
Group Leader Cancer Health Data Sciences

Candidate information

Dear Applicant,

The Institute of Cancer Research (ICR) and The Royal Marsden Hospital (RMH) invite applications for a Group Leader in Cancer Health Data Sciences. The successful candidate will establish an independent, internationally competitive research programme that harnesses advanced data-science and AI approaches to large-scale, multimodal health datasets to advance cancer prevention, early detection, diagnosis and therapeutic response.

The post offers access to exceptional data resources and a world-leading clinical environment through the ICR–RMH partnership. These include electronic health records, medical imaging, genomic and molecular profiling data generated through clinical trials and epidemiological studies- together with national health and administrative datasets. The appointee will complement and strengthen existing expertise in clinical research, epidemiology, genomics, computational biology, and imaging and translational cancer science.

We seek an outstanding researcher with strong quantitative and computational skills, extensive experience in the analysis of health data within cancer research, and a proven track record of delivering innovative, high-impact research with clear translational potential.

The post will be based in the Division of Cancer Genetics and Epidemiology at the ICR and will include an honorary appointment at the The Royal Marsden NHS Foundation Trust. In addition to leading their own independent research programme, the postholder will contribute to strategic development of clinical and population cancer data science across the ICR and the RMH. This will include contribution to activities supported through the NIHR Biomedical Research Centre (BRC) at RM/ICR, alongside other institutional, charitable and externally funded initiatives.

The appointee will develop and sustain a substantially externally funded research portfolio aligned with their scientific vision and to foster collaborative research across the ICR, RMH and the wide cancer research community.

Appointments will be made at the appropriate academic level, subject to skills and experience.

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Job description

Job title:	Group Leader: Cancer Health Data Sciences
Division:	Genetics and Epidemiology
Grade:	Career Faculty / Career Development Faculty / (subject to skills and experience)
Hours / duration:	Full time (35 hours per week), Monday to Friday.
Responsible to:	Professor Richard Houlston, Head of Division
Location:	Sutton, London

Duties and Responsibilities

Research Leadership

1	Lead an independent research programme applying advanced data-science and AI approaches to large-scale clinical and population cancer datasets.
2	Produce high-impact publications, secure external funding, and drive innovation in applied cancer data science.
3	Represent the ICR and RM as a national and international spokesperson, engaging with funding bodies, policy makers, industry and academic partners, and the NIHR BRC network.

Data Integration, Analysis & Visualisation

1	Integrate, analyse and visualise complex multimodal data for cancer research, including clinical data, research studies and national datasets.
2	Apply advanced analytical methods, such as statistical modelling, NLP, machine learning and AI- ensuring reproducibility, interpretability, scalability and performance.

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Job description (continued)

3	Evaluate and adopt emerging tools and technologies for AI/ML, NLP and decision support.
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Strategic Development & Collaboration

1	Contribute expertise to the development of clinical and population cancer data science strategy across the ICR and RMH, including engagement with relevant NIHR BRC themes and programmes where aligned with the postholder's research interests.
2	Provide expert input to data-science-related initiatives and working groups, and collaborate with senior clinical, research, information and digital leads across RMH and ICR.
3	Work with clinical and informatics teams to promote high-quality, structured data capture, sound data governance and effective data linkage.
4	Build strong collaborations across RMH, ICR, Imperial Academic Health Science Centre (AHSC), and national programmes such as DATA-CAN, working closely with clinical, epidemiological, statistical and computational teams.

Translation & Impact

1	Translate data-driven insights into clinically relevant tools, decision-support approaches and improvements in cancer prevention, diagnosis and treatment.
2	Adapt to emerging technologies and evolving data-science capabilities to ensure the programme remains at the forefront of the field.

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Job description (continued)

Training & Mentorship

1	Supervise and mentor researchers and trainees, promoting best practice in health data science and responsible AI use.
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Institutional Responsibilities

1	To manage budgets for the group.
2	To be responsible for ensuring compliance with ICR and national regulations on safety and ethics that are relevant to the research programme.
3	To be responsible to the Head of Division with respect to: (i) ICR corporate responsibility to the public (ii) ICR safety policy, rules and regulations (iii) Returns required by external organisations (iv) Disciplinary matters.
4	To undertake such academic, administrative and managerial duties that could be reasonably expected of a Group Leader by the Head of Division and Chief Executive.
5	All staff must ensure that they familiarise themselves with and adhere to any ICR policies that are relevant to their work and that all personal and sensitive personal data is treated with the utmost confidentiality and in line with the General Data Protection Regulations.

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Person specification

Education and Knowledge

PhD (or equivalent) in relevant quantitative discipline (including, but not limited to, data science, epidemiology, biostatistics, health informatics, computer	Essential
Strong foundation in quantitative methods and applied analytics.	Essential
Strong understanding of data governance, privacy, and ethical considerations in health data science	Essential

Skills

Strong analytical skills familiarity with modern data-science workflows.	Essential
Familiarity with modern software development practices (e.g., version control, documentation, reproducible pipelines).	Essential
Ability to apply advanced analytical methods with attention to reproducibility, interpretability, and robust evaluation.	Essential
Ability to lead, coordinate and deliver research projects independently.	Essential
Ability to obtain and maintain peer reviewed research funding.	Essential
Writing, presenting and explaining technical and/ or scientific reports to a wide range of scientific and lay audiences.	Essential
Skills in data visualisation and communication of complex results.	Essential
Experience working with unstructured data, including NLP/LLMs.	Desirable
Understanding of real-world evidence generation, health informatics standards, or interoperability.	Essential

