CORPORATE OVERVIEW

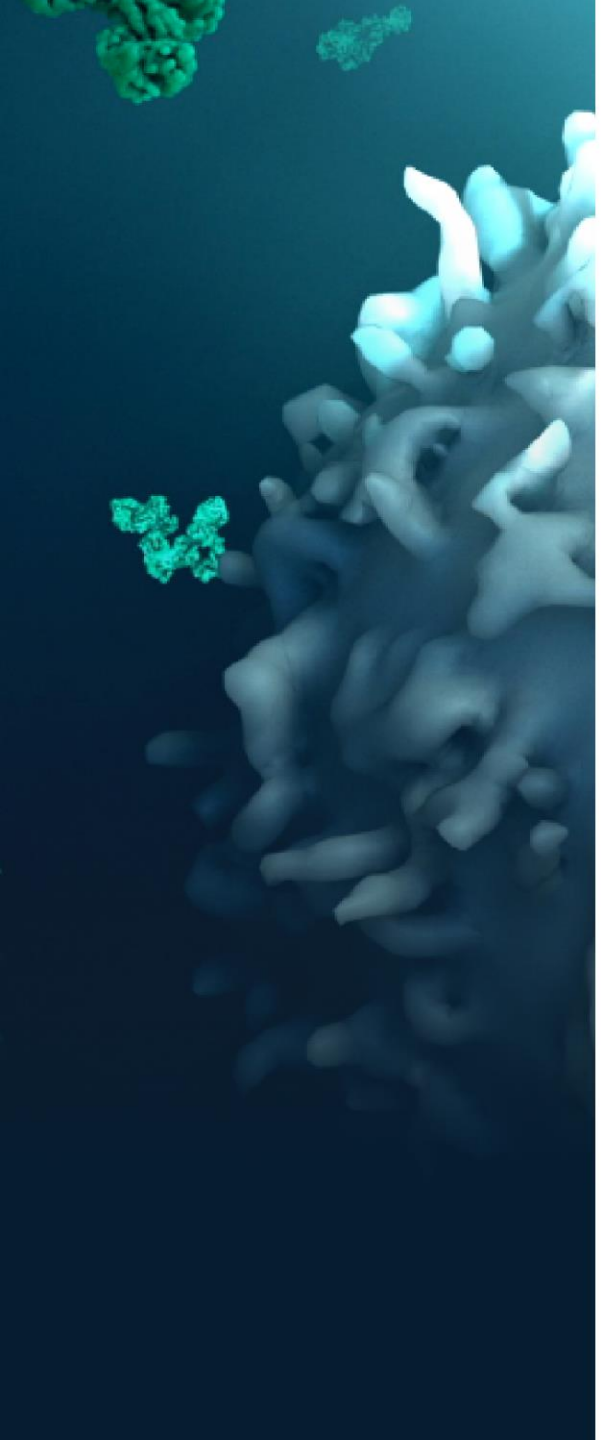
NOVEMBER 2021

Frank Bedu-Addo Ph.D. President & CEO

PDS Biotechnology

Nasdaq: PDSB

Developing powerful, safe, versatile immunotherapies



Forward-Looking Statements

This presentation contains forward-looking statements about PDS Biotechnology Corporation (“PDSB”), and its businesses, business prospects, strategies and plans, including but not limited to statements regarding anticipated pre-clinical and clinical drug development activities and timelines and market opportunities. All statements other than statements of historical facts included in this presentation are forward-looking statements. The words “anticipates,” “may,” “can,” “plans,” “believes,” “estimates,” “expects,” “projects,” “intends,” “likely,” “will,” “should,” “to be,” and any similar expressions or other words of similar meaning are intended to identify those assertions as forward-looking statements. These forward-looking statements involve substantial risks and uncertainties that could cause actual results to differ materially from those anticipated.

Factors that may cause actual results to differ materially from such forward-looking statements include those identified under the caption “Risk Factors” in the documents filed with the Securities and Exchange Commission (“SEC”) from time to time, including its Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q and Current Reports on Form 8-K. You are cautioned not to place undue reliance on these forward-looking statements, which speak only as of the date of this presentation. Except to the extent required by applicable law or regulation, PDSB undertakes no obligation to update the forward-looking statements included in this presentation to reflect subsequent events or circumstances.

PDS Biotech is a clinical stage biotechnology company developing a pipeline of immunotherapies based on the proprietary Versamune® platform

CORPORATE OVERVIEW

- Biopharma developing novel T-cell activating cancer treatment candidates
- **Three** phase 2 oncology clinical trials in progress with multiple near-term readouts
- Clinical partnerships with Merck, MD Anderson Cancer Center and National Cancer Institute
- Debt free with approximately **$69.7M in cash** as of September 30, 2021

VERSAMUNE® PLATFORM

- Interim data from NCI-led PDS0101 Phase 2 trial showed tumor reduction in ~70% of patients who had failed prior treatment
- No new or elevated toxicities observed from the addition of PDS0101 to combination therapy
- Pre-clinical studies demonstrate potency and versatility of Versamune® in oncology and infectious disease
- Multiple composition and application patents valid through mid-2030s

A significant barrier to effective immunotherapy has been the **inability to promote adequate CD8+ killer T-cell responses** *in vivo*

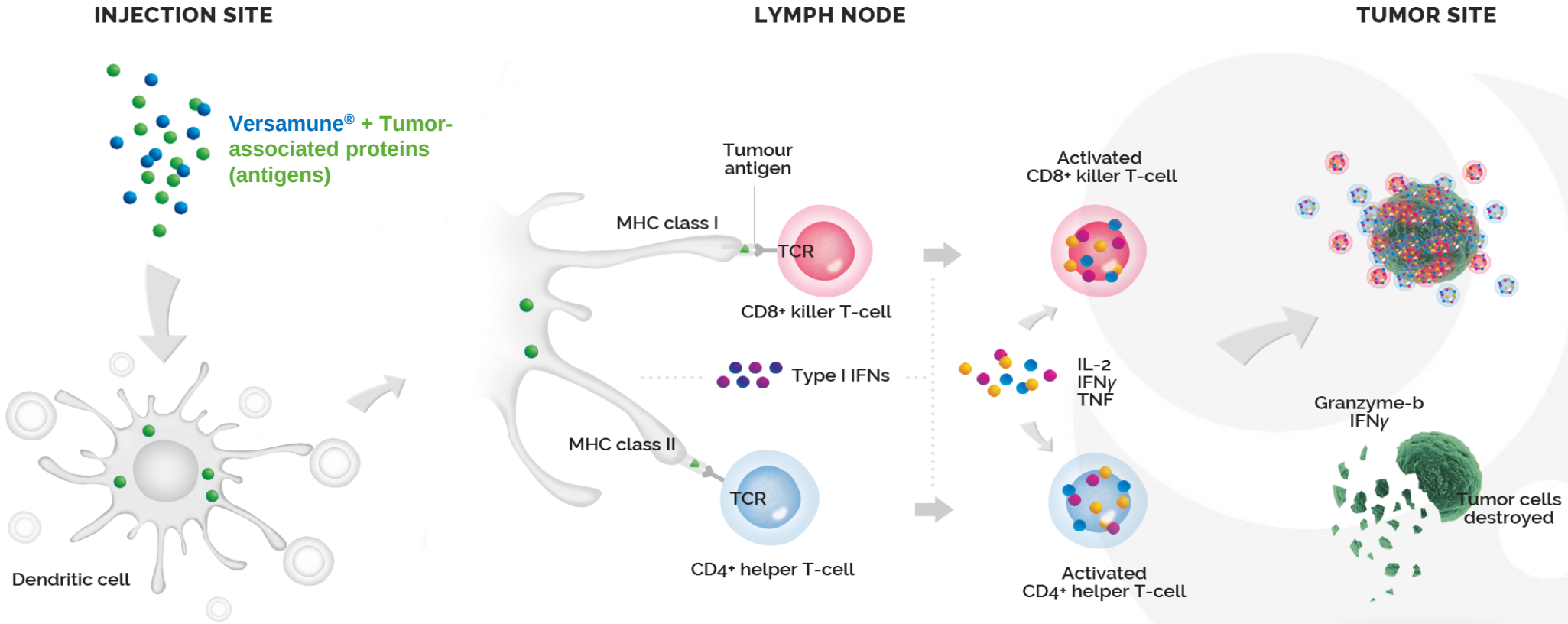
70-90% of cancer patients **fail check point inhibitor therapy**

PDS Biotech's Versamune®-based immunotherapies are designed to promote a powerful *in vivo* tumor-specific **CD8+ killer T-cell response**

Versamune®-based therapies also show promising potential to:

- Generate the right type and quantity of effective CD8+ killer T-cells
- Generate memory T-cells, to enhance durability of response
- Generate potency without systemic side effects

Versamune® is designed to induce a robust and targeted anti-tumor response *in vivo* when administered with a tumor-associated antigen



Recruits T-cells to lymph nodes:
Promotes uptake of immunotherapy and entry into lymph nodes. Signals T-cells to infiltrate lymph nodes.

Trains T-cells to target tumors:
Promotes antigen processing and presentation to T-cells via MHC I and II pathways

Arms T-cells to kill tumor cells:
Activates Type I Interferon pathway, enabling a powerful antigen-specific (tumor) killer CD8+ T-cell response

References: Gandhapudi SK, et al. 2019. Antigen priming with enantiospecific cationic lipid nanoparticles induces potent antitumor CTL responses through novel induction of a Type I IFN response. J Immunol. 202 (12): 3524-3536. Smalley Rumfield C et al. 2020. Immunomodulation to enhance the efficacy of an HPV therapeutic vaccine. J. for ImmunoTherapy of Cancer 8:e000612.

PDS Biotech executive team has demonstrated success in the development and commercialization of leading pharmaceutical products

Frank Bedu-Addo, PhD
Chief Executive Officer

- Senior executive experience with management of strategy and execution at both large pharma and biotechs
- Notable drug development:
  Abelcet® (Liposome Company/ Elan)
  PEG-Intron® (Schering-Plough/ Merck)

Matthew Hill
Chief Financial Officer

- >20 years of financial and operational leadership roles for life sciences companies
- Former Chief Financial Officer of several publicly traded companies

Lauren V. Wood, MD
Chief Medical Officer

- >30 years of translational clinical research experience
- Former Director of Clinical Research at National Cancer Institute Center for Cancer Research (Cancer Vaccine Branch)

Gregory Conn, PhD
Chief Scientific Officer

- Co-founder
- >35 years of drug development experience
- In-depth experience with biotech drug discovery, product development and manufacturing

PDS Biotech's robust Versamune® -based oncology pipeline is being developed in partnership with the leaders in immuno-oncology

PRODUCT	INDICATION	COMBINATION	PC	P1	P2	P3	R	PARTNER(S)
Oncology								
PDS0101 (HPV16)	Recurrent/metastatic HPV16-positive head and neck cancer	KEYTRUDA® (standard of care)						MERCK
	Arm 1: Checkpoint inhibitor naïve 1st line treatment							
	Arm 2: Checkpoint inhibitor refractory 2nd or 3rd line treatment							
PDS0101 (HPV16)	HPV-positive anal, cervical, head and neck, penile, vaginal, vulvar cancers	Bintrafusp alfa and M9241						NIH NATIONAL CANCER INSTITUTE
	Arm 1: Checkpoint inhibitor naïve 2nd line treatment							
	Arm 2: Checkpoint inhibitor refractory 3rd line treatment							
PDS0101 (HPV16)	1st line treatment of locally advanced (IB3-IVA) cervical cancer	Chemo-radiation (standard of care)						THE UNIVERSITY OF TEXAS MD Anderson Cancer Center
PDS0102 (TARP)	TARP-associated AML, prostate and breast cancers	TBD						NIH NATIONAL CANCER INSTITUTE
PDS0103 (MUC1)	MUC1-associated breast, colon, lung, ovarian and other cancers	TBD						NIH NATIONAL CANCER INSTITUTE
PDS0104 (TRP2)	Melanoma	TBD						

PDS Biotech Funded

Partner Co-Funded

PDS Biotech's Versamune® -based pipeline is being developed in partnership with leaders in infectious disease

