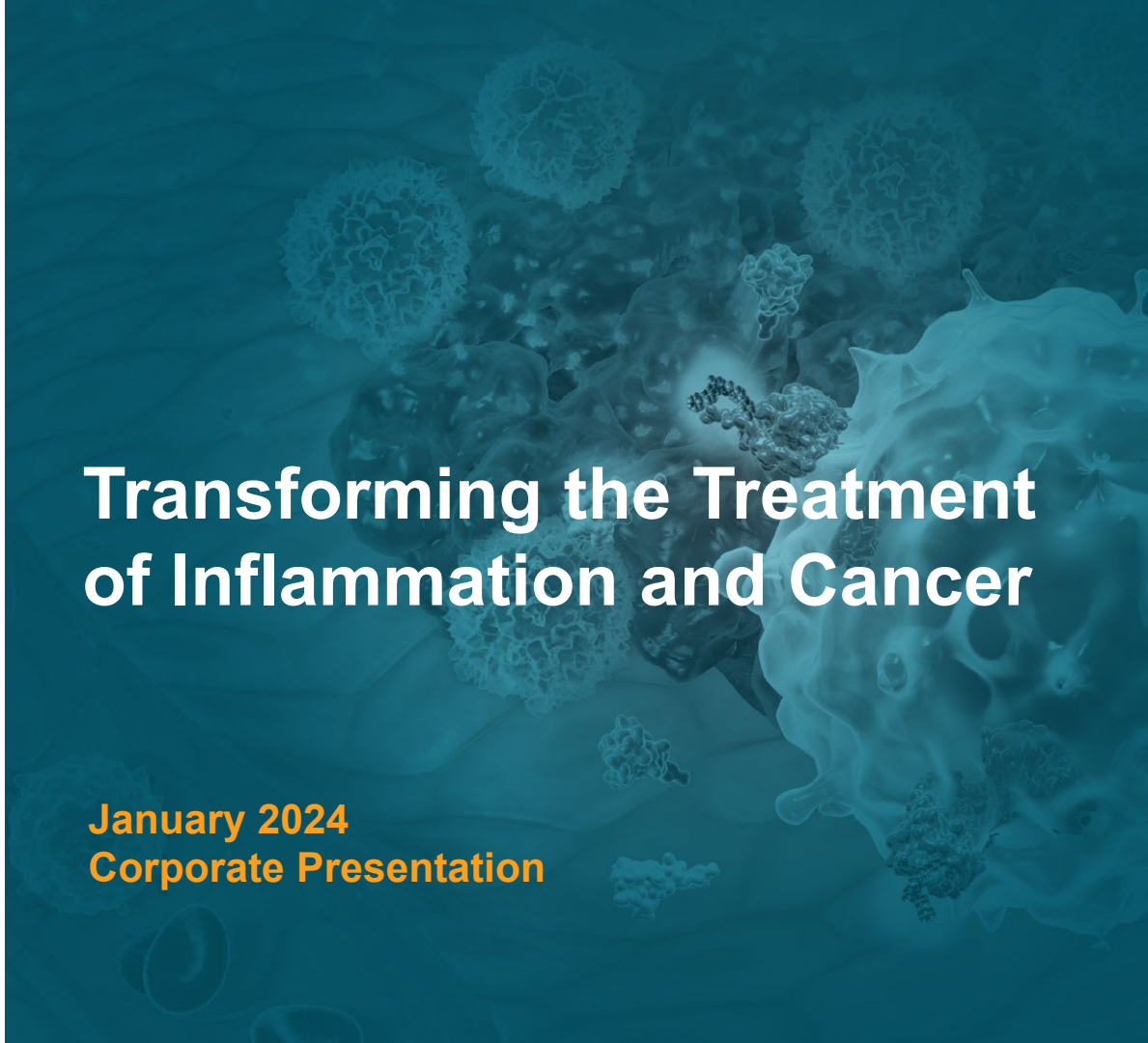
RAPT THERAPEUTICS

Transforming the Treatment of Inflammation and Cancer



January 2024
Corporate Presentation

Legal Disclaimers

Statements in this Presentation that are not statements of historical fact are forward-looking statements. Such forward-looking statements include, without limitation, statements regarding RAPT Therapeutics, Inc.'s (the "Company," "we," or "us") research and clinical development plans; current and future drug candidates; business strategy and plans; regulatory pathways; and our ability to complete certain milestones. Words such as "believe," "anticipate," "plan," "expect," "will," "may," "upcoming," "milestone," "potential," "target" or the negative of these terms or similar expressions are intended to identify forward-looking statements, though not all forward-looking statements necessarily contain these identifying words. These forward-looking statements are based on the current beliefs of the Company's management with respect to future events and trends and are subject to known and unknown risks and uncertainties, including those described in the "Risk Factors" section of our most recent Form 10-Q filed with the Securities and Exchange Commission, and any current and periodic reports filed thereafter, that may cause our actual performance or achievements to be materially different from any future performance or achievements expressed or implied by the forward-looking statements in this Presentation. These forward-looking statements should not be taken as forecasts or promises nor should they be taken as implying any indication, assurance or guarantee that any assumptions on which such forward-looking statements have been made are correct or exhaustive or, in the case of such assumptions, fully stated in the Presentation. You are cautioned not to place undue reliance on these forward-looking statements, which speak only as of the date this Presentation is given. Although we believe that the beliefs and assumptions reflected in the forward-looking statements are reasonable, we cannot guarantee future performance or achievements. Except as required by law, we undertake no obligation to update publicly any forward-looking statements for any reason after the date of this Presentation.

