PDS Biotechnology

Precision Designed Science for Cancer Patients

NASDAQ: PDSB

August 2025

Forward-Looking Statements

This communication contains forward-looking statements (including within the meaning of Section 21E of the United States Securities Exchange Act of 1934, as amended, and Section 27A of the United States Securities Act of 1933, as amended) concerning PDS Biotechnology Corporation (the "Company") and other matters. These statements may discuss goals, intentions and expectations as to future plans, trends, events, results of operations or financial condition, or otherwise, based on current beliefs of the Company's management, as well as assumptions made by, and information currently available to, management. Forward-looking statements generally include statements that are predictive in nature and depend upon or refer to future events or conditions, and include words such as "may," "will," "should," "would," "expect," "anticipate," "plan," "likely," "believe," "estimate," "project," "intend," "forecast," "guidance", "outlook" and other similar expressions among others. Forward-looking statements are based on current beliefs and assumptions that are subject to risks and uncertainties and are not guarantees of future performance. Actual results could differ materially from those contained in any forward-looking statement as a result of various factors, including, without limitation: the Company's ability to protect its intellectual property rights; the Company's anticipated capital requirements, including the Company's anticipated cash runway and the Company's current expectations regarding its plans for future equity financings; the Company's dependence on additional financing to fund its operations and complete the development and commercialization of its product candidates, and the risks that raising such additional capital may restrict the Company's operations or require the Company to relinquish rights to the Company's technologies or product candidates; the Company's limited operating history in the Company's current line of business, which makes it difficult to evaluate the Company's prospects, the Company's business plan or the likelihood of the Company's successful implementation of such business plan; the timing for the Company or its partners to conduct clinical trials for PDS0101 (Versamune® HPV), PDS01ADC, PDS0103 (Versamune® MUC1) and other Versamune® based product candidates; the future success of such trials; the successful implementation of the Company's research and development programs and collaborations, including any collaboration studies concerning PDS0101 (Versamune® HPV), PDS01ADC, PDS0103 (Versamune® MUC1) and other Versamune® based product candidates and the Company's interpretation of the results and findings of such programs and collaborations and whether such results are sufficient to support the future success of the Company's product candidates; the success, timing and cost of the Company's or its partners' ongoing clinical trials and anticipated clinical trials for the Company's current product candidates, including statements regarding response rates, the timing of initiation, pace of enrollment and completion of the trials (including the Company's ability to fully fund its disclosed clinical trials, which assumes no material changes to the Company's currently projected expenses), futility analyses, presentations at conferences and data reported in an abstract, and receipt of interim or preliminary results (including, without limitation, any preclinical results or data), which are not necessarily indicative of the final results of the Company's ongoing clinical trials; any Company statements about its understanding of product candidates mechanisms of action and interpretation of preclinical and early clinical results from its clinical development programs and any collaboration studies; the Company's ability to continue as a going concern; and other factors, including legislative, regulatory, political and economic developments not within the Company's control. The foregoing review of important factors that could cause actual events to differ from expectations should not be construed as exhaustive and should be read in conjunction with statements that are included herein and elsewhere, including the other risks, uncertainties, and other factors described under "Risk Factors," "Management's Discussion and Analysis of Financial Condition and Results of Operations" and elsewhere in the documents we file with the U.S. Securities and Exchange Commission. The forward-looking statements are made only as of the date of this press release and, except as required by applicable law, the Company undertakes no obligation to revise or update any forward-looking statement, or to make any other forward-looking statements, whether as a result of new information, future events or otherwise.

Multiple Opportunities for Value Creation

Potential first to market in rapidly growing multi-billion-dollar HPV16+ HNSCC

Potential for Leadership in HPV16+ HNSCC

- Positive results in Phase 2 Trial of PDS0101 in HPV16+ 1L R/M HNSCC
  - **Median overall survival (OS) 39.3 months***
- Robust activity in multiple HPV16+ indications

First Pivotal Study in 1L R/M HPV16+ HNSCC

- PDS0101 is the only investigational therapy with positive survival data reported in HPV16+ HNSCC, currently being studied in a Phase 3 clinical trial

Deep PDS01ADC Pipeline in Large Markets

- Phase 2 investigator-initiated trials in multiple indications e.g. colon and prostate cancers
- Funded by 3rd parties (non-dilutive)
- Potential pharma partnership opportunities

Collaborations & Publications on PDS0101 Immunology & Clinical Studies by Major Cancer Institutions

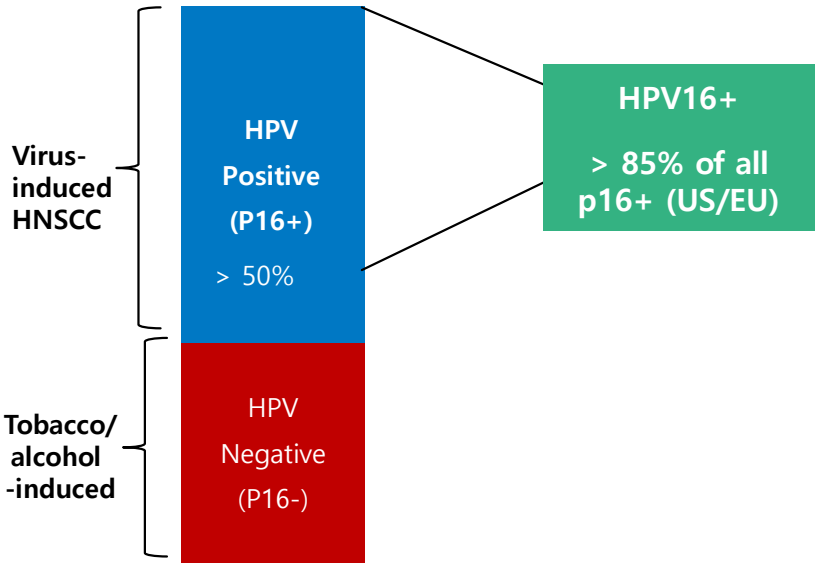
- MD Anderson, Mayo Clinic, NCI
- Supports validity of PDS0101 clinical responses and PDS Biotech approaches to immunotherapy

