MicroRNA-based Diagnostic Identifies Squamous Lung Cancer with 96% Sensitivity

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A new study shows for the first time that a microRNA-based diagnostic test can objectively identify squamous lung cancer with 96% sensitivity, according to Harvey Pass, M.D. of the NYU Cancer Institute at NYU Langone Medical Center, one of the authors of the study published on-line ahead of print in the *Journal of Clinical Oncology*.

In a paper titled, "Diagnostic Assay Based on has-miR-205 Expression Distinguishes Squamous From Non-Squamous Non-Small-Cell Lung Carcinoma," researchers looked at 252 patients with lung cancer and sent their tumor samples to a lab where a single microRNA biomarker identified squamous lung carcinomas with 96% sensitivity and 90% specificity. This is important because studies have shown that as many as 30% of squamous lung cancers are misclassified. If the type of lung cancer is not identified correctly, patients may have side effects due to treatment and medications. For example, squamous lung cancer carries increased risk of severe or fatal bleeding for certain targeted biological therapies including Bevacizumab (Avastin) and other drugs in development. Other approved therapies such as Pemetrexed (Alimta) are indicated for non-squamous lung cancer only.

The study, funded by Rosetta Genomics, was conducted at the NYU Cancer Institute at NYU Langone Medical Center in collaboration with researchers from Columbia University and Sheba Medical Center.

"The results of this study are very encouraging," says Harvey Pass, MD, professor of cardiothoracic surgery and director, thoracic surgery and

oncology at the NYU Cancer Institute at NYU Langone Medical Center. “The study has demonstrated that a microRNA biomarker successfully identifies squamous lung cancer with high reproducibility, sensitivity and specificity. “The study certainly demonstrates the power of microRNAs in correctly classifying lung cancer and hopefully can immediately translate into more accurate choices of targeted therapies as well as cytotoxics for the disease.”

Dr. Pass is the Vice chairman medical advisory board for Rosetta Genomics (Nasdaq: ROSG), the company who makes a test based on the same microRNA biomarker that was evaluated by the study. The test offers similar accuracy (97% sensitivity) and is now commercially available through Rosetta Genomics CLIA-certified lab in Philadelphia.

Provided by New York University Langone Medical Center