This Presentation discusses drug candidates that are under clinical study and which have not yet been approved for marketing by the U.S. Food and Drug Administration. No representation is made as to the safety or effectiveness of any drug candidates for any use for which such drug candidates are being studied.

Novel Oral Drugs That Target Critical Immune Drivers

- Proprietary discovery engine
- Clinically de-risked assets
- Large market opportunities
- Strategic collaborations
- Strong cash position

CLINICAL

Zelnecirnon (Inflammation):

- Oral agent targeting inflammatory Th2 cells
- Phase 1b in AD: efficacy on all key exploratory endpoints with excellent safety and tolerability
- Phase 2b in AD ongoing, data expected mid 2024
- Phase 2a in Asthma ongoing

Tivumecirnon (Oncology): MERCK Hanmi

- Selectively targets immunosuppressive tumor T_{reg}
- PoC in Phase 2 with mono and combo efficacy
- 45% ORR* as PD-1 combo in CPI-naïve NSCLC

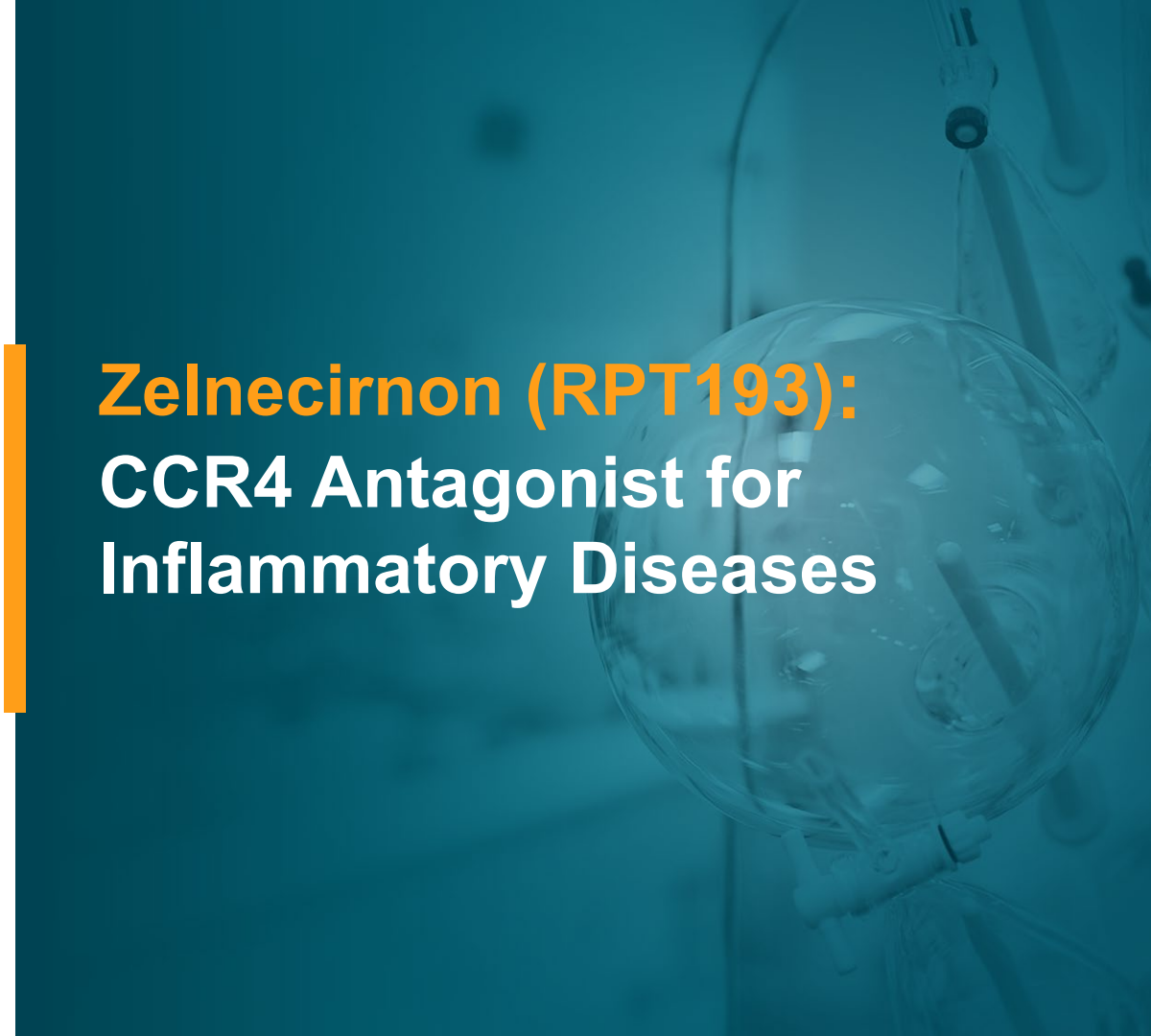
DISCOVERY

Additional inflammation and oncology targets

*Trial ongoing and data could mature

RAPT THERAPEUTICS

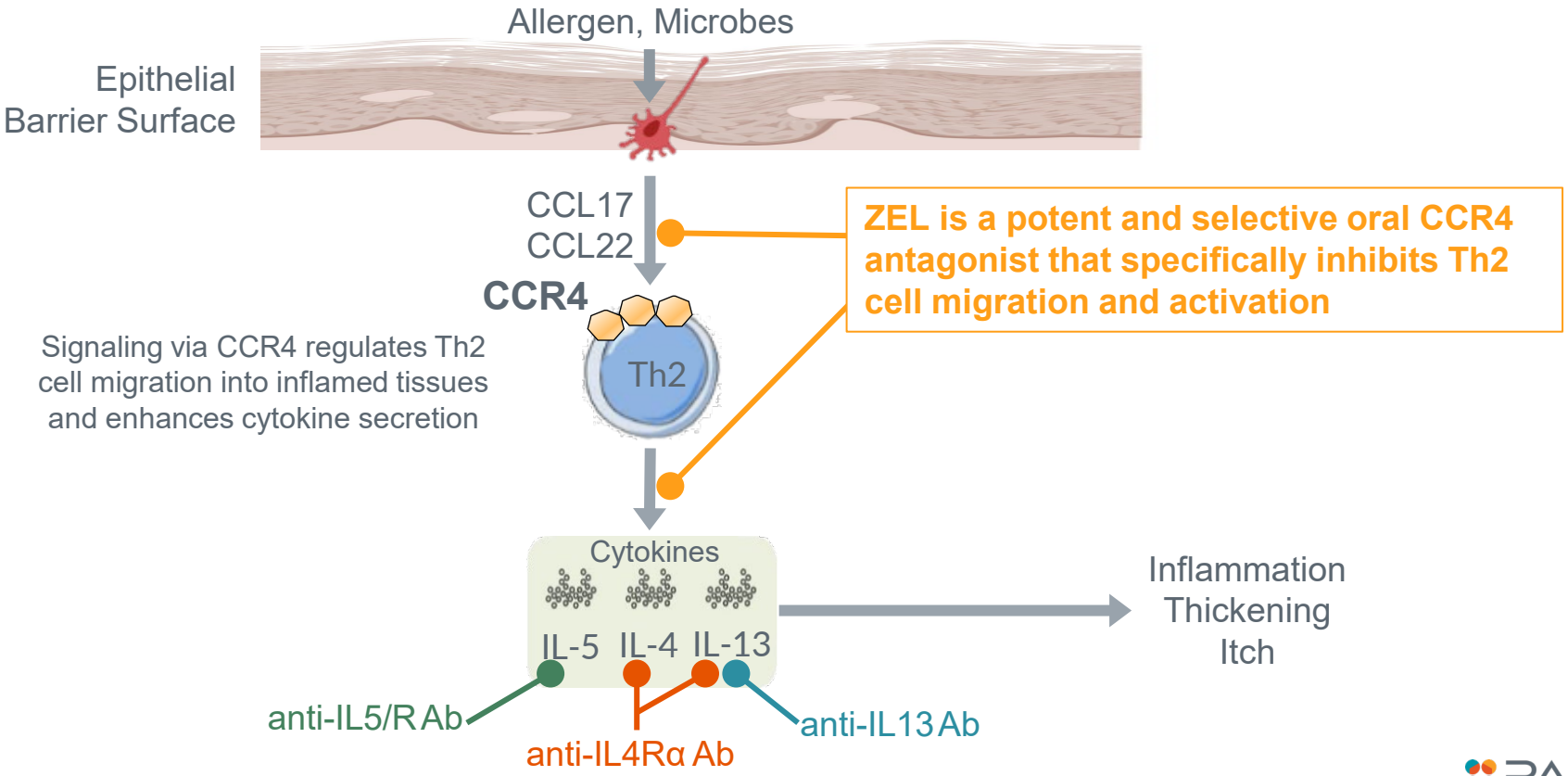
Zelnecirnon (RPT193):
CCR4 Antagonist for Inflammatory Diseases



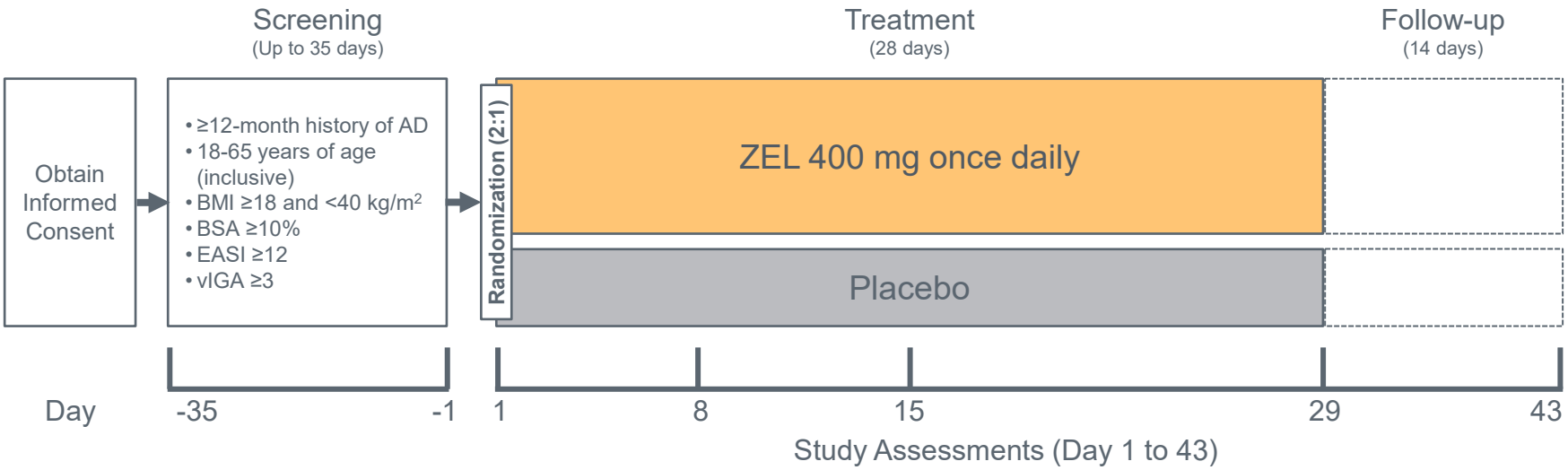
Zelnecirnon: First-in-Class Oral Th2 Inhibitor for Inflammatory Diseases