* Final data cut results do not yet include confirmed safety and response data

HPV16-Positive Head and Neck Cancers Represent a Significant Unmet Need

Large and growing opportunity with poor current treatment options

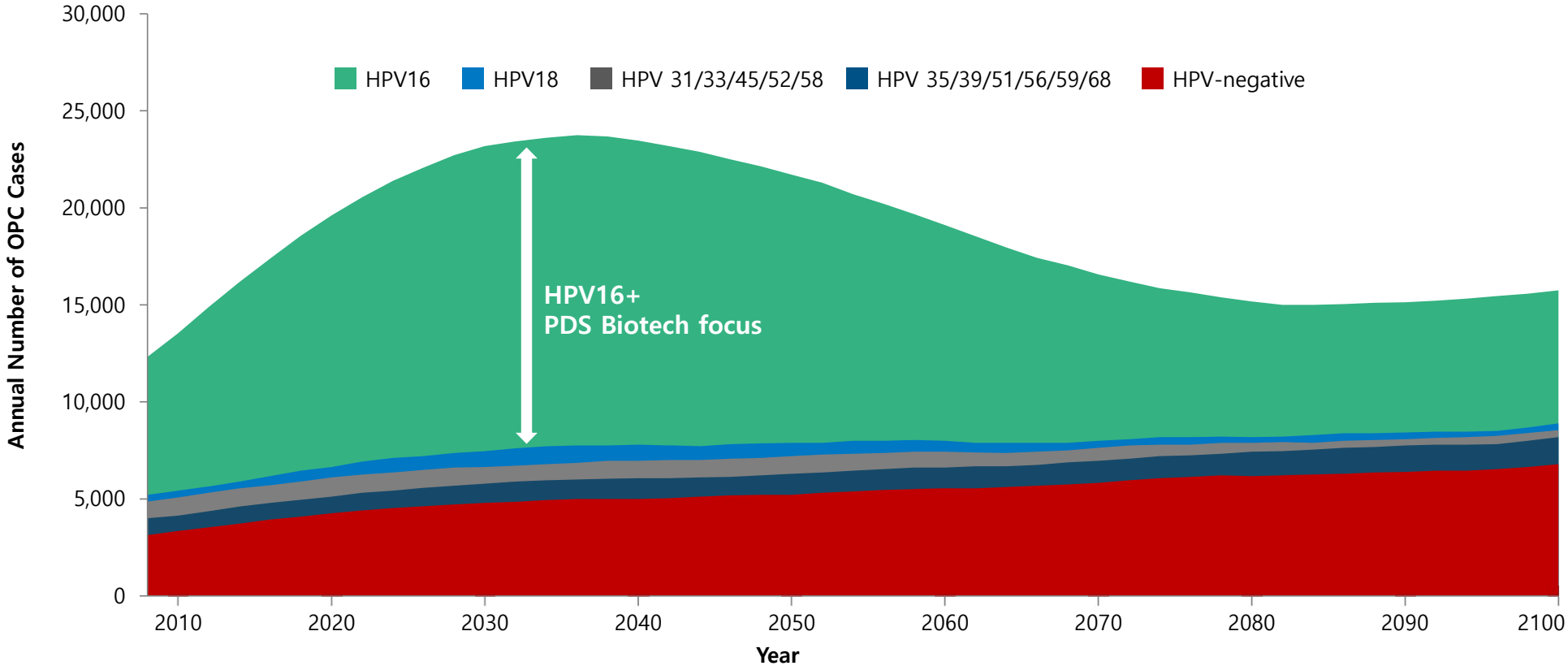
Two (2) Types of Head and Neck Cancer



- ✓ **Large subset of HNSCC cases[1,2]**
- ✓ **Fast growing segment due to**
  - ✓ **Poor uptake of HPV vaccine[1]**
  - ✓ **Changing sexual behavior[3]**
  - ✓ **Unique pathophysiology of HPV16[4]**
- ✓ **No HPV16-specific treatments approved**
- ✓ **Poor survival rates with standard of care[5-7]**

"This is a disease with a rapidly growing incidence. There has been a complete change in our practice over the last decade in how we see the patients presenting with newly diagnosed disease and then returning with relapsed and/or metastatic disease"
K. Harrington MD, PhD, Institute of Cancer Research, UK

Projected Rapid Increase in Incidence of HPV16-positive HNSCC[1]



OPC – Oropharyngeal cancer

Significant Unmet Needs Remain in HPV16-Positive HNSCC

HPV16-positivity reported to result in poor treatment outcomes and poor survival

Limitations of Current Therapies: Published median overall survival with standard of care pembrolizumab or pembrolizumab + chemotherapy is about 12-18 months[7])

Two published studies have been reported in which HPV16-positive patients were compared head-to-head vs other P16+ (HPV+) patients and HPV-negative patients

Early-stage HNSCC: HPV16-positive and HPV-negative patients had worse survival than patients with other HPV-positive (P16+) HNSCC[5]

Advanced oral cancer: HPV16-positive patients had statistically worse survival than patients with advanced HPV-negative oral cancer[6]

No controlled or comparative studies have been conducted between checkpoint inhibitors and PDS0101 or between EGFR inhibitors and PDS0101.

