differences across treatment classes in the association between tumor regrowth and OS.

Conclusions Our results suggest that not all reductions in tumor size are equal. A patient with a certain degree of tumor shrinkage on the PD-1/PD-L1 inhibitor will have lower mortality risk than a patient with a similar degree of shrinkage on the other regimens evaluated. More research is needed to determine whether the result is unique to this particular PD-1/PD-L1 inhibitor, to determine what mechanisms of action mediate these treatment-specific effects, and to develop improved surrogate measures of treatment efficacy.

REFERENCES

1. Eisenhauer EA, Therasse P, Bogaerts J, *et al*: New response evaluation criteria in solid tumours: revised RECIST guideline (version 1.1). *Eur J Cancer* 2009;**45**:228–247.
2. Of Health USD, Services H, *Others*: Clinical trial endpoints for the approval of non-small cell lung cancer drugs and biologics: guidance for Industry, 2015
3. Mandrekar SJ, An M-W, Meyers J, *et al*: Evaluation of Alternate Categorical Tumor Metrics and Cut Points for Response Categorization Using the RECIST 1.1 Data Warehouse. *J Clin Orthod* **32**:841–850, 2014
4. Blumenthal GM, Karuri SW, Zhang H, *et al*: Overall response rate, progression-free survival, and overall survival with targeted and standard therapies in advanced non-small-cell lung cancer: US Food and Drug Administration trial-level and patient-level analyses. *J Clin Oncol* **33**:1008–1014, 2015
5. Stein WD, Figg WD, Dahut W, *et al*: Tumor growth rates derived from data for patients in a clinical trial correlate strongly with patient survival: a novel strategy for evaluation of clinical trial data. *Oncologist* **13**:1046–1054, 2008
6. Carpenter B, Gelman A, Hoffman MD, *et al*: Stan: A probabilistic programming language [Internet]. J Stat Softw 2017;76, Available from: http://www.stat.columbia.edu/~gelman/research/published/Stan-paper-aug-2015.pdf

http://dx.doi.org/10.1136/jitc-2020-SITC2020.0276

277 COMBINED NEOADJUVANT CHEMO-IMMUNOTHERAPY THERAPY ACHIEVES SUPERIOR DOWNSTAGING OF RESECTABLE NON-SMALL CELL LUNG CANCER AS COMPARED TO CHEMOTHERAPY, MONO OR DUAL IMMUNOTHERAPY

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Background Tumor and nodal downstaging following neoadjuvant therapy in resectable non-small cell lung cancer (NSCLC) are important markers of therapeutic response associated with favorable prognosis. We studied the impact of four different systemic neoadjuvant therapies on tumor, nodal and overall pathological downstaging of surgically resectable I-IIIA NSCLC (AJCC 7th edition).

Methods Our study cohorts consisted of NSCLC patients treated with three cycles of neoadjuvant platinum doublet chemotherapy from 2001–2012 (N=302, 84%), and patients treated on the NEOSTAR study (NCT03158129) who received neoadjuvant nivolumab (N=21,6%), nivolumab plus ipilimumab (N=16, 4%), or platinum doublet chemotherapy plus nivolumab (N=22, 6%). Clinical and pathological (yp) T and N staging were evaluated for downstaging and upstaging; differences were assessed using Fisher's exact test.

Results Following neoadjuvant platinum doublet chemotherapy, nivolumab, nivolumab plus ipilimumab and platinum doublet chemotherapy plus nivolumab, the rates of clinical-to-pathological ypT downstaging were 26% (N=79), 29% (N=6), 38% (N=6) and 59% (N=13), respectively, p =0.012 (table 1). The rates of clinical-to-pathological ypN downstaging in patients with clinical N1 or N2 disease with each therapy were 55% (N=96), 50% (N=3), 50% (N=2), and 42% (N=5) respectively, p =0.862. Overall clinical-to-pathological (ypT and/or ypN) downstaging rates were 38% (N=114), 38% (N=8), 38% (N=6), and 68% (N=15) respectively, p=0.048. The proportions of patients being overall upstaged following each therapy were 28% (N=85), 38% (N=8), 38% (N=6) and 14% (N=3), respectively, p=0.251. These results suggest superior downstaging effect and clinically meaningful lower upstaging probability of combined platinum doublet chemotherapy plus nivolumab as compared to other neoadjuvant regimens.

Abstract 277 Table 1 Response to Chemotherapy, Immunotherapy, and Combination Therapy

TABLE: Response to Chemotherapy, Immunotherapy, and Combination Therapy

	Chemotherapy N=302	Single-agent ICI N=21	Dual-agent ICI N=16	Chemotherapy+ ICI N=22	p
ypT downstaged vs. stable/upstaged	26% (79)	29% (6)	38% (6)	59% (13)	0.012
ypN downstaged vs. stable/upstaged*	55% (96)	50% (3)	50% (2)	42% (5)	0.862
Overall yp downstaged vs. stable/upstaged	38% (114)	38% (8)	38% (6)	68% (15)	0.048

*Among those with cN1 disease

ICI: immune checkpoint inhibitor

Conclusions The combination of neoadjuvant platinum doublet chemotherapy with nivolumab achieves the most robust tumor and overall pathological downstaging and decreases the probability of upstaging at surgery. Whether the overall downstaging effect results in improved survival will be determined with longer follow-up, in conjunction with results from ongoing phase III neoadjuvant chemo-immunotherapy trials.

Trial Registration NCT03158129

Ethics Approval This study was approved by the University of Texas MD Anderson Institutional Review Board with a waiver of informed consent, protocol 2020-0337.

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278 PHASE I CLINICAL TRIAL EVALUATING THE SAFETY OF ADP-A2M10 SPEAR T-CELLS IN PATIENTS WITH MAGE-A10^{+} ADVANCED NON-SMALL CELL LUNG CANCER

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Background ADP-A2M10 SPEAR T-cells are genetically engineered autologous T-cells that express a high affinity MAGE-A10-specific T-cell receptor targeting MAGE-A10^{+}tumors in the context of HLA-A*02. This trial is now complete (NCT02592577).

Methods This first-in-human dose escalation trial utilized a modified 3+3 design to evaluate safety and antitumor activity. Eligible patients (pts) were HLA-A*02^{+} with advanced non-small cell lung cancer (NSCLC) expressing MAGE-A10. Pts underwent apheresis; T-cells were isolated, transduced with a lentiviral vector containing the TCR targeting MAGE-A10, and expanded. Pts underwent lymphodepletion (LD) with varying doses/schedules of fludarabine (Flu) and cyclophosphamide (Cy) prior to receiving ADP-A2M10. ADP-A2M10 was