Oral Drug Demonstrates Promising Antitumor Activity in Patients With Advanced Lung Cancer

Sevabertinib is an oral drug targeting HER2 mutations that shrinks tumors in advanced lung cancer patients, with minimal side effects.

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- Lung cancer is the leading cause of cancer-related death worldwide, with up to 4% of non-small cell lung cancer cases having a HER2 gene mutation.
- Sevabertinib is an oral drug targeting HER2 mutations that shrinks tumors in advanced lung cancer patients, with minimal side effects.
- FDA granted priority review for sevabertinib, and results of this study will help inform the decision.

Berlin – The oral targeted therapy sevabertinib led to tumor reduction and manageable side effects in patients with HER2-mutant non-small cell lung cancer (NSCLC), according to data from a trial led by researchers at The University of Texas MD Anderson Cancer Center.

The Phase I/II SOHO-01 clinical trial found that over 70% of the patients studied saw their tumors shrink or disappear. The results were published [October 17] in the New England Journal of Medicine and presented concurrently at the European Society for Medical Oncology (ESMO) Congress 2025 (Abstract LBA75) by principal investigator Xiuning Le, MD, PhD, associate professor of Thoracic/Head and Neck Medical Oncology.

Why is the SOHO-01 study important?

While platinum-based chemotherapy and, in some cases, immunotherapy are the standard first-line treatments for patients with advanced HER2-mutant NSCLC, opportunities remain to improve outcomes and minimize toxicity with new targeted therapies.

One such therapy, trastuzumab deruxtecan [Enhertu], a HER2-targeted antibody-drug conjugate (ADC), has received Food and Drug Administration (FDA) accelerated approval for patients who have already been treated. However, this treatment comes with health risks, including interstitial

lung disease (ILD).

The trial results suggest sevabertinib, a reversible tyrosine kinase inhibitor developed by Bayer – targeting mutant HER2 while avoiding effects on normal EGFR – may be a safe and effective option for this patient group.

“For patients with HER2-mutant lung cancer, treatment options have historically been limited and outcomes suboptimal,” Le said. “FDA approval of sevabertinib would introduce another targeted therapy option, one that precisely targets this mutation. This drug has demonstrated meaningful clinical activity with a manageable safety profile, representing a significant advance in the care of this challenging disease.”

What are the key findings of the Phase I/II SOHO-01 trial?

The open-label, multicenter SOHO-01 study enrolled 209 patients with advanced NSCLC driven by EGFR or HER2 into three different cohorts, each receiving 20 mg of sevabertinib twice a day. Cohort D included 81 patients who had received prior therapy not targeted to HER2; Cohort E included 55 patients who had received HER2-targeted ADCs; and Cohort F enrolled 73 patients who had not received prior therapies.

The results demonstrated sevabertinib reduced tumor activity in patients both naïve to and previously treated with HER2-targeted antibody-drug conjugates. Diarrhea was the most common side effect, and no ILD was reported.

Of the subgroups, Cohort D patients had a response rate of 70.5%, with a median time of 8.3 months before their cancer progressed. Encouragingly, similar results were seen across different patient cohorts, no matter which treatments they’d had before or whether their cancer had spread to the brain.

Is sevabertinib currently approved for use in NSCLC patients?

In May 2025, sevabertinib was granted priority review for accelerated approval by the FDA. This came after it received the FDA’s 2024 Breakthrough Therapy designation. The results of SOHO-01 support the New Drug Approval (NDA) submitted to the FDA.

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