biomarker-driven trials for children’s cancers, other rare cancers, and cancers of unmet need.
- **Take** forward innovative trials of high-precision radiotherapy through the MR Linac and collaborative research on proton therapy.
- **Work** with partners to collect and analyse health economic data and routine healthcare data to show the value of new treatments and prevention strategies for society and support their uptake into routine healthcare.
- **Help** develop innovative trials in surgery and radiotherapy by working through clinical networks such as the International Centre for Recurrent Head and Neck Cancer at The Royal Marsden.
- **Reduce** potential harms of treatment by assessing long-term adverse effects, finding ways to ease side effects, and developing better ways of deciding whether patients will benefit from treatment.

Inspiring tomorrow's leaders

Vision

We will empower our students and early-career researchers to become tomorrow's leaders in cancer research and treatment by providing the best possible education, training and careers support.

Meg Dinesh Kumar is studying for her PhD at the ICR.



Now



The ICR is a world-leading higher education institution and plays a vital role in building the future cancer research community globally. We are a member institution of the University of London, with a strategic goal to educate and train the next generation of cancer researchers and clinicians.

The ICR offers PhD and MD(res) research degree opportunities across the full range of our research, and a taught MSc programme for clinicians in training. The learning environment of our students is distinctive and outstanding – drawing on our world-class research and close partnership with The Royal Marsden.

Our research degree programme is aimed at outstanding scientists and clinicians who aim to pursue a career in cancer research. Students learn by working side by side with internationally renowned researchers, and we aim to equip them with the investigatory and technical skills they need to become leading cancers researchers.

Our taught postgraduate MSc in Oncology is aimed at doctors who intend to pursue a professional career in some aspect of clinical or medical oncology. We also collaborate with Imperial College London in the delivery of an MSc in Genomic Medicine. These taught degrees provide the clinical leaders of tomorrow with education in the scientific discoveries that underpin their work.

We were delighted to rank top in 2021, and frequently throughout the period of the previous strategy, for overall student experience in the UK-wide Postgraduate Research Experience Survey and the Postgraduate Taught Experience Survey. Our success in these measures reflects our culture of close collaboration between staff and students which has been invaluable in helping the ICR react to challenges – most recently the Covid-19 pandemic. It has allowed us to do things differently, and to maintain an excellent student experience.

Next



Our education strategy 2022–27, *Inspiring tomorrow's leaders*, sets out our future aspirations for education, training and support at the ICR – dovetailing with our goals for research, impact and organisational excellence. We aim to offer our students the highest possible standard of education, informed by the very latest scientific approaches and technological advances. We are also committed to providing exceptional career support for postdoctoral scientists and clinicians. It is important to us that our students and early-career researchers continue to perform excellently once they have graduated from the ICR – going on to leading roles in cancer research, oncology and related professions all over the world.

Our plans for education are structured into three core goals, which are designed to further enhance the quality and range of learning and teaching at the ICR:

- 1 Provide world-class research degree programmes
- 2 Teach tomorrow's clinical leaders today's discoveries
- 3 Support early-career scientists and clinicians to become research leaders



Meg Dinesh Kumar is a second-year PhD student in Professor Clare Isacke's lab at the ICR. Aside from carrying out exciting research of her own, Meg says that some of the best things about doing a PhD at the ICR are having opportunities to collaborate with other groups, having access to new technologies and equipment, and importantly, being surrounded by incredible scientists who will guide you and support your development.

"The ICR gives you a great foundation to start your career in cancer research – there are so many opportunities to learn the skills you need to thrive as a postdoc or a future team leader. It also offers a lot of support to PhD students to ensure your degree goes as smoothly as possible."

1 Provide world-class research degree programmes

We will further develop and enhance the quality of the ICR's research degree programmes and student support.

NOW

The ICR offers an outstanding education for our research-degree students in how to become a top-quality cancer researcher. Students learn within a world-class research environment embedded within research teams right across our organisation. We can also offer a unique translational focus in which to pursue research degree opportunities, thanks to our overriding focus on benefiting cancer patients, and our strong partnership with The Royal Marsden. We offer PhD research degrees suitable for graduates with a first degree in science, and PhD and MD(Res) research degrees for medically qualified clinicians looking to take their first step into a research-active career.

Our students are integral to the work of the ICR. They are a vital part of our research teams and will make important discoveries during their research degrees and beyond that in their future careers as researchers. Our students also shape the kind of organisation we are, as we work closely with them to make enhancements to our educational offering, manage challenges and drive cultural shift.

Over the previous strategy period, we expanded our portfolio of research degrees by forming a major partnership with Imperial College London. We established the Convergence Science Centre, which secured Cancer Research UK funding for non-clinical training programmes. We also gained funding from the Medical Research Council for a new Doctoral Training Programme. And through collaborative projects with industrial partners, we allowed students to benefit from the expertise and resources of commercial organisations relevant to cancer science and technology.