PRODUCT	INDICATION	COMBINATION	PC	P1	P2	P3	R	PARTNER(S)
Infectious Disease								
PDS0201 (M-tuberculosis)	Prevention of tuberculosis							Farmacore
PDS0202 (influenza)	Universal prevention of influenza							NIH National Institute of Allergy and Infectious Diseases
PDS0203 (SARS-CoV-2)	Prevention of COVID-19							Farmacore, MCTI, BLANVER

PDS Biotech Funded

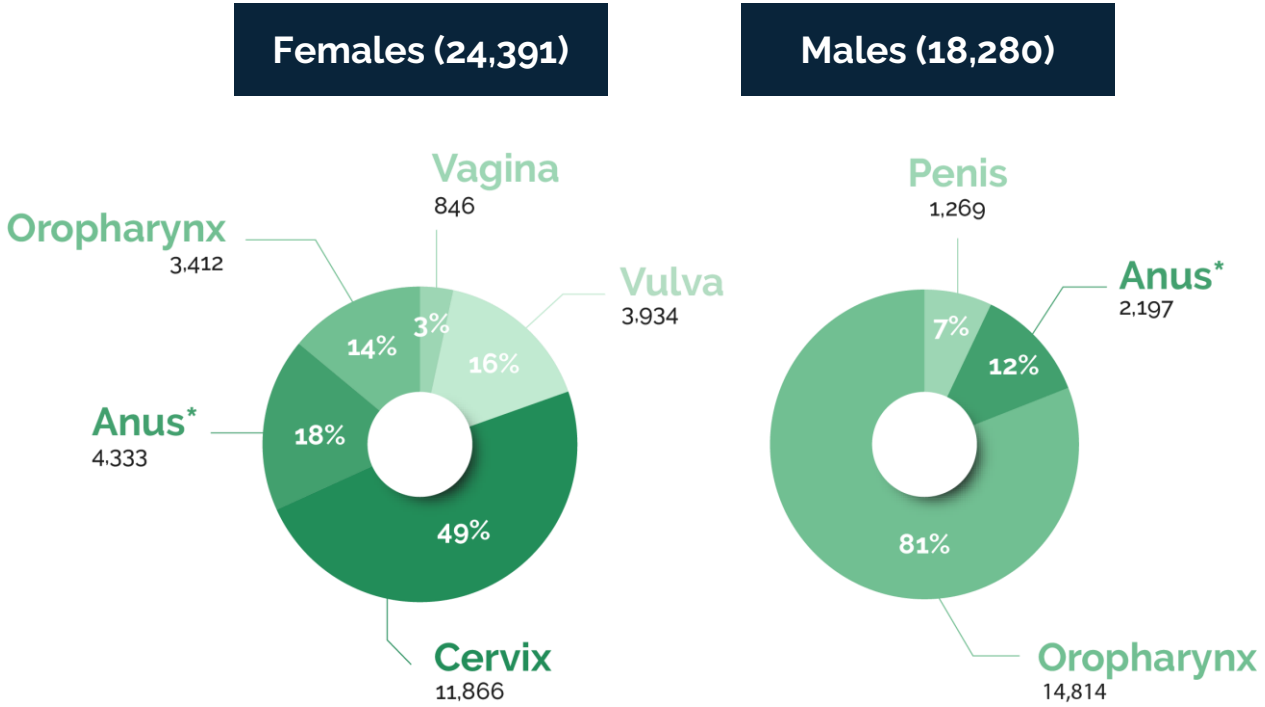
Partner Co-Funded

*Consortium of PDS Biotech, Farmacore Biotechnology and Blanver Farmoquimica. Funding provided by The Ministry of Science, Technology and Innovation of Brazil ("MCTI")

Introduction to PDS0101

PDS0101 is designed to treat cancers caused by human papillomavirus (HPV)-16, which represents 70-80% of the HPV-associated cancer market

US annual HPV-associated cancer incidence[1]



- Approximately 43,000 patients are diagnosed with HPV-associated cancers annually in the US[1]
- Cancers caused by HPV include anal, cervical, head and neck, penile vaginal and vulvar cancers
- Incidence rate of HPV-related anal and head and neck cancer is growing and remains a significant unmet medical need
- Existing immunotherapies cost $120,000+ annually per patient[2]

[1]Markowitz et al. 2016. Centers for Disease Control and Prevention. 2018.
[2]Hernandez et al. 2018. American Journal of Managed Care Volume 24, Issue 2; Company Research

human papillomavirus (HPV)-16 cancers represents 70-80% of the HPV-associated cancer market

FIRST LINE

Treatment:

Radiation and/or Chemotherapy

- 20-30% of patients either progress or have a recurrence of cancer and are considered to have advanced cancer

ADVANCED CANCER

Treatment:

Checkpoint Inhibitors (CPI)

- Objective response rate (ORR) ranges from 12-24%
- 75-80% of patients fail treatment with CPIs and are CPI refractory

CPI REFRACTORY

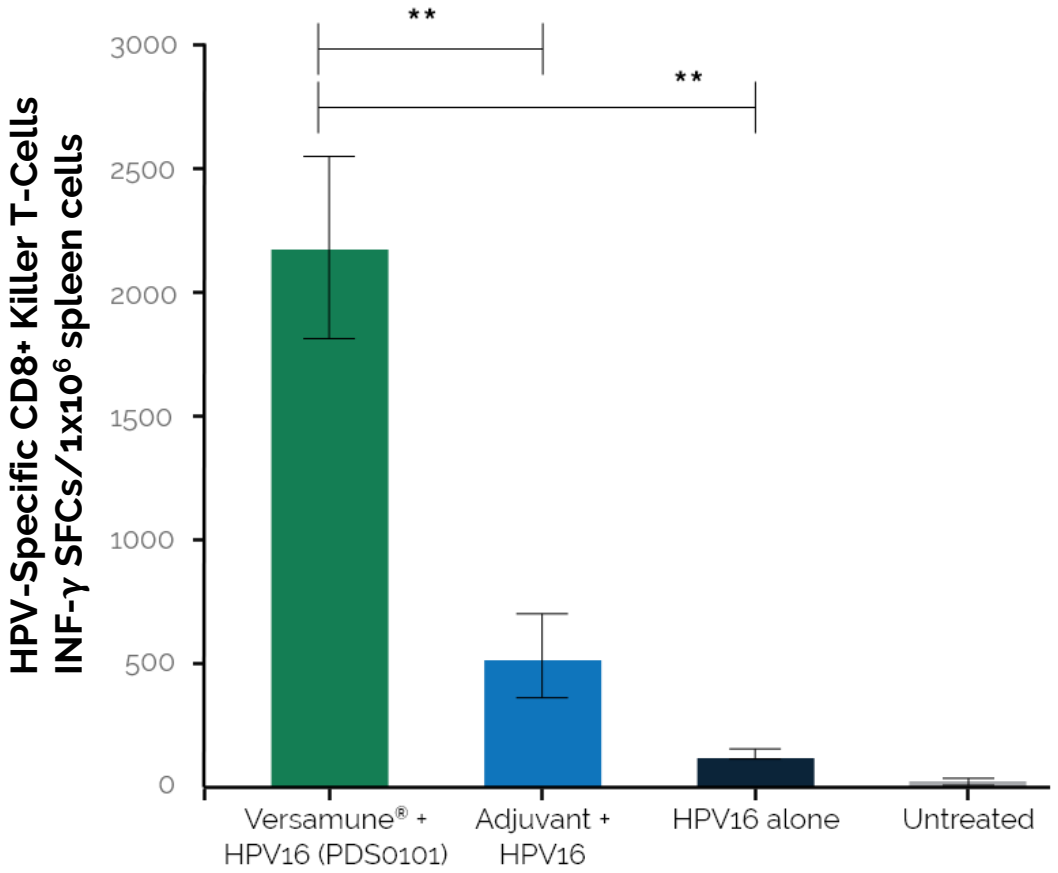
Few Treatment Options

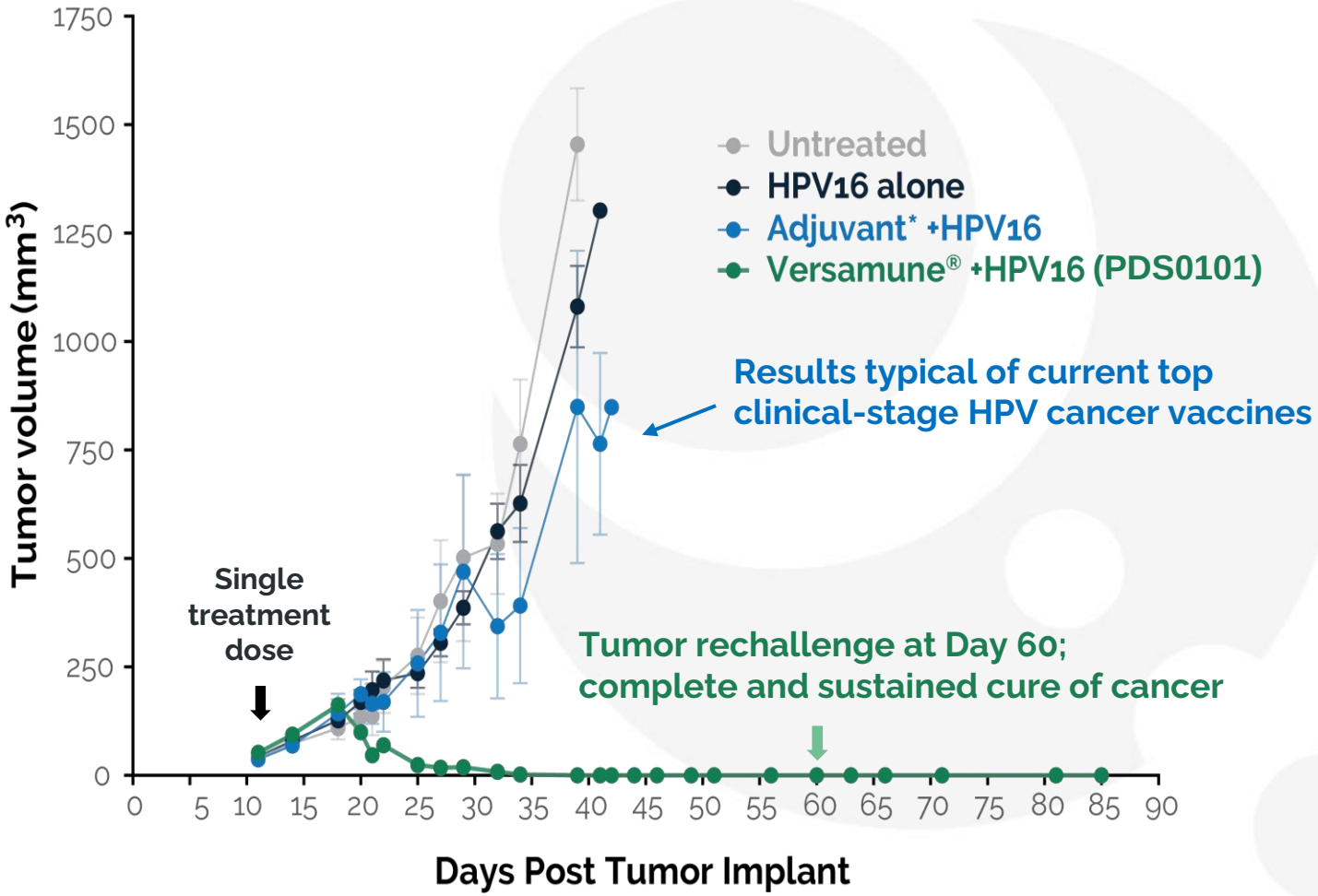
- Objective response rate (ORR) ranges from 5-12%
- Historical median survival of patients is 3-4 months

References: Markowitz et al. 2016. Centers for Disease Control and Prevention. 2018. Hernandez et al. 2018. American Journal of Managed Care Volume 24, Issue 2; Company Research, Strauss J. et al. 2021 ASCO Annual Meeting Abstract: 2501.