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Person specification (continued)

Experience

At least 5 years' experience in applying data science methods in oncology, including clinical research, population health, or real-world evidence.	Essential
Experience conducting applied research using large-scale health, clinical, or population datasets (e.g., EHR, registry data, cohorts, clinical trials, linked datasets).	Essential
Proven track record of high-quality research outputs (peer-reviewed publications, impactful reports, tools or software).	Essential
Experience integrating, managing or analysing multimodal health data.	Essential
Experience applying advanced analytical approaches such as statistical modelling, machine learning, AI, or natural language processing.	Essential
Evidence of successful development of research software, tools or methods.	Essential
Experience collaborating within multidisciplinary teams (e.g., clinicians, epidemiologists, statisticians, data engineers).	Essential
Experience developing or contributing to grant applications.	Essential
Experience supervising or mentoring junior researchers.	Essential
Track record in securing research funding, from research councils or charities.	Essential
Experience of leading a research team in clinical and population data science in oncology.	Desirable
Experience of working across institutions.	Desirable

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Person specification (continued)

General

The ability to work in a team of different disciplines	Essential
Strong commitment to improving cancer outcomes through data-driven research	Essential
Effective communication and leadership skills.	Essential
Flexibility to adapt to emerging technologies and evolving data-science capabilities.	Essential
Committed to personal and professional development.	Essential
Ability to build effective collaborations across disciplines and institutions.	Essential
Commitment to equality, diversity and inclusion, and supportive mentoring of trainees.	Essential
Interest in contributing to the strategic development of data science capacity at ICR/RMH, through national initiatives such as the NIHR BRC.	Essential
Engagement with national or international data-science, epidemiology, or AI research networks.	Essential

Main Terms and Conditions

The post-holder will be employed by The Institute of Cancer Research, with an honorary contract with The Royal Marsden NHS Foundation Trust where appropriate.

Salary

Appointments will be made at the appropriate academic level, subject to skills and experience. At ICR, academics are appointed as either Career Faculty, which is non-time limited with a competitive salary, or as Career Development Faculty, which is a six-year fixed term contract.

For Career Faculty appointments the post-holder's salary will be determined by the CEO of the ICR.

The Career Development Faculty appointments are made at £66,092 in the first instance.

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Visiting the Department

Applicants are invited and encouraged to visit the Institute of Cancer Research informally by arrangement. The ICR are not empowered to pay travelling expenses or a subsistence allowance in connection with any such visits.

For an informal discussion and/or to arrange an informal visit please contact Professor Richard Houlston Richard.houlston@icr.ac.uk / Professor Montse Garcia-Closas montse.garcia-closas01@icr.ac.uk

About our organisation

About our organisation We are one of the world's most influential cancer research institutes with an outstanding record of achievement dating back more than 100 years. We are world leaders in identifying cancer genes, discovering cancer drugs and developing precision radiotherapy. Together with our hospital partner The Royal Marsden, we are rated in the top four centres for cancer research and treatment worldwide. As well as being a world-class institute, we are a college of the University of London. We came second in the league table of university research quality compiled from the Research Excellence Framework (REF 2021). We have charitable status and rely on support from partner organisations, charities, donors and the general public. We have more than 1000 staff and postgraduate students across three sites – in Chelsea and Sutton. funders, supporters and partnerships help drive forward our work.

Benefits

We offer a fantastic working environment, great opportunities for career development and the chance to make a real difference to defeat cancer. We aim to recruit and develop the best – the most outstanding scientists and clinicians, and the most talented professional and administrative staff.

The annual leave entitlement for full time employees is 28 days per annum on joining. This will increase by a further day after two years' and five years' service.

Staff membership to the Universities Superannuation Scheme (USS) is available. The USS is a defined benefit scheme and provides a highly competitive pension scheme with robust benefits. The rate of contributions is determined by USS and details of the costs and benefits of this scheme can be found on their website. If staff are transferring from the NHS, they can opt to remain members of the NHS Pension Scheme.

We offer a range of family friendly benefits such as flexible working, a parents' group, and a maternity mentoring scheme. Other great benefits include interest free loans for discounted season tickets for travel and bicycle purchases, access to the NHS discounts website, a free and confidential Employee Assistance Programme which offers a range of well-being, financial and legal advice services, two staff restaurants, and access to a gym and sporting facilities at our Sutton site.

Our mission is to make the discoveries that defeat cancer.

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Our values

The ICR has a highly skilled and committed workforce, with a wide variety of roles, each requiring different skills. But whether you work as a researcher, or work as part of our corporate team, your work and behaviour is underpinned by these six values. They are what bring us together as one team – as 'One ICR'.



Pursuing excellence

We aspire to excellence in everything we do, and aim to be leaders in our field.



Acting with Integrity

We promote an open and honest environment that gives credit and acknowledges mistakes, so that our actions stand up to scrutiny.



Valuing all our people

We value the contribution of all our people, help them reach their full potential, and treat everyone with kindness and respect.



Working together

We collaborate with colleagues and partners to bring together different skills, resources and perspectives.



Leading innovation

We do things differently in ways that no one else has done before, and share the expertise and learning we gain.



Making a difference

We all play our part, doing a little bit more, a little bit better, to help improve the lives of people with cancer.



Our values set out how each of us at the ICR, works together to meet our mission – to make the discoveries that defeat cancer. They summarise our desired behaviours, attitudes and culture – how we value one another and how we take pride in the work we do, to deliver impact for people with cancer and their loved ones.”

Professor Kristian Helin
Chief Executive