



Quest Diagnostics Unveils New Data Confirming Benefits Of Leukemia Tests Using Blood Plasma, Compared With Conventional Tests Using Cells In Bone Marrow Or Blood, At American Society Of Hematology Meeting

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23 Quest Diagnostics abstracts demonstrate scientific leadership with data highlighting effectiveness of newer, more sensitive, less invasive tests to diagnose and monitor hematologic disease

LYNDHURST, N.J., Dec. 9 /PRNewswire-FirstCall/ -- Quest Diagnostics Incorporated (NYSE: DGX), the nation's leading provider of diagnostic testing, information and services, announced today that it is presenting new data on a new series of laboratory-developed diagnostic assays for hematologic diseases, such as leukemia and lymphoma, at the 47th Annual Meeting and Exposition of the American Society of Hematology (ASH) in Atlanta. The company expects to introduce the first of these tests later this month. In total, 23 published Quest Diagnostics abstracts are being presented during the conference, which runs from December 10-13, 2005. The abstracts and presentations cover topics including new plasma-based testing, studies involving testing of new therapeutics, and studies on a range of advances in clinical diagnostics and monitoring of therapy. The authors include Quest Diagnostics scientists as well as collaborators from various academic centers, including MD Anderson Cancer Center.

Overall, the abstracts present data to demonstrate that plasma-based assays are an effective and less invasive way of diagnosing and monitoring leukemia and lymphoma patients, compared with the current laboratory diagnostic methods. Some current tests require patients to undergo painful procedures, such as bone marrow biopsies, which require extraction of tissue with a bone-piercing, large-gauge needle. The abstracts also describe laboratory developed assays that have the potential of evaluating tumor load in patients with leukemia and lymphoma as well as quantifying the level of a tumor's "activity" by measuring the phosphorylation of the oncoproteins; these capabilities are not possible using conventional methods that test cells from either bone marrow or peripheral blood.

"To summarize, some of these new plasma-based assays provide physicians with a more accurate and complete picture of what is happening within a patient's body compared with biopsies, which provide limited information only about a specific area," said Maher Albitar, M.D., Medical Director for Hematopathology at Quest Diagnostics. "When the new assays are available, they will allow oncologists to assess patients more frequently, allowing them to more closely monitor a patient's progress on therapy and tailor treatment accordingly."

"We are excited by the breadth of work Dr. Albitar and his team are performing, as demonstrated by the wealth of data being presented at this year's ASH meeting," said Surya N. Mohapatra, Ph.D., Chairman and Chief Executive Officer of Quest Diagnostics. "The new assays have the potential to provide the physician with more clinically useful information for the assessment of prognosis, disease progression, and therapeutic success than current methods, which could enable oncologists to advance the efficacy of therapies. Based on the body of research presented at ASH, Quest Diagnostics has the potential to provide new ways to help clinicians better manage their patients with a new generation of diagnostics to replace some of the current tests that depend solely on tissue and cells."

In one study, the investigators reported the development of a new plasma-based assay for patients with chronic myeloid leukemia (CML). This assay measures a tumor marker, Bcr-Abl fusion protein, quantifies the tumor load and also detects the level of activation (phosphorylation) of the Bcr-Abl protein in the plasma. The investigators believe that the level of activation may have utility in monitoring the clinical behavior and response to therapy [Meeting Abstract #2006] Measurement of Free Circulating Bcr-Abl Fusion Protein and Its Phosphorylation in Patients with Chronic Myeloid Leukemia.

In another study, Dr. Albitar and his colleagues presented data demonstrating the ability of plasma-based testing to detect JAK2 mutations, especially in the homozygous state. The JAK2 mutation is the most common genomic abnormality in myeloproliferative diseases involving blood cells derived from bone marrow (polycythemia vera, essential thrombocythemia, and myelofibrosis). The investigators reported that patients with homozygous JAK2 mutations, when detected in plasma, indicated more aggressive disease, as evidenced by shorter survival, than heterozygous patients. Conventional testing methods using bone marrow or circulating cells cannot distinguish between the homozygous and heterozygous populations. [Meeting Abstract #2593] Hemizygous/Homozygous and Heterozygous JAK2 Mutation Detected in Plasma of Patients with Myeloproliferative Diseases: Correlation with Clinical Behavior.

In another study, the investigators demonstrated that blood plasma testing was comparable in accuracy to conventional bone marrow testing and more sensitive than testing cells found in peripheral blood, which is commonly used for patients with chronic myeloid leukemia (CML). The study showed that plasma-based testing assessed mutations associated with resistance to therapy, in this case Gleevec (Imatinib). [Meeting Abstract #4849] Discrepancy in Detecting Bcr-Abl Kinase Domain Mutations between Cells from Bone Marrow and Cells from Peripheral Blood, and Greater Concordance between Bone Marrow Cells and Plasma Free RNA.

A fourth study showed that plasma based testing by PCR was more effective than conventional testing by PCR using peripheral blood cells in monitoring both CML patients who responded to therapy using Gleevec (Imatinib) and those patients whose residual disease was increasing. [Meeting Abstract #2007] Plasma RNA Is More Reliable Than Peripheral Blood Cells for Monitoring Molecular Response to Imatinib in Patients with Chronic Myeloid Leukemia.

The investigators also presented several studies involving new laboratory developed assays based on flow cytometry to measure levels of intracellular kinase proteins and their activation (phosphorylation). These new assays may be used by physicians to help guide and determine the efficacy of various therapeutic approaches, which currently are being investigated in several ongoing clinical trials. [Meeting Abstract #2769] Differences in Histone Acetylation Levels in CD34+ Cells between Acute Myeloid Leukemia (AML) and Myelodysplastic Syndrome (MDS): Correlation between Higher Levels of Histone 2B Acetylation and Survival in AML; [Meeting Abstract #2772] 4E-Binding Protein 1 (4E-BP1) in CD34+ Cells as Measured by Quantitative Flow Cytometry Is an Independent Prognostic Factor in Patients with Acute Myeloid Leukemia. [Meeting Abstract #3526] Novel Quantitative Flow Cytometry-Based Signaling Assays Reveal a Potential Role for HSP90 Inhibitors in the Treatment of JAK2 Mutant-Positive Diseases. [Meeting Abstract #3426] Measurement of HSP90 and HSP70 in CD34-Positive Cells: Lower Levels in Myelodysplastic Syndrome Than in Acute Myeloid Leukemia and Correlation with Clinical Behavior; Phosphorylation Levels of BCR-ABL, Stat5, and CrkL Proteins in Imatinib-Resistant

CML Patients as Compared to Previously Untreated CML Patients: Implication of Poor Drug Binding and Activation of Alternate Pathways. Hypomethylation Therapy of Decitabine in Patients with Myelodysplastic Syndromes (MDS) Induces Apoptosis and Reduces Proliferation.

Readers may access all 23 of the Quest Diagnostics abstracts online by visiting the American Society of Hematology website: http://www.abstracts2view.com/hem_ash05atlanta/index.php

About Quest Diagnostics

Quest Diagnostics is the leading provider of diagnostic testing, information and services that patients and doctors need to make better healthcare decisions. The company offers the broadest access to diagnostic testing services through its national network of laboratories and patient service centers, and provides interpretive consultation through its extensive medical and scientific staff. Quest Diagnostics is a pioneer in developing innovative new diagnostic tests and advanced healthcare information technology solutions that help improve patient care. Additional company information is available at: www.questdiagnostics.com.

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