Greater quantity & quality of Versamune®-induced killer (CD8+) T-cells may result in unique ability to eradicate HPV-positive tumors after a single dose

Induced a >10-fold number of highly potent T-cells and eradication of HPV-positive tumors after a single dose in preclinical studies



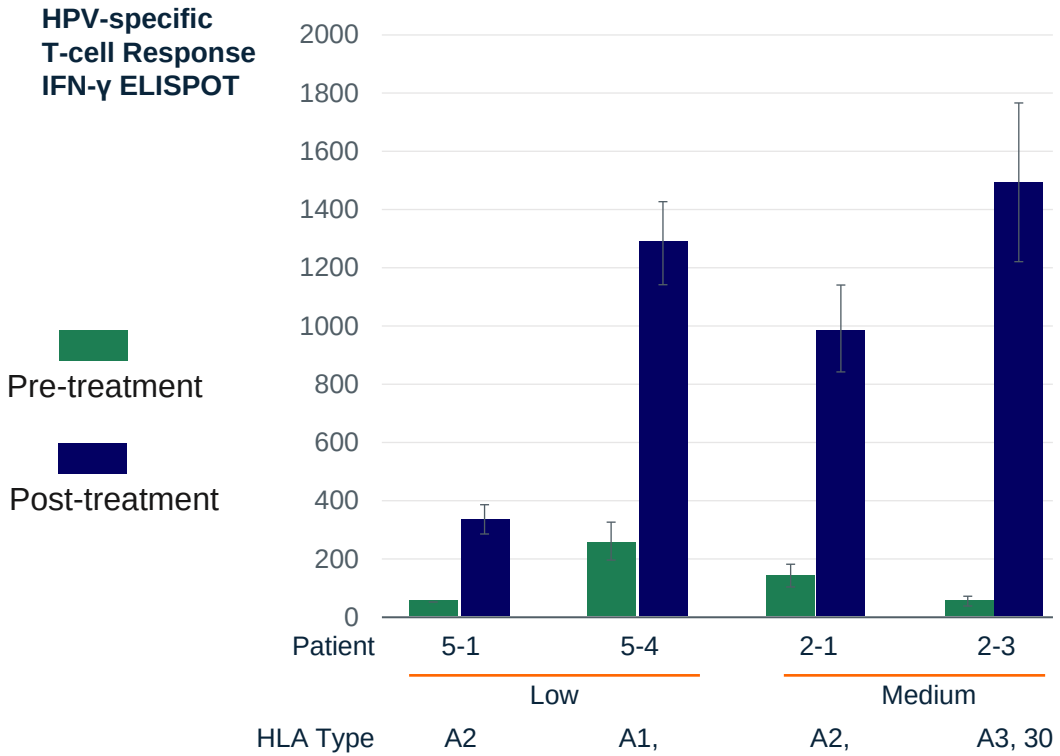


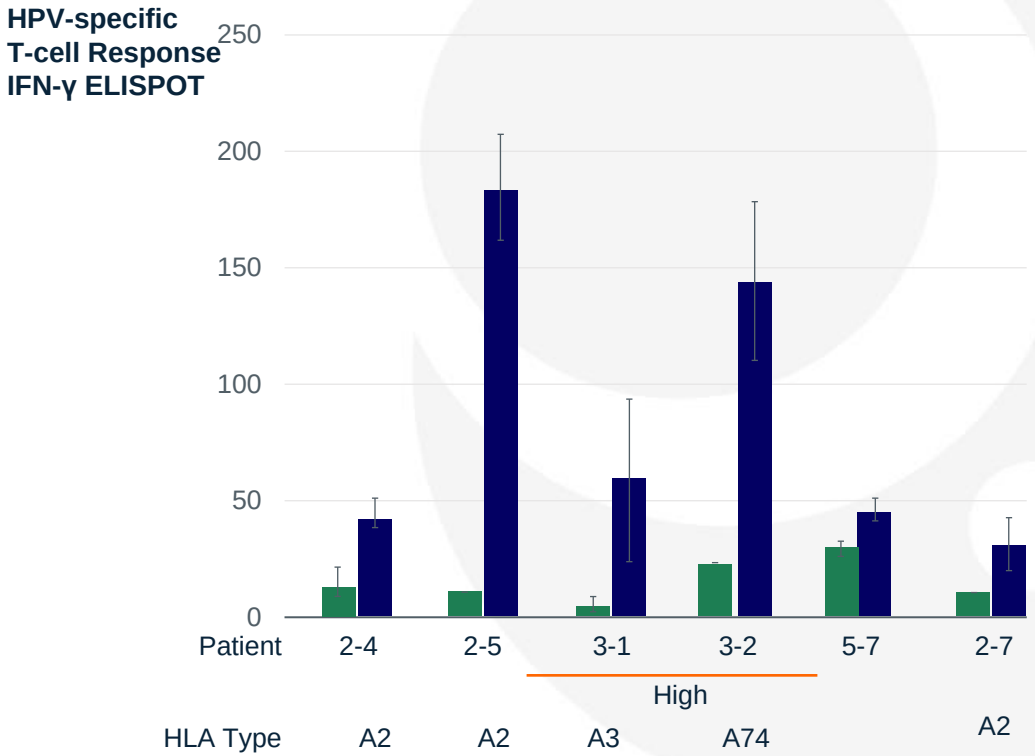
*Adjuvant = cytokine GM-CSF

References: J. Immunology, 2019 (202), 1215; Studies in TC-1 tumor model with other immunotherapies reported in: Vaccine 2009, January 14, 27 (3): 431; Science Translational Medicine 2016, 13 April, Vol 8 Issue 334; Vaccine 2009, September 25, 27 (42): 5906.

Sub-cutaneous injection of PDS0101 monotherapy induced high quantity of potent HPV16-specific CD8+T-cells in Phase 1 clinical trial

Responses were evaluated on Days 14-19 after SC injection
Predominant CD8+ T-cell responses confirmed by Granzyme-b ELISPOT





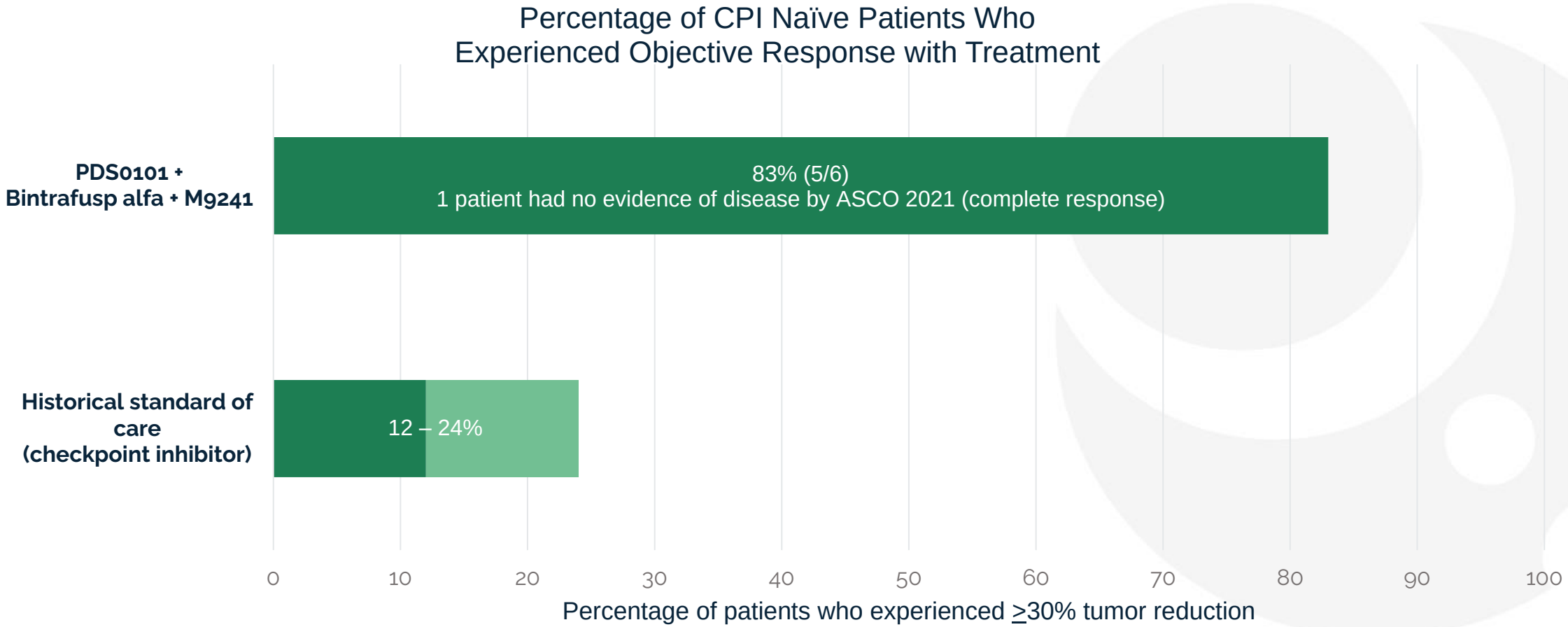
Lesion regression in 8/10 CIN patients within 3 months of treatment (Retrospective analysis)
No recurrence within 2-year evaluation period may suggest durable immune responses

Phase 2 NCI-led clinical trial evaluating the triple combination of PDS0101, Bintrafusp alfa and M9241 in advanced HPV-associated cancer

Indication	Patients with advanced HPV-associated cancer who have failed prior treatment
Clinical Agents	**Bintrafusp alfa:** Bifunctional checkpoint inhibitor-"TGF-β trap" fusion protein **M9241:** Antibody-conjugated immuno-cytokine **PDS0101:** Versamune®-based immunotherapy generating HPV-specific CD8+ T-cells
Study goals	Group 1: Objective response rate (ORR) in checkpoint inhibitor (CPI) naïve patients Group 2: ORR in patients who have failed checkpoint inhibitor therapy (CPI refractory)
Timing	**Full enrollment of 56 patients** **Complete enrollment expected by Q1 2022**
Trial Sponsor	NIH NATIONAL CANCER INSTITUTE

The objective of this trial is to evaluate the potential of the triple combination to provide an effective therapy for patients with advanced and untreatable cancer

ASCO 2021: PDS0101 triple combination achieved 83% ORR among six advanced HPV16-positive CPI naive patients, suggesting potential efficacy

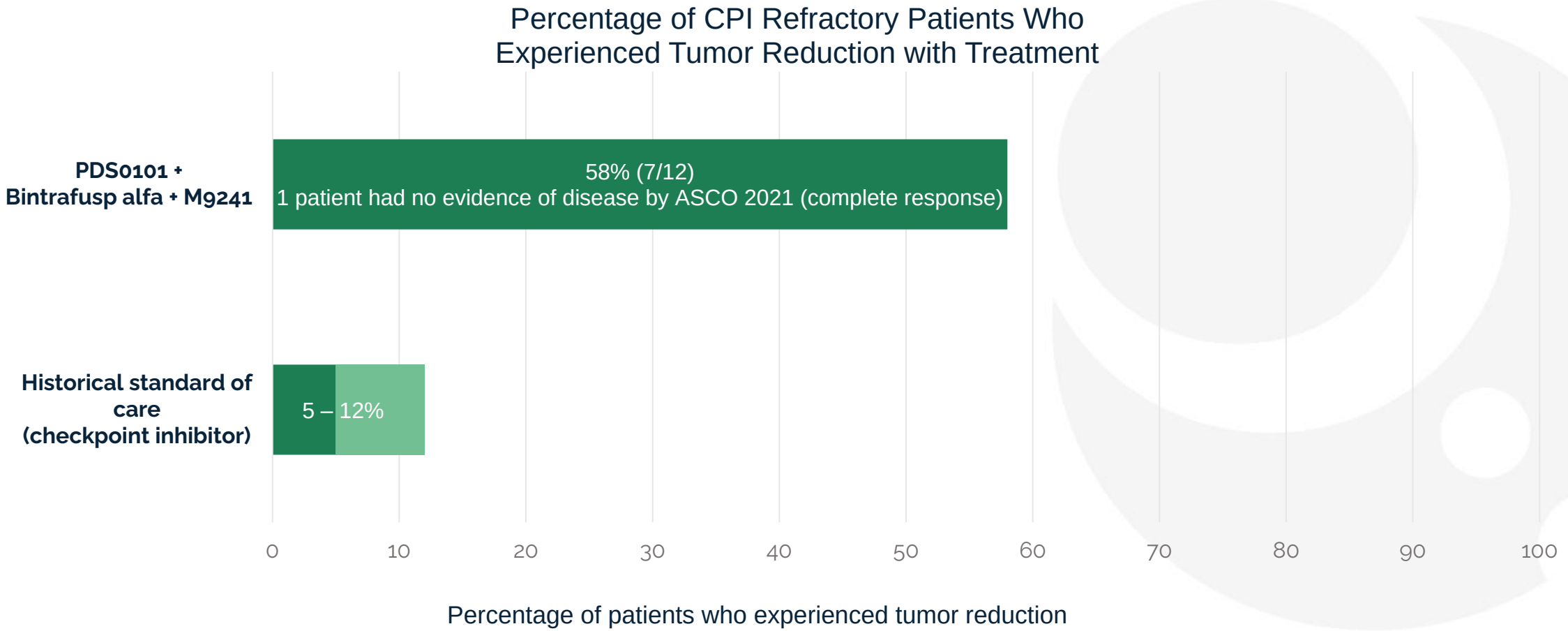


* These numbers reflect data as of evaluation of 25 patients at a median of 8 months; numbers will change as more patients undergo evaluation

Reference: Strauss J. et al. Phase II evaluation of the triple combination of PDS0101, M9241, and Bintrafusp alfa in patients with HPV 16 positive malignancies. Presented at: American Society of Clinical Oncology 2021 Annual Meeting; June 4-8, 2021; Virtual. Abstract: 2501.