- **Highly potent and selective once-daily oral** CCR4 antagonist designed to safely reduce Th2-inflammation
- **Clear benefit on signs and symptoms as monotherapy** in a Phase 1b in moderate-to-severe atopic dermatitis
- **Favorable safety and tolerability:** no laboratory safety monitoring or black box warning expected
- **Potential positioning as drug of first choice** after inadequate response to TCS, prior to injectables and JAKs
- **Phase 2b AD data expected mid 2024,** pivotal studies anticipated in 2025
- **Phase 2a asthma trial ongoing**
- **Pipeline in a Product:** potential in many Th2 disorders

Zelnecirnon Targets Th2 Cells, Key Drivers of Inflammation in AD, Asthma and Other Diseases



Phase 1b Trial Explored Zelnecirnon Safety and Efficacy in Patients with Moderate-to-Severe Atopic Dermatitis



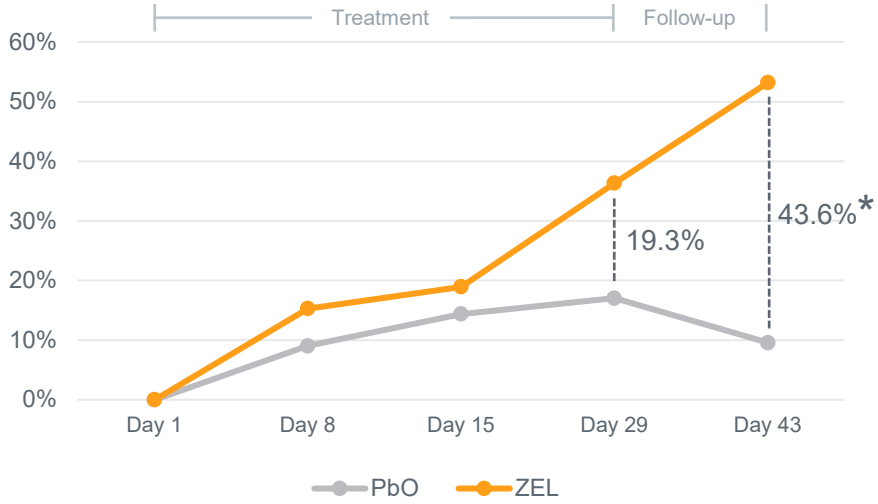
- Enrolled 31 patients into a double-blind, randomized trial with 2:1 allocation of ZEL to placebo
- Monotherapy study: steroid and immunosuppressant washout period; rescue steroids not permitted through Day 43
- Not powered for any specific endpoint
- Exploratory endpoints include: EASI, Pruritus Numerical Rating Scale (NRS), SCORAD and vIGA

Phase 1b Baseline Demographics and Disease Characteristics

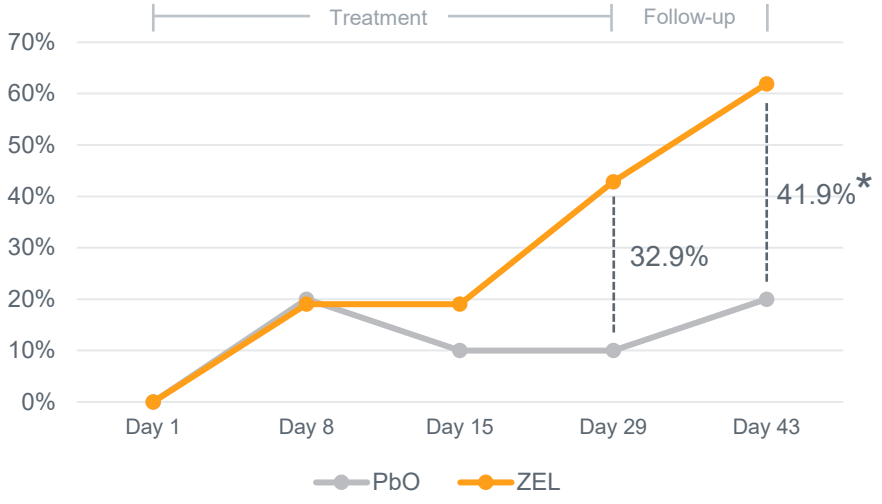
	Placebo	ZEL
N	10	21
Age, Mean (Range)	35.8 (22-64)	41.0 (19-63)
Female, n (%)	4 (40.0%)	12 (57.1%)
Baseline Characteristics		
EASI, Mean (Range)	21.07 (13.6-45.5)	18.49 (12-30)
BSA, Mean (Range)	24.5 (10-61)	23.3 (11-55)
vIGA 3, n (%)	8 (80.0%)	18 (85.7%)
Peak NRS, Mean (Range)	7.3 (3-10)	6.9 (3-10)
Peak NRS ≥4, n (%)	9 (90.0%)	20 (95.2%)

