



Developing Novel Integrin-Based Therapeutics

MARCH 2026

Disclaimers

This presentation has been prepared by Pliant Therapeutics, Inc. ("we," "us," "our," "Pliant" or the "Company"). The information set forth herein does not purport to be complete or to contain all of the information you may desire. Statements contained herein are made as of the date of this presentation unless stated otherwise, and this presentation shall not under any circumstances create an implication that the information contained herein is correct as of any time after such date or that information will be updated or revised to reflect information that subsequently becomes available or changes occurring after the date hereof.

This presentation includes forward-looking statements regarding Pliant's proprietary drug candidates, the timing of the start and conclusion of ongoing or planned clinical trials, including the timing of, and our ability to achieve, anticipated milestones, the sufficiency of our cash, cash equivalents and short-term investments, the timing and outcome of regulatory decisions, future availability of clinical trial data, our collaborations for our product candidates and the maintenance of those collaborations; business and results from operations; and other matters. Actual results could differ materially from those contained in any forward-looking statements as a result of various factors, including without limitation: that Pliant's drug candidates do not advance in development or result in approved products on a timely or cost effective basis or at all; the cost, timing and results of clinical trials; our ability to manage and mitigate the impact of the ongoing COVID-19 pandemic; that many drug candidates that have completed early-stage trials do not become approved drugs on a timely or cost effective basis or at all; the ability to enroll patients in clinical trials; possible safety and efficacy concerns; regulatory developments; the ability of Pliant to protect its intellectual property rights, and unexpected costs, charges or expenses that reduce cash runway. Pliant's pipeline programs are in various stages of pre-clinical and clinical development, and the process by which such pre-clinical or clinical therapeutic candidates could potentially lead to an approved therapeutic is long and subject to significant risks and uncertainties. Pliant undertakes no obligation to update forward-looking statements as a result of new information or otherwise. For a discussion of these and other risks and uncertainties, and other important factors, any of which could cause our actual results to differ from those contained in the forward-looking statements, see the section entitled "Risk Factors" and elsewhere in the Company's most recent Annual Report on Form 10-K and Quarterly Report on Form 10-Q on file with the Securities and Exchange Commission (the "SEC") and our other filings with the SEC.

This presentation also contains estimates and other statistical data made by independent parties and by us relating to market size and growth and other data about our industry. This data involves a number of assumptions and limitations, and you are cautioned not to give undue weight to such estimates. In addition, projections, assumptions, and estimates of our future performance and the future performance of the markets in which we operate are necessarily subject to a high degree of uncertainty and risk.

This presentation concerns drugs that are under clinical investigation and which have not yet been approved for marketing by the U.S. Food and Drug Administration (the "FDA"). They are currently limited by Federal law to investigational use, and no representation is made as to their safety or effectiveness for the purposes for which they are being investigated.

Near-term Oncology Opportunity with Long-Term Platform Potential

PLN-101095: Oral $\alpha_v\beta_8$ / $\alpha_v\beta_1$ Inhibitor for Treatment of ICI-resistant Tumors

- **4 clinical responders** (1 CR and 3 PRs [1 unconfirmed]) at 3 highest Ph1 doses, in heavily pre-treated patients with advanced and/or metastatic solid tumors, secondary refractory to ICIs
- **Durable** response with median time on treatment of 15 months to date for clinical responders
- **Well tolerated in Ph1 Study**
- **Oral small molecule** showed **dose-dependent** plasma exposure
- Ph1b dose expansion will explore NSCLC and other tumor types with strong mechanistic rationale for integrin inhibition

New Opportunity for Integrin Platform: Cell-selective Drug Delivery

- **Emerging cell-specific delivery platform for siRNA payloads**
- **Broad applicability** across multiple disease areas
- **Integrin-focused library** of 15k+ compounds built to interrogate all cell-specific integrin subtypes

Pliant's strong cash position funds operations through 2028

Pipeline

Program	Indication	Preclinical	Phase 1a/1b	Phase 2	Phase 3	Global Rights
<p>PLN-101095 $\alpha_v\beta_8/\alpha_v\beta_1$ inhibitor</p>	Solid Tumors					
<p>INTEGRIN DRUG DELIVERY PLATFORM</p>	Muscle					
	Adipose Tissue					
	Undisclosed					

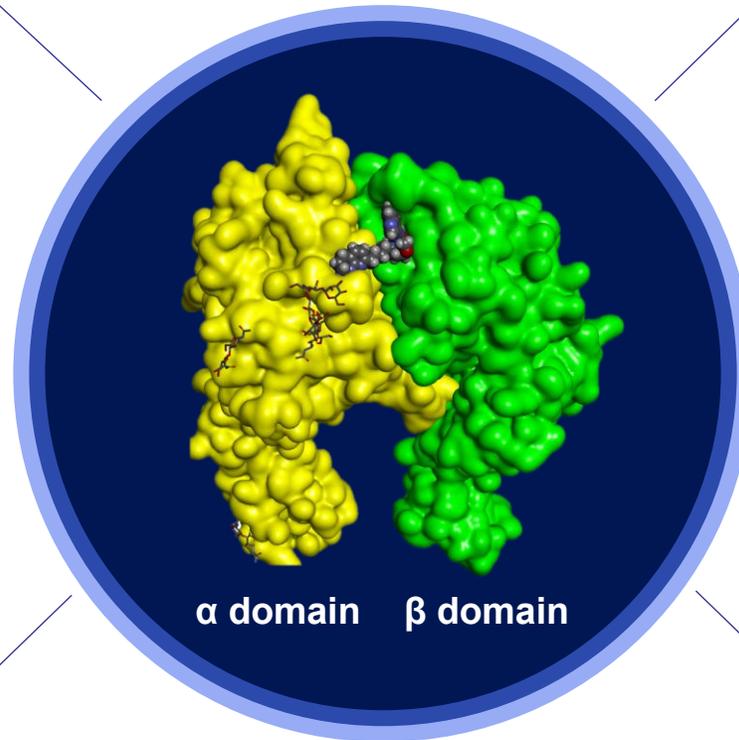
Integrins are an Attractive Target Class

