Safety and Efficacy of Immune Checkpoint Inhibitor (ICI) Naïve Cohort from Study of PDS0101 and Pembrolizumab in HPV16-positive Head and Neck Squamous Cell Carcinoma (HNSCC)

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Abstract: 6012

Background
Up to 70% of oropharyngeal cancers in the US are HPV-mediated with most caused by HPV16 infection.1,2 PDS0101 is a novel, investigational, T cell activating, HPV16-targeted immunotherapy that stimulates a targeted T cell response against HPV16-positive cancers.

Methods
VERSATILE-002 (NCT04260126) is a Phase 2, open-label, non-randomized, adaptive design study evaluating the combination of PDS0101 and pembrolizumab in subjects with HPV16-positive recurrent and/or metastatic (R/M) HNSCC in 2 cohorts: ICI-naïve and ICI-refractory. All ICI naïve subjects must be ≥18 years of age and have a combined positive score (CPS) ≥1.

All subjects receive pembrolizumab 200mg IV Q3W with PDS0101 administered SC in two 0.5 mL injections during Cycles 1, 2, 3, 4, and 12 (max 5 doses). This study is in collaboration with Merck Sharp & Dohme LLC, a subsidiary of Merck & Co., Inc., Rahway, NJ, USA.

Results
Forty-eight subjects who received at least one cycle of combination therapy made up the intent to treat (ITT) population. They had a median age of 62.5 (range 45–83), were 93.8% male, 93.8% White, 62.5% ECOG 0, and 41.7% CPS ≥20. In the ITT population, the median overall treatment duration was 3.5 months (range 0.0–19.5). The median number of PDS0101 doses was 4 (range 1–5); 56.3% received 4 doses and 22.9% received 5 doses. The median number of pembrolizumab doses was 5 (range 1–28); 27.1% received ≥10 doses. Efficacy was evaluated in the modified ITT (mITT) population (n=34) which consisted of all ITT subjects who had imaging assessment following treatment. They had a median age of 63.5 (range 46–83), were 94.1% male, 97.1% White, 56.8% ECOG 0, and 50.0% CPS ≥20. Only 4 subjects had Grade 3 TRAEs: fatigue, injection site reaction, blood alkaline phosphatase increased, hyperglycemia, colitis, and rash. No subject came off study due to toxicity.

Conclusions
• PDS0101 with pembrolizumab is well tolerated in this ICI-naïve R/M HPV16-positive HNSCC population
• Median PFS was 10.4 months which compares favorably to published median PFS of 2–3 months for approved ICIs when used as monotherapy in patients with similar PD-L1 levels.4
• The estimated 12-month OS rate of 87.1% is promising compared to published median OS of 56%.3
• These results justify a confirmatory randomized, controlled study

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Limitations
This study presents data from a snapshot of an ongoing Phase 2 study. Fourteen subjects were enrolled but had not yet received their first imaging assessment. Final results may differ for reasons including: outcomes from additional subjects enrolled in the study, new outcomes from existing subjects, delays in data entry at the research site, ongoing monitoring and clarification of data queries.

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