Zelnecirnon Differentiated from Placebo for EASI and EASI-50 at Day 29 with Further Improvement at Day 43

% Improvement in EASI

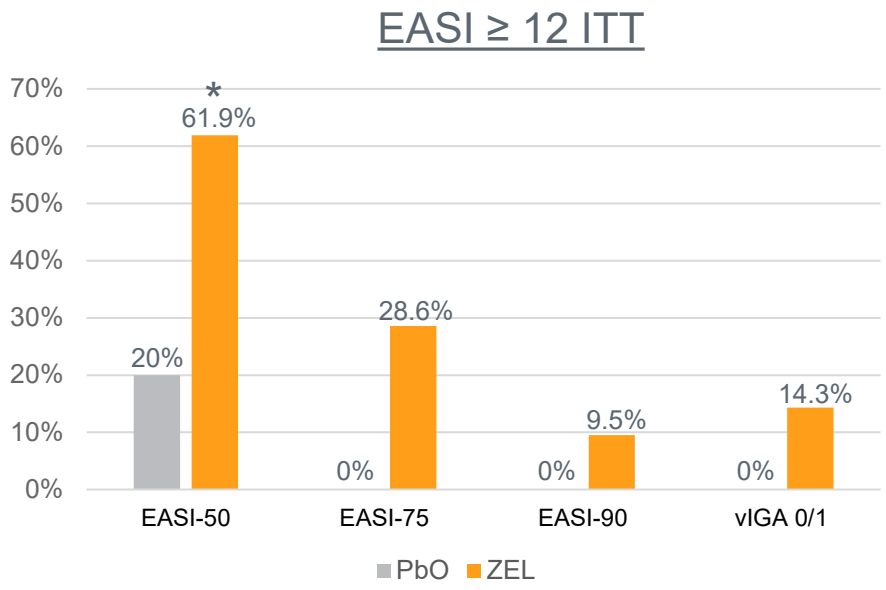


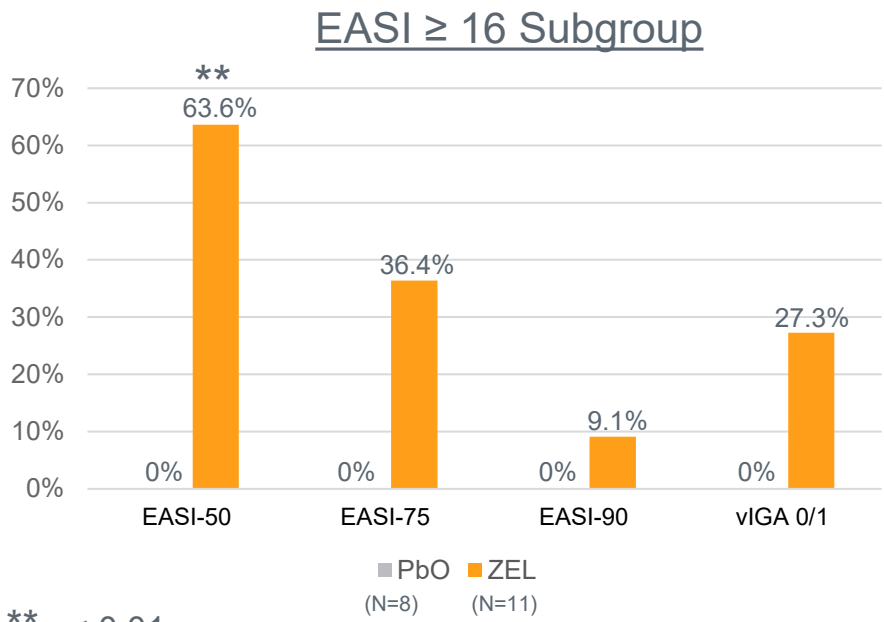
Proportion of EASI-50



*p < 0.05

Zelnecirnon Differentiated from Placebo on EASI-75, 90 and vIGA 0/1 at Day 43

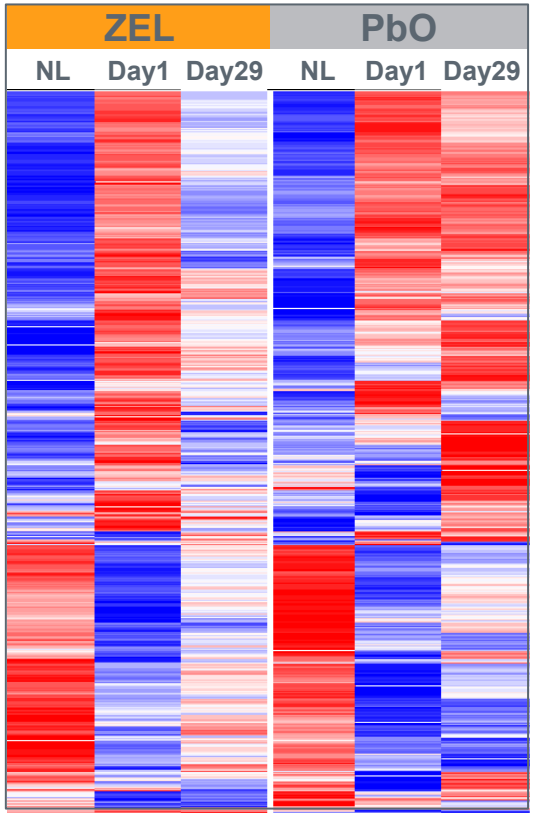




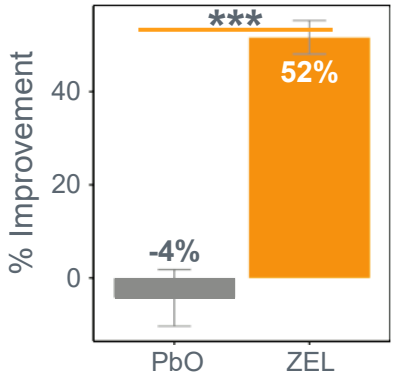
*p < 0.05 **p < 0.01

- Similar efficacy between ITT and EASI ≥ 16 Subgroup

Zelnecirnon Demonstrated Significant Improvement in AD-Associated Gene Signatures in the Skin