ASCO 2021: Triple combination achieved 58% tumor reduction among 12 HPV16 checkpoint inhibitor refractory patients

- ***5 patients had already achieved an objective response (>30% tumor reduction)***



* These numbers reflect data as of evaluation of 25 patients at a median of 8 months; numbers will change as more patients undergo evaluation

Reference: Strauss J. et al. Phase II evaluation of the triple combination of PDS0101, M9241, and Bintrafusp alfa in patients with HPV 16 positive malignancies. Presented at: American Society of Clinical Oncology 2021 Annual Meeting; June 4-8, 2021; Virtual. Abstract: 2501.

ASCO 2021: Triple combination shows promising durability of potential for anti-cancer efficacy in HPV16-positive checkpoint inhibitor naïve patients

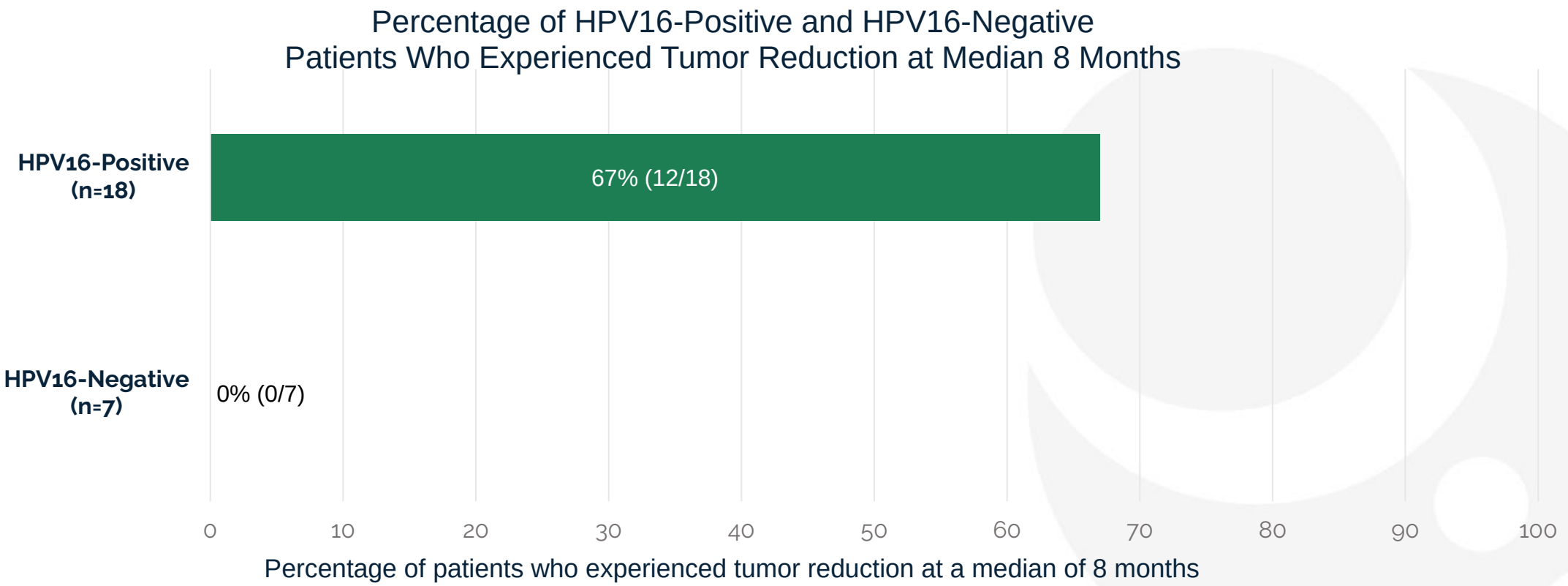
	PDS0101 + Bintrafusp alfa + M9241 HPV16-positive	Standard of Care (Checkpoint Inhibitors)
Number of checkpoint inhibitor naïve patients	6	
Ongoing objective responses at median of 8 months	***80% (4/5)***	
Survival at median of 8 months	***100% (6/6)***	Historical is 7-11 months
Number of checkpoint inhibitor refractory patients	12	
Ongoing tumor reduction at median of 8 months	***86% (6/7)***	
Ongoing objective responses at median of 8 months	***80% (4/5)***	
Survival at median of 8 months	***83% (10/12)***	Historical is 3-4 months

Preliminary results suggest PDS0101 induction of *in vivo* highly active tumor-attacking HPV16 killer (CD8+) T-cells even in extensively treated and immunologically limited patients have the potential for effective disease reduction and ongoing responses

* These numbers reflect data as of evaluation of 25 patients; numbers will change as more patients undergo evaluation

Reference: Strauss J. et al. Phase II evaluation of the triple combination of PDS0101, M9241, and Bintrafusp alfa in patients with HPV 16 positive malignancies. Presented at: American Society of Clinical Oncology 2021 Annual Meeting; June 4-8, 2021; Virtual. Abstract: 2501.

ASCO 2021: Results in HPV16-negative patients suggests critical role of PDS0101-induced HPV16-specific CD8+ T-cells in promoting tumor reduction



Preliminary results suggest that HPV16-specific CD8+ and CD4+ T-cell induction by PDS0101 as predicted by preclinical studies may promote enhanced clinical benefit of the triple combination

* These numbers reflect data as of evaluation of 25 patients; numbers will change as more patients undergo evaluation

Reference: Strauss J. et al. Phase II evaluation of the triple combination of PDS0101, M9241, and Bintrafusp alfa in patients with HPV 16 positive malignancies. Presented at: American Society of Clinical Oncology 2021 Annual Meeting; June 4-8, 2021; Virtual. Abstract: 2501.

Phase 2 trial evaluating the combination of PDS0101/KEYTRUDA® for treatment of HPV16-positive metastatic/recurrent head and neck cancer (VERSATILE-002)

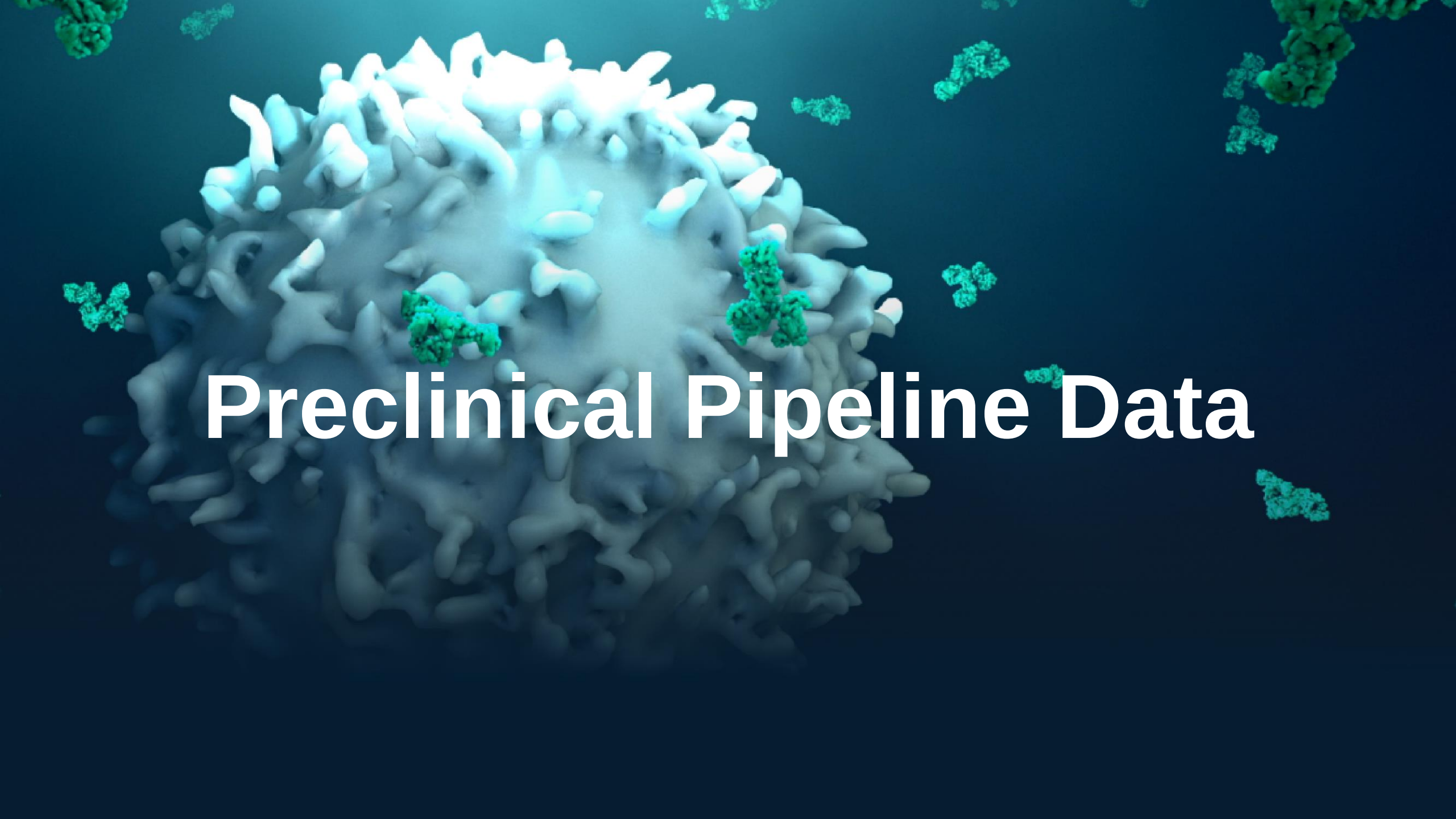
Indication	Treatment of patients with HPV16-positive head and neck cancer whose cancer has spread or returned
Clinical Agents	**KEYTRUDA® (Standard of Care):** Anti-PD1 checkpoint inhibitor (ORR ~20%) **PDS0101:** Versamune®-based immunotherapy generating HPV-specific CD8+ and CD4+ T-cells
Study goals	Group 1: Objective response rate (ORR) as first-line treatment in checkpoint inhibitor (CPI) naïve patients Group 2: ORR in patients who have failed checkpoint inhibitor therapy (CPI refractory)
Timing	Preliminary efficacy data anticipated Q4 2021/Q1 2022
Trial Partner	MERCK

