Supplemental Online Content

Han CY, Fitzgerald C, Lee M, et al. Association Between Toxic Effects and Survival in Patients With Cancer and Autoimmune Disease Treated With Checkpoint Inhibitor Immunotherapy. *JAMA Oncol*. Published online July 7, 2022. doi:10.1001/jamaoncol.2022.2081

eMethods.

This supplemental material has been provided by the authors to give readers additional information about their work.

Additional Methods:

Additional inclusion and exclusion criteria for the patient cohort are as follows: all patients had tumors profiled using MSK-IMPACT (MSK-Integrated Mutation Profiling of Actionable Cancer Targets), an FDA-approved targeted next-generation sequencing platform for patients with advanced cancer treated at Memorial Sloan Kettering Cancer Center, employed as a part of routine clinical care. We excluded patients with synchronous or multiple cancers, enrolled in blinded trials, treated in neoadjuvant/adjuvant settings, and with unevaluable response.

Patients were screened for pre-existing AID as defined by a list maintained by the American Autoimmune Related Diseases Association using ICD-9/10 codes dated prior to the date of ICI initiation and verified through manual review. Additional toxicity data was collected solely for patients in the AID cohort. Response to ICIs was graded using Response Evaluation Criteria in Solid Tumors v1.1, or manual review of target lesion sizes if RECIST reads were unavailable, with objective response rate based on partial or complete responses. Overall survival was measured from ICI initiation until death, with patients censored at last contact.

For analysis, categorical data were compared with Fisher's exact and chi-square tests, and continuous data compared with independent sample t-tests and nonparametric independent samples tests. Kaplan Meier curves were used to estimate the survival function, with the log rank test used for a statistical comparison between groups. For the multivariable Cox regression, toxicity was modeled as a time-varying covariate in consideration of possible immortal time bias, as toxicity is conditional on survival. The threshold for statistical significance was set to $\alpha<.05$. Analyses were performed using SPSS v26.0.