Integrins are extracellular matrix receptors

- Cell surface receptors that facilitate cell-cell and cell-extracellular matrix adhesion and interaction
- A major path of communication between the inflammatory cells and fibroblasts
- Composed of 24 heterodimers across four classes

Integrins are a productive target class

- Multiple approved drugs in I&I indications
- Clinically validated receptors for delivery of drug payloads into specific cell types



Pliant's integrin library

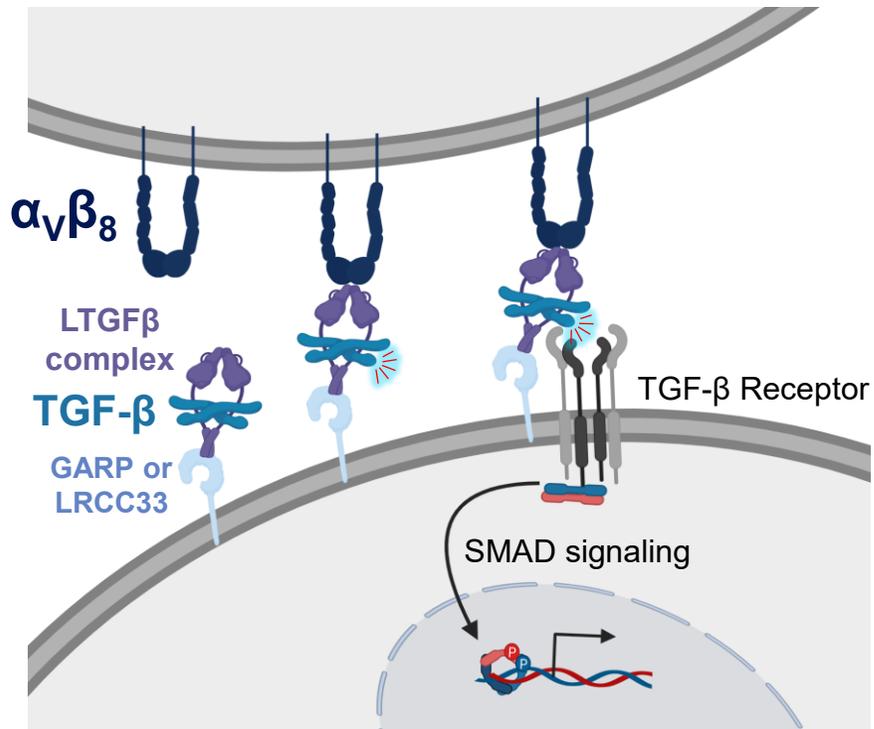
- Broad coverage of integrin heterodimers in 15,000+ compound library
- SAR understanding of binding motifs with desired biology
- Emphasis on optimal pharmacokinetic and potency/selectivity profiles

Integrins are a promising delivery modality

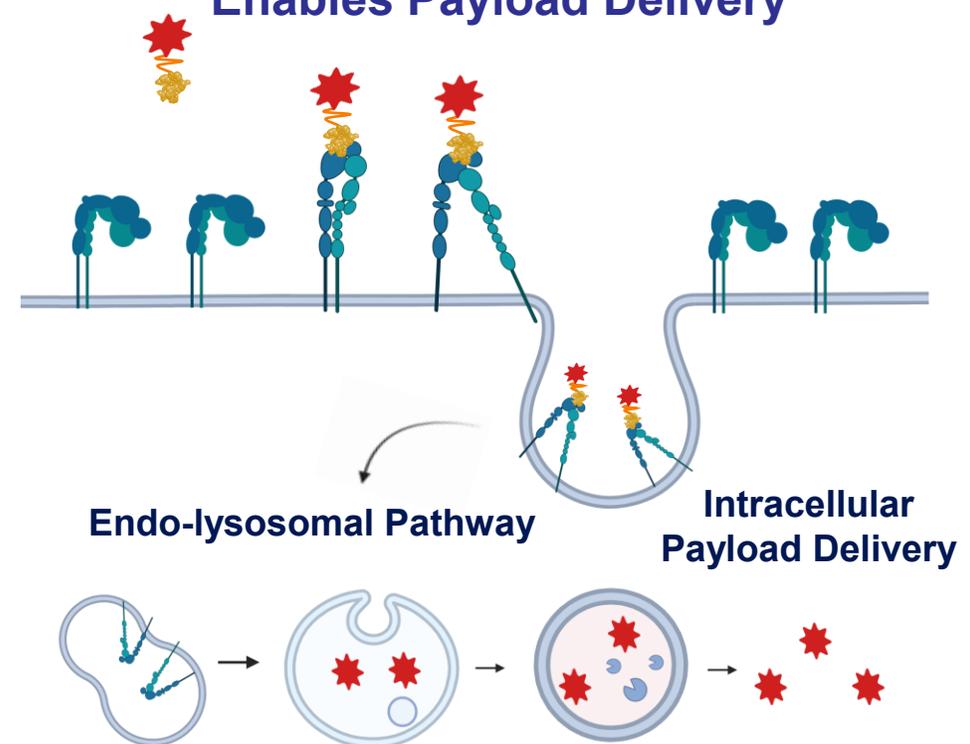
- Each integrin has a unique cell type-restricted expression profile
- Integrins readily internalize, enabling payload delivery