VERSATILE-002: Phase 2 Study of PDS0101 and Pembrolizumab in HPV16+ First Line (1L) Recurrent/Metastatic (R/M) HNSCC

Patient demographics incorporated historically low IO responders:
60% of patients were CPS <20, 81% had recurrent disease

Study Treatment

PDS0101

5 doses: 1 mL **Subcutaneous injection** at Cycles 1, 2, 3, 4 & 12)

Pembrolizumab

200mg IV Q3W up to 35 Cycles (2 years)

Key Entry Criteria for ICI Naïve Subjects

R/M HNSCC

HPV16-positive tumor

≥18 years of age

Combined positive score (CPS) ≥1

Study Design

Single-arm study

31 sites in US and EU

2 Cohorts:
- ICI Naïve
- ICI Resistant

Study complete

Endpoints

Primary:

Best overall response (BOR) of confirmed complete response (CR) or confirmed partial response (PR) per RECIST v1.1

Key Secondary:

Overall Survival (OS)

Progression Free Survival (PFS) per RECIST v1.1

Safety and tolerability

CPS=PD-L1 combined positive score

Positive PDS0101 Phase 2 Clinical Data (VERSATILE-002)[8]

Promising clinical responses and patient survival

- Median overall survival of 39.3 months* (pembrolizumab benchmark in 1L R/M HPV-positive and HPV-negative HNSCC is approx. 12-18 months)
- 21% complete or near complete (90-100%) tumor shrinkage with durable responses for a median of 22 months
- Significant disease control rate (DCR) of 77.4% with overall median duration of response of 22 months
  - Met primary endpoint with 35.8% ORR (CPS≥1)
- Well-tolerated (8/87 (9%) Grade 3 and 1/87 (1%) Grade 4 Treatment-Related Adverse Events)**

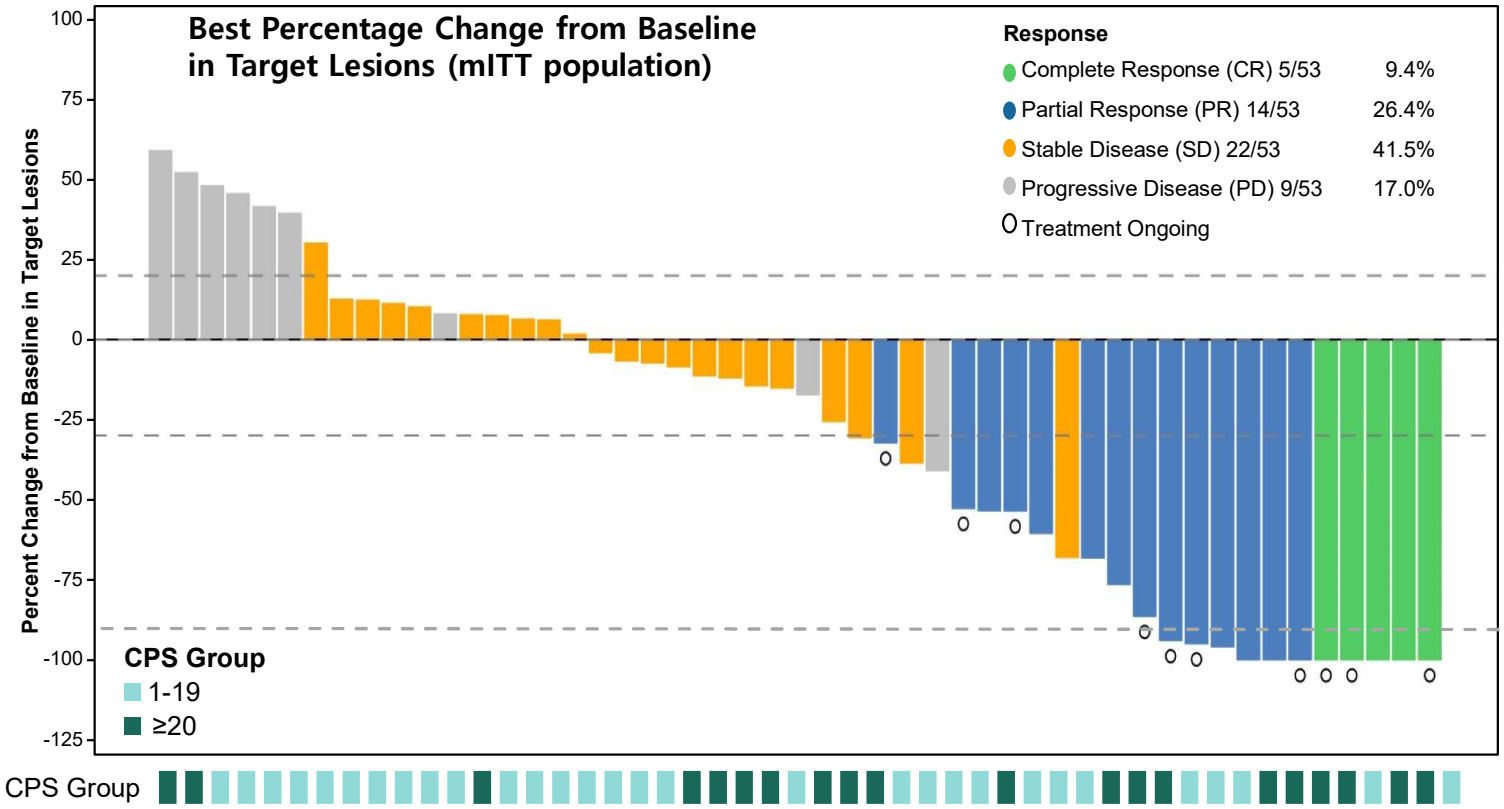
No head-to-head studies performed between PDS0101 and pembrolizumab

