

# 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- $\gamma$  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

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followed by adoptive transfer of expanded autologous TIL in conjunction with DC-targeted microvessicle 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<sup>®</sup> platform. Data and results analysis will be presented in poster format.

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