Integrins – Multifunctional Targets for Modulation and Delivery

$\alpha_v\beta_8$ Integrin Activation of TGF- β



Integrin Internalization & Recycling Enables Payload Delivery



Pliant's programs are designed to modulate conserved biological features of integrins



PLN-101095 – $\alpha_v\beta_8$ / $\alpha_v\beta_1$ Dual Integrin Inhibitor Clinical Stage Solid Tumor Program

Potential First-in-Class Oral $\alpha_v\beta_8/\alpha_v\beta_1$ Inhibitor



Potent dual inhibitor of $\alpha_v\beta_8$ and $\alpha_v\beta_1$

- Tumors that overexpress $\alpha_v\beta_8$ have a poor prognosis
- $\alpha_v\beta_1$ upregulated on cancer-associated fibroblasts



Small molecule - Oral administration

- High tissue penetration (vs. biologics) improves target coverage to maximize the therapeutic index



Dose escalation demonstrated encouraging efficacy in ICI secondary refractory tumors

- 4 out of 10 clinical responders (1 CR and 3 PR [1 unconfirmed]) in 3 highest doses
- Large increases in circulating IFN- γ observed in clinical responders only



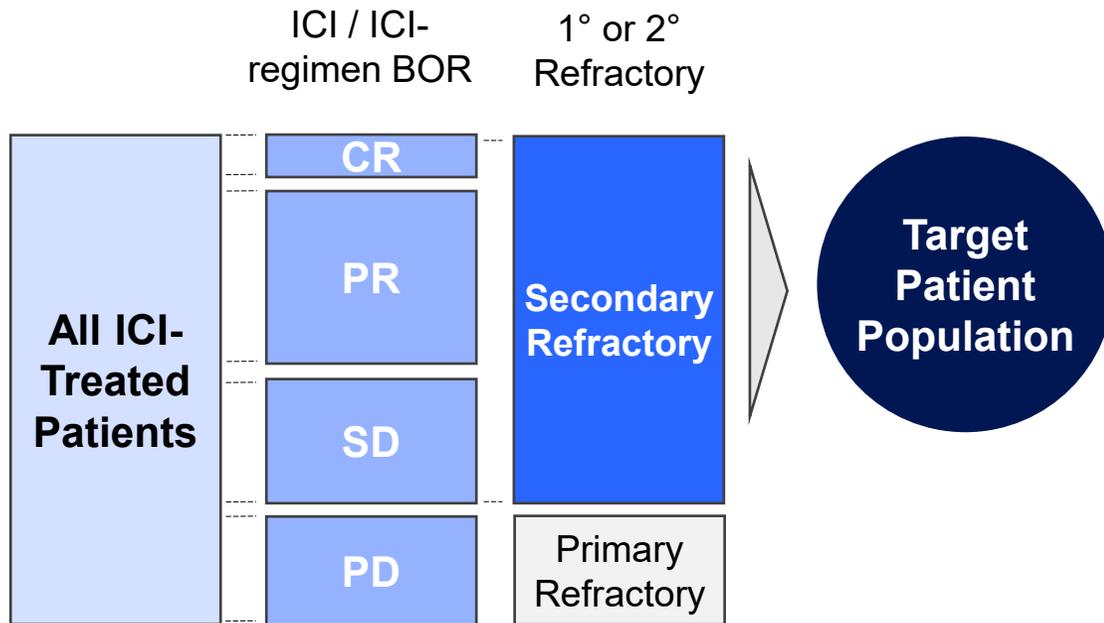
Initiating indication expansion cohorts

- Assessing NSCLC and other tumor types with strong mechanistic rationale for integrin inhibition

CR, confirmed complete response (100% tumor reduction); PR, confirmed partial response ($\geq 30\%$ tumor reduction)

PLN-101095 Positioned as Preferred Agent in ICI Refractory Patients

ICI Refractory Opportunity



Broad Opportunity in Secondary Refractory Tumors

- High unmet needs across the post-I/O setting
- Post-PD-(L)1 treatment choices offer limited efficacy
- Padcev (urothelial Ca) and Welireg (clear cell RCC) both launched in this setting with strong initial uptake

Post-ICI Progression in NSCLC

- Frequent utilization of ICI regimens in 1L
- Up to 50% of ICI-treated patients may be secondary refractory, depending on specific line of therapy
- Chemotherapy is the only post 2L treatment available
 - Median PFS in ICI refractory patients is 3-5 months

