



IASLC



INTERNATIONAL  
ASSOCIATION  
FOR THE STUDY  
OF LUNG CANCER

Conquering Thoracic Cancers Worldwide

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### **KEYNOTE 189: Tumor Mutational Burden Not Significantly Associated with Efficacy of Pembrolizumab**

**Barcelona**— Tumor mutational burden was not significantly associated with efficacy of pembrolizumab plus chemotherapy or placebo plus chemotherapy as first-line therapy for metastatic nonsquamous non-small cell lung cancer, according to research reported today by Dr. M. Garassino from the Fondazione IRCCS Istituto Nazionale dei Tumori, Milan, Italy. Dr. Garassino presented this new data today at the **IASLC 2019 World Conference on Lung Cancer** hosted by the International Association for the Study of Lung Cancer.

Tumor mutational burden is a measurement of mutations carried by tumor cells and is a predictive biomarker being studied to evaluate its association with response to immunotherapy. TMB, in concert with PD-L1 expression, has been demonstrated to be a useful biomarker across some cancer types.

To test this notion, Dr. Garassino and her colleagues randomized 616 patients 2:1 to pembrolizumab plus chemotherapy or placebo plus chemotherapy. TMB was determined by whole-exome sequencing of tumor and matched normal DNA. The clinical utility of TMB on outcomes was assessed using prespecified TMB cut points of 175 and 150 Mut/.

Of the 616 patients enrolled, 293 (48.3%) had evaluable TMB data: 207 for pembrolizumab plus chemotherapy, 86 for placebo plus chemotherapy. Baseline characteristics and outcomes were generally similar in the TMB-evaluable and total populations. TMB as a continuous variable was not significantly associated with overall survival, progression-free survival or objective response rate for pembrolizumab plus chemotherapy or placebo plus chemotherapy. Pembrolizumab plus chemotherapy improved overall survival, progression-free survival and objective response rate.

“Tumor mutational burden was not significantly associated with efficacy of pembrolizumab plus chemotherapy or placebo plus chemotherapy as first-line therapy for metastatic nonsquamous NSCLC,” said Dr. Garassino. “Pembrolizumab plus chemotherapy had a similar OS benefit in the TMB-high and low subgroups.”

#### **About the WCLC:**

The WCLC is the world’s largest meeting dedicated to lung cancer and other thoracic malignancies, attracting more than 7,000 researchers, physicians and specialists from more than 100 countries. The goal is to increase awareness, collaboration and understanding of lung cancer, and to help participants implement the latest developments across the globe. The conference will cover a wide range of disciplines and unveil several research studies and clinical trial results. For more information, visit

[wclc2019.iaslc.org](http://wclc2019.iaslc.org).

**About the IASLC:**

The International Association for the Study of Lung Cancer (IASLC) is the only global organization dedicated solely to the study of lung cancer and other thoracic malignancies. Founded in 1974, the association's membership includes more than 7,500 lung cancer specialists across all disciplines in over 100 countries, forming a global network working together to conquer lung and thoracic cancers worldwide. The association also publishes the *Journal of Thoracic Oncology*, the primary educational and informational publication for topics relevant to the prevention, detection, diagnosis and treatment of all thoracic malignancies. Visit [www.iaslc.org](http://www.iaslc.org) for more information.

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