NEW TARGETED MEDICINE WORKS BETTER THAN CHEMOTHERAPY, WITH FEWER ADVERSE EFFECTS

Up to 7% of NSCLCs have a genetic change known as anaplastic lymphoma kinase (ALK) rearrangement that results in an abnormal ALK protein that causes cells to grow and spread. The first medicine that targets ALK, crizotinib, was approved by the FDA in 2011, and more potent medicines have been introduced since that time. In 2017, two clinical trials showed that one new ALK medicine, alectinib, is more effective than crizotinib for patients with previously untreated NSCLC, and also causes fewer adverse effects.32,33

In the larger of the two trials, during a median follow-up of 18 months, 41% of patients who received alectinib had their cancer worsen, or died, compared with 68% of those who received crizotinib.33 Alectinib was also better at curbing the growth of cancer that had spread to the brain; only 12% of patients had worsening brain metastases compared with 45% of those who received crizotinib.

ROLE OF IMMUNOTHERAPY CONTINUES TO EXPAND, SLOWING ADVANCED CANCER GROWTH

In 2017, the FDA granted accelerated approval to pembrolizumab combined with standard chemotherapy (carboplatin and pemetrexed) as an initial treatment of metastatic NSCLC.34 The approval was based on an early clinical trial that found that the chance of cancer worsening was cut nearly in half by adding pembrolizumab to chemotherapy.

The median time until cancer worsening was 13 months with pembrolizumab and chemotherapy, versus 9 months with chemotherapy alone; however, the incidence of serious treatment-related adverse effects was higher with combined modality treatment (41%) than chemotherapy alone (28%). An international phase III clinical trial is underway to confirm these findings (ClinicalTrials.gov identifier: NCT02578680).

A newer immune checkpoint inhibitor, durvalumab, also seems to have a role in lung cancer treatment. These findings mark the first advance in years for the treatment of stage III, locally advanced NSCLC. This type of cancer accounts for approximately one third of all NSCLCs.

The standard treatment of patients with tumors that cannot be surgically removed is chemotherapy with radiation, or chemoradiation. Despite this treatment, cancer quickly worsens, and only 15% of patients are alive 5 years after diagnosis.

In this trial, patients whose cancer did not worsen after chemoradiotherapy were randomly assigned to receive durvalumab or placebo.35 The median time until cancer worsening was 16.8 months with durvalumab and 5.6 months with placebo, and the median time until patients died or the cancer spread to distant parts of the body was 23.2 months versus 14.6 months, respectively.

ASCO estimates that 250,000 years of life would be saved in the United States if all patients with NSCLC for whom checkpoint inhibitors are currently indicated received the treatment. While the average number of years of life saved is 2.5, up to 25% of people who receive checkpoint inhibitors as an initial treatment and 10% of those who receive them as a second-line treatment may live well beyond 5 years after treatment initiation.

The estimates were based on an analysis of clinical trial results and cancer incidence and population data conducted by the ASCO Center for Research and Analytics (CENTRA). The researchers accounted for differences by race and gender in NSCLC incidence and life expectancy.

Immunotherapy for Lung Cancer Could Save 250,000 Years of Life

Immune checkpoint inhibitors have transformed treatment for advanced NSCLC. There are currently 3 FDA-approved checkpoint inhibitors for previously treated NSCLC (nivolumab, pembrolizumab, and atezolizumab) and pembrolizumab is approved as an initial therapy for certain patients. In clinical trials, patients who received these immunotherapies have lived longer, on average, than those who received standard chemotherapy. However, given that checkpoint inhibitors have been in use for only a few years, their impact on long-term survival is not yet known.

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