Abstract 6061: Initial results of MC200710 Therapeutic Vaccine (PDS0101) alone or with Pembrolizumab Prior to Surgery or RT for Locally Advanced HPV16+ Oropharyngeal Squamous Cell Carcinoma

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Background

- **PDS0101** is a T cell stimulating immunotherapy (therapeutic vaccine) targeting HPV16
- **5 cycles of PDS0101 + pembrolizumab** has shown durable responses in HPV-positive recurrent/metastatic HNSCC

MC200710 is a Phase 2 Window of Opportunity study
- Patients with locally advanced HPV+ OPSCC
- Two cycles of neoadjuvant PDS0101 +/- pembrolizumab prior to surgical resection or chemoradiotherapy (CRT)

Methods

20 patients (10 per arm) were enrolled between 2022 and 2024

Sequential alternating design:
ARM A – 2 cycles of PDS0101
ARM B – 2 cycles of PDS0101 + Pembrolizumab

- Coprimary endpoint ≥50% decline in ctDNA post 2 cycles is reported and compared across arms (Fisher's Exact Test)
- Secondary end point of Radiologic Object Response Rate
- Toxicity was assessed using CTCAE criteria
- Recurrence rates (Kaplan Meier Analysis)

Patients

Majority Male (90%)	Median age 61 years	No smoking history 65%
Majority cT1/T2 (70%)	Majority cN1 (65%)	
Primary Surgical Management (65%)	Primary Chemoradiation (35%)	

Results

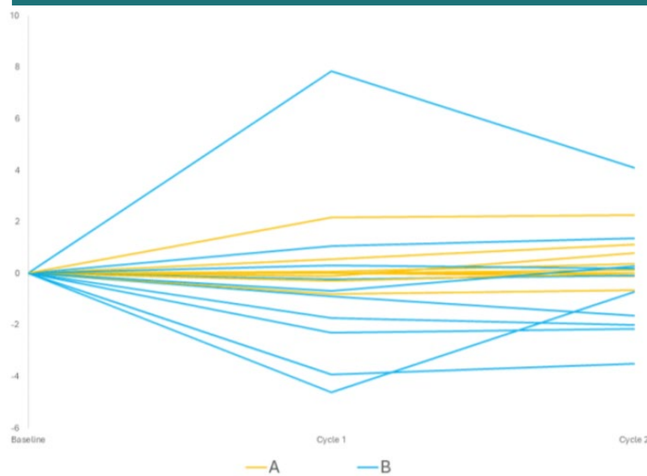

Figure 1: ctDNA response
Arm B had a significantly improved ctDNA response rate (50%) as compared to Arm A (0%), p= 0.0325

Outcomes:
- All patients completed all cycles and initiated definitive therapy
- With a median follow up of 6 months, 2 patients in ARM A had cancer recurrence and 0 in ARM B.
- OS at 12 months was 80% for ARM A and 100% for ARM B

Toxicity:
- Limited toxicity was observed. Injection site reaction was the most common toxicity of which majority were grade 1
- 1 patient experienced grade 2 toxicity (pneumonitis, ARM B), and 1 patient experiencing grade 3 toxicity (transient hepatitis, ARM A) possibly related

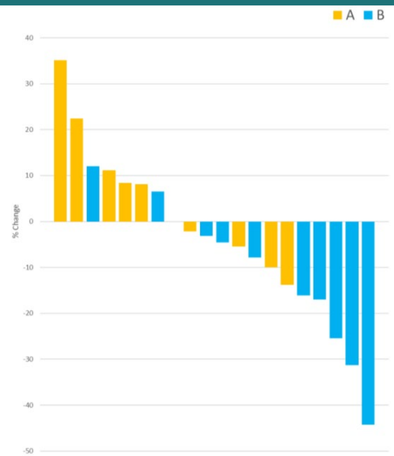

Figure 2: Radiologic ORR
70% of pts in Arm A had stable disease and 100% of pts in Arm B had stable disease or partial response (20%)

The combination of PDS0101 and pembrolizumab met the primary endpoint of MC200701 and shows promise for further evaluation.

50% of patients receiving PDS0101 + Pembrolizumab (ARM B) had a significant decline in ctDNA

Conclusions

- Clinical activity was seen with PDS0101 with or without pembrolizumab.
- The combination of PDS0101 and pembrolizumab met MC200710's primary endpoint of ctDNA response and shows promise for further evaluation.

Future Directions

- PDS0101 + Pembrolizumab is being tested in a Phase III study Versatile 003 (NCT06790966)
- Given the promising results seen here PDS0101 + Pembrolizumab should be evaluated in locally advanced HPV+ OPSCC in the neoadjuvant setting