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Thermo Fisher introduces new diagnostic system to aid in evaluation of lung transplant rejection

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New gene expression profiling test enhances precision in assessing lung transplant rejection and injury

Thermo Fisher Scientific, the world leader in serving science, has introduced a new laboratory developed test for post-transplant biopsy assessment designed to improve the detection of lung transplant rejection and injury, delivering quantifiable results that may increase diagnostic confidence and guide timely treatment.

Due to the significant risk of rejection, lung transplant recipients often require routine biopsies to monitor the health of their new lungs. Yet, when assessing the same lung biopsy sample, research shows that only 18% of pathologists will agree on a diagnosis of acute rejection.

Thermo Fisher's new Molecular Microscope® Diagnostic System for Lung (MMDx® Lung) leverages the power of machine learning to profile gene expression data from lung biopsies, comparing each new sample to a reference set of over 896 lung biopsies. The system assesses the probability of rejection and provides molecular scores associated with injury, graft dysfunction and rejection. The results may aid in a pathologist's assessment, with the aim of enabling greater confidence in the diagnosis and treatment of a lung transplant recipient.

Lung transplantation, once considered experimental, has evolved to become a standard of care for patients with end-state lung disease. In the past decade, the number of annual lung transplants in the U.S. has nearly doubled. Despite medical advances, lung transplant recipients continue to face higher rates of rejection compared to other solid organ transplants, with a five-year survival rate of just under 60%.

In the United States, MMDx Lung is delivered through a collaboration with Kashi Clinical Laboratories, a market leader in transplantation immunodiagnostic lab testing.