* Top line data from final data cut; **PDS Biotechnology data on file

Noteworthy Tumor Regression Independent of Patient CPS Score[8]

81% of patients had progressed after prior treatment and 60% had low CPS status

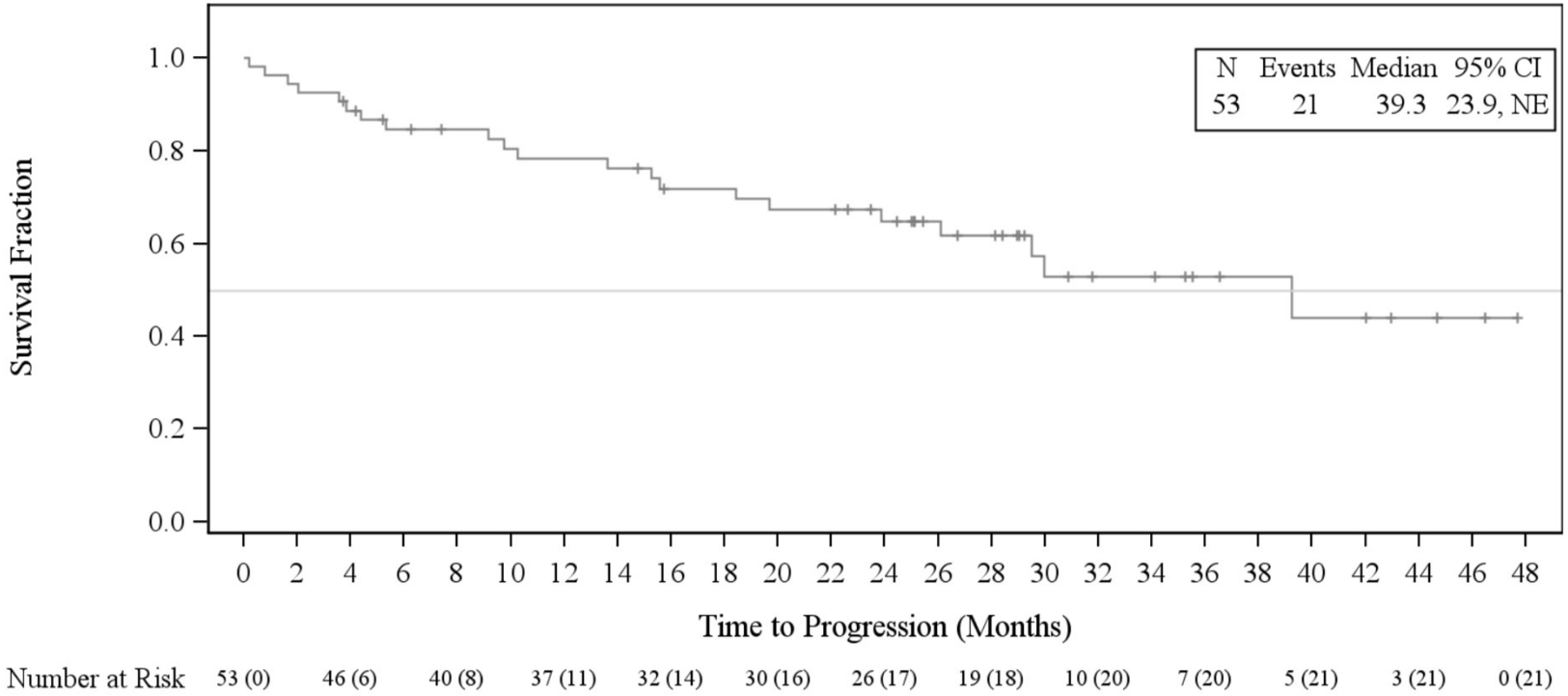
- ✓ **Confirmed Disease Control Rate of 77.4%**
- ✓ **ORR of 35.8%**
- ✓ **21% of patients had tumor regression of 90-100%**



Confirmed Objective Response Rate (ORR) Based on Investigator Assessment Per RECIST v1.1

Promising Median Overall Survival of 39.3 Months for CPS ≥ 1

11 patients with survival beyond 30 months



Overall survival plotted by standard Kaplan-Meier methodology. At the time of the data cut, 23 subjects were alive and still being followed for survival, 9 subjects discontinued the study (7 withdrew consent, 2 were lost to follow up), and 21 subjects had died. Follow up is defined as the time from start of study treatment until death by any cause or date of censoring and includes long-term follow up period.

Per standard KM methodology, subjects who discontinued the study are censored at the last visit date. A sensitivity analysis including survival status of discontinued subjects where attainable was performed at last data cut and resulted in mOS beyond previously reported data.
*PDS Biotechnology data on file

PDS0101 Plus Pembrolizumab Was Well-Tolerated

8/87 (9%) patients had a Grade 3 TRAE*; 1/87 (1%) had a Grade 4 TRAE**

Treatment related adverse events (TRAEs) by Grade in ICI naïve and resistant patients	n (%)
Any Combination TRAE	76 (87.4)
Grade 1	40 (46.0)
Grade 2	26 (29.9)
Grade 3	8 (9.2)
Grade 4	1 (1.1)
Grade 5	0

Most common Non-Injection Site Reaction TRAEs	n (%)
Fatigue	30 (34.5)
Headache	13 (14.9)
Diarrhea	10 (11.5)

*Grade 3 Combination-TRAE were: Fatigue (2), Rash, Alanine aminotransferase increased, Blood alkaline phosphatase increased, Lymphocyte count decreased, Autoimmune colitis, Colitis, Headache, Acute kidney injury, Hyponatremia, Hyperglycemia,
**Grade 4 Combination-TRAE: encephalitis (case recorded approx. one year after last PDS0101 dose)