Target positioning for PLN-101095 as the preferred 2L agent

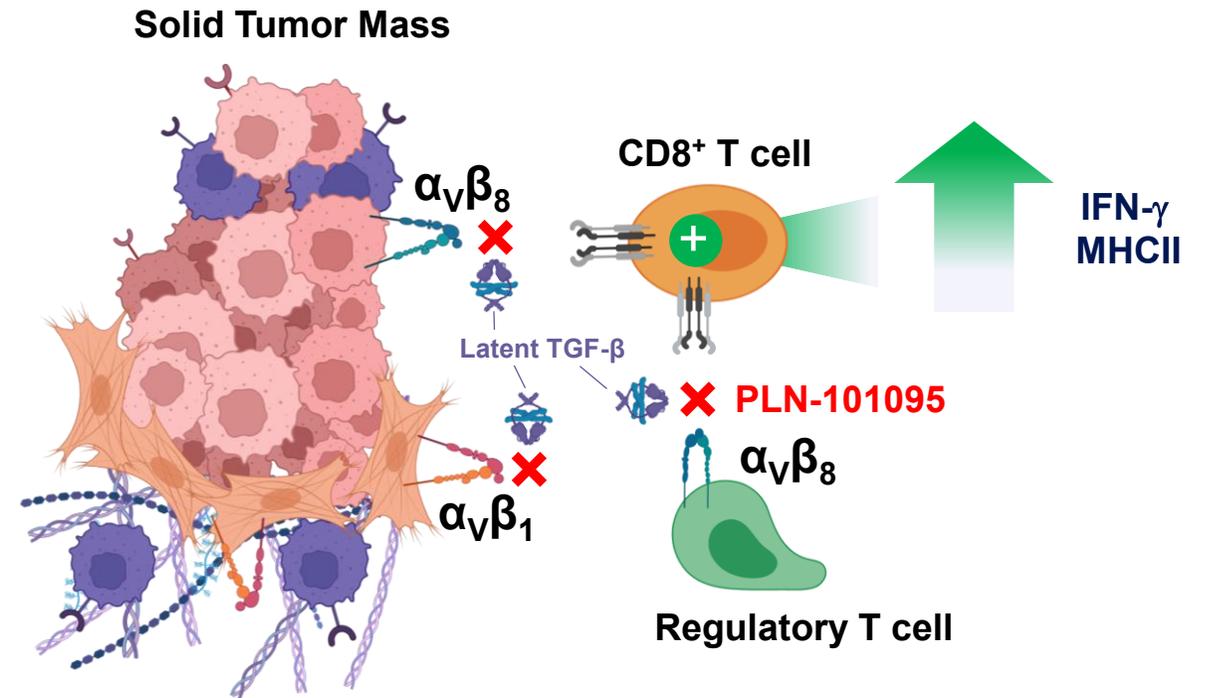
CR, confirmed complete response; PR, confirmed partial response; SD, stable diseases; PD, progressive diseases; BOR, best overall response; PFS: progression free survival.
Rates of PRs and acquired resistance estimated from US PI for approved PD-1 regimens.

Differentiated Mechanism with Potential to Unlock the Promise of TGF- β Inhibition Across Solid Tumors

In response to sustained immune activity, solid tumors utilize $\alpha_v\beta_8$ and $\alpha_v\beta_1$ activation of TGF- β to suppress and escape immune control

PLN-101095 designed to:

- Selectively block $\alpha_v\beta_8$ and $\alpha_v\beta_1$ activation of TGF- β
- Modulate tumor microenvironment
- Selectively enhance T cell IFN- γ effector function
- Combine with orthogonal IO approaches like anti-PD-1
- Address TGF- β -related resistance to immune checkpoint blockade

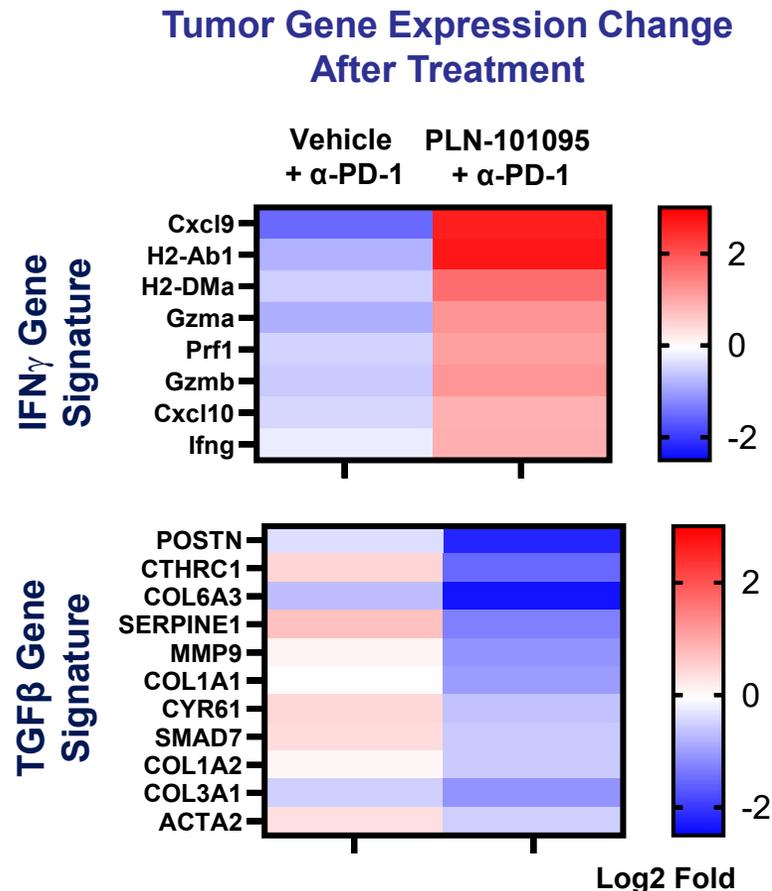


Integrin inhibition of $\alpha_v\beta_8$ and $\alpha_v\beta_1$ blocks activation of TGF- β to reduce immunosuppression leading to a new or reinvigorated cancer immune response