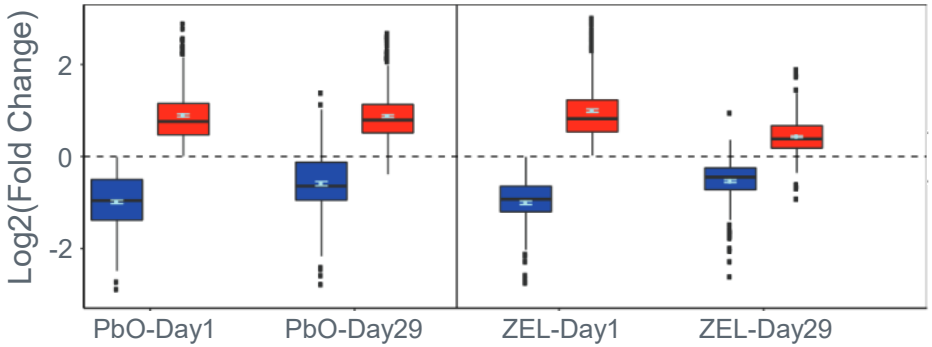
Mean % Improvement in MADAD Transcriptome



***(p<0.001)

MADAD: Meta-Analysis Derived Atopic Dermatitis score

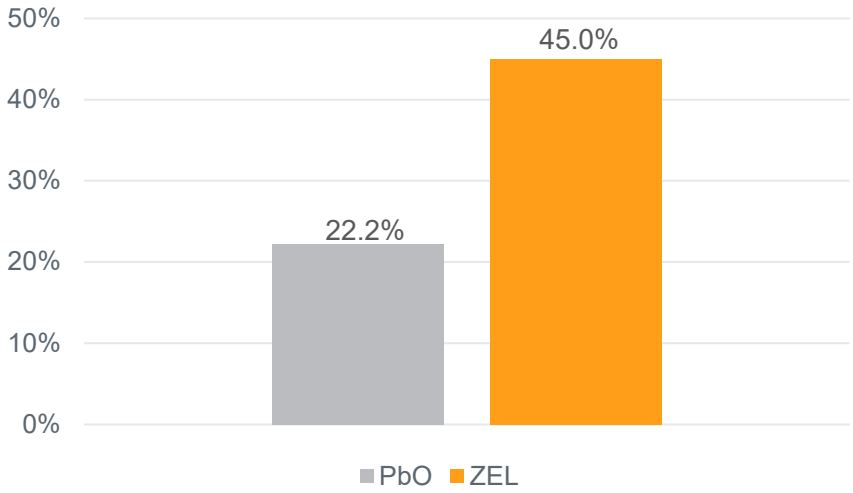
Changes in the Lesional AD Transcriptome



RAPT THERAPEUTICS

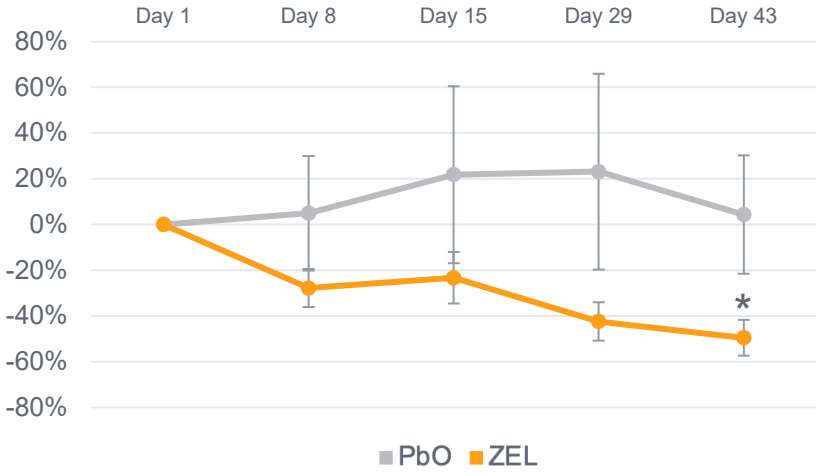
Zelnecirnon Produced Improvement in Itch and Sleep

