NEWS RELEASE

Foundation Medicine and Dana-Farber Present Data at ASCO20 Showing that Comprehensive Genomic Profiling Identified Co-Occurring Alterations that May Cause Treatment Resistance in Patients with METex14-altered NSCLC

CAMBRIDGE, Mass. – May 29, 2020 – Foundation Medicine, Inc., and Dana-Farber Cancer Institute presented new data highlighting the utility of comprehensive genomic profiling (CGP) to guide treatment decisions in patients with advanced non-small cell lung cancer (NSCLC) whose tumors also have an alteration that leads to MET exon 14 skipping (METex14). The results underscore the feasibility of tissue and liquid biopsy CGP to characterize common alterations that may be critical for predicting responses to MET inhibitors in patients with NSCLC. These data were presented in a clinical science symposium at the 2020 American Society of Clinical Oncology (ASCO) Virtual Scientific Program.

NSCLC accounts for approximately 85% of lung cancer diagnoses, approximately 3% of which have MET exon 14 skipping.1,2 While METex14-altered NSCLC is sensitive to MET inhibition, alterations that co-occur with METex14 may cause treatment resistance to MET inhibitors.

In this analysis of more than 60,000 cases of advanced NSCLC, researchers characterized a subset of 1,387 of patients (2.3%) with METex14-altered NSCLC – a prevalence consistent with previous research – and identified multiple co-occurring alterations that may cause resistance to MET inhibitors.3,4,5,6 The study also identified six different subclasses of METex14 skipping alterations based on their location, illustrating the complexity of this cancer, which has a poor prognosis.7

“Diverse, co-occurring alterations in METex14 non-small cell lung cancer may correlate with primary or acquired resistance to treatment, so detecting these various alterations using comprehensive genomic profiling may be critical to predicting response to MET inhibitors,” said lead study author Mark Awad, M.D., assistant professor of medicine at Harvard Medical School and clinical director of the Lowe Center for Thoracic Oncology at Dana-Farber Cancer Institute. “These data underscore the urgent need to identify effective strategies to delay or overcome resistance to targeted therapies in METex14 mutant NSCLC.”

Among 36 patients with paired tissue and liquid samples, potential resistance mechanisms to MET inhibition included 25% of patients with secondary MET alterations, 8% of patients with MET amplification and individual cases with acquired alterations in the EGFR, ERBB2, KRAS and
the PI3K pathway were identified. Co-alterations and potential acquired resistance mechanisms appear largely independent of primary METex14 alteration subtype.

“This study emphasizes the importance of comprehensive genomic profiling in patients with METex14-altered NSCLC to facilitate precision medicine both earlier and throughout a patient’s treatment,” said Brian Alexander, M.D., M.P.H, chief medical officer at Foundation Medicine and study co-author. “The study also adds more evidence that genomic testing through both tissue and liquid biopsy can be an important tool for monitoring for resistance alterations during treatment.”

A full list of data being presented by Foundation Medicine and its collaborators, and more information about Foundation Medicine’s portfolio of CGP tests are available at http://comprehensivegenomicprofiling.com.

About METex14-altered Non-Small Cell Lung Cancer
NSCLC accounts for 80-85% of lung cancer diagnoses.1 Mutations that lead to skipping METex14, called skipping alterations, are oncogenic drivers in NSCLC. Approximately 3% of patients with NSCLC have MET exon 14 skipping.2 These tumors produce an altered form of the MET protein, which is a receptor tyrosine kinase that activates a wide range of cellular signaling pathways that can lead to cancer growth.

About Foundation Medicine
Foundation Medicine is a molecular information company dedicated to a transformation in cancer care in which treatment is informed by a deep understanding of the genomic changes that contribute to each patient’s unique cancer. The company offers a full suite of comprehensive genomic profiling assays to identify the molecular alterations in a patient’s cancer and match them with relevant targeted therapies, immunotherapies and clinical trials. Foundation Medicine’s molecular information platform aims to improve day-to-day care for patients by serving the needs of clinicians, academic researchers and drug developers to help advance the science of molecular medicine in cancer. For more information, please visit www.FoundationMedicine.com or follow Foundation Medicine on Twitter (@FoundationATCG).

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Foundation Medicine Contact:
Lee-Ann Murphy, 617-245-3077
pr@foundationmedicine.com
3 Characterization of 1,387 NSCLCs with MET exon 14 (METex14) skipping alterations (SA) and potential acquired resistance (AR) mechanisms. Abstract 9511.