- TRAE = Treatment Related Adverse Event
- ICI=Immune checkpoint inhibitor
- *PDS Biotechnology data on file

VERSATILE-003: Pivotal Phase 3 in Progress[9]

PDS0101 + pembrolizumab in HPV16+ 1L R/M HNSCC with HPV16 Companion diagnostic

Randomized controlled trial
- N = 351
- 2:1 randomization

Primary Endpoint
- Overall Survival (OS)

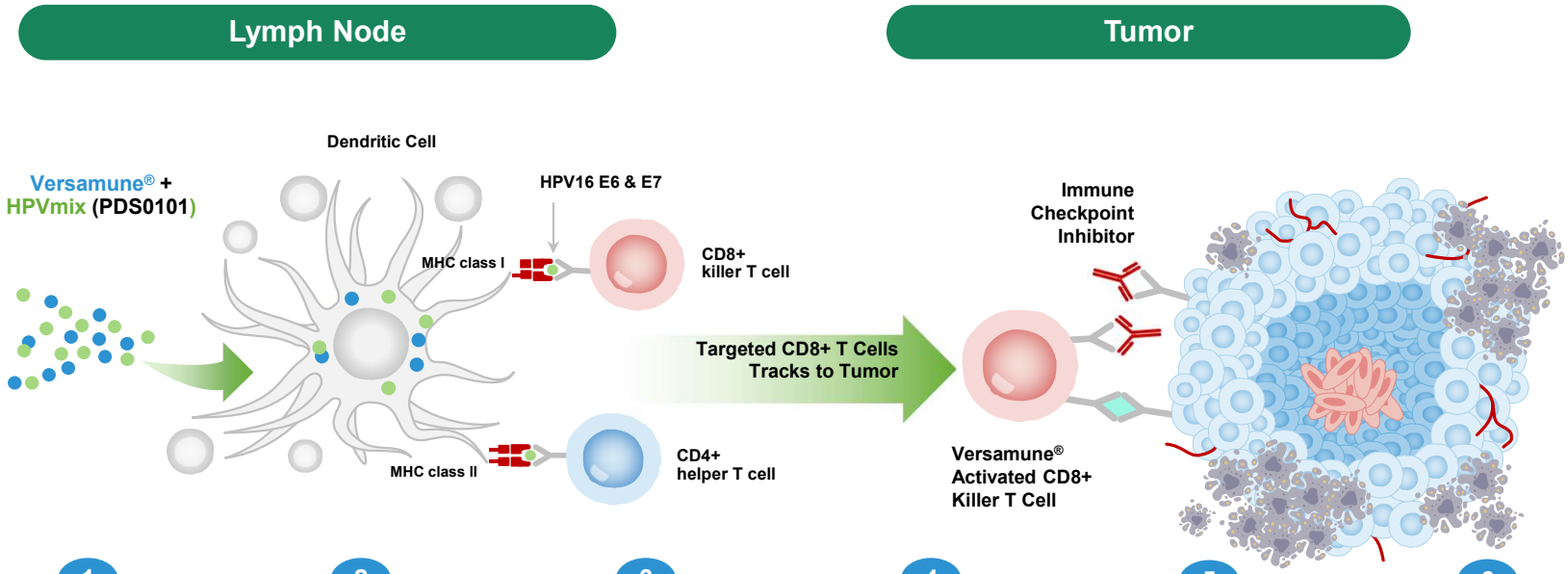
Secondary Endpoints
- Objective Response Rate (ORR)
- Disease Control Rate (DCR)
- Duration of Response (DoR)
- Progression Free Survival (PFS)

Key Eligibility Criteria
- HPV16-positive HNSCC
- CPS ≥1
- ≥18 years of age
- ECOG 0-1

Survival Assumptions
- Experimental arm: 28 months
- Control: 18 months

PDS0101 Drives Powerful and Durable Anti-Tumor Responses

MOA provides potent and targeted HPV16-specific T cell response[17]



1. Subcutaneous Injection of PDS0101
2. Stimulates uptake by dendritic cells & accumulates in the lymph nodes
3. T cells increase production of HPV16- specific CD8 killer & CD4 helper T cells
4. Activated multi-functional T cells recognize and infiltrate tumor
5. Activated T cells attack and destroy tumor
6. Immune checkpoint inhibitor restores pre-existing T cell responses

Well Positioned in HPV16+ 1L R/M HNSCC in the US and Europe

	Merus	Bicara	BioNTech	PDS Biotech
	Combinations with Pembrolizumab			
Median OS	Not disclosed	21.3 months	22.6 months	**39.3 months** 95% CI (23.9, NE)**
Population	All comers	HPV-negative	HPV16-positive	**HPV16-positive**
Administration Convenience	IV Q2W until PD or toxicity	IV QW (D1, D8, D15)	IV Q1W 8X then Q3W for 24mos	***5 subcutaneous injections of PDS0101***

- HPV16+ HNSCC is fastest growing segment
- No HPV16-specific treatments approved