The performance of the ICR's students continues to be excellent, and our graduates go on to leadership positions in science and industry all over the world.

NEXT

Over the course of this strategy, we will further enhance our internationally renowned programme of research degrees to attract and nurture the highest calibre of students. We need to successfully compete for new studentship funding to maintain and increase our student population. We must deliver exceptional support for students during research degrees, and in the transition to their next research role.

We will offer students a truly exceptional educational experience across the range of our research, and one that prepares them for new ways of doing science. We want our students to gain experience of cutting-edge science, technology and computing within a modern, multidisciplinary research environment, and to learn how to innovate by collaborating across research boundaries. We will seek new partners and funding sources, so we can recruit students across a wider range of disciplines who can play a vital role in an increasingly diverse cancer research community.

We will:

- **Ensure** our research degree students receive first-class training and learning opportunities shaped by the newest approaches to doing research and the latest scientific and technological advances.
- **Open** studentship opportunities in exciting new collaborative areas of research working across scientific disciplines and with increasing involvement of data science, mathematics and computing.
- **Offer** taught elements within PhD courses reflecting our latest understanding of cancer's complexity, ecosystems and evolution, and covering cutting-edge areas such as artificial intelligence and data science.
- **Diversify** our external studentship funding to maintain or increase our population of research students and insulate ourselves from the resource constraints at many funders.
- **Establish** and develop the new MRC-funded Doctoral Training Programme.
- **Enhance** our strategic focus on clinical academic training to help ensure a strong pipeline of clinicians in research.
- **Provide** a programme of ongoing support for Faculty (especially those new to supervising and examining) to supplement supervisor training.
- **Encourage** a wider range of doctoral projects to offer research opportunities to students from less traditional areas including allied health professionals.

HOW

A range of activities will help us deliver our aspirations for the ICR's research degree programmes:

- **Work** with our student body to provide cutting-edge scientific training and a range of high-quality personal development opportunities.
- **Apply** for additional funding for research degree studentships, including collaborative bids for PhD programmes that incorporate taught elements, and new ring-fenced studentship funding for data science, computational science and artificial intelligence.
- **Embed** training and cohort activities into the MRC Doctoral Training Programme and other research degree studentships.
- **Seek** an extension for the MRC Doctoral Training Programme from the initial three to a full five student intake years, and if possible, bid for its renewal.
- **Encourage** and support publication during the PhD programme, as a foundation for the future scientific careers of our students.
- **Explore** PhD by Publication for staff whose research has been conducted mostly or entirely at or in partnership with the ICR.
- **Increase** support for allied health professionals to undertake research degrees by, where appropriate, identifying and establishing links with collaborators at other research institutions to form inter-disciplinary supervisory teams.
- **Enhance** provision for clinical students, including increased senior leadership engagement and oversight of transitions between clinical and academic training.
- **Continue** to help students whose research was disrupted by the pandemic with bespoke extensions and stipend support as needed.





Dr Alex Pawsey is studying for an MSc in Oncology at the ICR alongside his training as a specialist registrar in oncology at University College London Hospital.

"My clinical training to date has given me a great understanding of modern practices but I wanted to expand my knowledge of the science underpinning the work I do on a day-to-day basis.

"I choose to study the MSc at the ICR because of the large variety of lectures and modules available and to be exposed to the ICR's world-leading researchers. To be able to see how the research we are being taught can benefit patients directly has inspired me to become involved in clinical academia in the future."

2 Teach tomorrow's clinical leaders today's discoveries

We will provide postgraduate taught degrees that support the rapid translation of scientific advances into benefits for cancer patients and fuel the pipeline of highly skilled clinical researchers working to defeat cancer.

NOW

Our postgraduate taught degree courses provide the clinical leaders of tomorrow with education in the scientific discoveries that underpin their work. We offer an MSc in Oncology and collaborate with Imperial College London in the delivery of an MSc in Genomic Medicine.

The MSc in Oncology is designed to equip clinical trainees specialising in medical or clinical oncology with a high level of understanding of the theory and practice of cancer science, advanced cancer treatment and experience of cancer research. The course is delivered on a part-time, day-release basis and encourages proactive problem solving and reflective approaches to medical or clinical practice.

We are also a founding partner of Imperial College London's MSc in Genomic Medicine and provide a core module in cancer genomics. The degree is an innovative programme that teaches students to interpret and understand genomic data, which has an increasingly important impact on patient treatment and care.



