

Letter to the Editor

Lung Cancers in Non-Smokers

Every year, more than 2 million people around the world are diagnosed with lung cancers. Although most of them had a history of tobacco smoking, 10 to 20 percent had never smoked, which occurred more frequently in women and at an earlier age. Recently, there has been evidence showing the origin of lung cancer in people with no history of smoking.

A study of tumor genomes for mutational signatures, using whole-genomic sequencing to characterize the genomic changes in tumor tissue and matched with normal tissue from never smokers, revealed three subtypes of lung cancer in never smokers. The predominant “piano” subtype is associated with the activation of progenitor cells, which are involved in the creation of new cells. The “mezzo-forte” subtypes had specific chromosomal changes as mutations in the growth factor receptor gene *EGFR*. The “forte” subtype exhibited whole-genome doubling, a genome change that is often seen in lung cancers in smokers.

Researchers reported their findings in a paper entitled “Genomics and evolutionary classification of lung cancer in never smokers,” which appeared on September 6, 2021 in *Nature Genetics*, DOI: 10.1038/s41588-021-00920-0. <https://scitechdaily.com/genetic-analysis-illuminates-origins-of-lung-cancer-in-people-with-no-history-of-smoking/>.

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