PEOPLE

Julie M. Vose, MD, MBA, an internationally recognized expert in the treatment of lymphoma and chief of the Oncology/Hematology Division at the University of Nebraska Medical Center in Omaha, began a 1-year term as president of the American Society of Clinical Oncology (ASCO) at its 2015 Annual Meeting in Chicago, IL, on June 1. Since 2006, she has served as the associate director of clinical research and co-chair of the lymphoma program at the institution's Fred and Pamela Buffet Cancer Center.

Johns Hopkins University

Suzanne L. Topalian, MD, professor of surgery and oncology and director of the melanoma program at the Sidney Kimmel Comprehensive Cancer Center, Johns Hopkins University School of Medicine in Baltimore, MD, received the Karnofsky Memorial Award on May 30 at the ASCO meeting. The award recognizes her outstanding contributions to cancer research, diagnosis, and treatment. Her studies of human antitumor immunity have provided a foundation for the translational development of cancer vaccines, adoptive T-cell transfer, and immunomodulatory monoclonal antibodies.

F. Carter Smith

Also at the ASCO meeting, **James P. Allison, PhD,** professor and chair of The University of Texas MD Anderson Cancer Center Department of Immunology in Houston, received the Science of Oncology Award on May 31. The award salutes his groundbreaking studies on T-cell response mechanisms and the application of that knowledge to overcome cancer's ability to evade the immune system. His discoveries led to the clinical development of ipilimumab (Yervoy; Bristol-Myers Squibb) to block CTLA-4.

Expanding the Reach of Anti–PD-1 Therapy

Therapies that expose tumors to immune surveillance by preventing interactions between the PD-1 receptor and its ligands, PD-L1 and PD-L2, continue to generate excitement in the oncology field, with pembrolizumab (Keytruda; Merck) and nivolumab (Opdivo; Bristol-Myers Squibb)—both approved for metastatic melanoma, and the latter for advanced squamous non–small cell lung cancer (NSCLC)—now being evaluated in other solid tumors.

At the American Society of Clinical Oncology's Annual Meeting in Chicago, IL, May 29–June 2, results from investigations of pembrolizumab in metastatic head and neck squamous cell carcinoma (HNSCC), and nivolumab in advanced liver cancer and non-squamous NSCLC, were reported. "These common cancers have been quite refractory to treatment and not previously considered candidates for immunotherapy," said Lynn Schuchter, MD, chief of hematology and oncology at the University of Pennsylvania School of Medicine.

In the KEYNOTE-012 study, the objective response rate (ORR) to pembrolizumab among 132 patients with HNSCC was 24.8%, with half responding within 9 weeks; 86% of responses are ongoing. Drug activity was independent of PD-L1 status and occurred among patients whose disease was positive for human papillomavirus (HPV; primarily nonsmokers) or negative for HPV (mostly smokers).

"Pembrolizumab is twice as good as our only approved targeted therapy, cetuximab [Erbitux; Bristol-Myers Squibb]," said the study's lead author Tanguy Seiwert, MD, assistant professor of medicine at the University of Chicago. Just 13% of patients respond to cetuximab, and recent data suggest it is less effective in HPV-positive tumors. Pembrolizumab was well tolerated, with the main side effects being fatigue and hypothyroidism.

Nivolumab was evaluated in a phase I/II study for advanced liver cancer, and 19% of 42 evaluable patients responded. "To put this in context, the response rate with our only approved systemic therapy, sorafenib [Nexavar; Onyx Pharmaceuticals], is just 2%," said the study's lead author Anthony El-Khoueiry, MD, director of the phase I program at the University of Southern California's Norris Comprehensive Cancer Center in Los Angeles. "Two patients' tumors completely disappeared, and six of the eight responses are ongoing, highlighting the durability of this immunotherapy."

Nivolumab was active and well tolerated even in patients with hepatitis B or C infections. The main side effects were elevated amylase and lipase levels along with abnormal liver enzymes, all unaccompanied by clinical symptoms. "Importantly, the 1-year overall survival [OS] rate was 62%, compared to 30% with sorafenib," El-Khoueiry noted. "We'll need to verify our findings in larger studies, but immunotherapy may have a role in treating liver cancer."

Meanwhile, in the phase III CheckMate 057 study, nivolumab extended the OS of patients with advanced non-squamous NSCLC by 3 months, compared with standard docetaxel. In this study, 582 patients were randomized, independent of PD-L1 status, to receive either drug. The ORRs with nivolumab and docetaxel were 19% and 12%, respectively; the median duration of response was significantly longer with nivolumab—17.2 months, compared with 5.6 months with docetaxel. Nivolumab had a favorable safety profile: 10% of patients experienced moderate to severe side effects, versus 54% of those given docetaxel.

"In our study, PD-L1 expression emerged as a predictive factor for benefiting from nivolumab," noted the study's lead author Luis Paz-Ares, MD, PhD, a professor of medicine at Hospital Universitario 12 de Octubre in Madrid, Spain: The median OS for patients expressing PD-L1 in 1% or more of their tumor cells was 17.2 months with this immunotherapy, versus 9.0 months with docetaxel; this 8-month difference doubled for patients with higher (>5%) PD-L1 expression. Paz-Ares called this a "huge magnitude of benefit," adding that "there were no survival differences between nivolumab and docetaxel for