NEXT

Over the course of this strategy, we will enhance the ICR's taught degree programme to offer the best possible education to tomorrow's clinical leaders and researchers. We aim to ensure clinicians continue to learn about the cutting-edge advances in science and technology underpinning the latest cancer treatments. We will aim to integrate new areas of science into our teaching, including our understanding of cancer's complexity, evolution and ecosystems, and the latest use of data science and artificial intelligence in diagnosis and the prediction of treatment outcomes.

We will:

- **Evolve** the curriculum of the MSc in Oncology to take advantage of the latest advances in cancer science, treatment and technology.
- **Future-proof** the MSc in Oncology course so it can continue supporting the professional development of clinical trainees, the needs of their NHS Trusts, and cancer patients.
- **Further** develop our training provision for researchers and clinicians who teach.
- **Support** taught course students to improve completion rates.
- **Investigate** ways to extend the reach of ICR teaching throughout the UK and overseas.
- **Learn** lessons from changes implemented to our taught courses during the pandemic – providing students with increased flexibility.
- **Ensure** the ICR's core module in the MSc in Genomic Medicine teaches the very latest advances in genomics, and their implications for cancer diagnosis and treatment.

HOW

We will put in place a range of practical measures to deliver our aspirations to enhance the ICR's taught degree programme:

- **Seek** feedback from students, to support the course management team and academic staff in the continual development of our teaching.
- **Support** course directors and module leaders to obtain educational training and qualifications as necessary.
- **Introduce** hybrid approaches to course delivery to retain the benefits of face-to-face networking while gaining flexibility from remote teaching where appropriate.
- **Pursue** our interest in partnering with the NHS and the Royal College of Radiologists to attract overseas students to our MSc in Oncology course while adding clinical oncology capacity to The Royal Marsden and other hospitals.
- **Promote** the flexible structure of the course, and the ability to exit with intermediate qualifications in the path to the full MSc award.

We aim to ensure clinicians learn about cutting-edge science.



Dr Diana Zatreanu is a Postdoctoral Research Fellow in the CRUK Gene Function Team at the ICR. She is investigating ways to tackle resistance to PARP inhibitors – drugs that exploit weaknesses in a tumour's systems for repairing DNA.

Diana was selected for the Pathway to Independence programme which brought together outstanding postdocs from the ICR, the Wellcome Sanger Institute, Medical Research Council, Cancer Research UK institutes and Babraham Institute for two and a half days of workshops.

She said: "This is a really exciting field and I'd love to have my own group someday. The Pathway to Independence programme was a great opportunity to meet fellow postdocs and create a support network. It was helpful to discuss what the options and opportunities are for the future, during this stage of your postdoc."

3 Support early-career scientists and clinicians to become research leaders

We will support postdoctoral researchers and clinician scientists to have successful careers in science, medicine and industry – especially in making the key transition to becoming a research team leader.

NOW

Early-career scientists and clinicians are vital members of the ICR's research teams and make many of our most exciting discoveries. We are committed to supporting our early-career researchers as they take the first steps to becoming research team leaders or moving into other career positions in science, medicine or education. We are signed up to the Concordat to Support the Career Development of Researchers and hold a European Commission HR Excellence in Research Award.

The ICR is already successful at producing future leaders in research. We surveyed postdocs who left between 2009 and 2018 and found 93% were working in science or education, and 15% had achieved independent academic positions.

We greatly enhanced our career development support over the previous strategic period. We developed our flagship residential programme, 'Pathway to Independence – developing future scientific leaders', through collaboration with the Biotechnology and Biological Sciences Research Council and the Wellcome Sanger Institute. The programme supports postdoctoral researchers at the crucial point in their career when they are seeking their first independent research position. We have made extensive efforts to support development of clinical academics, including establishing a Clinical Academic Forum and offering mentorship. We also developed the 'Pathway to Independence – clinical academics in cancer research' residential programme – and 50% of all our 2016 participants now hold clinician scientist fellowships, clinical lectureships or principal investigator awards.

NEXT

Over the course of this strategy, we will further enhance training for early-career researchers and support their transition to becoming world-class scientists and clinicians. Our focus will be in ensuring our postdoctoral researchers are equipped to meet the challenges of their future and obtain leadership roles in academia and industry. We recognise the benefit of diverse career pathways and will provide tailored support for the transition to the many varied roles involved in research and innovation.

We will:

- **Provide** our postdoctoral researchers with the knowledge, skills and support to succeed – meeting our commitments in the Concordat to Support the Career Development of Researchers.
- **Offer** postdoctoral researchers leadership and people management support and personal development experiences, to help them obtain senior roles across the research ecosystem including in industry.
- **Support** our postdoctoral clinical academics to make the transition to independence.
- **Develop** researchers from multiple disciplines, specialisms and backgrounds, maximising our national and international reach.
- **Ensure** we provide a research culture that enables everyone to thrive.