No head-to-head studies have been performed between any of the agents

Deep Pipeline in Large Cancer Markets

PDS focused on VERSATILE-003

	Therapy / Treatment	Indication	PC	P1	P2	P3	Partner
Versamune®	PDS0101 + pembrolizumab vs. pembrolizumab	HPV16-positive recurrent/metastatic HNSCC	FDA Fast Track				
	PDS0101 + pembrolizumab	HPV16-positive recurrent/metastatic HNSCC	Trial Complete				MERCK
	PDS0101 + chemo (IMMUNOCERV)	1L treatment of locally advanced (IB3-IVA) cervical cancer	Trial Complete				MD Anderson Cancer Center
	PDS0101 +/- pembrolizumab	Neo-adjuvant treatment of locally advanced HPV-positive oropharyngeal cancer (OPSCC)	Recruitment Complete				MAYO CLINIC
Versamune®+ PDS01ADC	PDS0101 + PDS01ADC + immune checkpoint inhibitor (ICI)	Recurrent/metastatic HPV16-positive cancers*	Trial Complete				NIH NATIONAL CANCER INSTITUTE
	PDS0103 + PDS01ADC + ICI (IND filed Q1-2025)	Recurrent/metastatic MUC1-positive colorectal cancer					NIH NATIONAL CANCER INSTITUTE
PDS01ADC	PDS01ADC + hepatic artery infusion pump (HAIP)	Metastatic colorectal cancer, intrahepatic cholangiocarcinoma, or metastatic adrenocortical carcinoma					NIH NATIONAL CANCER INSTITUTE
	PDS01ADC + enzalutamide	PET positive recurrent prostate cancer					NIH NATIONAL CANCER INSTITUTE
	PDS01ADC + docetaxel	Metastatic castration sensitive and castration resistant prostate cancer					NIH NATIONAL CANCER INSTITUTE

* Anal, cervical, HNSCC, penile, vaginal, vulvar

PDS0101: Potentially Differentiated Late Clinical-Stage Immunotherapy

Lead Indication in HPV16+ HNSCC with Potential for Opportunities

Late-Stage Clinical Program

- Positive Phase 2 study with median OS of 39.3 months
- Global Phase 3 pivotal study actively recruiting[9]

Favorable Product Profile

- Non-chemo approach for 1L R/M HNSCC
- Phase 2 safety profile well tolerated[8]
- Convenient dose schedule (5 subQ doses)[8,9]

Significant Commercial Potential

- Differentiated profile for HPV16+ HNSCC
- Potential use in earlier stage disease and other HPV16+ cancers[18]
- Payor support for IO-like pricing potential[19]

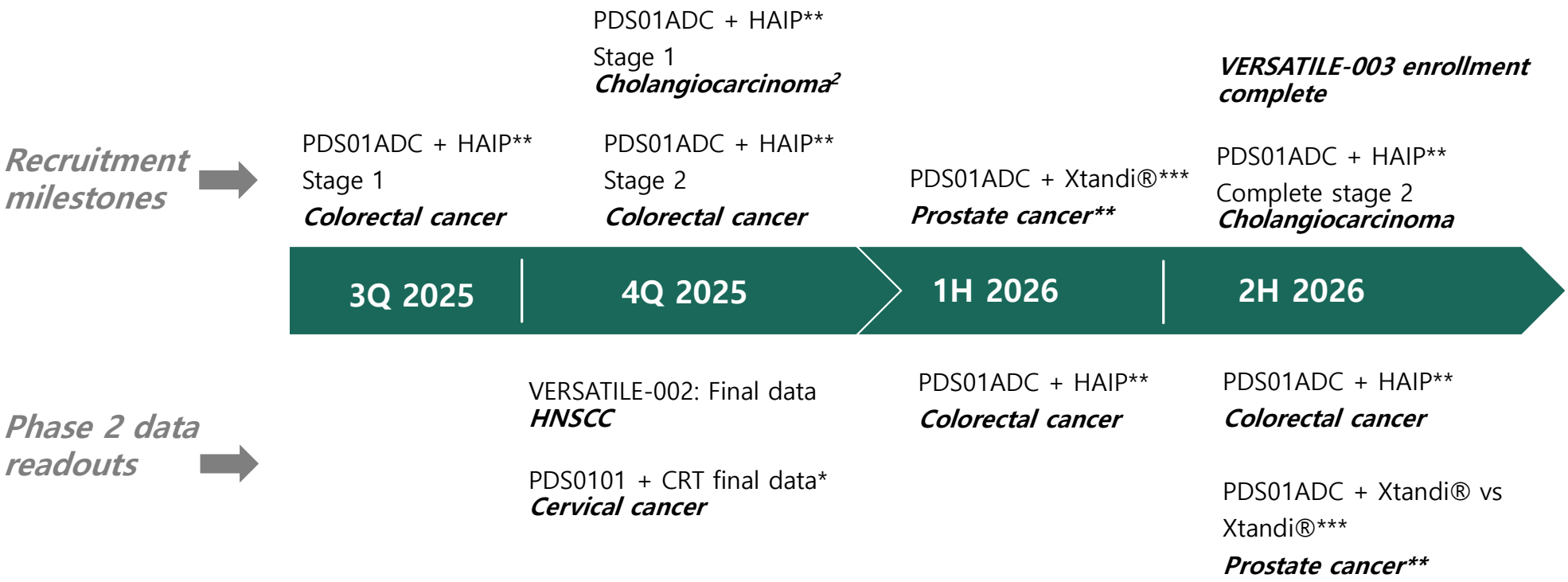
Strong IP Coverage

- 12 Patent families
- Composition and method claims cover platform and products
- PDS0101 LOE expected 2042/2043

PDS Biotechnology data on file

Upcoming Milestones

Potential for near-term value creating clinical milestones expected



*Study run/sponsored by MD Anderson Cancer Center; **Study run/sponsored by NCI/NIH
***Xtandi® is standard of care for biochemically recurrent prostate cancer (Astellas Pharma, Japan)

Market Research and Commercial Opportunities

First line (1L) Recurrent/Metastatic HPV16+ HNSCC[19]	
US annual incidence*	13,600
Oncologist view of PDS0101 TPP	Favorable
Oncologist anticipated adoption rate	82%
Payer feedback	Favorable, consider checkpoint inhibitors as closest pricing analog
US revenue projections for 1L R/M HPV16+ HNSCC	$1.3B*

