Experimental KRAS Inhibitor Shrinks Lung Tumors

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After three decades of unsuccessful attempts, researchers have finally cracked the KRAS code, leading to the development of promising new targeted therapies. The KRAS gene makes proteins that regulate cell growth, and KRAS mutations can allow cancer to grow out of control.

One experimental KRAS inhibitor, adagrasib, targets a specific mutation known as KRAS G12C, which is found in about 13% of non-small-cell lung cancer (NSCLC) tumors. The first drug targeting the same mutation, Lumakras (sotorasib), was approved last year.

In the Phase II KRYSTAL-1 study, 112 patients with this mutation who had previously received both chemotherapy and checkpoint inhibitor immuno-therapy were treated with adagrasib pills twice daily.

After about a year of follow-up, the overall response rate (tumor shrinkage) was 43%. What's more, the drug also shrank tumors that had spread to the brain. The median progression- free survival time was 6.5 months, and the median overall survival time was 12.6 months.

"These data highlight that inhibiting KRAS-G12C can lead to clinically meaningful benefits to NSCLC patients with this form of lung cancer," says Pasi Jänne, MD, PhD, of Dana-Farber Cancer Institute in Boston. Adagrasib has also shown activity against other malignancies with the KRAS-G12C mutation, including colorectal, pancreatic and biliary tract cancers.

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