an opportunity to be followed for at least 16 weeks) is shown in the table 1. At data cutoff, 91.8% of responders remained ongoing and still on treatment. Treatment-related adverse events (TRAEs) occurred in 93.6% of pts (G3 in 13.8% [13/94], no G4 or G5, treatment discontinuation in 2.1% [2/94]). Treatment-related SAEs occurred in 3.2%. Most frequent TRAEs (≥15%) were fever (24.5%), hypothyroidism (21.3%), upper respiratory tract infection (18.1%), and ALT elevations (17.0%). Grade ≥3 TRAEs reported in ≥2 pts were platelet count decreased (2.1%). Immune-related AEs were reported in 42.6% of pts (G3 in 2.1%; psoriasis [n=1], IgA nephropathy [n=1]).

Conclusions Penpulimab was shown to be highly active resulting in a high CR rate in pts with R/R cHL. With longer follow-up, CR rate for penpulimab in R/R cHL could be further increased. Penpulimab demonstrated notably lower rates of SAE, TRAE leading to discontinuation, and Grade ≥3 immune-related AEs in pts with R/R cHL.

Trial Registration NCT03722147

http://dx.doi.org/10.1136/jitc-2020-SITC2020.0791

Abstract 791 Table 1 Anti-tumor activity of penpulimab in R/R cHL

<table>
<thead>
<tr>
<th>ORR, % (95% CI)</th>
<th>CR, %</th>
<th>DCR, median (range), months</th>
<th>DoR, median (range), months</th>
<th>6m-PFS, % (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>83.6% (73.9, 91.2)</td>
<td>49.3%</td>
<td>91.8% (83.6, 96.0)</td>
<td>62% (0.0-13.1)</td>
<td>82.2% (68.5, 90.4)</td>
</tr>
</tbody>
</table>

Background Specific immune cell responses against oncogenic antigens are major determinants to achieve long-term disease control for HPV-related malignancies. We developed TG4001, a viral based vaccine against the HPV E6 and E7 antigens. These results warrant validation in a larger cohort of patients.

Trial Registration NCT03260023

http://dx.doi.org/10.1136/jitc-2020-SITC2020.0793

793 TG4001 (TIPAPKINOGENE SOVACIVEC) AND AVELUMAB FOR RECURRENT/METASTATIC (R/M) HUMAN PAPILLOMA VIRUS (HPV)-16+ CANCERS: CLINICAL EFFICACY AND IMMUNOGENICITY

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Specific immune cell responses against tumor-associated antigens are major determinants to achieve long-term disease control for HPV-related malignancies. We developed TG4001, a viral based vaccine against the HPV E6 and E7 antigens. These results warrant validation in a larger cohort of patients.

Trial Registration NCT03260023

http://dx.doi.org/10.1136/jitc-2020-SITC2020.0791

794 SAFETY AND EFFICACY RESULTS FROM A PHASE 1/1B STUDY OF INTRATUMORAL MK-4621, A RETINOIC ACID-INDUCIBLE GENE I (RIG-I) AGONIST, PLUS INTRAVENOUS PEMBROLIZUMAB IN PATIENTS WITH ADVANCED SOLID TUMORS

Víctor Moreno,1 Caroline Gaudy-Marquete,1 Martin Wermke,2 Antoine Italiano,2 Emanuela Romano,1 Audrey Marabelle,1 Emilie Conners,2 Heng Zhou,3 Konstantin Dobrenkov,4 Elliot Chartash,5 Emiliano Calvo*,4 Emiliano Calvo Alber,5 START Madrid-UCD, Hospital Universitario Fundacion Jimenez, Madrid, Spain;6 CEPMC CLIP2, Timone’s Hospital, Marseille, France;7 Universitätsklinikum Carl Gustav Carus, Dresden, Germany;8 Institut Bergonié, Bordeaux, France;9 Institut Curie, Paris, France;10 Institut Gustave Roussy, Villejuif, France;11 Merck and Co., Inc., Kenilworth, NJ, USA;12 START Madrid-CIOCC, Centro Integral Oncología, Madrid, Spain

Background The oligonucleotide MK-4621 selectively binds RIG-I to activate the RIG-I pathway, inducing a type 1 interferon response. In a first-in-human study (MK-4621-001, NCT03065023), intratumoral MK-4621 resulted in no dose-limiting toxicities (DLTs) and increased circulating chemokine levels and tumor expression of interferon signaling genes in patients with advanced/recurrent solid tumors. We report outcomes from an open-label, dose-escalation phase 1/1b study of intratumoral MK-4621 and intravenous pembrolizumab in patients with advanced solid tumors (MK-4621-002, NCT03739138).

Methods Participants were aged ≥18 years with histologically/cytologically confirmed advanced/metastatic solid tumors, ECOG PS 0/1, cutaneous, subcutaneous, and/or nodal lesions amenable to intratumoral injection and had received, or were intolerant to, all treatments known to
confer clinical benefit. In 3-week cycles, patients received intratumoral MK-4621 0.4, 0.6, or 0.8 mg on days 1, 8, and 15 for 6 cycles (delivered via jetPEI®, Polyplus Transfection, Illkirch, France) plus intravenous pembrolizumab 200 mg on day 1 for 35 cycles. Treatment continued until disease progression or unacceptable toxicity. The primary objective was to establish a preliminary recommended phase 2 dose based on DLTs (cycle-1), AEs, and treatment discontinuations due to AEs; AEs were graded per NCI CTCAE v4.0. Tumor imaging was performed Q9W; response was assessed by the investigator.