Estimated Market for Pipeline Indications (US only)	
Locally advanced HPV16+ HNSCC (PDS0101)[19]	>$1.0B
HPV16+ anal, cervical, penile, vaginal, vulvar (PDS0101)[20-23]	>$2.0B
Biochemically recurrent prostate cancer (PDS01ADC)[24]	~$2.0B
Metastatic colorectal cancer (PDS01ADC)[25]	~$2.0B

*Based on current incidence rate and independent market research

Multiple Opportunities for Value Creation

Potential first to market in rapidly growing multi-billion-dollar HPV16+ HNSCC

Potential for Leadership in HPV16+ HNSCC

- Positive results in Phase 2 Trial of PDS0101 in HPV16+ 1L R/M HNSCC
  - **Median overall survival (OS) 39.3 months***
- Robust activity in multiple HPV16+ indications

First Pivotal Study in 1L R/M HPV16+ HNSCC

- PDS0101 is the only investigational therapy with positive survival data reported in HPV16+ HNSCC, currently being studied in a Phase 3 clinical trial

Deep PDS01ADC Pipeline in Large Markets

- Phase 2 investigator-initiated trials in multiple indications e.g. colon and prostate cancers
- Funded by 3rd parties (non-dilutive)
- Potential pharma partnership opportunities

Collaborations & Publications on PDS0101 Immunology & Clinical Studies by Major Cancer Institutions

- MD Anderson, Mayo Clinic, NCI
- Supports validity of PDS0101 clinical responses and PDS Biotech approaches to immunotherapy

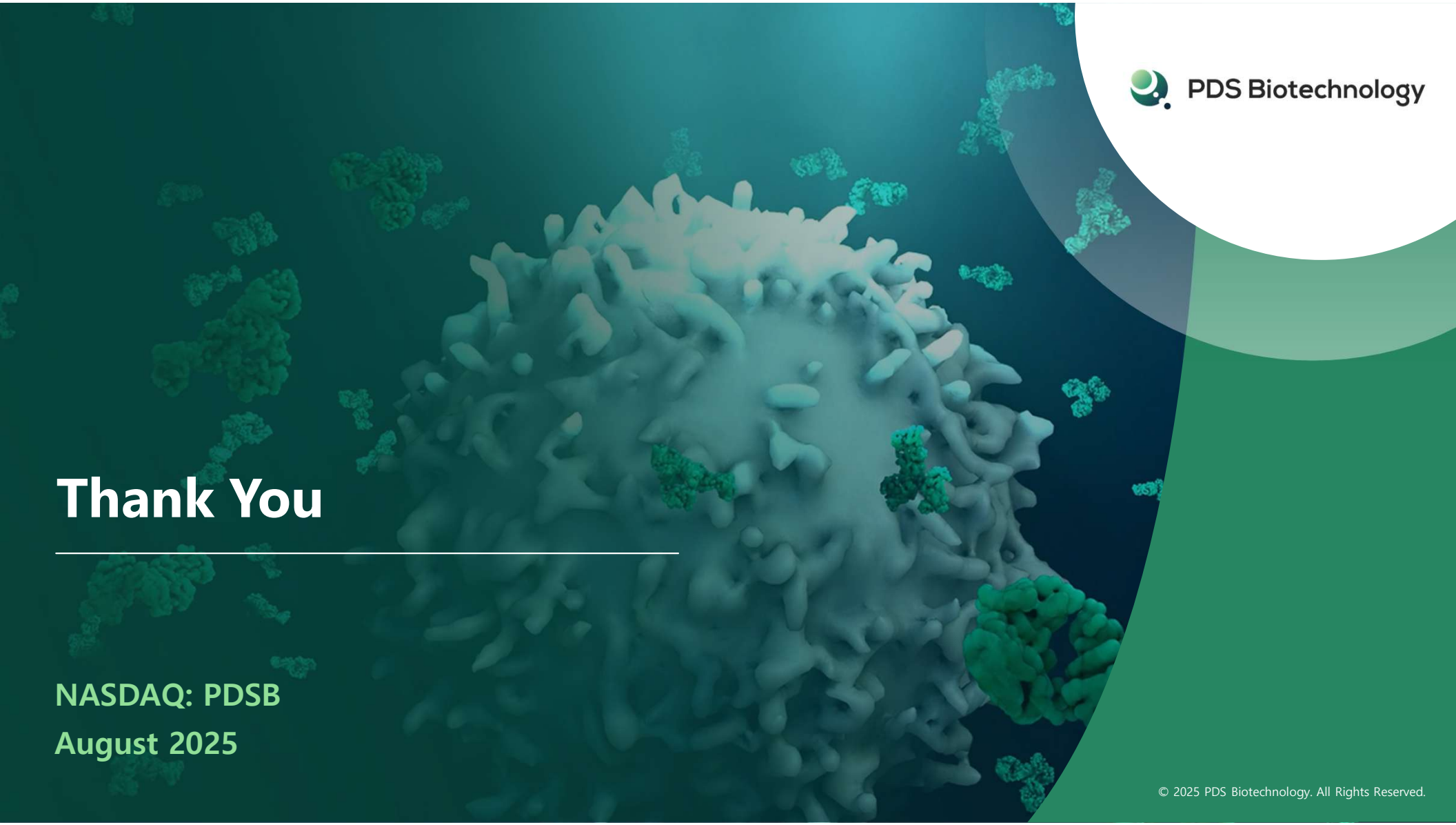
* Final data cut results do not yet include confirmed safety and response data