HOW

- **Work** with our researcher associations to inform, prioritise and help deliver training and career development activities that meet their needs.
- **Enhance** induction for postdoctoral training fellows so they can plan for success from the start.
- **Extend** access to careers support for up to 12 months after leaving the ICR.
- **Consider** opportunities, with partners and internally, to deliver training in leadership and management skills.
- **Offer** industry exchanges to enable researchers to work with industry collaborators.
- **Provide** training and support for commercialisation and entrepreneurship such as through our entrepreneurs-in-residence.
- **Lead** the competitive residential Pathways to Independence programme to support researchers from across the UK.
- **Award** bursaries for high-calibre clinical academics and increase participation in our Clinical Academic Forum, to prepare them for competitive fellowship applications.
- **Collaborate** externally to deliver training and career development including with the University of London, Imperial College London and Cancer Research UK.



Growing our impact for patients

Vision

We will maximise the impact of our research for patients by engaging with industry, funders, donors and the public, building partnerships in the UK and internationally, and influencing the uptake of our advances into routine healthcare.

Alfred Samuels's prostate cancer was treated with abiraterone, which the ICR discovered, and developed for patients with The Royal Marsden.





Now



It is our aim as an organisation to change the lives of people with cancer. We carry out extraordinary, world-leading research, but we know that alone is not enough to maximise our impact. We are committed to working across academia, Government and industry to ensure our findings have benefits for society and the economy, and to grow our funding for research so we can achieve even more in the future.

We aim to embed new treatments, technologies and approaches into routine healthcare, by building an evidence base to support their adoption, working through networks and commercial partnerships, and influencing healthcare policymakers. We are proud of the impact our research has had for cancer patients throughout our history – and especially over the last decade.

Our work with industry, charity partners and The Royal Marsden has helped take the innovative cancer drugs abiraterone and olaparib to patients. We have worked with a network of partners across the UK to develop new streamlined treatment schedules for high-precision radiotherapy – benefiting patients and making savings for the NHS. And we are among the leading higher education institutions in the UK at generating invention income from our research – helping sustain our life-saving work into the future.

Next



We have ambitions to grow our impact even further over the period of this strategy to maximise the chances that our findings will change the lives of patients. We will work to articulate the benefits of our research for society through an expanded programme of knowledge exchange, sector leadership and influencing. We will also continue to work with industry and other partners to enhance the ICR's global impact, and we will increase income for our future research by working with partners, donors and funders.

This part of our strategy has three goals:

- 1 Amplify our research impact
- 2 Strengthen our partnerships
- 3 Increase income for our research



Alfred Samuels was diagnosed with advanced prostate cancer in January 2012. He recalls how doctors told him to “think short term”. But Alfred’s wife found out about the STAMPEDE trial, which sought to find out if adding the drug abiraterone to standard hormone therapy could help patients with advanced prostate cancer. The ICR discovered abiraterone, and developed it for patients with The Royal Marsden. After seven months in the trial, Alfred saw his PSA readings go down from 509 ng/ml to 0.1 ng/ml – below levels expected for a man of his age.

He said: “When I was diagnosed in 2012, my PSA readings suggested I was in dire trouble. As part of the STAMPEDE trial I was given abiraterone and Prostate and the treatment went very well. Abiraterone saved my life and if the ICR is allowed to continue its research, it can help to discover other life-saving drugs.”

1 Amplify our research impact

The ICR and The Royal Marsden are together committed to ensuring our research has the greatest possible impact for people with cancer and their families. We believe our world-class research and ability to bridge rapidly between the laboratory and the clinic can have a huge impact for people with cancer not only in the UK, but globally. In doing so, our work can play a vital role in helping grow the UK’s economy. It is crucial that we lead through networks and share our research with a wide range of audiences to articulate its benefits for society and influence the uptake of our findings into routine healthcare.

We will:

- **Engage** extensively with patients, their families and other advocates, to make sure their voice is heard and influences all parts of the research cycle.
- **Work** collaboratively across the UK and internationally to build evidence of the effectiveness of new treatments and technologies.
- **Lead** through networks in spearheading the adoption of innovative new cancer treatments as part of routine healthcare.
- **Identify** and advocate for opportunities to introduce targeted early detection programmes based on an assessment of cancer risk.
- **Use** health economic data and patient data to demonstrate the benefit of our findings for society and make the case for their adoption by the NHS.
- **Be** an advocate for excellent cancer research and its translation into improved healthcare.
- **Work** through early diagnosis and mobile health clinics to translate findings on cancer risk and detection into improvements in healthcare.
- **Work** through the Government and clinical networks to shape national strategy and build capacity for stratified cancer trials.
- **Engage** with funders, donors and the public, to show the impact of our work, build support and income, and attract young people into science.
- **Champion** diversity in cancer research by working with underserved communities to design studies that cater for their needs.
- **Push** for equity in access to innovations through our national reach and by working with local primary care and community providers.



