Early Research Suggests First Immunotherapy for Mesothelioma on the Horizon

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ASCO Perspective

“We’re seeing a second wave of immunotherapy with expansion of its use in more cancer types. This study shows that immunotherapy may represent an effective new treatment approach for mesothelioma, a disease for which we've long had too little to offer,” said ASCO Expert Michael S. Sabel, MD, FACS. “These results will serve as a building block to improve the outlook for patients with this cancer.”

CHICAGO – Malignant pleural mesothelioma or MPM is a rare cancer, but its incidence has been rising. This cancer is usually associated with asbestos exposure, and patients have a median life expectancy of only 13-15 months. All patients relapse despite initial chemotherapy, more than 50% of them within six months after stopping treatment. There are currently no effective therapeutic options for patients with MPM.

Early findings from an ongoing phase II clinical trial in France, MAPS-2, show that immunotherapy may slow the growth of MPM after relapse. At 12 weeks, cancer had not worsened in 44% of patients who received nivolumab (Opdivo) and in 50% of those who received nivolumab with ipilimumab (Yervoy).

The study will be featured in a press briefing today and presented at the 2017 American Society of Clinical Oncology (ASCO) Annual Meeting.
“Our findings suggest that immunotherapy may provide new hope to patients with relapsed mesothelioma,” said lead study author Arnaud Scherpereel, MD, PhD, head of the Pulmonary and Thoracic Oncology Department at the University Hospital (CHU) of Lille in Lille, France. “This randomized phase II trial may be enough to support the use of immune checkpoint inhibitors in this setting, but it is too early to conclude whether nivolumab alone or the combination of nivolumab and ipilimumab is better.”

**About the Study**
This multi-center clinical trial enrolled 125 patients with advanced MPM who had received up to two prior treatments, including standard platinum-based chemotherapy. The majority of patients (80%) were male, and the median age was 72 years. The patients were randomly assigned to treatment with nivolumab alone or nivolumab with ipilimumab until the cancer worsened; 70% of patients received at least 3 cycles of either treatment.

**Key Findings**
The authors report results from the first 108 patients treated on the study. The disease control rate or DCR, defined as the percentage of patients in which cancer either shrunk or did not grow, was 44% among the patients who received nivolumab only and 50% among those who received nivolumab with ipilimumab (the 12-week DCR for all treatments previously tested in relapsed MPM was less than 30%). Tumors shrunk in 17% of patients treated with nivolumab and 26% of those treated with nivolumab and ipilimumab.

After a mean follow-up of 10.4 months of the 125 patients, the median time until the cancer worsened (progression-free survival) was 4 months with nivolumab alone and 5.6 months with nivolumab and ipilimumab. The median overall survival was 10.4 months in the nivolumab group and not reached in the nivolumab with ipilimumab group (meaning that more than 50% were still alive at analysis). Mature quality-of-life data are not yet available.

The side effects were rather mild overall with the most common being thyroid problems, colon inflammation, and skin rash. Severe side effects were more common in the nivolumab plus ipilimumab group (18% vs. 10%), in which three treatment-related deaths occurred.

**Next Steps**
With 125 patients, MAPS-2 is the largest clinical trial of immune checkpoint inhibitors in
mesothelioma to date, according to the authors. Many ongoing clinical trials are exploring nivolumab and other immune checkpoint inhibitors as second- or third-line treatments for MPM. In addition, several larger clinical trials investigating immune checkpoint inhibitors as initial therapy for MPM are already under way.

“Mesothelioma cells build a protective tumor microenvironment to shield themselves against the immune system’s attacks and even act against anti-tumor immune response,” said Dr. Scherpereel. “Therefore, therapies that shift the tumor microenvironment from a state of immune suppression to one of immune activation may hold promise in MPM.”

**About Mesothelioma**

Malignant pleural mesothelioma is a cancer that begins in the lining of the lungs. This cancer is associated with occupational exposure to asbestos, which causes chronic inflammation. It typically takes 30 to 40 years from asbestos exposure to development of MPM.

The peak of asbestos use was between the 1960s and the 1980s. Although use of asbestos has been banned in the United States and many European countries, asbestos is still being used and extracted in many developing countries. “For these reasons, we expect to continue to see growing incidence of mesothelioma in the coming decades,” said Dr. Scherpereel.

This study was funded by Bristol-Myers Squibb.

View the full abstract.

**For your readers:**

- Understanding Immunotherapy
- Guide to Mesothelioma

View the disclosures for the 2017 ASCO Annual Meeting News Planning Team.

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