Confirmation that PDS0101 enhances the therapeutic benefit of checkpoint inhibitors could expand evaluation of Versamune®-based therapies in multiple cancer indications

Phase 2 investigator-led trial evaluating the combination of PDS0101 and chemoradiation in patients with locally advanced cervical cancer (IMMUNOCERV)

Indication	Treatment of patients with locally advanced cervical cancer – Stages IB3-IVA
Clinical Agents	**Chemoradiotherapy (CRT – Standard of Care):** Cisplatin and radiation therapy **PDS0101:** Versamune®-based immunotherapy generating HPV-specific CD8+ and CD4+ T-cells
Study goals	Safety, rate of regression and local control in patients with primary tumor ≥5cm (n=35 patients)
Timing	Preliminary data anticipated 1H 2022 – Rate of complete response by PET-CT at 6 months and rate of tumor volume reduction by MRI at 30-40 days from start of treatment
Trial Sponsor	THE UNIVERSITY OF TEXAS MD Anderson Cancer Center

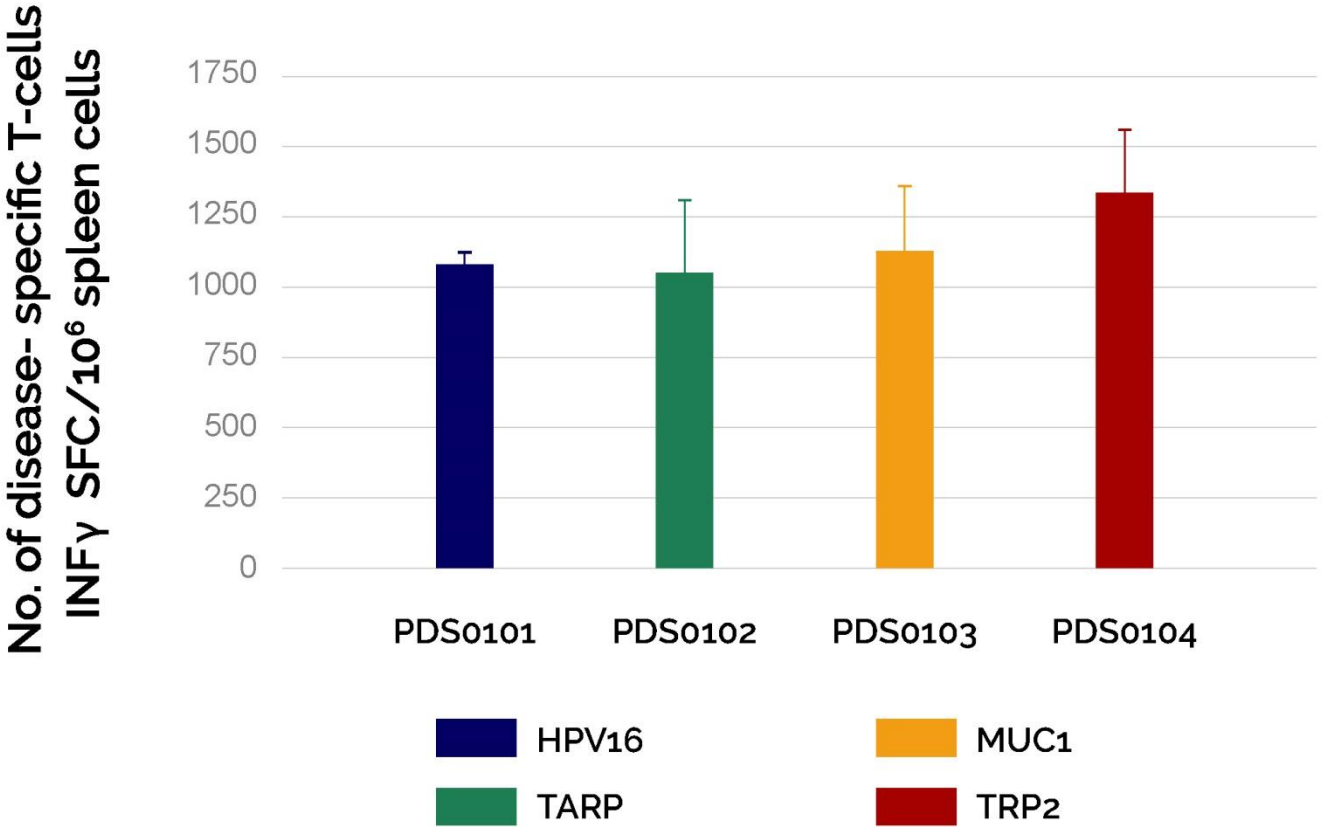
If successful, this study could support further investigation of Versamune®-based immunotherapies in combination with chemotherapy or CRT to treat multiple cancers



Preclinical Pipeline Data

In preclinical studies, Versamune® has demonstrated potential for potent CD8+ (killer) T-cell responses with different tumor antigens

PDS0101 Phase 2 interim results demonstrate promising link between targeted CD8+ killer T-cell response and anti-tumor response



Versamune®-induced T-cells

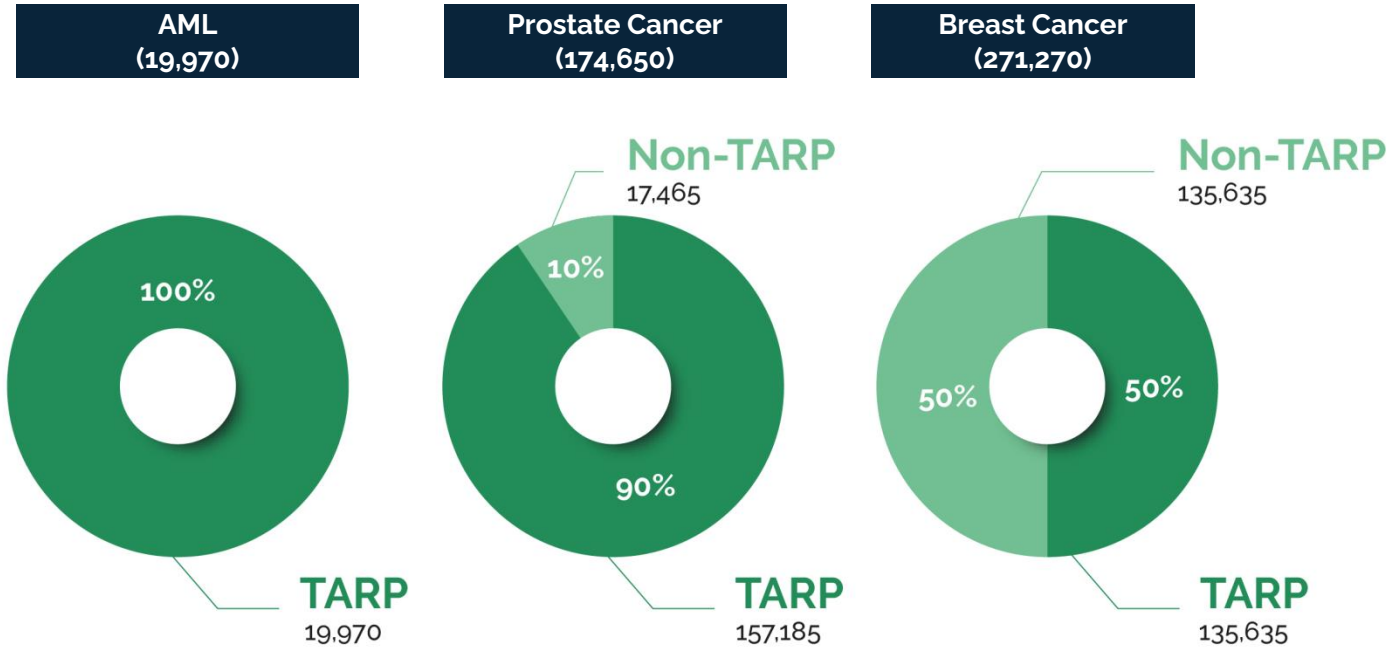
- High quantity
- Right phenotype (high quality)
- Strong killing potency

Reference: Data on file.

Development of PDS0102

PDS0102 is designed to treat cancers caused by T-cell receptor gamma alternate reading frame protein (TARP), including AML, prostate and breast cancers

Approximately 470,000 patients are diagnosed annually with AML, prostate or breast cancer, most of which are associated with target T-cell receptor gamma alternate reading frame protein (TARP)

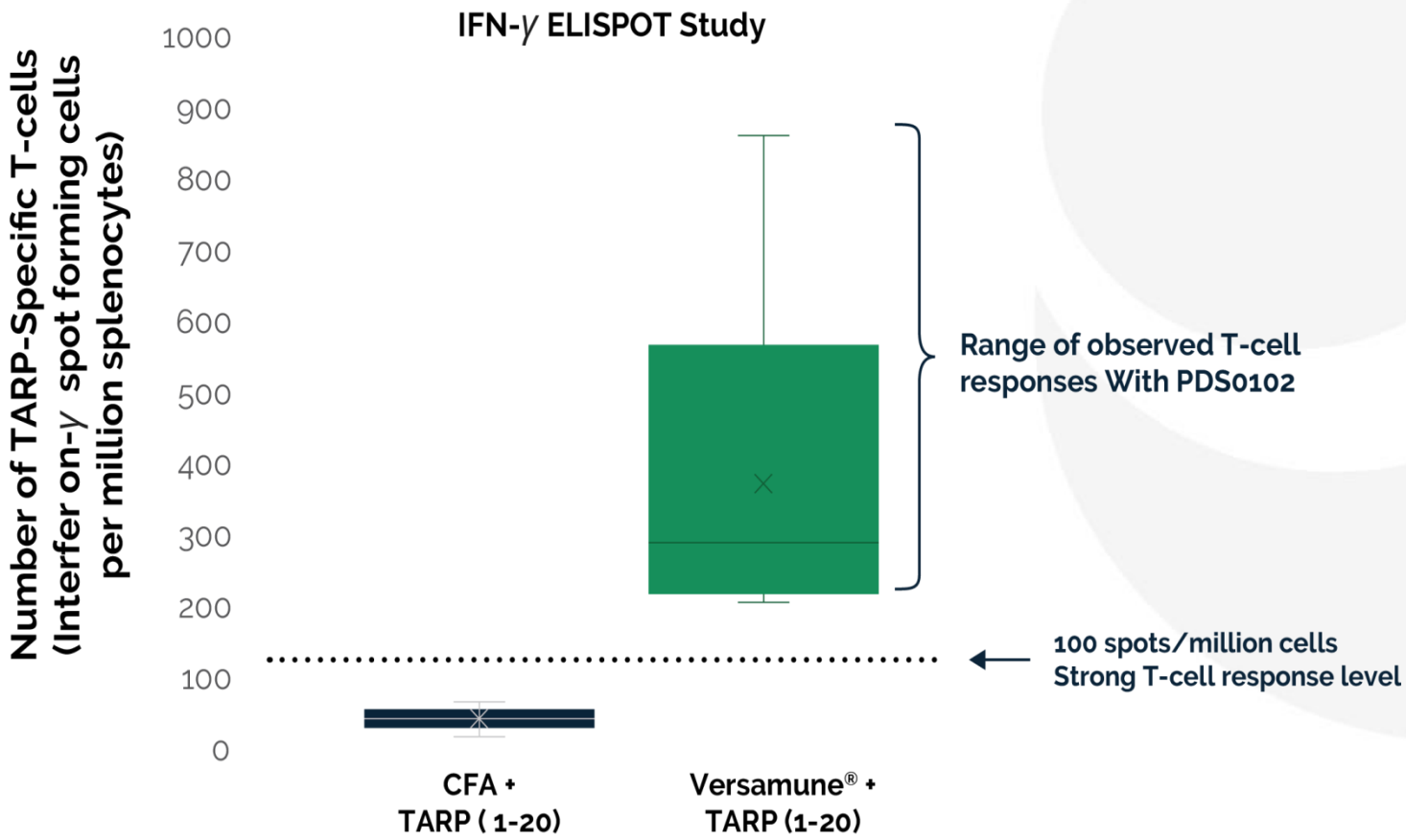


- **Acute Myeloid Leukemia (AML)**
  - Almost 20,000 cases in the US annually
  - TARP expressed in 100% of AML
- **Prostate cancer**
  - Almost 175,000 US cases annually
  - The immunogenic TARP protein is expressed in about 90% of prostate cancers at all stages of the disease^
- **Breast cancer**
  - More than 270,000 US cases annually
  - TARP expressed in about 50% of breast cancers at all stages of the disease

References: Fritzche FR et al. Histol Histopathol 2010 Jun; 25 (6): 733-9 doi: 10.14670/HH-25.733, Cancer Facts & Figures, American Cancer Society, 2019, LV Wood, et al. Oncoimmunology, 2016. Vol 5. No 8. e1197459.

