ICR The Institute of Cancer Research

Database Programmer/Analyst Programmer

Candidate Information

Date: March 2022

The Institute of Cancer Research

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 top in the league table of university research quality compiled from the Research Excellence Framework (REF 2014).

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.

The Clinical Trials and Statistics Unit (CTSU)

The ICR-CTSU is an internationally recognised cancer clinical trials unit (CTU), led by Professor Bliss, with over 30 years' experience in the design, conduct and analysis of cancer clinical trials. ICR-CTSU receives programmatic core funding from Cancer Research UK (CRUK), is a UK Clinical Research Collaborative registered CTU and is one of fifteen CTUs recognised by the UK National Cancer Research Institute for a professional specialism in the development and delivery of cancer trials.

ICR-CTSU's strategic vision is to enact pull-through of world-leading science from ICR and elsewhere into patient benefit via high quality and efficient cutting-edge trials of smarter, kinder treatments which will ultimately translate into patient benefit internationally. Our main interests and areas of expertise are the evaluation of new drug treatments and

technologies (including radiotherapy) and the use of biomarker-driven designs to clinically qualify putative predictive biomarkers and evaluate targeted treatments. Our portfolio includes innovative, efficient and adaptive trial platforms and early phase trials. We have a large network of collaborations within the clinical and academic community and with the pharmaceutical industry.

Our portfolio of national and international phase II and III trials prioritises activity in three clinical and therapeutic domains:

- Breast and rare cancers trials
- Radiotherapy, urology and head and neck caner trials
- Early phase and adaptive trial designs

These priority areas are supported by a cross-cutting biomarker and genomic analysis theme. This theme facilitates interrogation of the wealth of emerging trial data and focuses on the integration and translation of novel diagnostic, prognostic and therapeutic strategies into clinically relevant biomarker driven trial designs. We also manage an expanding number of early phase I/II cancer trials in collaboration with the Drug Development Unit, a joint unit of ICR and The Royal Marsden NHS Foundation Trust and a leading phase I unit globally.

Some highlights which demonstrate the breadth and impact of our portfolio include: In women with advanced triple negative breast cancer our TNT trial has demonstrated that those with an inherited BRCA mutation were twice as likely to benefit from carboplatin as the current standard of care (Nat Med. 2018 May;24(5):628-637) and is set to change practice internationally. Our TOPARP study led to FDA Breakthrough Designation of olaparib for advanced prostate cancers with BRCA and other DNA repair defects and has catalysed development of molecularly stratified treatment strategies for prostate cancer (N Engl J Med 2015; 373(18) 1697-708; ASCO 2019). The FAST-FORWARD trial provides evidence that a one-week course of radiotherapy in fewer but larger daily doses is as safe as the standard three-week therapy for women following surgery for early stage breast cancer (Lancet 2020 395(10237): 1613-1626) and is the most recent of our long-standing portfolio of phase III radiotherapy trials to report practice changing results.

We are a multi-disciplinary CTU, with more than 90 staff including statisticians/trial methodologists, clinical trials programme managers, trial managers, data managers, research IT programmers and administrative support staff. We have over 75 multi-centre trials on our portfolio which are in set up, open to recruitment, or in active or long-term follow-up, with access to further closed trials. Our senior management team hold leadership roles shaping clinical research at the local, national and international level.

Further information is available at:

ICR www.icr.ac.uk | **Twitter** @ICRnews | **Facebook** www.facebook.com/theinstituteofcancerresearch

ICR-CTSU https://www.icr.ac.uk/our-research/centres-and-collaborations/centres-at-the-icr/clinical-trials-and-statistics-unit

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

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Job description

Department / division:	Division of Clinical Studies, ICR-CTSU
Pay grade / staff group:	Databased Programmer: Professional Services 5 Analyst Programmer: Scientific Professional 5
Hours / duration:	Full time (35 hours per week), Monday to Friday. Fixed term contract for 2 years
Reports to:	Clinical Trials IT Manager
Main purpose of the job:	To provide IT, database and programming support for clinical studies within the ICR-CTSU

Role Summary:

We require a database programmer / analyst programmer to work on a variety of new and existing clinical studies helping to support ICR-CTSU's scientific work in multi-centre clinical trials. The post holder will join a team of six working within ICR-CTSU to provide programming and related IT support to members of the trials unit. (Note that the Institute has a central Information Systems department that provides e-mail, security, network, back-up and desktop support services.)

