New PATHFINDER Study Analysis Demonstrates Efficient Diagnostic Resolution Following Multi-Cancer Early Detection Testing

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Diagnostic Evaluations Were Consistent With Galleri®-Predicted Cancer Signal Origin in 78% of Study Participants

Whole-Body Imaging Did Not Contribute to Diagnostic Resolution in More Than Half of Participants

Results Were Presented at the 2023 ASCO Annual Meeting

MENLO PARK, Calif., June 3, 2023 — GRAIL, LLC, a healthcare company whose mission is to detect cancer early when it can be cured, today announced results from a retrospective analysis of the interventional PATHFINDER study to assess whether diagnostic evaluations of individuals who received a cancer signal detected (CSD) result with the Galleri® multi-cancer early detection (MCED) test were appropriately directed by the test's cancer signal origin (CSO) predictions. The findings demonstrated that in the majority of cases (78%), the test's CSO-directed initial diagnostic evaluation led to a diagnostic resolution. The findings were presented during a poster discussion session at the 2023 American Society of Clinical Oncology (ASCO) Annual Meeting.

"USPSTF-recommended cancer screening tests have reduced cancer-related mortality, but there are no established screening methods for many other types of cancer. MCED blood tests have the potential to be a powerful tool to screen for multiple cancers simultaneously from a single blood specimen," said Deb Schrag, MD, MPH, Chair, Department of Medicine at Memorial Sloan Kettering Cancer Center in New York and PATHFINDER investigator. "In the PATHFINDER Study, the MCED test's prediction of cancer signal origin helped to direct the clinical workup to either confirm a diagnosis of cancer or establish that one was not present. Focused workups help limit exposures to excessive testing."

This analysis was conducted on 39 PATHFINDER participants who received a CSD test result from both Galleri and an earlier version of the MCED test and had diagnostic evaluations. Diagnostic resolution was achieved in 82% of participants (n=32) after initial evaluation. Of those, the test's CSO-directed predictions led to diagnostic resolution in 78% of cases (25/32). The remaining seven participants required additional workup due to persistent clinical suspicion of cancer based on prior cancer history or abnormal or equivocal findings on initial evaluation. In all seven cases, additional workup led to diagnostic resolution.

Diagnostic workup was not prescribed by the protocol and was performed at the discretion of the ordering provider, and funded by GRAIL. Whole-body imaging (PET/CT or CT chest/abdomen/pelvis) was ordered for specific indications in 27 cases, and included 9 with a prior cancer history, 10 with non-localizing CSO (hematologic or indeterminate), and 1 with both. Although whole-body imaging was useful for hematologic and indeterminate CSOs, it did not contribute to diagnostic resolution in 51% of the participants (20/39).

"A major requirement of an MCED test is the ability of the test to predict where a cancer signal may be coming from in the body to help direct diagnostic workup in order to avoid unnecessary tests, radiation and costs," said Eric Klein, MD, Distinguished Scientist at GRAIL and PATHFINDER investigator in his prior role as Professor and Chair, Glickman Urological and Kidney Institute at the Cleveland Clinic. "These results demonstrate Galleri's ability to detect a methylation pattern considered to be a hallmark of cancer, and to localize the cancer signal to help physicians and their patients reach diagnostic resolution in the majority of patients with a positive MCED test. Whole-body imaging contributed to diagnosis in patients with hematologic CSOs, where it is already indicated, and rarely in other cancers."

About the PATHFINDER Study
PATHFINDER was a single-arm study, conducted under an approved Investigational Device Exemption application by the US Food and Drug Administration, that evaluated MCED screening with the Galleri test and clinical care pathways following a cancer signal detected test result in 6,662 individuals aged 50 years or older. The study measured the time required to achieve diagnostic resolution (i.e., healthcare provider-defined end to the diagnostic evaluation) following a cancer signal detected result and the number and types of diagnostic tests that were used (primary endpoint). MCED test performance was a key secondary endpoint, including positive predictive value (PPV, the percent of cancer signal detected results that were confirmed to be cancer) and the accuracy of the predicted cancer signal origin. MCED test performance was measured using both earlier and refined versions of Galleri. The earlier version of the test was refined to reduce the detection of pre-malignant hematologic conditions, which are fairly common, and improve prediction of the cancer signal origin. Participants were followed for 12 months after enrollment. Final results of the PATHFINDER study were previously reported at the European Society for Medical Oncology (ESMO) Congress 2022.