Our entrepreneur-in-residence scheme brings successful businesspeople into the ICR to advise and mentor scientists in commercialisation of their findings. This is an essential step in enabling laboratory discoveries to translate into new diagnostics and therapies.

“The ICR has a whole generation of entrepreneurs who are passionate and dedicated to bringing treatments from fundamental lab research to patients as quickly as possible. Working with the Business and Innovation Office, ICR scientists continue to drive the agenda in pursuing strategic collaborations, licensing ICR technology and commercialising ICR research in order to make a meaningful impact to patients’ lives.”

Heather King, ICR entrepreneur-in-residence

2 Strengthen partnerships

The ICR works closely with partners in industry, the NHS and academia to maximise the impact of our research for patients. We will seek to work strategically with our existing partners to build the impact of our work together, and to establish new relationships where we believe they can expand the scope of our research and increase the chances that our findings will reach patients.

We will:

- **Commercialise** our research findings to maximise the chances that they will benefit patients and generate a fair return for our future science.
- **Partner** with industry to open access to commercial expertise and resources.
- **Strengthen** our existing strategic partnerships with industry by engaging at a senior level with major pharmaceutical companies on joint initiatives.
- **Develop** new relationships with a range of life-science and data science companies where there are common interests that can advance our research.
- **Work** closely with existing partners including The Royal Marsden on new strategic initiatives with a strong potential to benefit patients.
- **Seek** new international partnerships with academic organisations, trusts and foundations where they can strengthen our science and widen our reach.
- **Work** with the London Borough of Sutton, occupiers at the Innovation Gateway and commercial developers to further develop The London Cancer Hub as a vibrant life-science ecosystem.
- **Build** our culture of entrepreneurship through initiatives such as our entrepreneurs in residence, to help researchers work with commercial partners or translate their work through new ventures.
- **Develop** and strengthen multidisciplinary research centres which span different areas of ICR research and external institutions.
- **Explore** the possibility of new partnerships in the UK or internationally to deliver clinical training and education in oncology.

We will deepen bonds with donors and funders to grow our impact.

3 Increase income for our research

The ICR's research is changing lives, and gaining more funding for our work will increase our future impact. We are committed to working in new ways, through close collaboration between our researchers and our professional services staff, to grow our income and build funding for our future research. We believe we can grow our impact by deepening our bonds with donors and funders, strengthening our brand, and expanding our reach internationally.

We will:


- **Grow** the ICR's income for our future research by expanding our philanthropic activities – working with donors, trusts and foundations in the UK and internationally.
- **Identify** and exploit opportunities to maximise income from commercialisation while protecting academic freedom to publish and delivering the greatest possible patient benefit.
- **Develop** new programmes of income generation focused around the ICR's multidisciplinary research centres.
- **Work** collaboratively with key partners including The Royal Marsden on joint activities to attract income for innovative joint initiatives.
- **Develop** a programme of senior-level engagement with research funders, the pharmaceutical industry and venture capital.
- **Make** the case for increased science funding and support for The London Cancer Hub through engagement with senior levels of Government.
- **Strengthen** the ICR's brand and marketing to increase awareness of our organisation among funders, donors and supporters.
- **Embrace** opportunities to generate income internationally – through partnership working, senior-level engagement and new academic and commercial initiatives.
- **Embed** a culture of fundraising at the ICR and support our researchers in their interactions with donors and foundations.



Our excellent organisation

Vision

We will be an excellent organisation motivated by our mission and values – where brilliant and diverse people work together as One ICR, supporting our science and embracing a sustainable future.

A portrait of Dr Michael Raney, a man with short dark hair and glasses, wearing a red and white striped shirt. He is looking directly at the camera with a slight smile. The background is a bright yellow-green color with a network of white lines and circles.

Dr Michael Raney
co-chairs the REACH
forum, which promotes
diversity and inclusion
at the ICR.

Now

We can only fulfil our mission to defeat cancer if we are an excellent organisation capable of supporting and sustaining world-class science.

We want to be an employer of choice for staff and students from all around the world, known for a passionate commitment to our research and to cancer patients. Our motivated workforce will deliver excellent services for our science with urgency and efficiency.

We have made major strides as an organisation over the period of our last strategy – promoting our values and diversity, embracing multidisciplinary team science and collaboration, and offering excellent facilities and financial support for our research.

We have launched a new culture and engagement strategy to break down barriers within the ICR and underline the importance of work-life balance and wellbeing. We have renewed our Athena SWAN Silver award for promoting women in science and introduced a Beyond the Statements programme to champion diversity and inclusion at every level. Close collaboration between our researchers and professional services staff has delivered state-of-the-art facilities and support – ranging from our world-class Centre for Cancer Drug Discovery to enhanced scientific computing and sophisticated new grant planning software.