PDS0102 may provide superior induction of TARP-specific tumor attacking CD8+ killer T-cells

PRE-CLINICAL OPTIMIZATION STUDIES:
TARP-Specific T-cell Induction after 2 injections of PDS0102

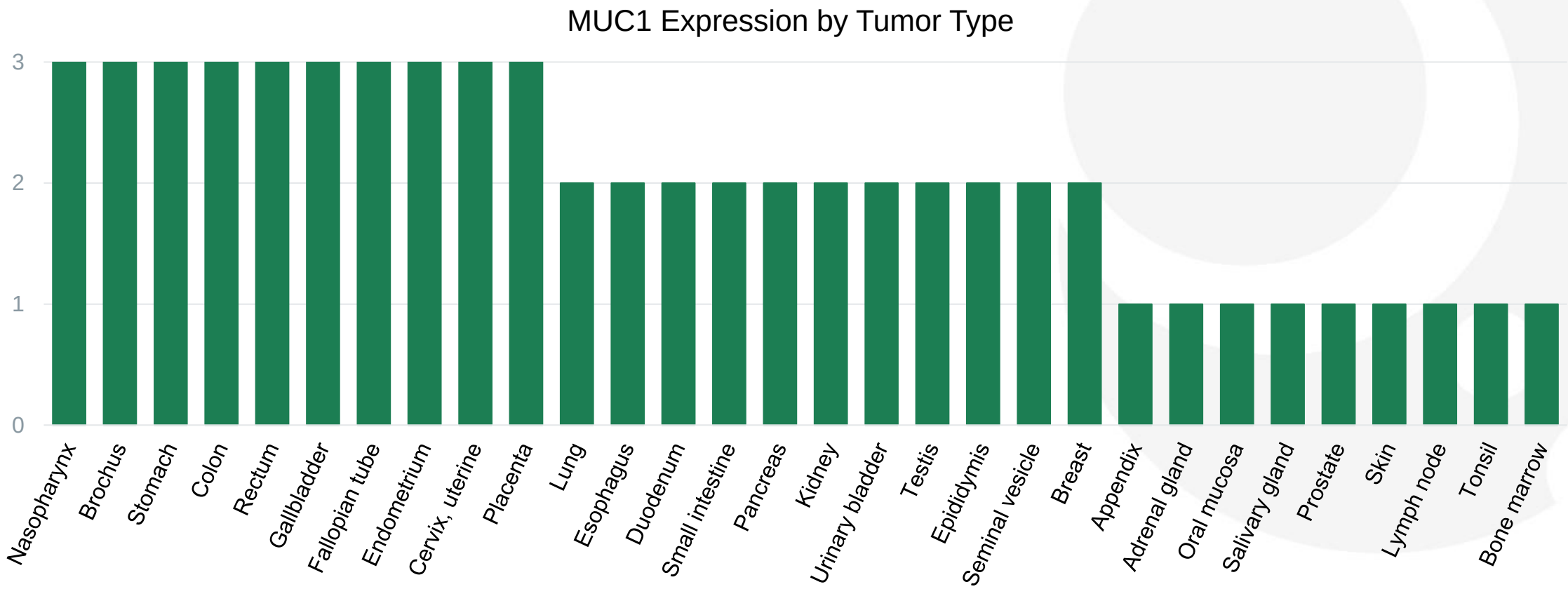


Reference: Wood LV et al, Oncoimmunology, 2016, Vol. 5 (8)
CFA – Complete Freund's Adjuvant a highly potent immune activator not used in humans due to potentially lethal toxicity

Development of PDS0103

PDS0103 is designed to treat cancers caused by mucin-1 (MUC1), which is highly expressed in solid tumors and is associated with poor prognosis

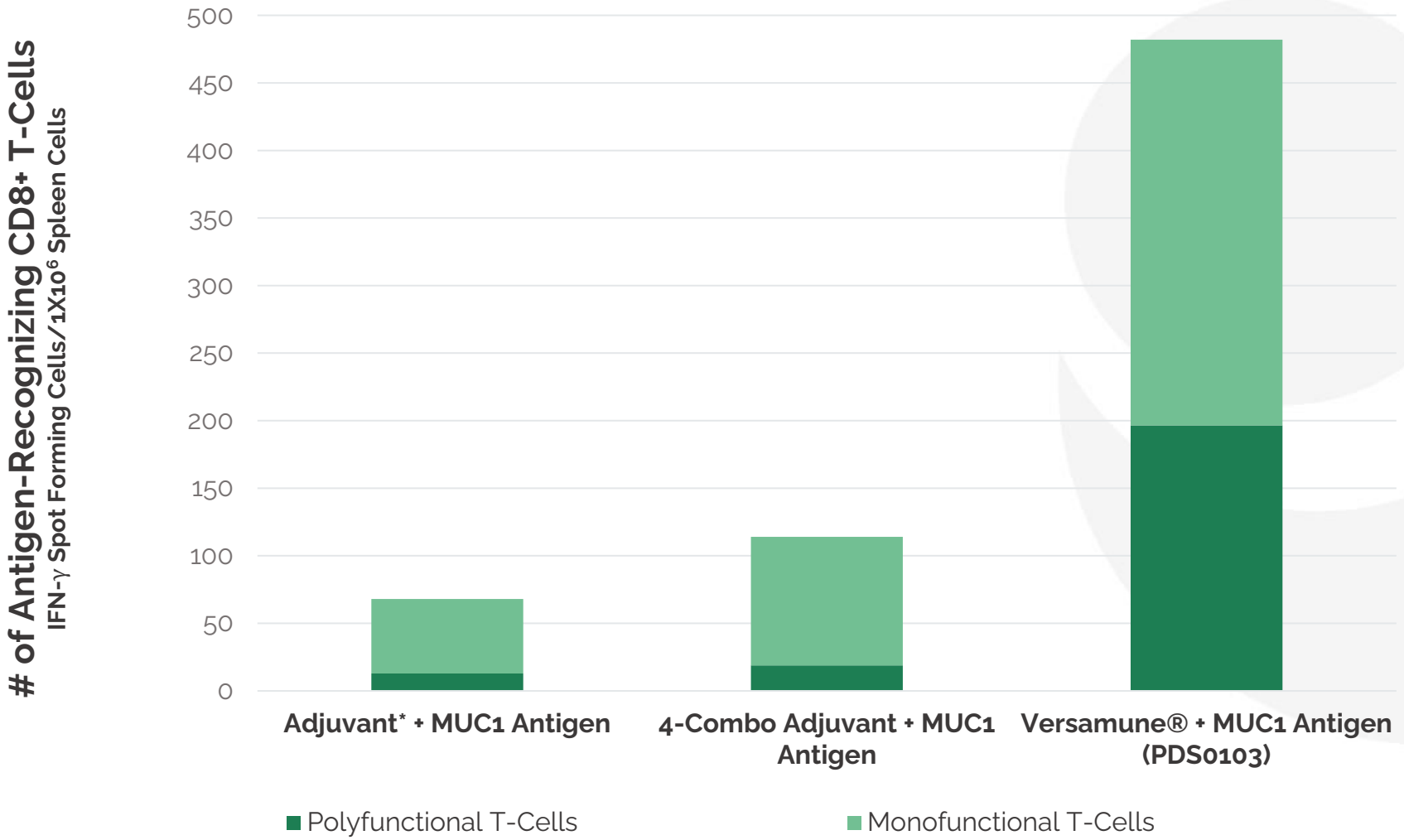
Clinical trial design will seek to evaluate PDS0103 in tumor types with the highest expression of MUC1 and the greatest differences in MUC1 expression between malignant and healthy tissue



Reference: M. Uhlen, et al. A pathology atlas of the human cancer transcriptome. Science.18 Aug 2017. MUC1 protein expression overview data available from https://www.proteinatlas.org/ENSG00000185499-MUC1/tissue.

Greater quantity and quality of Versamune®-induced CD8+ killer T-cells may result in ability to eradicate MUC1-positive tumors