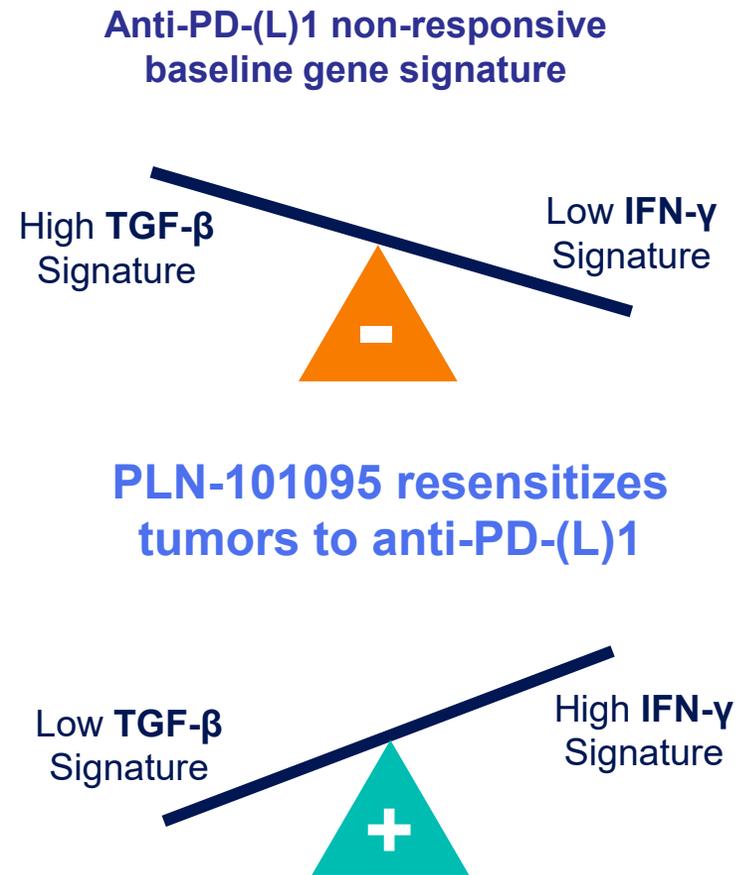
Mechanism of Action in Solid Tumors

Promotes ICI Responsiveness by Inhibiting TGF- β & Increasing IFN- γ Expression

By inhibiting TGF- β , PLN-101095 shifts solid tumors to a high IFN- γ signature, ICI-responsive state



EMT6 tumor model, day 28, 300 mg/kg PLN-101095 dosed by minipump.





PLN-101095 Phase 1a Data

Summary – Phase 1 Interim Analysis in ICI Refractory Solid Tumors

PLN-101095 showed antitumoral activity with pembrolizumab in ICI secondary refractory participants

- 4 clinical responders (1 CR and 3 PRs [1 unconfirmed]) in ICI secondary refractory population¹ at doses ≥ 1000 mg BID
- Durable response with median time on treatment of 15 months, to date, in cholangiocarcinoma (CR), non-small cell lung cancer (PR), melanoma (PR) and head and neck SCC (uPR) with a 71% average tumor reduction

PLN-101095 dosed in combination with pembrolizumab was generally well tolerated

- Rash was the most common adverse event (all mild or moderate)

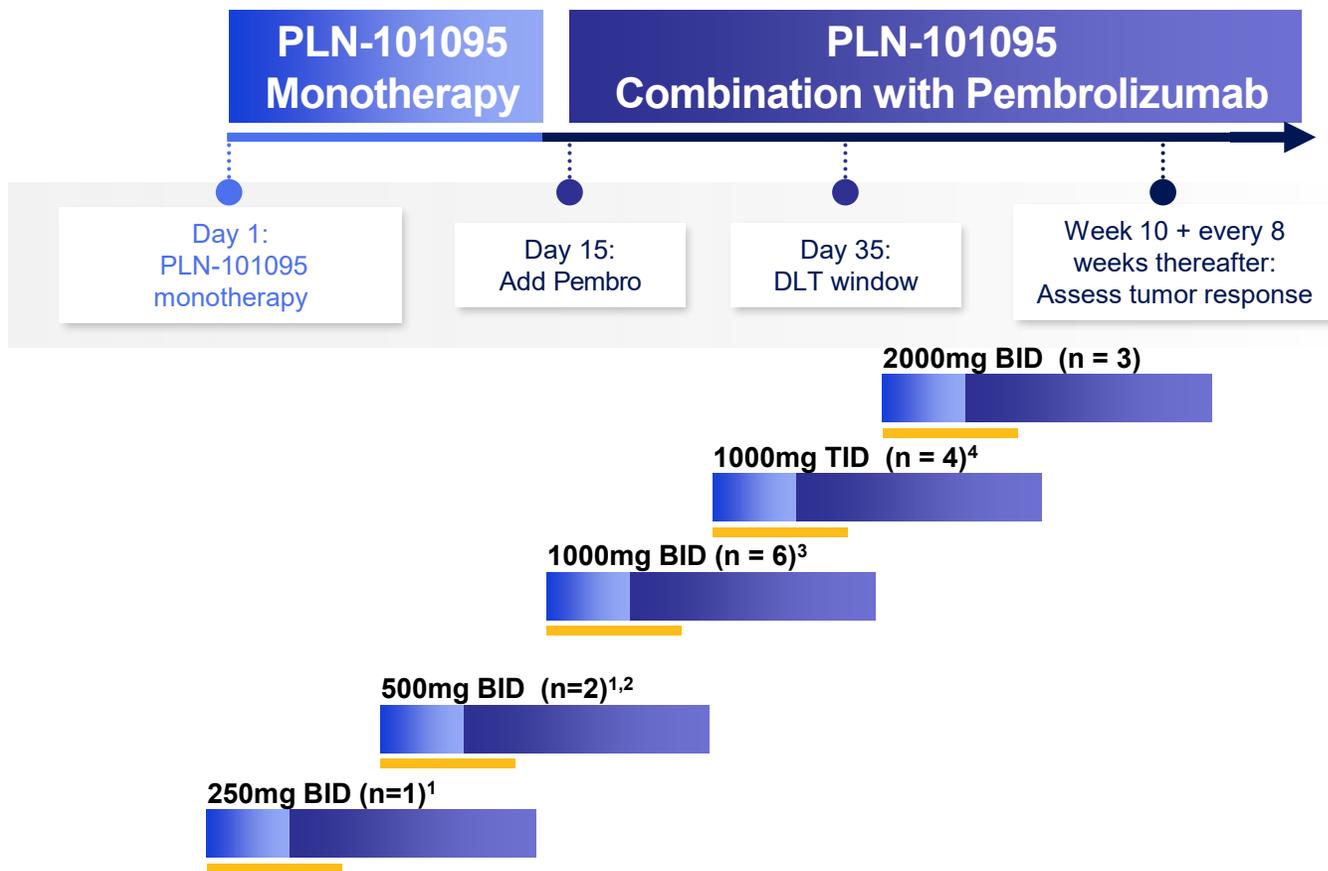
Circulating biomarker IFN- γ was identified as a potential early predictor of treatment response