Next

We want to be a fantastic place to come and work – with an environment that attracts brilliant scientists, clinicians, professional staff and students from all over the world. We aim to embrace a passionate, research-centred, ‘can do’ culture, delivering cutting-edge scientific facilities and services for our researchers that are simple, fast and reliable.

We will place our values at the heart of our organisation and create dedicated programmes to embed diversity and support early-career development. We will bring researchers from different specialties together within new multidisciplinary centres and find ways of partnering them with our professional staff – working across boundaries to deliver outstanding scientific facilities and support.

We also want to safeguard the ICR for the future – and to play our part in safeguarding the planet. We need to be financially responsible, growing and diversifying our income, and spending our money efficiently where it can best further our mission. Just as important, we must be environmentally sustainable in the way we carry out our science, so we can continue conducting our world-class research until cancer is defeated.

This section of our strategy has four foundations, which underpin all our work:

- 1 Exceptional facilities and support
- 2 Brilliant people, inspiring values
- 3 Together, as One ICR
- 4 A sustainable future





Power BI

The ICR's professional services teams have worked with scientists to create a new reporting tool using the Power BI software. We built solutions quickly and interactively using an agile and collaborative approach, and shared new versions weekly for feedback. The reporting tools now allow scientists to access and view financial and research equipment data more easily, allowing them more time to focus on their world-leading research.

Researchers describe the Power BI tool as being transformative for monitoring budgets, intuitive to use and as making it quick and easy to find the information they need.

1 Exceptional facilities and support

We will support our science and organisation through world-class facilities, services and support, underpinned by a commitment to research-centred solutions, efficiency and data security.

We will:

- **Deliver** world-class facilities across the ICR's sites in Chelsea and Sutton and maximise the use of our scientific space.
- **Develop** new core scientific facilities to meet future priorities, such as enhancing use of animal models.
- **Create** a new data science core service that provides state-of-the-art data storage and analysis and offers ICR scientists simple and affordable solutions.
- **Support** researchers in retaining the highest standards of scientific integrity through a programme of research culture training and our commitment to the Concordat to Support Research Integrity.
- **Provide** workplace facilities and support that enable our people to be as productive as possible.
- **Develop** our professional services in line with best practice to deliver research support of the highest standard and efficiency.
- **Engage** with scientists to develop new research-centred services and systems, including automated and AI-driven digital solutions.
- **Review** all our systems and processes and seek to prioritise, streamline and simplify.
- **Empower** staff to find solutions to the operational challenges faced by our researchers, within the governance frameworks under which we must operate.
- **Provide** robust data security and quality assurance while taking a risk-based approach that avoids unnecessary constraints on scientific progress.
- **Respond** to the needs of students and supervisors by adopting new e-learning models and teaching technologies.

2 Brilliant people, inspiring values

We will attract and develop talented staff and students, and support them through a vibrant culture that reflects our values.

This strategic foundation sets out how we will nurture a fantastic, motivated and diverse workforce right across the ICR. It links closely to goal 3 of *Inspiring tomorrow's leaders*, which focuses on the dedicated support we will provide for early-career scientists and clinicians.

We will:

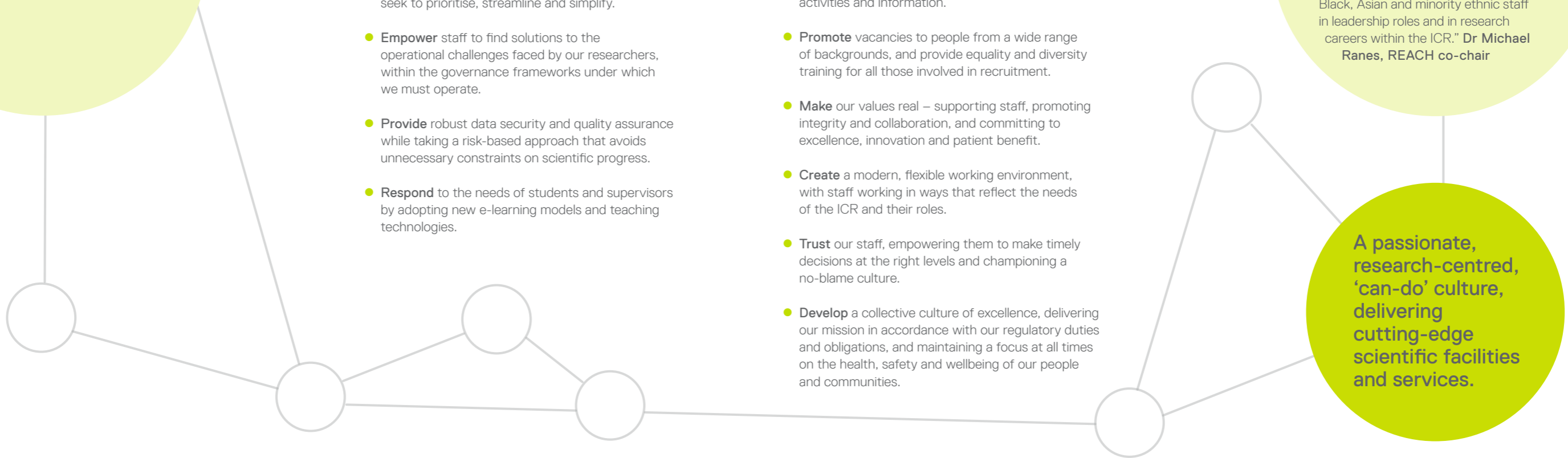
- **Recruit** and nurture brilliant people from a diverse range of backgrounds.
- **Develop** a positive ICR culture that embeds diversity and inclusivity.
- **Support** people early in their careers and in advancing to become future leaders through dedicated development programmes.
- **Support** members of our leadership team to develop their leadership styles and demonstrate our values.
- **Motivate** our people to believe passionately in the ICR's mission, live our values, and deliver to the highest standard.
- **Value** everyone's contribution and professionalism, across research and professional services, and have zero tolerance of bullying.
- **Support** the wellbeing and mental health of all our staff and students, through networks, services, activities and information.
- **Promote** vacancies to people from a wide range of backgrounds, and provide equality and diversity training for all those involved in recruitment.
- **Make** our values real – supporting staff, promoting integrity and collaboration, and committing to excellence, innovation and patient benefit.
- **Create** a modern, flexible working environment, with staff working in ways that reflect the needs of the ICR and their roles.
- **Trust** our staff, empowering them to make timely decisions at the right levels and championing a no-blame culture.
- **Develop** a collective culture of excellence, delivering our mission in accordance with our regulatory duties and obligations, and maintaining a focus at all times on the health, safety and wellbeing of our people and communities.



“Our mission is it to defeat cancer and to do this we need to ensure we have best and brightest minds working at the ICR. Everyone brings a different view of how to approach the challenges we face so it is vital we have a diverse range of talented people – and that everyone feels included irrespective of ethnicity, gender, sexuality or disability. The Race, Ethnicity and Cultural Heritage forum – REACH – was set up as part of this effort, to allow staff members from ethnic minorities to discuss issues and aspirations, and to promote diversity at the ICR.”

“The REACH forum helped to create our organisational action plan *Race Equality: Beyond the Statements*, which seeks to address the under-representation of Black, Asian and minority ethnic staff in leadership roles and in research careers within the ICR.” **Dr Michael Raney, REACH co-chair**

A passionate, research-centred, 'can-do' culture, delivering cutting-edge scientific facilities and services.





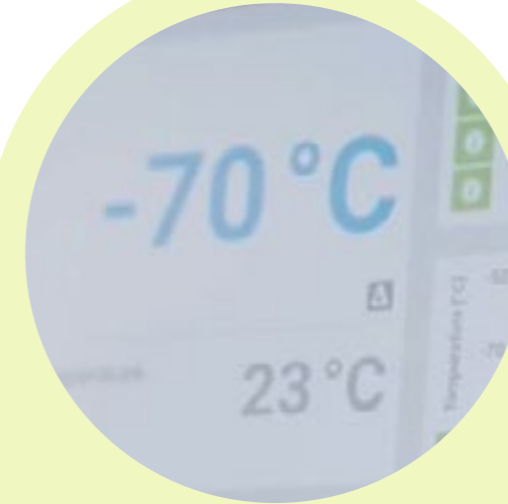
The ICR's culture and engagement programme aims to enrich our organisation by bringing our staff and students together and by embedding our values in all our work. We have established various themes, including creating a vibrant research culture, breaking down barriers across the ICR, and enhancing diversity and inclusion. Among the early outputs was an event to bring staff and students together across our Sutton and Chelsea sites and to recognise their contributions through our new Above and Beyond awards. We are also promoting multidisciplinary team working at our annual ICR conference, and introducing a range of new ways to bring staff and students in different types of roles together, professionally and socially. Ultimately, we aim to create a culture in which everyone is valued, whatever their background or skill set, and where we understand we can achieve more together than we could alone.

3 Together, as One ICR

We will work together as One ICR, achieving our goals through close collaboration and with a shared commitment to our mission.