- ***Induced a >10-fold number of polyfunctional MUC1 specific CD8+ T-cells***

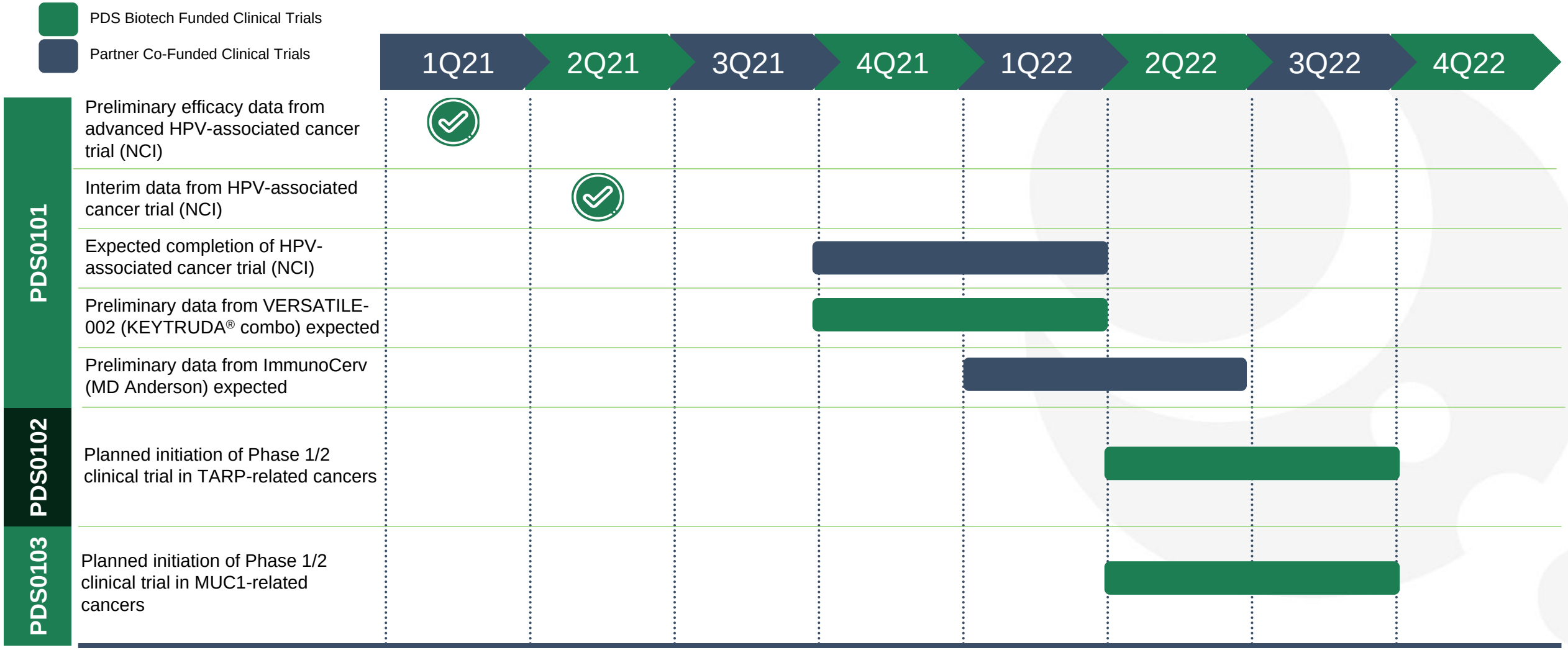


*Adjuvant = cytokine GMCSF

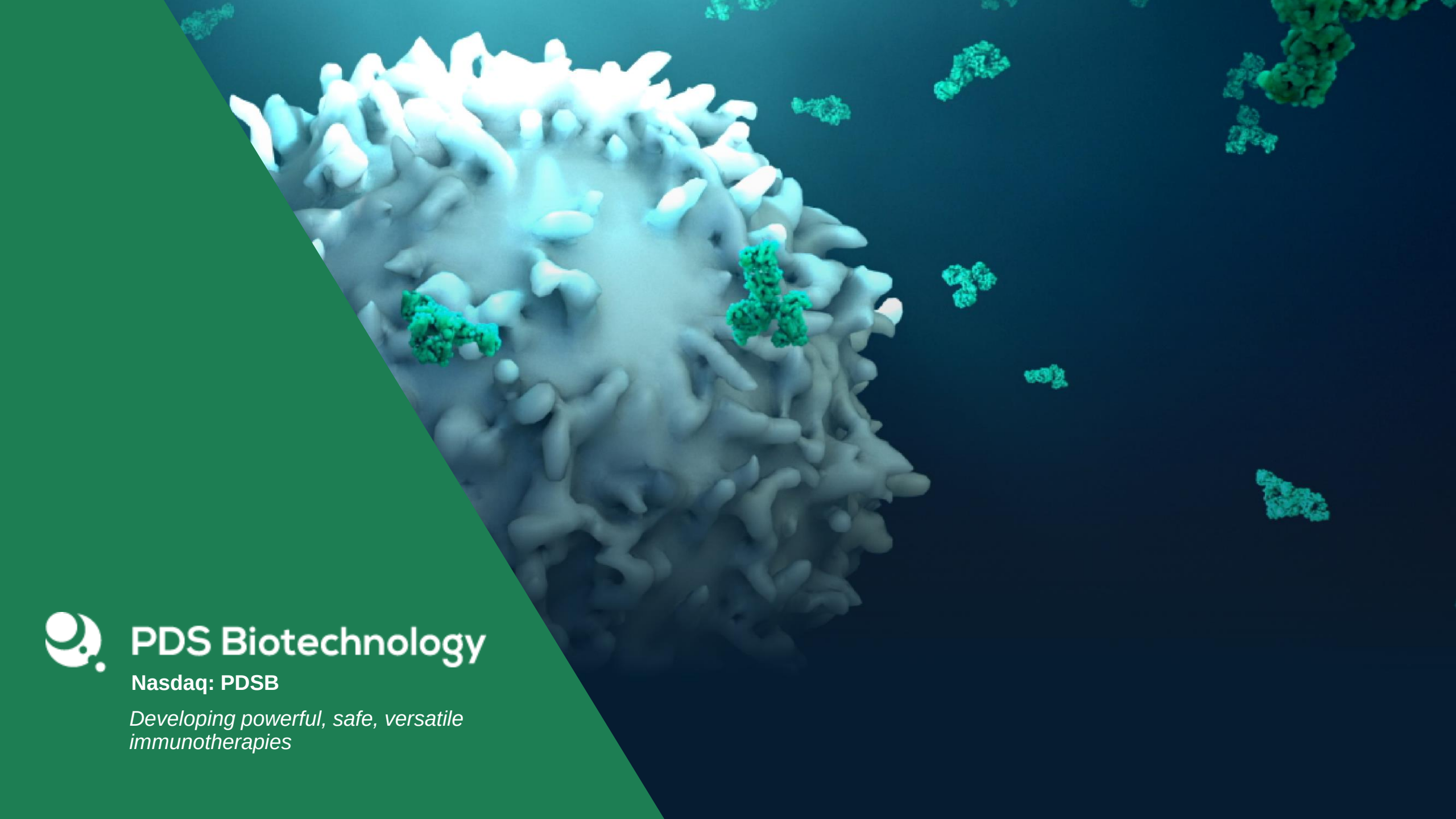
References: J. Immunology, 2019 (202), 1215; Studies in TC-1 tumor model with other immunotherapies reported in: Vaccine 2009, January 14, 27 (3): 431; Science Translational Medicine 2016, 13 April, Vol 8 Issue 334; Vaccine 2009, September 25, 27 (42): 5906.

PDS0101 Near-Term Milestones and Market Opportunities

Projected milestones through 2022*



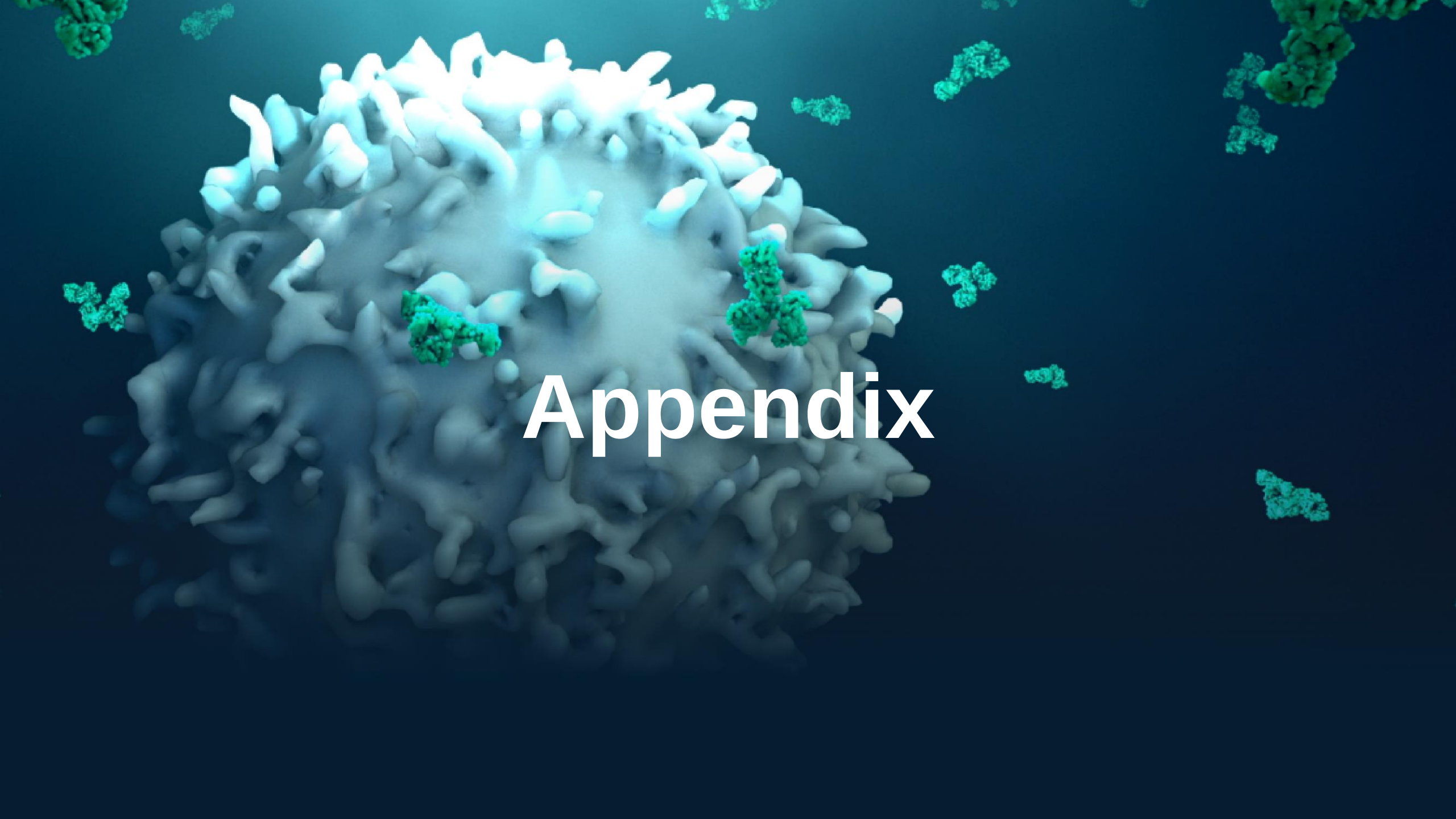
*Based on current enrollment and forecast modeling as of November 2021. Subject to change.



PDS Biotechnology

Nasdaq: PDSB

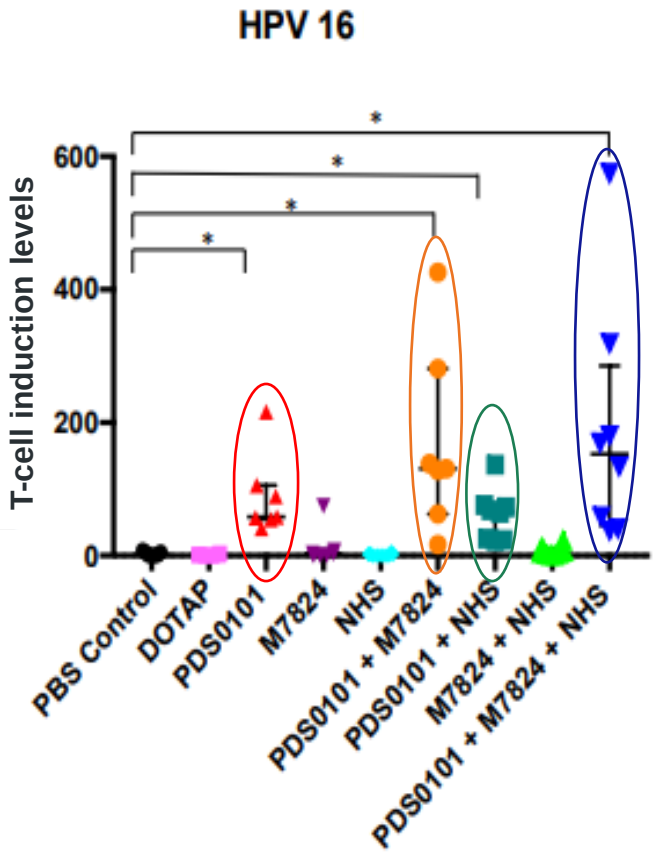
Developing powerful, safe, versatile immunotherapies



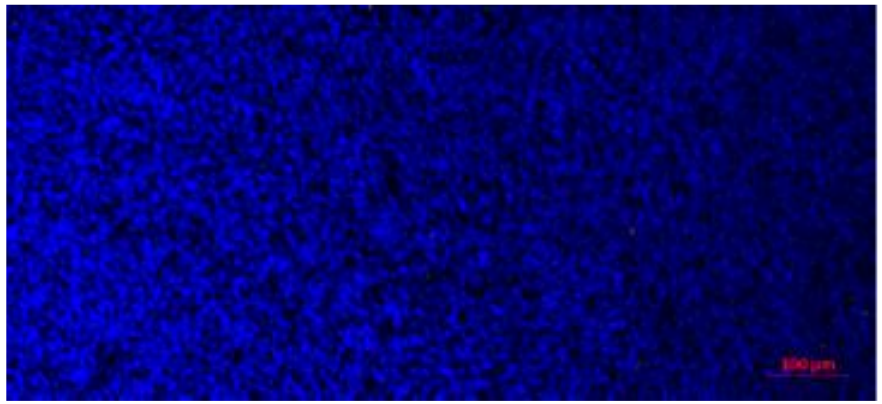
Appendix

Preclinical study: Triple combination of PDS0101, Bintrafusp alfa (M7824) and M9241 (NHS-IL12) demonstrated higher targeted T-cell response

Combination of PDS0101 with M9241 or Bintrafusp alfa generated superior targeted T-cell response; triple combination demonstrated superior efficacy