- Significant increases in plasma IFN- γ observed at Day 14 (monotherapy), comparing clinical responders to non-responders ($p < 0.01$)
- IFN- γ increases maintained through Day 28 (combination therapy)

¹ ICI secondary refractory defined as stable disease, partial or complete response while on prior ICI therapy with at least 6 months of prior ICI therapy
CR, confirmed complete responses (100% tumor reduction); PR, confirmed partial response ($\geq 30\%$ tumor reduction); uPR, unconfirmed partial response ($\geq 30\%$ tumor reduction)

Phase 1 Study in Patients Refractory to ICIs

Enrollment Complete with All Doses Cleared



1 Cohorts 1 and 2 used accelerated titration
 2 One participant discontinued at Day 14 due to disease progression (non-evaluable)
 3 Cohort expanded due to single dose limiting toxicity (DLT)
 4 One participant added as part of backfill

PRIMARY AND SECONDARY ENDPOINTS

- TEAEs, serious TEAEs, and DLT events
- PK parameters in monotherapy and combination therapy with pembrolizumab

EXPLORATORY ENDPOINTS

- Antitumor activity: ORR, DCR and mDOR
- Changes in blood-based biomarkers
- PK/PD relationships

POPULATION

- Primary or secondary ICI-refractory tumors for which pembrolizumab is approved with documented disease progression ≥ 75 days from start of prior ICI
- At least 1 measurable lesion

DCR: Disease Control Rate (stable disease, partial and complete responses)
 mDOR: median Duration of Response
 ICI: Immune Checkpoint Inhibitor
 ORR: Objective Response Rate (partial and complete responses)

Demographics and Baseline Characteristics

- Predominantly white (75%), mixed gender (50% male) population
- Average [range] age of 60 [34,72] years
- Heterogenous group of tumor types enrolled
 - Cohorts 1-2 (doses < 1000 mg BID): NSCLC, HNSCC and RCC
 - Cohorts 3-5 (doses ≥ 1000 mg BID): NSCLC (n=2), Cholangiocarcinoma (n=3), RCC, melanoma, CRC, endometrial cancer, TNBC, ovarian CCA, **HNSCC**, and anal cancer
- Population was 75% ICI secondary refractory with median prior ICI exposure of therapy 12 months
- Prior failed ICI regimens: pembrolizumab (n=9), {pembrolizumab, nivolumab} (n=4), durvalumab (n=2), {pembrolizumab, avelumab} (n=1)
- Median of 3 prior lines of therapy before trial entry with the last line including a chemotherapy agent in 88% of participants

CCA: clear cell adenocarcinoma; CRC: colorectal cancer HNSCC: Head and neck squamous cell carcinoma; NSCLC: non-small cell lung cancer; RCC: renal cell carcinoma; TNBC: triple negative breast cancer

PLN-101095 was Generally Well Tolerated Exhibiting Dose-dependent PK

	Cohort 1 & 2 <1000 mg BID (n=3)	Cohort 3 1000 mg BID (n=6)	Cohort 4 1000 mg TID (n=4)	Cohort 5 2000 mg BID (n=3)	Total (n=16)
Most Common TEAEs					
Rash ¹	1 (33)	3 (50.0)	3 (75)	1 (33)	8 (50)
Anemia	0	1 (17)	2 (50)	0	3 (19)
Diarrhea	0	2 (33)	0	1 (33)	3 (19)
Serious TEAE	1 (33)	3 (50) ²	1 (25) ²	0	5 (31)

