(all races) with stage IV melanomas captured in the NCDB for the periods from 2004–2011 and 2012–2016.
Conclusions Asian patients with melanoma are receiving diagnoses at older ages. Despite decreases in OS for all Asian patients with melanoma, advanced stage IV of the diseases have improved outcomes for the group treated in the era of ICI and TT. Further investigation is warranted to understand the treatment, patient, and tumor characteristics that predict response in this demographic of patients.

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730 HISTOTRIPSY FOCUSED ULTRASOUND ABLATION INDUCES IMMUNOLOGICAL CELL DEATH IN TREATED AND DISTANT UNTREATED TUMORS

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Background Histotripsy, a novel image-guided, robotically assisted sonic therapy platform, is a non-invasive and non-thermal tumor ablation modality. We have previously shown that histotripsy potentiates profound innate and adaptive anti-tumor responses in addition to direct tumor destruction.[1] In this study, we sought to characterize the biomarkers of tumor cell death pathways immediately after histotripsy and after the induction of adaptive anti-tumor immune responses in preclinical settings.
Methods Immunocompetent C57BL/6 mice were inoculated with bilateral subcutaneous flank injections of Hepa1-6 hepatocellular carcinoma to generate 8–10 mm tumors within 8–11 days. Unilateral subtotal histotripsy was then performed. Mice were euthanized at 6h, and 1, 3 and 10–12 days post-treatment (dpt). Tumors were measured, harvested, fixed, sectioned and studied using multicolor immunohistochemistry.
Results Histotripsy decreased treated tumor growth by 50% and abscopal tumor growth by 30–40% compared to untreated tumors at 12dpt, evidencing a systemic anti-tumor immune response that inhibited growth of distant untreated tumor. Treated tumors showed immediate tissue liquefaction in the ablation zone with marked extranuclear translocation of the damage associated molecular pattern HMGB1. At 1dpt, 100% of tumor cells within the ablation zone showed HMGB1 translocation, and 70% of tumor cells at the periphery of the ablation zone showed HMGB1 translocation. Caspase 3 cleavage was not observed in the direct ablation zone, but at the junction of the ablated and non-ablated tissue ~40% cells that released HMGB1 showed cleaved Caspase 3. Caspase 9 cleavage was observed in ~50% cells that had cleaved Caspase 3, suggesting early programed cell death with mitochondrial damage and cytochrome C release 1 dpt; the presence of inflammasome integration/activation suggested pyroptosis induction. Areas of tumor well outside the zone of ablation and within untreated tumors contralateral to ablated tumors did not show early DAMP release or apoptotic cell death compared to the control tumors. However, a robust immune cell infiltration was observed in these locations at 10–12dpt, involving CD8 T-cell infiltration and areas of tumoral HMGB1 release in the vicinity of the infiltrating CD8 T cells - indicating the induction of immune rejection of treated and untreated tumors by histotripsy.
Conclusions Our results indicate that histotripsy ablation promotes tumor cell destruction through both immediate mechanical disruption, as well as possible adjacent apoptotic and pyroptotic death. Systemic CD8 T-cell mobilization and immunological cell death in the treated and the contralateral tumors is a novel long term therapeutic benefit.

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Regulatory, financial, and access considerations

731 COSTS OF CARE FOR FIRST-LINE (1L) TREATMENT OF ADVANCED NON-SMALL CELL LUNG CANCER (ANSCLC): A REAL-WORLD CLAIMS ANALYSIS

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Background Recent advances in therapy have created numerous options for the 1L treatment of aNSCLC. This study describes the total direct healthcare costs for patients treated with immunotherapy monotherapy (IO), chemotherapy (CT), or immunotherapy plus chemotherapy (IO+CT) in the 1L setting.
Methods The Ability Patient Complete claims database was used to identify US patients aged ≥ 18 years diagnosed with aNSCLC (ICD-9: 162.*; ICD-10: C34.*) initiating 1L treatment with IO, CT, or IO+CT between January 2015 and May 2019. Patients were required to have at least 6 months of continuous enrollment prior to initiation of 1L treatment, ≥ 1 inpatient or 2 outpatient claims for lung cancer, and a claim within 45 days for a secondary metastatic site. Patients with another malignant primary cancer, who participated in a clinical trial, or who received treatments consistent with small cell lung cancer or a systemic therapy not used for lung cancer were excluded. Costs were calculated on a per-patient per month (PPPM) basis from initiation of 1L treatment until discontinuation or end of study period and expressed in 2019 US dollars. A standardized cost approach was applied, with average wholesale prices for antineoplastic and other drug costs and CMS fee schedules for outpatient visits, inpatient stays, ED visits, and other medical costs (e.g. all other outpatient medical services including infusions of growth factors, radiographic studies, blood draws, etc.). All antineoplastic costs were considered individually.
Results 8,154 patients were included in the cohort: 1,319 received IO, 5,315 CT, and 1,520 IO+CT. By cohort, mean age was 65 (IO), 63 (CT), and 62 (IO+CT) years while mean Charlson Comorbidity Index was 2.12, 2.11, and 1.83, respectively. Key results by healthcare resource utilization category are provided in the table below (table 1).
Conclusions The total PPPM healthcare costs of patients receiving chemotherapy (CT or IO+CT) are higher than those only receiving IO monotherapy. These differences are driven by higher outpatient visit, other medical, and pharmacy costs. IO-containing regimens have higher antineoplastic costs than