**Results**

As of May 14, 2020, 30 participants received therapy with MK-4621 0.4 (n=7), 0.6 (n=5), or 0.8 mg (n=18). Median time on therapy was 57 (range, 1-365) days. The most frequent tumor types were breast (20%) and melanoma (17%); 90% of patients received =2 prior lines of therapy. One patient in the 0.8-mg group experienced a DLT (grade 3 treatment-related pleural effusion), which resulted in treatment discontinuation; no other patient discontinued owing to AEs. Grade 3 treatment-related AEs occurred in 1 patient (14%) at the 0.4-mg dose (pyrexia), 1 patient (20%) at the 0.6-mg dose (hypertension), and 5 patients (28%) at the 0.8-mg dose (anemia [n=2], dyspnea/pleural effusion [n=1], lymphopenia [n=1], pyrexia [n=1]). No treatment-related grade 4/5 AEs occurred. Across dose levels, the most frequently occurring treatment-related AEs were pyrexia (63%), chills (37%), cytokine-release syndrome (20%), and nausea (20%). Efficacy outcomes are below (table 1). Significant changes in blood interferon-gamma inducible protein-10 and monocyte chemotactic protein-2 were observed at each dose level, consistent with the mechanism of action of MK-4621.

### Abstract 794 Table 1 Efficacy outcomes

<table>
<thead>
<tr>
<th>Dose Level</th>
<th>Pembrolizumab (mg)</th>
<th>Overall Response (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>MK-4621 0.4 mg</td>
<td>Pembrolizumab (n=7)</td>
<td>CR 0, PR 0, SD 2/29 (7%), PD 2/29 (7%)</td>
</tr>
<tr>
<td>MK-4621 0.6 mg</td>
<td>Pembrolizumab (n=5)</td>
<td>CR 0, PR 0, SD 3/4 (75%)</td>
</tr>
<tr>
<td>MK-4621 0.8 mg</td>
<td>Pembrolizumab (n=18)</td>
<td>CR 0, PR 0, SD 1/3 (33%), PD 0/18 (0%)</td>
</tr>
</tbody>
</table>

Conclusions

The combination of intratumoral MK-4621 plus intravenous pembrolizumab had a manageable safety profile. At the highest dose level, modest antitumor activity was observed in patients treated with combination therapy.

**Trial Registration** ClinicalTrials.gov identifier, NCT03739138

**Ethics Approval** An independent institutional review board or ethics committee approved the protocol at each study site, and the trial is being conducted in compliance with Good Clinical Practice guidelines and the Declaration of Helsinki.

http://dx.doi.org/10.1136/jitc-2020-SITC2020.0794

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**Background**

Angiosarcoma is a rare cancer of endothelial cells that can be aggressive and carries a high mortality. A subset of angiosarcomas are characterized by high tumor mutational burden (TMB) and UV light exposure DNA mutational signature. Isolated case reports have suggested clinical efficacy of immune checkpoint blockade in angiosarcoma; no prospective studies of immune checkpoint inhibition in angiosarcoma have been reported. We report efficacy analysis results for patients with advanced or unresectable angiosarcoma treated with ipilimumab and nivolumab as a cohort of an ongoing phase II study for rare cancers (NCT02834013).

**Methods**

This is a prospective, open-label, multicenter phase II clinical trial of ipilimumab (1mg/kg IV q6weeks) plus nivolumab (240mg IV q2weeks) for patients with metastatic or unresectable angiosarcoma. The primary endpoint is objective response rate as assessed by RECIST v1.1, including measurable cutaneous disease that can be followed by photography. Secondary endpoints include PFS, OS, stable disease at six months, and toxicity. A two-stage design is used with six patients in the first stage and an additional ten patients in the second stage.

**Results**

At data cutoff, 16 patients with angiosarcoma were enrolled. Median age was 68 years (25-81 years). Median number of prior lines of therapy was 2 (0-5). 9 patients had cutaneous primary tumors of any cutaneous site, 7 had non-cutaneous primary tumors. ORR for all patients was 25% (4/16, table 1, figure 1). Subgroup analysis revealed that 60% (3/5) of patients with primary cutaneous tumors of the scalp or face had a confirmed objective response. 6-month PFS was 38%. 75% of patients experienced an adverse event (AE), and 25% experienced a grade 3-4 AE. Isolated case reports have suggested clinical efficacy of immune checkpoint blockade in angiosarcoma; no prospective trials of immune checkpoint inhibition in angiosarcoma have been reported. We report efficacy analysis results for patients with advanced or unresectable angiosarcoma treated with ipilimumab and nivolumab as a cohort of an ongoing phase II study for rare cancers (NCT02834013).

**Conclusions**

The combination of ipilimumab and nivolumab was well tolerated and had an ORR of 25% in angiosarcoma regardless of primary site, with 3 of 5 patients with cutaneous tumors of the scalp or face responding. Ipilimumab and nivolumab warrant further investigation in angiosarcoma.