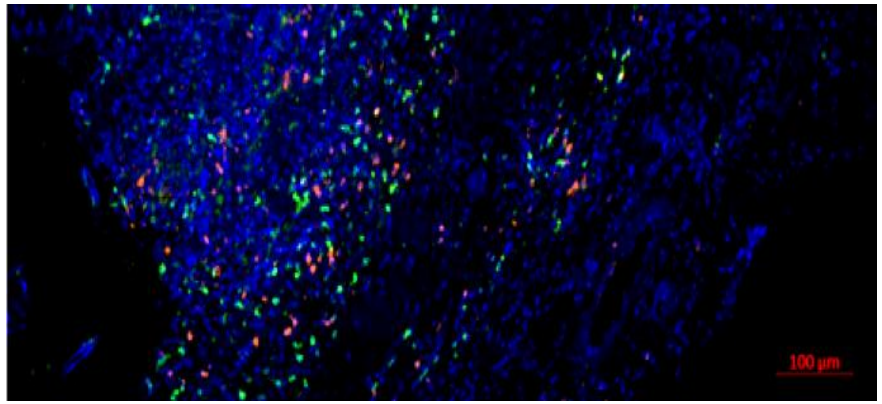


T-cell clones per 25% of TCR repertoire (Average)



Bintrafusp alfa (M7824 - bi-functional checkpoint inhibitor)

Tumor Regression: **0/16 (0%)**
T-cell Clones: **22**



Red – CD8+ (killer) T-cells
Green – CD4 + (helper) T-cells

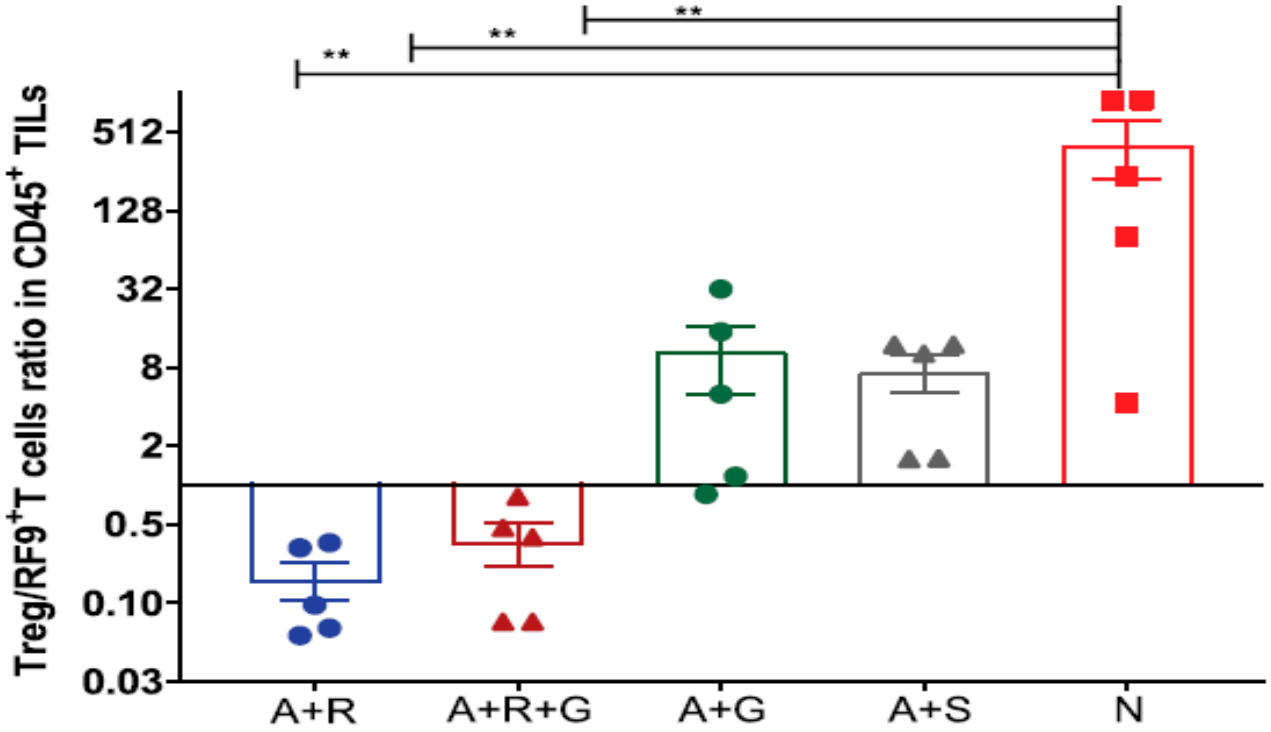
PDS0101 + Bintrafusp alfa + M9241 (NHS IL-12)

Tumor Regression: **13/16 (81%)**
T-cell Clones: **3**

*Reference: Smalley Rumfield C, Pellom ST, Morillon II YM, et al; Journal for ImmunoTherapy of Cancer 2020; 8:e000612. doi: 10.1136/jitc-2020-000612

Versamune® induces high quantity and quality of CD8+ killer T-cells that infiltrate the tumors and make them more susceptible to killing

Minimizes the presence of immune suppressive regulatory T-cells (Treg) within the tumor microenvironment



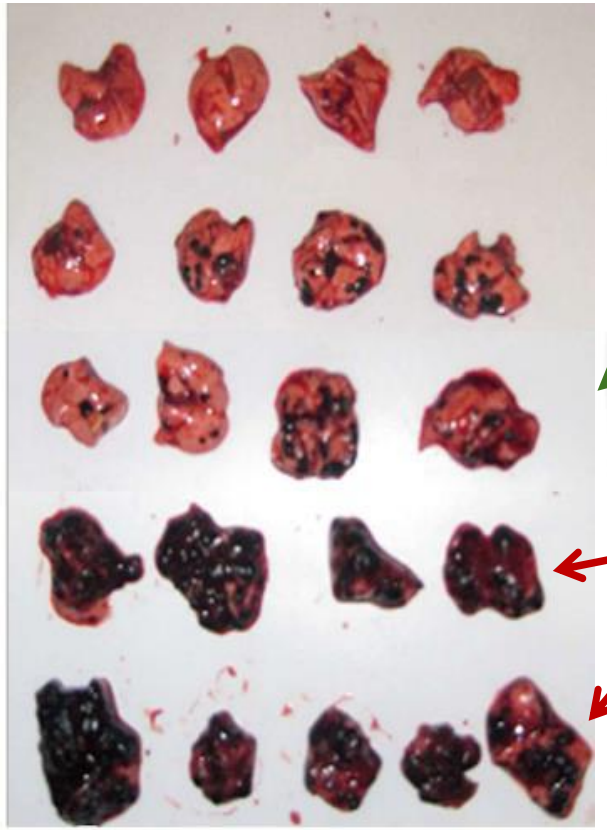
A-antigen, R-Versamune® (R-DOTAP); G-GM-CSF; S-Sucrose; N-Naive

PDS0101 treatment alters the tumor from having >250-fold more immune repressive Treg cells than CD8+ (killer) T-cells to having about 10-fold higher CD8+ T-cells than Treg cells within 10 days of treatment

Reference: Data on file.

PDS0104 preclinical studies: Potent TRP2-specific CD8+ killer T-cells demonstrate potential to break immune tolerance in difficult-to-treat B16 melanoma

Potential potent activity with different tumor antigens



Reference: Data on file.

Immunotherapeutics ORR in HPV-associated malignancies

Agents(s)	Cervical (CPI Naïve)	H&N SCC (CPI Naïve)	All HPV (CPI Naïve)	All HPV (CPI refractory)	References
Pembroluzimab (Keytruda®)	14%	24%			Keynote 012, Siewert TY, 2016
Nivolumab (Opdivo®)		13%			Checkmate 154, Ferris RL, 2018
Atezolizumab (Tecentriq®)		22%			Colevas AD, *Ann Oncol* 2018
Opdivo + ISA 101			33%		Massarelli, *JAMA Oncol* 2019
Bintrafusp-α			30.5%	10%	Strauss, *JITC* 2020
PDS0101 + Bintrafusp-α + M9241			83% (ORR)	58% (reduction) 42% (ORR)	Strauss, ASCO 2021

No new or elevated toxicities observed from the addition of PDS0101 to the combination; PDS0101 only caused transient injection site reactions

Adverse Event Summary	All patients N=25*
	Grade ≥2
Treatment-related adverse events (TRAEs)	23 (92%)
TRAEs leading to discontinuation of ≥ 1 drug(s)	5 (20%)
Treatment-related serious AEs	7 (28%)
TRAEs in ≥5% of patients	
Anemia	12 (48%)
Lymphocyte decrease	7 (28%)
Flu like symptoms	6 (24%)
Injection site reactions	5 (20%)
Hematuria	4 (16%)
AST/ ALT/ Alk phos elevation	4 (16%)
Keratoacanthomas	4 (16%)
Leukocyte decrease	3 (12%)
Maculopapular rash	3 (12%)
Pruritis	3 (12%)
Nausea/ vomiting	3 (12%)
Mucositis	3 (12%)
Hypothyroidism	3 (12%)
Peripheral motor neuropathy	2 (8%)
Fatigue	2 (8%)

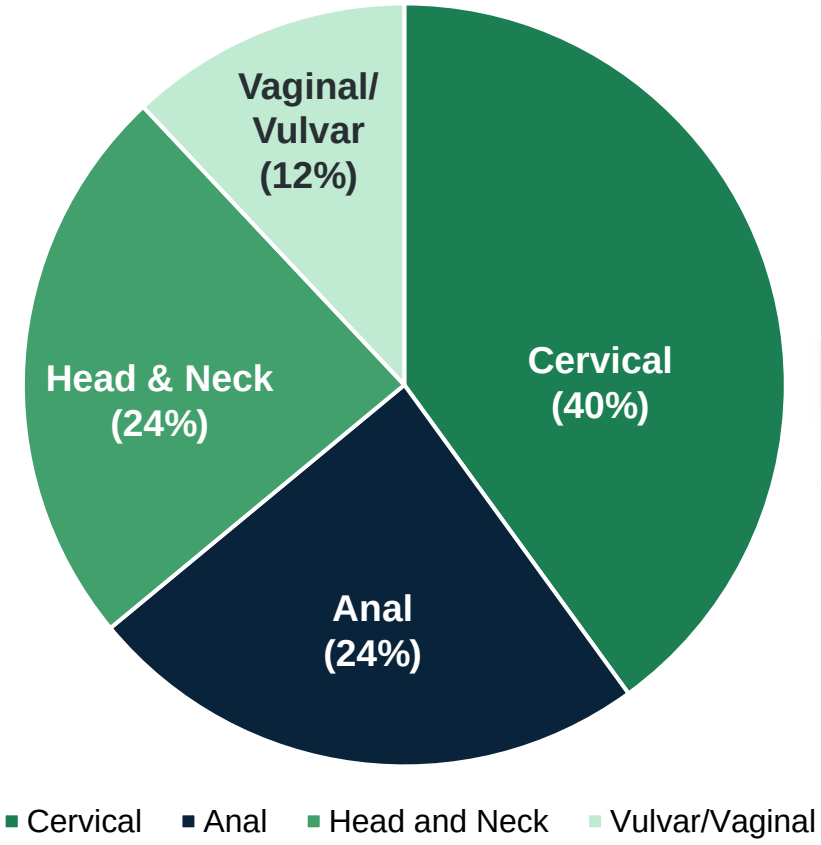
* These numbers reflect data as of evaluation of 25 patients; numbers will change as more patients undergo evaluation

- Grade 3 TRAEs occurred in 10 (40%) patients
  - Anemia due to gross hematuria (n=4), AST/ALT elevation (n=2); flu like symptoms (n=1), nausea/ vomiting (n=1), leukopenia (n=1), lymphopenia (n=2), HLH (n=1)
- One patient with transient grade 3 leukopenia and lymphopenia also had transient grade 4 neutropenia
- 4 patients who originally had grade 3 toxicities with the triple combo including M9241 at 16.8 mcg/kg tolerated the triple combo with M9241 at 8 mcg/kg w/o any further grade ≥3 toxicities
- No treatment-related deaths occurred

Reference: Strauss J. et al. Phase II evaluation of the triple combination of PDS0101, M9241, and bintrafusp alfa in patients with HPV 16 positive malignancies. Presented at: American Society of Clinical Oncology 2021 Annual Meeting; June 4-8, 2021; Virtual. Abstract: 2501.

PDS0101 interim Phase 2 trial data presented by the NCI at ASCO 2021: Most HPV-associated cancers are represented - >95% of all US cases

Percentages of HPV-related cancers (anal, cervical, head and neck, vaginal and vulvar cancers) included in the interim data study population



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