PDS0101 a novel type I interferon and CD8 T cell activating immunotherapy in combination with pembrolizumab in subjects with recurrent/metastatic HPV16-positive head and neck squamous cell carcinoma (HNSCC)

Abstract # 6041

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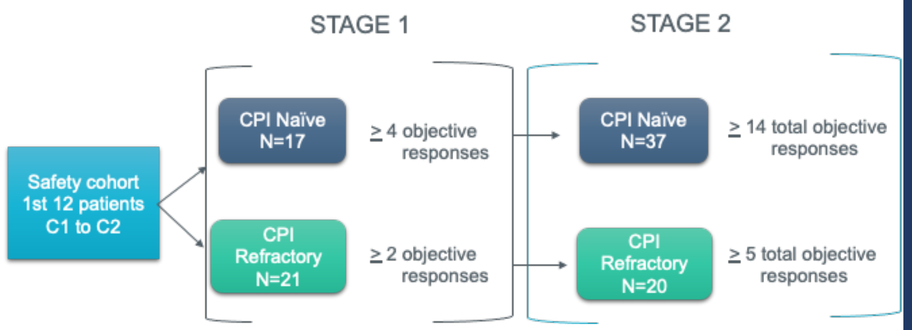
Background/Methods:

- Pembrolizumab is currently approved as monotherapy in PDL1 CPS >= 1 HNSCC patients.
- PDS0101 is a Versamune®-based T cell activating HPV-targeted immunotherapy shown to have anti-tumor synergy with checkpoint inhibitors
- PDS0101 upregulates Type 1 interferons and induces high levels of polyfunctional anti-tumor CD8 and CD4 T cells *in vivo* as well as immune memory.
- PDS0101 combination therapy may allow greater clinical benefit to be realized in patients receiving CPIs

VERSATILE-002 Study Design (NCT04260126)

- Simon 2-stage design in CPI naïve and refractory subjects with HPV16+ cancer and PDL1 CPS >= 1. Primary efficacy endpoint of best overall response (BOR) of confirmed CR or PR per RECIST 1.1
- Dosing Schedule: Pembrolizumab 200 mg IV Q 3W and PDS0101 at Cycles 1-4, 12. Pembrolizumab continuation until disease progression, intolerance or up to 35 cycles



Despite durable responses, **checkpoint inhibitor (CPI) therapy benefits only a minority of HNSCC patients** with recurrent/metastatic disease

In CPI naïve, HPV 16+ CPS+ patients, PDS0101 plus pembrolizumab exhibits **preliminary evidence of clinical benefit in a majority of patients** with an acceptable safety profile and allows continued dosing of pembrolizumab.

Response Rate was 41%

Median PFS and OS have not been reached in this early cohort:

9 mo PFS rate (95% CI): 55.2% (31.9, 78.4)

9 mo OS rate (95% CI): 87.2% (70.4, NE)

Acknowledgements

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Results:

Initial efficacy and safety data on 19 CPI naïve subjects with CPS >=1 (N=19), CPS >=20 (N=7) and ECOG 0-1

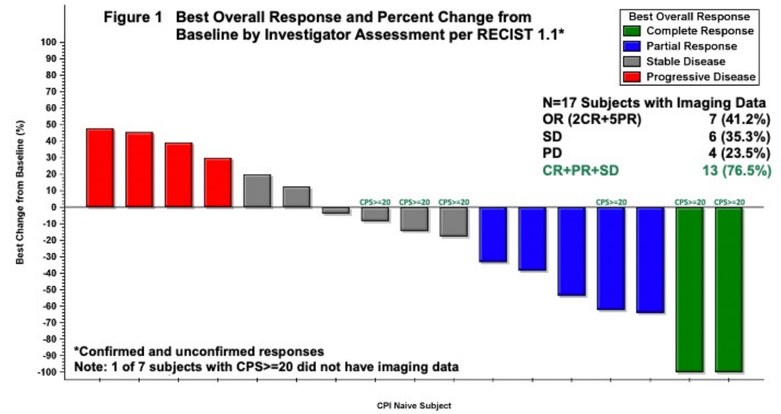

Table 1 Dose Exposure Summary Safety Population (N=19)	Median (Min, Max)
PDS0101 Doses Received	4.0 (1.0, 5.0)
PDS0101 Treatment Duration (Months)	2.2 (0.0, 7.7)
Pembrolizumab Doses Received	9.0 (1.0, 18.0)
Pembrolizumab Treatment Duration (Months)	5.9 (0.0, 11.9)
Subjects with any PDS0101 or pembrolizumab dose reduction, n (%)	0
Subjects with any PDS0101 or pembrolizumab dose discontinuation, n (%)	0

Table 2 Treatment Emergent Adverse Events (TEAEs) Safety Population (N=19)	CPI Naïve Subjects (N=19) n (%) : Events
Subjects with any TEAEs	18 (94.7%) : 371
Grade 1	3 (15.8%) : 303
Grade 2	8 (42.1%) : 51
Grade 3	5 (26.3%) : 11
Grade 4	0 (0.0%) : 4
Grade 5	2 (10.5%) : 2
≥ Grade 3 TEAEs Attributed to Study Treatment by the investigator No subjects met this criteria	**0**
Serious Study Treatment Related TEAEs No subjects met this criteria	**0**

Future Directions for Research:

- Stage 1 was sufficiently successful to justify proceeding to Stage 2 in CPI naïve patients
- Stage 1 in CPI refractory continues accrual
- HPV-specific CD8 and CD4 T cell response analysis as well as next steps in clinical development are planned