

HEAD AND NECK CASE STUDY

Case 2 :

Gamma Delta T-Cell Therapy in
Recurrent/Relapse Carcinoma
Tongue with Extensive Metastasis

PATIENT PROFILE

- **Age/Gender:**
40 years/Male
- **Diagnosis:**
Recurrent/Relapse
Carcinoma Tongue with
metastasis to Bone,
Bilateral Adrenals, Bilateral
Lungs, Spleen, Bilateral
Kidneys, and Bone Marrow.

CLINICAL HISTORY AND PREVIOUS TREATMENT

2022: Underwent Surgery followed by Concurrent
Chemoradiotherapy (CTRT)

Recurrence Status: Not salvageable

Post-surgery Chemoradiotherapy (CTRT) in 2022

Multiple lines of systemic therapy:

Pembrolizumab + Paclitaxel-Carboplatin

Cetuximab – Gemcitabine

Triple Metronomic Therapy

Vinorelbine

HRAS Mutation identified; Tipirafinib denied.

TCR not opted due to time requirements.

**Chose Gamma Delta T-Cell Therapy as an
alternative.**

Baseline Markers:(Before starting Cycle 1)

- Comprehensive metabolic panel and tumor markers were recorded to evaluate baseline disease burden.
- Specific markers, including IL-6, were noted for monitoring cytokine response post-infusion.

TREATMENT COURSE AND OBSERVATIONS:

Cycle 1: Gamma Delta T-Cells | **Dose Infused:** 174 million cells | **Infusion Date:** 14/08/24

Post-Infusion Observations:

- Day +2: Fever spike of 100.4°F (Grade 1 CRS as per ASTCT grading)
- Persistent intermittent fever but no hypotension or hypoxia.
- Cultures: Negative; Procalcitonin: 0.12
- IL-6 Level on Day +11: Elevated at 73.66 pg/ml (normal range: 0 to 7)

Clinical Response:

- Decrease in pain medication requirement.
- Noticeable reduction and eventual disappearance of swelling over the scalp and abdomen.

Cycle 2: Gamma Delta T-Cells | Dose Infused: 160 million cells | Infusion Date: 28/08/24

Post-Infusion Observations:

- Day +3: Episode of confusion noted while typing/writing (transient neurological symptom).
- Symptom resolved without intervention or further complications.

Day 0



Day 0:

- Ulcerative, erythematous lesion with irregular borders and signs of inflammation.
- Likely indicative of active tumor invasion and necrosis.

Day 30



Day 30:

- Increased exudate with necrotic debris, suggesting tumor lysis or ongoing inflammatory response.
- Possible response to therapy but with continued local tissue breakdown.

Day 60



Day 60

- Significant reduction in tumor mass with a well-demarcated ulcer bed showing granulation tissue.
- Surrounding erythema decreased, indicating reduced inflammation.
- Evidence of healing and potential tumor regression.

CONCLUSION

Gamma Delta T-Cell therapy demonstrated a favorable safety profile and promising clinical response in a patient with extensive metastasis and prior treatment resistance. This case underscores its potential as a viable option for non-salvageable recurrent malignancies.