We will:

- **Bring** together and learn from people with a wide range of skills and backgrounds – drawing strength from our diversity.
- **Embrace** multidisciplinary team science, with researchers from different disciplines coming together to address the biggest problems in cancer.
- **Promote** collaborative working between researchers and professional services on strategic projects and income generation, through shared goals and aligned appraisal targets.
- **Ensure** strategic research centres bridge disciplines and institutions and involve professional services in their leadership teams and income strategies.
- **Embed** a business partnership approach between our professional services and researchers, co-owning challenges and co-designing solutions.
- **Establish** matrix working across our professional services, to coordinate support for our science more effectively.
- **Be committed** to sharing knowledge across the ICR and building connections between different teams and disciplines.
- **Implement** governance structures that support shared ownership of our institutional strategy and joint working.



ACT Now is a grassroots initiative to involve all ICR staff and students in the quest to make our scientific research and ways of working more sustainable. The group acts as a consultative forum for new initiatives proposed by the ICR and ideas from staff.

The group has already had a demonstrable impact since it began in March 2022, including encouraging many ICR labs to reduce their carbon footprint by taking part in the Freezer Challenge 2022. The challenge helped labs to successfully convert their -80°C freezers to -70°C – without posing any risk to their samples – simply by implementing optimal cold storage management practices.

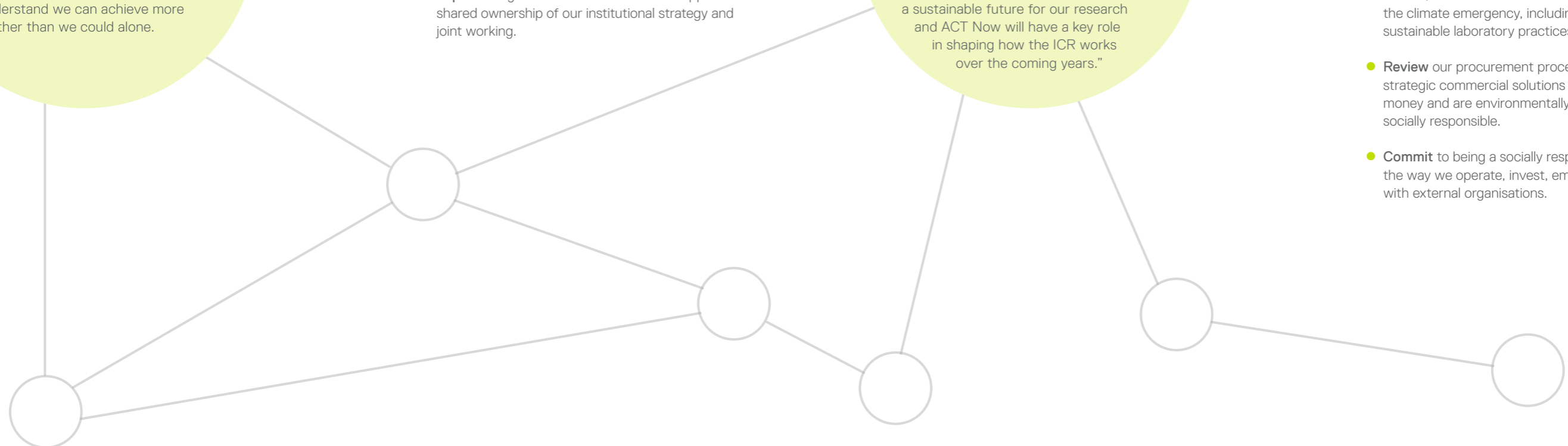
Simon Francis, Director of Estates and Facilities, said: "We are looking to create a sustainable future for our research and ACT Now will have a key role in shaping how the ICR works over the coming years."

4 A sustainable future

We will build a sustainable future for the ICR in support of our mission and values, through financial, environmental and social responsibility.

We will:

- **Ensure** the ICR is fit for the future by defining exactly what activities and services are needed to meet our mission and support our research.
- **Aim** to reduce our costs through regular zero-based budgeting and improvements to processes and systems.
- **Actively** manage our reserves to balance the need for continual investment in our research with sensible limits on expenditure.
- **Ensure** professional services and researchers work in partnership to deliver a major programme of work to grow and diversify our income.
- **Marshall** the ICR's scientific and professional expertise around initiatives to increase the environmental sustainability of our research.
- **Mobilise** our staff, students and partners to reduce the ICR's environmental impact in their own work and everyday life choices.
- **Set** a science-based target to reduce energy use and associated carbon emissions on the path to achieving net zero carbon by 2040, and in line with limiting the global average temperature increase to 1.5 centigrade.
- **Create**, share and learn innovative solutions to the climate emergency, including implementing sustainable laboratory practices.
- **Review** our procurement processes and introduce strategic commercial solutions that offer value for money and are environmentally sustainable and socially responsible.
- **Commit** to being a socially responsible organisation in the way we operate, invest, employ staff and contract with external organisations.





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