# Oxford and Grail study suggests Galleri blood test may drastically improve early cancer detection



A recent study suggests that a simple blood test, known as the Galleri test, can identify cancer cases even among patients who initially receive a false reassurance that they do not have the disease. The research, conducted by experts at the University of Oxford in collaboration with the diagnostics company Grail, revealed that about a third of individuals who were thought to have a false positive result actually had cancer diagnosed within two years. The Galleri test detects a DNA "fingerprint" associated with over 50 types of deadly cancers, often before symptoms emerge.

The study analysed data from 6,238 NHS patients who presented symptoms indicative of possible cancer and were referred for diagnostic scans and tests. Blood samples from these patients were tested with Galleri, but the results were withheld from their GPs to prevent influencing the choice of diagnostic investigations. Findings showed that 35.4% of patients initially classified as false positives later received a cancer diagnosis, with the test successfully indicating the tumour’s site in the vast majority of these cases. Intriguingly, more than half of these cancers were located in organs not initially suspected based on clinical symptoms, underscoring the test’s potential utility in guiding clinicians to the appropriate diagnostic pathways.

Brian Nicholson, associate professor at Oxford’s Nuffield Department of Primary Care Health Sciences and co-lead investigator, emphasised the significance of proactive follow-up for positive Galleri results, even when initial diagnostic processes suggest a false positive. He noted, “one-third of the apparent false positive results were actually cancers the standard-of-care diagnostic process couldn’t immediately identify,” highlighting the diagnostic gap the test might fill. Furthermore, the Galleri test’s ability to predict the cancer’s origin aligned with eventual diagnoses in nearly all such cases, which could reduce diagnostic delays and unnecessary procedures.

Sir Harpal Kumar, president of international business and biopharma at Grail and former head of Cancer Research UK, commented on the findings, pointing out the potential clinical value of Galleri for patients presenting with non-specific symptoms like unexplained weight loss or abdominal pain. He explained that the test’s ability to correctly identify the tumour site could assist GPs in referring patients to the right specialist clinics more efficiently, potentially speeding up diagnosis and treatment. Kumar also highlighted that incorporating the additional true positive cases revised the test’s positive predictive value to 84%, a remarkable improvement compared to the current urgent referral system, where only around 6% of patients are diagnosed with cancer.

These results were presented at the Early Detection of Cancer Conference in Oregon and affirm earlier reports from the SYMPLIFY study, which similarly demonstrated Galleri’s ability to detect cancers in symptomatic populations and accurately pinpoint tumour origins. The ongoing NHS-Galleri Clinical Trial, a large randomized study involving approximately 140,000 healthy participants, continues to evaluate Galleri’s performance for population-wide cancer screening and its potential to improve early detection and outcomes. Its findings will be critical in determining how the test may be integrated into standard NHS care.

The partnership between the University of Oxford and Grail to assess the Galleri test reflects growing interest in blood-based multi-cancer early detection (MCED) tools to transform cancer diagnostics. With plans underway to make the test broadly available to UK patients over the coming years, based on supportive data from both the UK and US, stakeholders are hopeful that Galleri could substantially reduce late-stage cancer diagnoses and associated mortality. However, these promising findings await peer-reviewed publication and further validation before routine clinical implementation.

### 📌 Reference Map:

* Paragraph 1 – [[1]](https://www.irishnews.com/news/uk/simple-blood-test-can-pick-up-cancer-cases-in-false-positive-patients-study-W7WVEYGBQBOQFB675PNOWHEJK4/), [[4]](https://www.cancer.ox.ac.uk/news/oxford-to-assess-revolutionary-multi-cancer-blood-test-in-trial-for-future-implementation-in-the-nhs)
* Paragraph 2 – [[1]](https://www.irishnews.com/news/uk/simple-blood-test-can-pick-up-cancer-cases-in-false-positive-patients-study-W7WVEYGBQBOQFB675PNOWHEJK4/), [[6]](https://www.phc.ox.ac.uk/news/new-collaboration-to-assess-revolutionary-multi-cancer-blood-test-in-trial-for-future-use-in-the-nhs)
* Paragraph 3 – [[1]](https://www.irishnews.com/news/uk/simple-blood-test-can-pick-up-cancer-cases-in-false-positive-patients-study-W7WVEYGBQBOQFB675PNOWHEJK4/), [[2]](https://grail.com/press-releases/grail-and-university-of-oxford-present-long-term-data-from-the-symplify-study-evaluating-the-galleri-multi-cancer-early-detection-test-in-symptomatic-individuals-at-the-early-detection-of-cancer/)
* Paragraph 4 – [[1]](https://www.irishnews.com/news/uk/simple-blood-test-can-pick-up-cancer-cases-in-false-positive-patients-study-W7WVEYGBQBOQFB675PNOWHEJK4/)
* Paragraph 5 – [[1]](https://www.irishnews.com/news/uk/simple-blood-test-can-pick-up-cancer-cases-in-false-positive-patients-study-W7WVEYGBQBOQFB675PNOWHEJK4/), [[2]](https://grail.com/press-releases/grail-and-university-of-oxford-present-long-term-data-from-the-symplify-study-evaluating-the-galleri-multi-cancer-early-detection-test-in-symptomatic-individuals-at-the-early-detection-of-cancer/)
* Paragraph 6 – [[3]](https://grail.com/clinical-studies/nhs-galleri-trial-clinical/), [[5]](https://grail.com/press-releases/grail-and-englands-national-health-service-nhs-present-trial-design-for-largest-study-of-multi-cancer-early-detection-test-at-asco-annual-meeting/), [[7]](https://grail.com/press-releases/grail-and-uk-government-to-make-galleri-multi-cancer-early-detection-blood-test-available-to-patients/)
* Paragraph 7 – [[4]](https://www.cancer.ox.ac.uk/news/oxford-to-assess-revolutionary-multi-cancer-blood-test-in-trial-for-future-implementation-in-the-nhs), [[6]](https://www.phc.ox.ac.uk/news/new-collaboration-to-assess-revolutionary-multi-cancer-blood-test-in-trial-for-future-use-in-the-nhs), [[7]](https://grail.com/press-releases/grail-and-uk-government-to-make-galleri-multi-cancer-early-detection-blood-test-available-to-patients/)

