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Patients with EGFR exon 20 insertions have poorer prognosis

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Exon 20 insertions are the third most common family of epidermal growth factor receptor (EGFR) mutations found in non–small-cell lung cancer (NSCLC). Little is known about cancers harboring these mutations aside from their lack of response to EGFR tyrosine kinase inhibitors, impairing the development of effective targeted therapies. A recent study published in the February 2013 issue of the International Association for the Study of Lung Cancer's (IASLC) *Journal of Thoracic Oncology*, concludes that patients with EGFR exon 20 insertions have similar clinical characteristics to those with common EGFR mutations, but a poorer prognosis.

Researchers from the Dana-Farber Cancer Institute studied 1,086 patients who underwent EGFR genotyping between 2004 and 2012. No significant differences were identified between the cancers carrying exon 20 inser¬tions and those with the common EGFR mutations. However, cancers with exon 20 insertions were more commonly seen in patients who are never-smokers and in Asian patients. Median survival of patients with exon 20 insertions was 16 months, similar to the survival of wild-type cancers and shorter than the survival of cancers with common EGFR mutations.

Given the findings, the researchers, "estimate that lung cancers with EGFR exon 20 have an annual incidence of approximately 2,000 to 4,000 patients in the United States, not dissimilar from the expected incidence of other uncommon genotype-defined subsets of NSCLC such as those with ROS1 rearrangements, BRAF mutations, or HER2

insertions."

To conclude the researchers say, "previously treated NSCLC carrying EGFR exon 20 insertions represent a population on oncogene-addicted cancers in need of targeted therapy development."

Provided by International Association for the Study of Lung Cancer