About GRAIL
GRAIL is a healthcare company whose mission is to detect cancer early, when it can be cured. GRAIL is focused on alleviating the global burden of cancer by using the power of next-generation sequencing, population-scale clinical studies, and state-of-the-art machine learning, software, and automation to detect and identify multiple deadly cancer types in earlier stages. GRAIL's targeted methylation-based platform can support the continuum of care for screening and precision oncology, including multi-cancer early detection in symptomatic patients, risk stratification, minimal residual disease detection, biomarker subtyping, treatment and recurrence monitoring. GRAIL is headquartered in Menlo Park, CA with locations in Washington, D.C., North Carolina, and the United Kingdom. GRAIL, LLC, is a subsidiary of Illumina, Inc. (NASDAQ:ILMN) currently held separate from Illumina Inc. under the terms of the Interim Measures Order of the European Commission.

For more information, visit grail.com.

About Galleri®
Galleri is the first-of-its-kind multi-cancer early detection (MCED) test that has demonstrated the ability to detect a shared cancer signal across more than 50 types of cancer through a routine blood draw. The Galleri test can improve the opportunity for asymptomatic early detection by screening for multiple cancers, most of which lack recommended screening tests. Galleri has demonstrated a low false positive rate and high positive predictive value (the proportion of people with a positive screening result who are diagnosed with cancer) in asymptomatic people at an elevated risk for cancer.

The Galleri test uses next-generation sequencing and machine-learning algorithms to isolate cell-free DNA and analyze methylation patterns to detect if a cancer signal is present. If a cancer signal is detected, the Galleri test predicts the cancer signal origin, or the tissue or organ where the cancer signal originated, to help guide diagnostic evaluation.

The Galleri test requires a prescription from a licensed health care provider and should be used in addition to recommended cancer screenings such as mammography, colonoscopy, prostate-specific antigen (PSA) test, or cervical cancer screening. It is intended for use in people with an elevated risk of cancer, such as those aged 50 or older.

For more information, visit galleri.com.

Important Galleri Safety Information
The Galleri test is recommended for use in adults with an elevated risk for cancer, such as those aged 50 or older. The Galleri test does not detect all cancers and should be used in addition to routine cancer screening tests recommended by a healthcare provider. Galleri is intended to detect cancer signals and predict where in the body the cancer signal is located. Use of Galleri is not recommended in individuals who are pregnant, 21 years old or younger, or undergoing active cancer treatment.

Results should be interpreted by a healthcare provider in the context of medical history, clinical signs and symptoms. A test result of “Cancer Signal Not Detected” does not rule out cancer. A test result of “Cancer Signal Detected” requires confirmatory diagnostic evaluation by medically established procedures (e.g., imaging) to confirm cancer.

If cancer is not confirmed with further testing, it could mean that cancer is not present or testing was insufficient to detect cancer, including due to the cancer being located in a different part of the body. False-positive (a cancer signal detected when cancer is not present) and false-negative (a cancer signal not detected when cancer is present) test results do occur. Rx only.

Laboratory/Test Information
GRAIL’s clinical laboratory is certified under the Clinical Laboratory Improvement Amendments of 1988 (CLIA) and accredited by the College of American Pathologists. The Galleri test was developed, and its performance characteristics were determined by GRAIL. The Galleri test has not been cleared or approved by the U.S. Food and Drug Administration. GRAIL’s clinical laboratory is regulated under CLIA to perform high-complexity testing. The Galleri test is intended for clinical purposes.

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