Safety

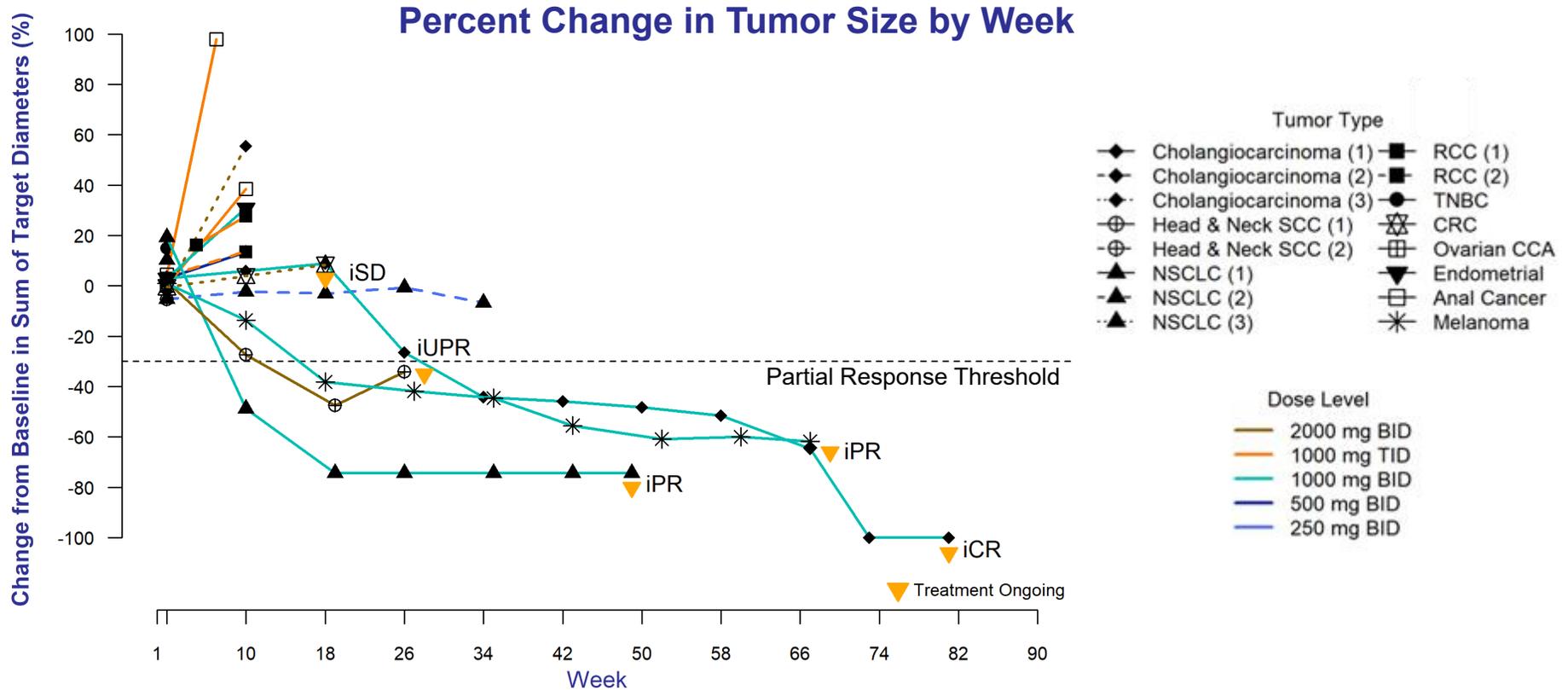
- Rash was the most common TEAE with all events mild or moderate in severity
- Two participants discontinued PLN-101095 due to TEAEs
 - Immune-mediated hepatitis (DLT, Cohort 3)
 - Grade 2 dermatitis bullous (Cohort 4)

Pharmacokinetics

- Dose dependent increases in exposures observed
- Doses \geq 1000 mg BID achieved sustained 24-hour IC₉₀ coverage

¹ Rash grouping includes Preferred Terms of rash, rash erythematous, rash maculo-papular, dermatitis acneiform and dermatitis bullous; ² One participant with outcome of death in cohort (Not related to PLN-101095, due to disease progression)

Deep, Durable Responses in Majority of Clinical Responders at Doses of ≥ 1000 mg BID



Median time on treatment for clinical responders is 15 months

Average maximum tumor lesion reduction of 71% observed in clinical responders¹

¹ including iUPR, iPR, iCR as of 11/30/2025

iPR: confirmed partial response (>30% tumor reduction); iUPR: unconfirmed partial response; iCR: confirmed complete response (no tumors); iSD: stable disease (between 30% reduction and 20% increase
CCA: clear cell adenocarcinoma; CRC: colorectal cancer SCC: Squamous cell carcinoma; NSCLC: non-small cell lung cancer; RCC: renal cell carcinoma; TNBC: triple negative breast cancer

60% of ICI Secondary Refractory Participants Experienced Disease Stabilization or Tumor Reduction with a Median Duration of treatment of 10 months²

	<1000 mg BID (n=3)	1000 mg BID (n=6)	1000 mg TID (n=4)	2000 mg BID (n=3)	All (n=16)	Secondary Refractory ≥1000 mg BID (n=10)
Clinical Responders, n (%)	0	3 (50)	0	1 (33)	4 (25)	4 (40)
Time on treatment ¹ , median, mo	0	16	0	6	15	15
Responders + Stable disease, n (%)	2 (67)	3 (50)	2 (50)	2 (67)	9 (56)	6 (60)
Time on treatment ² , median, mo	5	16	3	6	6	10
iCR, n (%)	0	1 (17)	0	0	1 (6)	1 (10)
iPR, n (%)	0	2 (33)	0	0	2 (13)	2 (20)
iUPR, n (%)	0	0	0	1 (33)	1 (6)	1 (10)
iSD, n (%)	2 (67)	0	2 (50)	1 (33)	5 (31)	2 (20)
iPD, n (%)	1 (33)	3 (50)	2 (50)	1 (33)	7 (44)	4 (40)