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## Bibliography

1. <https://www.irishnews.com/news/uk/simple-blood-test-can-pick-up-cancer-cases-in-false-positive-patients-study-W7WVEYGBQBOQFB675PNOWHEJK4/> - Please view link - unable to able to access data
2. <https://grail.com/press-releases/grail-and-university-of-oxford-present-long-term-data-from-the-symplify-study-evaluating-the-galleri-multi-cancer-early-detection-test-in-symptomatic-individuals-at-the-early-detection-of-cancer/> - GRAIL and the University of Oxford presented long-term data from the SYMPLIFY study at the Early Detection of Cancer Conference. The study found that one-third of participants initially believed to have a false-positive result were later diagnosed with cancer during follow-up. The Galleri test's positive predictive value in this symptomatic population was 84.2%, and it accurately predicted the cancer's location in almost all cases initially considered false positives. These findings highlight the importance of proactive follow-up on positive multi-cancer early detection results and the value of Galleri's cancer signal origin prediction.
3. <https://grail.com/clinical-studies/nhs-galleri-trial-clinical/> - The NHS-Galleri Clinical Trial is a large-scale, randomized, controlled study assessing the performance and clinical utility of the Galleri test for population screening in the UK. Enrolling approximately 140,000 participants aged 50 to 77 who have not been diagnosed or treated for cancer in the past three years, the trial aims to determine if adding Galleri to standard care can detect cancers at an earlier stage, potentially improving treatment outcomes. Participants are randomized into test or control arms, with those testing positive referred for standard care investigations and treatment within the NHS.
4. <https://www.cancer.ox.ac.uk/news/oxford-to-assess-revolutionary-multi-cancer-blood-test-in-trial-for-future-implementation-in-the-nhs> - The University of Oxford has partnered with GRAIL to evaluate the use of the Galleri multi-cancer early detection test in the NHS. The SYMPLIFY study aims to demonstrate how Galleri can increase cancer detection rates and simplify diagnostic pathways. Beginning in Summer 2021, the study seeks to recruit around 6,000 symptomatic patients from sites across England and Wales, who have been referred by their GP for testing of their blood samples with Galleri. Results of the Galleri tests will then be used for test validation purposes.
5. <https://grail.com/press-releases/grail-and-englands-national-health-service-nhs-present-trial-design-for-largest-study-of-multi-cancer-early-detection-test-at-asco-annual-meeting/> - GRAIL and England’s National Health Service (NHS) presented the trial design for the largest study of a multi-cancer early detection test at the ASCO Annual Meeting. The NHS-Galleri trial is a randomized and controlled clinical trial in the NHS’ clinical practice setting, enrolling 140,000 healthy volunteers aged 50-77 in select regions throughout England. The study aims to determine if the Galleri test, along with other standard cancer screenings, can find cancers at an early stage when they are less advanced, and patients have a higher chance of successful and potentially curative treatment.
6. <https://www.phc.ox.ac.uk/news/new-collaboration-to-assess-revolutionary-multi-cancer-blood-test-in-trial-for-future-use-in-the-nhs> - The Nuffield Department of Primary Care Health Sciences at the University of Oxford has partnered with GRAIL to assess the performance of the Galleri multi-cancer early detection test. The SYMPLIFY study aims to demonstrate how the test could increase cancer detection rates and simplify diagnostic pathways. Beginning in Summer 2021, the study seeks to recruit around 6,000 symptomatic patients from sites across England and Wales, who have been referred by their GP for testing of their blood samples with Galleri. Results of the Galleri tests will then be used for test validation purposes.
7. <https://grail.com/press-releases/grail-and-uk-government-to-make-galleri-multi-cancer-early-detection-blood-test-available-to-patients/> - GRAIL and the UK Government have announced plans to make the Galleri multi-cancer early detection blood test available to patients. Based on data from this program, access to the test could be expanded to around one million people across 2024 and 2025 and may roll out to a larger population thereafter. In a clinical validation study in the U.S., an earlier version of Galleri detected over 50 types of cancer with a low false positive rate of less than 1% through a single blood draw. Modeling data show that adding Galleri to existing standard of care has the potential to decrease the number of cancers diagnosed at late stage by nearly half, which could reduce the total number of cancer deaths in the UK by approximately one-fifth.