References

1. Damgacioglu H, Sonawane K, Chhatwal J, et al. Long-term impact of HPV vaccination and COVID-19 pandemic on oropharyngeal cancer incidence and burden among men in the USA: A modeling Study. *The Lancet Regional Health – Americas*. 2022;8:100143.
2. Tabatabaeian H et al, Navigating therapeutic strategies: HPV classification in head and neck cancer, *British Journal of Cancer*. (2024) 131: 220-230.
3. Landy R, et al JNCI: Upper age limits for US male human papillomavirus vaccination for oropharyngeal cancer prevention: a microsimulation-based modeling study; Journal of the National Cancer Institute, 2023, 115(4), 429–436.
4. Luo X et al; HPV16 drives cancer immune escape via NLRX1-mediated degradation of STING; J Clin Invest. 2020;130(4):1635–1652.
5. Ziai H. et al; Does HPV Subtype Predict Outcomes in Head and Neck Cancers?; International Journal of Otolaryngology; Volume 2021, Article ID 6672373; https://doi.org/10.1155/2021/6672373.
6. Lee L et al; Human Papillomavirus-16 Infection in Advanced Oral Cavity Cancer Patients Is Related to an Increased Risk of Distant Metastases and Poor Survival; PLOS One; July 2012, Volume 7, Issue 7, e40767.
7. Harrington, KJ, Burtness B, Greil R, et al. Pembrolizumab With or Without Chemotherapy in Recurrent or Metastatic Head and Neck Squamous Cell Carcinoma: Updated Results of the Phase III KEYNOTE-048 Study. *J Clin Oncol*. 2022;41:790-802. https://doi.org/10.1200/JCO.21.02508.
8. Weiss J et al. VERSATILE-002: Overall Survival of HPV16 Positive Recurrent/Metastatic Head and Neck Squamous Cell Carcinoma Patients Treated with T Cell Stimulating Immunotherapy PDS0101 and Pembrolizumab. Poster Presented: ASCO Congress 2025; June 2, 2025.
9. Price K et al. VERSATILE-003: A Phase 3, Randomized, Open-label Trial of PDS0101 and Pembrolizumab compared with Pembrolizumab for First-Line Treatment of Patients with HPV16-positive Recurrent/Metastatic Head and Neck Squamous Cell Carcinoma. Poster Presented: ASCO Congress 2025; June 2, 2025.
10. Kartikasari AER, (2019) Therapeutic Cancer Vaccines—T Cell Responses and Epigenetic Modulation; Front. Immunol. 9:3109. doi: 10.3389/fimmu.2018.03109.
11. Fan T et al; Therapeutic cancer vaccines: advancements, challenges and prospects; Signal Transduction and Targeted Therapy (2023) 8:450.
12. Sterner RC and Sterner RM; CAR-T cell therapy: current limitations and potential strategies; Blood Cancer Journal (2021) 11:69.
13. Luo J and Zhang X, Challenges and innovations in CAR-T cell therapy: a comprehensive analysis; Front. Oncol. 14:1399544. doi: 10.3389/fonc.2024.1399544.

References (continued)

14. Yoshida-Court K, Gjyshi O, Lin L, et al. IMMUNOCERV, an ongoing Phase II trial combining PDS0101, an HPV-specific T cell immunotherapy with chemotherapy and radiation for treatment of locally advanced cervical cancers (NCT04580771). Poster Presented at: SITC; November 8-12, 2022; Boston MA.
15. Seo A., et al, Human Papilloma Virus Circulating Cell-Free DNA Kinetics in Patients with Cervical Cancer Undergoing Definitive Chemoradiation, *Clinical Cancer Research, Jan. 10, 2025*.
16. Floudas CS et al, Novel Combination Immunotherapy and Clinical Activity in Patients With HPV-Associated Cancers: A Nonrandomized Clinical Trial; JAMA Oncol. 2025;11;(4):394-399. doi:10.1001/jamaoncol.2024.6998.
17. Gandhapudi SK, Ward M, Bush JPC, Bedu-Addo F, Conn G, Woodward JG. Antigen Priming with Enantiospecific Cationic Lipid Nanoparticles Induces Potent Antitumor CTL Responses through Novel Induction of a Type I IFN Response. *J Immunol.* 2019;202:3524-3536.
18. Routman DM et al., Initial results of MC200710 investigating therapeutic vaccine (PDS0101) alone or with pembrolizumab prior to surgery or radiation therapy for locally advanced HPV associated oropharyngeal carcinoma, a Phase 2 window of opportunity trial. Poster Presented: ASCO Congress 2025; June 2, 2025.
19. Triangle Research Group. PDS Proprietary Market Research Report. 2024.
20. Guerendiain D et al; HPV status and HPV16 viral load in anal cancer and its association with clinical outcome; *Cancer Medicine.* 2022;11:4193–4203.
21. https://www.hpvworld.com/articles/hpv-genotype-specific-risk-for-cervical-cancer/
22. Li Z. et al, Prevalence of human papillomavirus DNA and $p16^{INK4a}$ positivity in vulvar cancer and vulvar intraepithelial neoplasia: a systematic review and meta-analysis; The Lancet Oncology; Volume 24, Issue 4, P403-414April 2023.
23. Olesen TB et al, Prevalence of human papillomavirus DNA and $p16^{INK4a}$ in penile cancer and penile intraepithelial neoplasia: a systematic review and meta-analysis, The Lancet Oncology, Volume 20, Issue 1, P145-158, January 2019.
24. Spratt DE; Biochemical recurrence (BCR) among patients (pts) with prostate cancer (PC) after radiation therapy (RT); Journal of Clinical Oncology; Volume 41, Number 16_suppl; https://doi.org/10.1200/JCO.2023.41.16_suppl.e17111.
25. https://www.delveinsight.com/report-store/metastatic-colorectal-cancer-market



PDS Biotechnology

Thank You

NASDAQ: PDSB

August 2025