¹ As of November 30, 2025

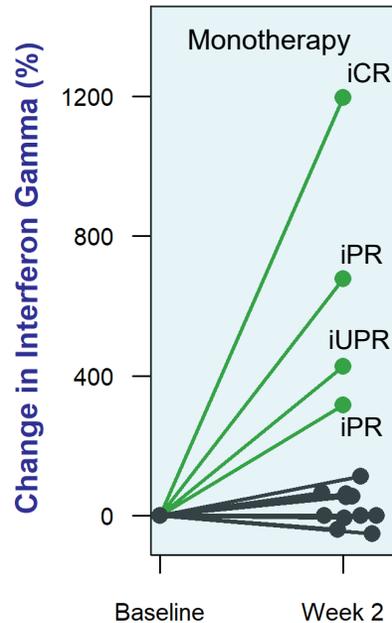
² As of November 30, 2025 for those still on treatment and as of first scan with progression for those with best overall response of stable disease

iCR, confirmed complete response by IRECIST; iPR, confirmed partial response by iRECIST; iUPR, unconfirmed partial response by iRECIST; iSD, Stable disease by IRECIST; iPD, progressive disease by iRECIST
DCR: disease control rate (iSD, iPR, iCR); mDOR: median duration of response

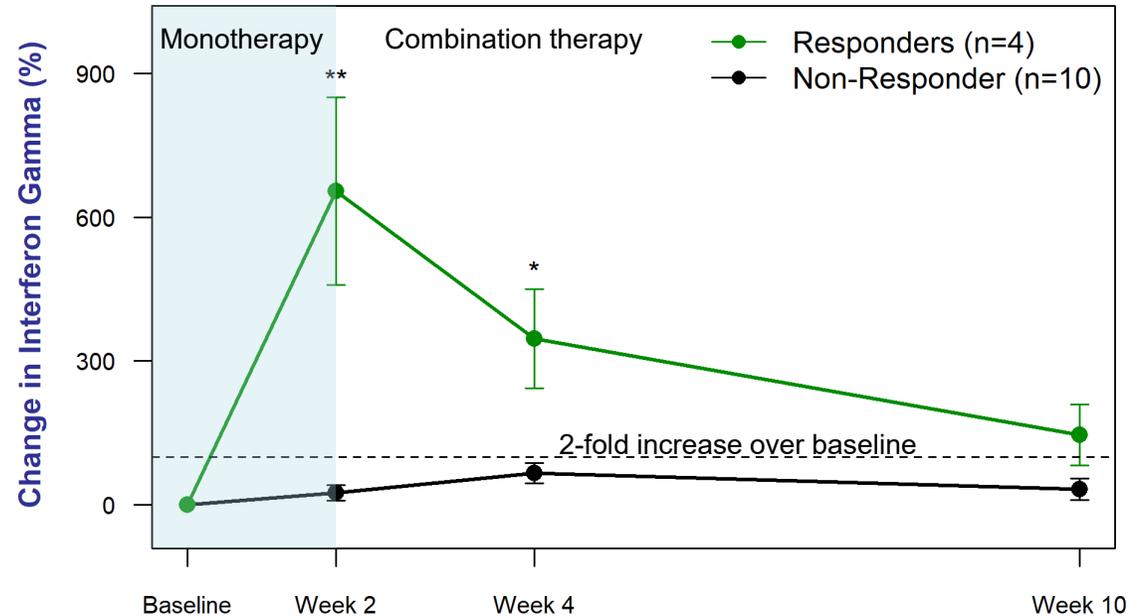
Clinical Response to PLN-101095 is Associated with Elevated Plasma IFN- γ Levels Following 14-day PLN-101095 Monotherapy

Percentage Change from Baseline in Plasma IFN- γ

By Subject at Week 2



Mean (\pm SE) Change over 10 Weeks



** p<0.01
* p<0.05

Change in circulating IFN- γ may provide a potential early predictor of treatment response

iUPR: unconfirmed partial response OR: objective response (partial and complete response); Non-Responders: stable disease and progressive disease
One participant with immune mediated hepatitis increase in IFN- γ (non-responder) excluded from mean change figure

Key Findings and Next Steps

PLN-101095 produced anti-tumor activity in multiple tumor types in ICI secondary refractory patients

PLN-101095 was well tolerated with a low discontinuation rate across all dose cohorts

IFN- γ biomarker data has potential to serve as response predictor

Initiating Phase 1b cohorts in NSCLC and other tumor types in 2026



PLN-101095 Phase 1b Trial

Part 2 Dose Expansion and Indication Selection

Study of Acquired Resistance to Prior Immune Checkpoint Blockade

Testing Single PLN-101095 Dose Level 1000 mg BID

DAY 1–14

DAY 15 ONWARDS

PLN-101095
Monotherapy

PLN-101095
+ Pembrolizumab

Evaluating Three Cohorts (n = up to 34 per cohort)

NSCLC

ccRCC

TMB-H^a

STUDY POPULATION

- Advanced or metastatic tumors
- Prior exposure to PD-1 therapy with documented disease progression
- Secondary resistance by SITC definition
- TMB-H^a cohort composed of melanoma, CRC, endometrial, and BTC
 - n ≥5 in each tumor type

PRIMARY AND SECONDARY ENDPOINTS

- Antitumor activity: ORR and DCR
- Safety: TEAEs, serious TEAEs, and DLT events

EXPLORATORY ENDPOINTS

- Durability of antitumor activity
- Changes in blood and tumor-based biomarkers
- Pharmacokinetics and PK/PD relationships