Proportion of NRS-4†



†At least a 4-point improvement among patients with a baseline pruritus NRS ≥4

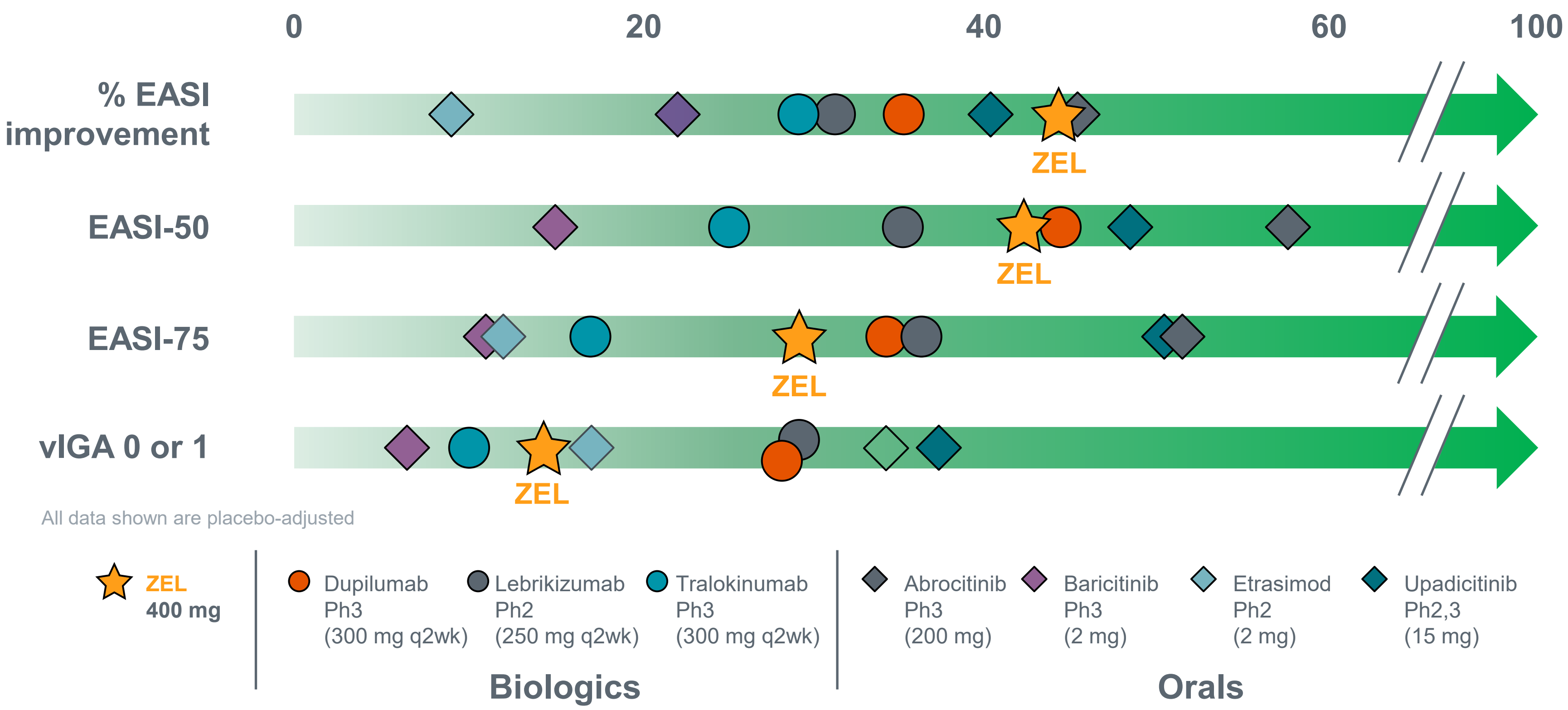
% Change in Patient Oriented SCORAD (Sleep Loss + Pruritus)



*p < 0.05

RAPT THERAPEUTICS

Zelnecirnon 6-Week Efficacy Compared to Other Drugs at 12-16 Weeks*



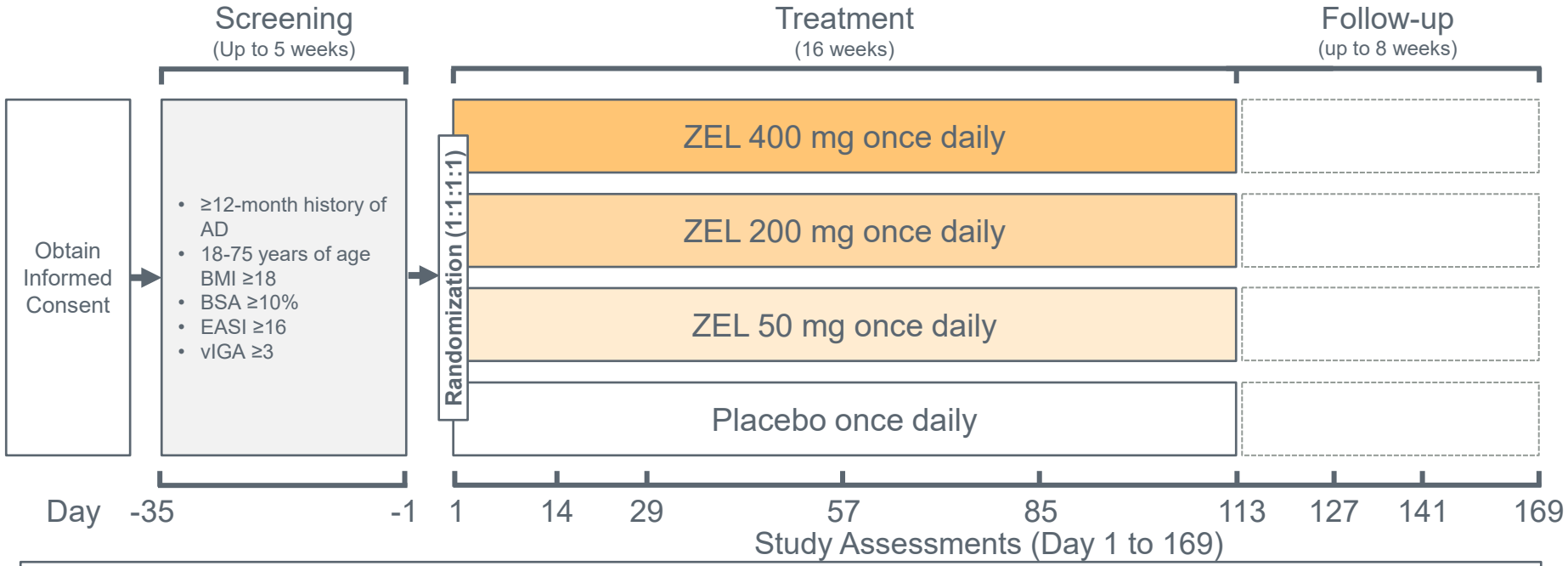
* Comparisons are based on published data and relative properties of other agents and do not reflect a head-to-head comparative study or clinical trial

