NHS
North Central London
Cancer Alliance

Introduction of Artificial Intelligence as a Reporting Tool for Prostate Biopsies

Project lead and organisation - Luis Beltran, Royal Free Hospital

Partner organisation(s) involved - Ibex Medical Analytics

Funding requested (£) - £64960 - year 1, £56960 - year 2

Proposed start and end dates - 1 September 2026 – 1 September 2027

Summary

This bid proposes implementing an AI-based reporting tool to improve the accuracy, efficiency, and timeliness of prostate cancer diagnosis from biopsy samples at the Royal Free Hospital. Increasing biopsy volumes, workforce shortages, and rising complexity are placing significant pressure on pathology services, leading to delays, variability in reporting, and risk of missed or misclassified cancers.

The project will deploy the Ibex Prostate AI platform as a pre-reporting decision-support tool within a fully digitised pathology workflow. The AI system will analyse biopsy slides and generate a draft report, which is then reviewed and validated by a pathologist. This approach aims to streamline workflows by supporting, rather than replacing, clinical decision-making and enabling more efficient use of specialist time.

Expected benefits include improved diagnostic accuracy and consistency, reduced reporting turnaround times (around 30% faster), and decreased need for additional confirmatory tests. The system is also expected to increase workforce productivity by reducing pathologist review time, helping to manage growing demand.

NCLCA Big Ideas Fund – Expression of Interest

Submit by 25 June 2026. Only NCLCA colleagues may submit.

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Questions marked with an asterisk indicate additional guidance on page 2 of this document.

Section 1 – Project Details			
Proposal title	**Introduction of Artificial Intelligence as a Reporting Tool for Prostate Biopsies**	**Project lead and organisation**	**Luis Beltran Royal Free Hospital**
Partner organisation(s) involved	**Ibex Medical Analytics**	**Funding requested (£)***	**£64960 year 1 £56960 year 2**
Proposed start and end dates*	**1 September 2026 – 1 September 2027**		
Section 2 – The Idea			
1. What is the challenge you are seeking to address?*	Cellular pathology services are facing increasing difficulty in delivering timely, consistent, and accurate diagnoses of prostate cancer from biopsy samples. Rising numbers of prostate biopsies, combined with workforce shortages and increasing reporting demands, are placing significant pressure on pathologists. This can lead to reporting delays, diagnostic variability, and an increased risk of missing small cancers or overcalling benign conditions. Assessment of prostate needle core biopsies remains the gold standard for diagnosis but is a complex and time-consuming process that requires evaluation of multiple features that guide treatment decisions, including cancer grade and tumour extent. Demand for these assessments is expected to increase substantially due to an ageing population, wider use of MRI-targeted biopsies, and the anticipated introduction of population-based screening programmes. There is therefore a clear need for innovative solutions that can improve the efficiency, consistency, and accuracy of prostate biopsy assessment while supporting a stretched pathology workforce and ensuring patients receive timely and reliable diagnoses.		
2. What is your proposed project and – at a high level – how would it be delivered?	Building on the recent digitasation of our service, the project will implement the Ibex Prostate AI platform as a pre-reporting decision-support tool for all prostate biopsy cases processed within the Royal Free Hospital pathology department. This tool reviews the whole slide scanned images and produces a pathology report incorporating all the relevant data as per the current RFH prostate biopsy report template **Current workflow**: 1. Slide prepared 2. Slide digitally scanned 3. Pathologists, reviews H& scanned slide 4. Report produced and authorised by pathologist. **Proposed workflow**: 1. Slide prepared 2. Slide digitally scanned 3. Ibex AI reviews H&E scanned slide and produces report 4. Pathologist reviews H& scanned slide 5. Pathologists authorises AI-prepared report with or without alterations		

Section 3 – Impact & Strategic Alignment	
3. Which NCL strategic objectives and/or National Cancer Plan ambitions does your project align with?	This project directly supports the operational delivery of high-performing, innovative and sustainable cancer diagnostic services by: Improving diagnostic quality and consistency. Increasing pathology reporting capacity. Supporting digital transformation and adoption of validated AI technologies. Enhancing workforce sustainability in a resource-constrained environment. Facilitating timely diagnosis and treatment decisions for patients with prostate cancer.
4. What impact do you expect the project to have on NCL cancer outcomes and/or patient experience?	Improved diagnostic accuracy and consistency with educed risk of missed cancers and grading discrepancies *(Lancet Digit Health*. 2020) Faster reporting turnaround times (30% cut in TAT reported) Reduced requirement for confirmatory IHC (up to 50% reduction reported). Increased pathology workforce productivity and capacity (25% decrease in pathologist reviewing time reported). Earlier and more confident treatment decision-making for patients. Improved patient experience through faster and more reliable diagnoses.
Section 4 – Resources	
5. What do you see as the likelihood of attracting external funding?	The likelihood of securing external funding for this project is low.
6. High-level indication of how the budget would be used*	Subscription and licensing costs for the Ibex Prostate AI platform. Integration and implementation costs.
Section 5 – Anything Else	
7. Is there anything else you would like to flag?	The project has the potential to significantly increase reporting capacity and future-proof pathology services against anticipated growth in prostate biopsy volumes. By improving efficiency and consistency, the Royal Free Hospital could potentially support additional regional prostate pathology workload and contribute to wider network resilience. Published experience with Ibex Prostate platform has demonstrated 25% average reduction in pathologist case review time. Given that there are approximately 2000 prostate biopsy cases per year reported in our department, and that the average review time according to RCPath is between 40-60 minutes, there is a potential saving of 330-500 hours (82-125 PAs) of consultant reporting time. IHC reduction of up to 50% would translate to approximately 100 fewer tests per year, generating cost savings while reducing reporting delays. This project therefore offers a realistic opportunity to improve quality, efficiency and sustainability within a high-volume cancer diagnostic pathway while supporting the broader digital pathology strategy across North Central London.

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Additional Guidance on Completing this EOI

General

- All EOIs must not exceed 2 pages.
- Please submit to uclh.nclcanceralliance@nhs.net by 25th June 2026.
- Only NCLCA colleagues may submit.

Section 1 – Project Details

- Our current expectation is that we will fund a small number of projects from a total funding pot of ~£600k.
- Proposed end date for the project must be no later than March 2029.

Section 2 – The Idea

- Question 1 - Describe the problem or unmet need. Include relevant data or evidence where possible.

Section 4 – Resources

- Question 6 - e.g., staffing, clinical time, technology, evaluation, overheads. Precise costings are not required at EOI stage.