The exact balance of responsibilities for the role between database / SQL programming and systems programming using c# and .net technologies, as well as the associated pay grade will depend upon the candidate's previous experience and demonstrable skills. The senior analyst programmer role will be required to lead on systems programming using c# and .net technologies and support and mentor less experienced database programmers

Duties and responsibilities:

Database Development and Maintenance

Work with trial managers, data managers and statisticians to ensure appropriate specification and testing of clinical and administrative databases. Construct, test and document clinical and administrative databases, using both in-house and commercially available systems.
Develop, document and integrate data constraints, consistency checks and flow control mechanisms into database systems.
Develop and integrate standard coding schemes and question sets into database systems.

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Implement and document suitable system validation procedures to ensure user requirements have been met.
Support users during the introduction of new systems.

SQL Database Programming

Develop, document and maintain SQL scripts to automate data extraction tasks and database administration.
Use SQL and both in-house and commercial reporting tools to develop a library of standard queries and reports for use by end users.
Provide SQL programming support for ad hoc extraction and listing requests.
Provide programming support for data extraction from Compact database systems.

IT Helpdesk and Support

Provide first and second line support as a scheduled member of the ICR-CTSU IT Helpdesk, including: • Setting up user access to new trials and systems and documentation of user access, password management, and any other aspects of data security within the Unit. • Assisting with hardware procurement and disposal • Providing data snapshots • Issue resolution and investigation
Contribute to day-to-day management of RDWeb and IIS servers.
Provide software training for ICR-CTSU staff on commercial clinical trial data management systems and MS Office products.
Provide general support with SQL Server and Microsoft Access to staff within ICR-CTSU as necessary.

Other

Represent ICR-CTSU IT in the context of discussions with IT staff in other NCRN accredited units, and UKCRC registered units, as required.
Contribute to the development and review of the Unit's IT related SOPs and processes.
Contribute to any internal or external audit of the Unit's IT systems and procedures.
Liaise with other clinical trials units concerning the import / export / structuring of data, as required.

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Adhere to written SOPs, applicable to ICR-CTSU clinical trials.
Participate in relevant meetings including study specific, role specific and wider team meetings as required.

Analyst Programmer Responsibilities

Develop, test, maintain and document programs and systems components to provide effective trial administration and management, using c#.net and related technologies e.g. xml, python, java script
Provide SQL/ C#, XML, XSLT programming for routine and ad hoc extraction of datasets from databases (including SQL Server and Access).
Design and build windows and web-based systems using .net technologies to provide access to Unit's clinical data for non IT staff
Test systems developed in-house, and document testing.
Contribute to the development of the unit's Intranet pages, including some directly linked to databases.
Support and mentor less experienced database programmers

In general ICR-CTSU staff work from 9 am to 5 pm with a one hour lunch break. However, the post holder may occasionally be required to work outside these hours to provide support for system upgrades or site power down testing.

We currently have a blended approach to home and office working and flexible working options would be considered.

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.

In addition, there will be other duties consistent with the nature and grade of the post.

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Person specification

Education and Knowledge

First degree in Computer Science / Information Systems OR First degree in a scientific / numerate field with practical experience of working in an IT environment and programming knowledge	Essential
A good grasp of the scientific rationale for randomised trials	Desirable
An understanding of the principles of Good Clinical Practice, Data Protection and the EU Clinical Trials Directive	Desirable
Good working knowledge of Windows OS and Microsoft Office	Essential

Skills

Ability to work independently and as part of a team with enthusiasm and a professional attitude.	Essential
Excellent organisational skills and attention to detail	Essential
Ability to maintain clear and accurate records	Essential
Effective verbal and written communication skills	Essential
Ability to take a methodical approach to problem solving	Essential
Flexible and adaptable approach to managing workload	Essential
Excellent interpersonal skills	Essential

Experience

Experience of programming databases in e.g. SQL Server, Oracle or systems of similar complexity	Essential
Experience of developing and testing SQL scripts	Essential
Experience with the MACRO clinical trial data management system	Desirable
Experience with data integration/data science	Desirable
Experience with coding schemes and dictionaries (e.g. MedDRA,CDISC)	Desirable
Experience of working in a research or health service / clinical environment	Desirable
Experience of working on an IT Helpdesk	Desirable

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Experience working to SOPs and an appreciation of the importance of quality management.	Desirable
For Analyst Programmer (as above plus)	
Experience of programming in C# .Net or a similar modern object orientated language	Essential
Experience of ASP and web development	Essential
Experience with Reporting Services, Crystal Reports or a similar report writing tool	Essential
Experience of using XML and related technologies	Desirable

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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 2 years' and 5 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.

Further information

You may contact CTSU for further information by emailing ctsu@icr.ac.uk. This job description is a reflection of the current position and is subject to review and alteration in detail and emphasis in the light of future changes or development.