Immunotherapy Shows Promise for Early Lung Cancer

Tecentriq after surgery and chemotherapy delayed recurrence in people with Stage II or III non-small-cell lung cancer.

July 8, 2021 By Liz Highleyman

Treatment with the checkpoint inhibitor Tecentriq (atezolizumab), which is approved for the treatment of metastatic non-small-cell lung cancer (NSCLC), can also help people with less advanced disease, according to a study presented at the American Society for Clinical Oncology annual meeting.

When used as adjuvant, or follow-up, treatment after surgery and chemotherapy, Tecentriq delayed disease recurrence, particularly for patients with a biomarker that predicts favorable response.

Non-small-cell lung cancer, which accounts for more than 80% of all lung cancers, is often detected late and has a high mortality rate. Recent advances in lung cancer treatment have mostly benefited people with advanced NSCLC. This is the first Phase III study to show that adjuvant immunotherapy can delay recurrence among people with early-stage NSCLC. These findings underscore the importance of lung cancer screening for current and former smokers to detect tumors early, when they are easier to treat and potentially curable.

Heather Wakelee, MD, of Stanford University Medical Center, presented findings from IMpower010, a clinical trial evaluating Tecentriq after surgical removal of tumors and platinum-based chemotherapy to prevent recurrence.

“Though surgery can cure some patients with early-stage lung cancer, disease recurrence is still very common,” Wakelee said. She noted that until this study, the only treatment known to help reduce that risk for most patients was chemotherapy, or in some cases Tagrisso (osimertinib) for the small proportion whose tumors carry specific EGFR mutations.

Tecentriq, from Genentech, is a monoclonal antibody that blocks a protein called PD-L1 that is expressed in some tumors. PD-1 is an immune checkpoint, a receptor on T cells that plays a role in regulating immune function. Some cancers can hijack PD-1 to turn off immune responses against them. Drugs that block the interaction between PD-1 and its binding partner, PD-L1, can release the brakes and restore T-cell activity. People with higher PD-L1 levels tend to respond better to

this type of immunotherapy.

In May 2020, the Food and Drug Administration approved Tecentriq as initial treatment for people diagnosed with metastatic NSCLC. Phase III trials showed that first-line Tecentriq delayed disease progression when paired with platinum chemotherapy and other drugs, including Abraxane (albumin-bound paclitaxel), Alimta (pemetrexed) or Avastin (bevacizumab). It was previously approved as a follow-up treatment for people with metastatic NSCLC who experience disease progression despite chemotherapy.

IMpower010 enrolled 1,280 people with Stage IB to IIIA NSCLC who had undergone complete surgical resection of their tumors followed by up to four cycles of cisplatin-based chemotherapy. About half had a tumor PD-L1 expression level of 1% or higher. A total of 1,005 patients were randomly assigned to receive IV infusions of Tecentriq every three weeks for up to 16 cycles or the best standard supportive care.

Among all participants with Stage II to IIIA cancer, the median disease-free survival time was 42.3 months in the Tecentriq group compared with 35.3 months in the supportive care group, reflecting a 21% reduction in the risk of recurrence or death. Results for people with Stage IB cancer and overall survival data are not yet mature.

Among Stage II to IIIA patients with a PD-L1 level of at least 1%, the median disease-free survival time was not yet reached because a majority were still alive without recurrence, reflecting a 34% risk reduction. Three quarters of Tecentriq recipients were alive and disease-free at two years compared with 61% of supportive care recipients; at three years, the corresponding figures were 60% versus 48%.

Treatment was generally safe, although side effects were common. About twice as many people who received Tecentriq experienced severe (Grade 3 or 4) adverse events as those in the supportive care group (22% versus 12%). Nearly 20% of Tecentriq recipients stopped treatment due to adverse events; less than 1% had fatal adverse events.

“For the first time, we are seeing that an immunotherapy is effective when used to treat early-stage lung cancer,” ASCO chief medical officer and executive vice president Julie Gralow, said in a press release. “The IMpower010 trial demonstrates that, for certain patients, atezolizumab can delay progression to advanced disease and perhaps even the need for more aggressive therapy. This could be an important advance in our understanding of immunotherapy and a step forward for many patients with lung cancer.”

Click here to read the study abstract.
Click here for more news from the ASCO annual meeting.

Click here to learn more about lung cancer.

© 2026 Smart + Strong All Rights Reserved.