

POSTER PRESENTATION

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Adoptive TIL in HPV-negative oral scca

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Background

A 22 year old male was diagnosed with clinical T2 squamous cell carcinoma of the lateral oral tongue. He underwent partial glossectomy with elective neck dissection of ipsilateral cervical nodes levels I-IV. Pathology showed a 2.1cm primary tumor with clear margins to 5mm, 1.6cm depth of invasion, one of 23 lymph nodes with a 3.5mm focus of involvement at level II, sans extra-capsular extension (pT2 pN1 M0).

Methods

Through an institutional research tissue protocol, a primary cell line was successfully established. TIL were simultaneously cultured and demonstrated tumor specific IFN- γ production. He completed a course of adjuvant IMRT to 60Gy in the ipsilateral neck and 54Gy in the contralateral neck within 12 weeks of surgery, without complications.

Results

Three months following completion of radiation, bilateral neck nodal recurrence was noted on scans and confirmed by biopsy (month 6 of disease course, overall). He was treated first line chemotherapy for recurrent disease during months 7 to 10, progressing locally in the neck through two multi-drug regimens (cisplatin/cetuximab/5FU, carboplatin/docetaxel). He then enrolled on a Phase Ib trial of combination anti-PD-1/anti-KIR during months 11 to 14 (BMS CA223-001, nivolumab/lirilumab), again progressing locally in the bilateral neck. At month 15, an individual patient compassionate treatment protocol was approved (FDA IND #16279, PH&S IRB #14-323B), using reduced-intensity Cy/Flu preparative lymphodepletion

followed by adoptive transfer of expanded autologous TIL in conjunction with DC-targeted microvesicle DPV-001 intradermal vaccine (DRibbles) and imiquimod adjuvant, with high-dose IL-2 support. Peripheral immune monitoring was performed using whole blood time-course sampling. Multi-spectral immunofluorescence with digital image quantitative immunophenotyping of FFPE longitudinal biopsy specimens was performed using the PerkinElmer Vectra[®] platform. Data and results analysis will be presented in poster format.

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