RAPT THERAPEUTICS

Zelnecirnon Phase 1b Safety

- No SAEs reported
- All AEs reported were mild or moderate in intensity
- No clinically significant safety laboratory abnormalities observed
- Overall safety profile suggests a well-tolerated oral drug that should not require laboratory safety monitoring

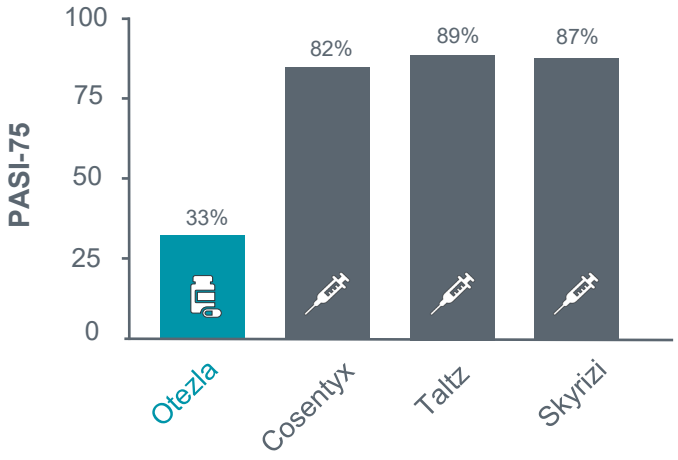
Dose-Finding Phase 2b Monotherapy Trial in Patients with Moderate-to-Severe Atopic Dermatitis



- **Goal enrollment**: 268 patients, ~67 per arm
- **Monotherapy study**: standard protocol to washout steroids/immunosuppressants and restrict rescue medications
- **Primary endpoint**: EASI
- **Secondary endpoints**: EASI-50/75/90, vIGA, Pruritus NRS

RAPT THERAPEUTICS

Otezla* Shows That A Safe Oral Drug With Modest Efficacy Can Be A Commercial Success



- No black box warning
- No laboratory monitoring

Positioning after TCS:

Preferred Option

Est. Peak sales:

$2.6B

Amgen acquisition price:

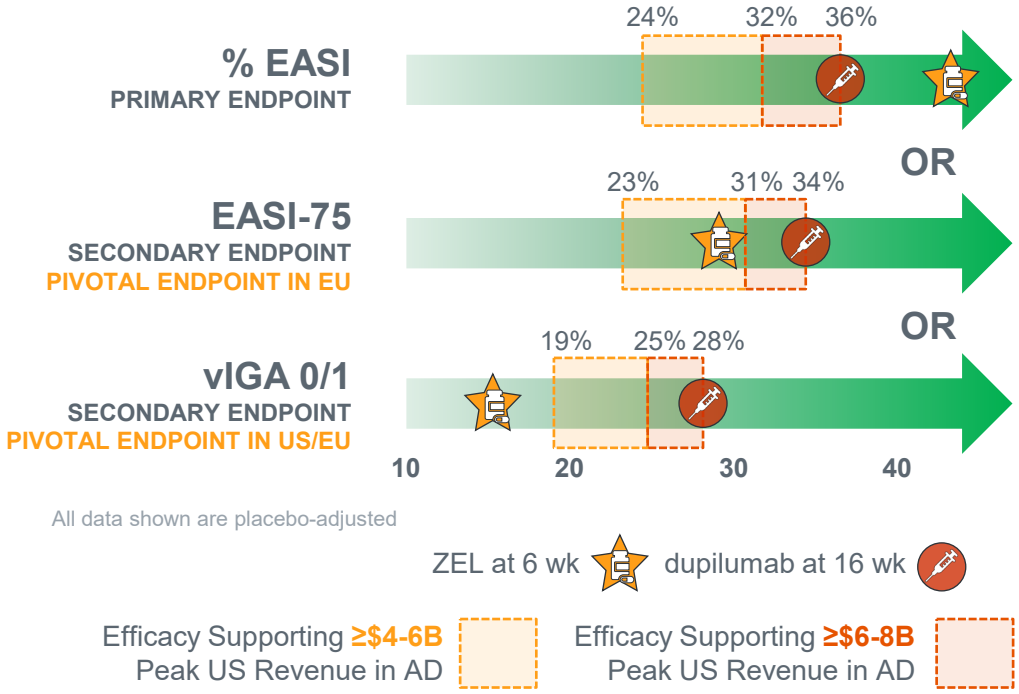
$13B

*Otezla® (apremilast) is a registered trademark of Amgen, Inc.

RAPT THERAPEUTICS

Zelnecirnon Can Be Commercially Successful Across a Broad Range of Efficacy

Zelnecirnon Efficacy Ranges

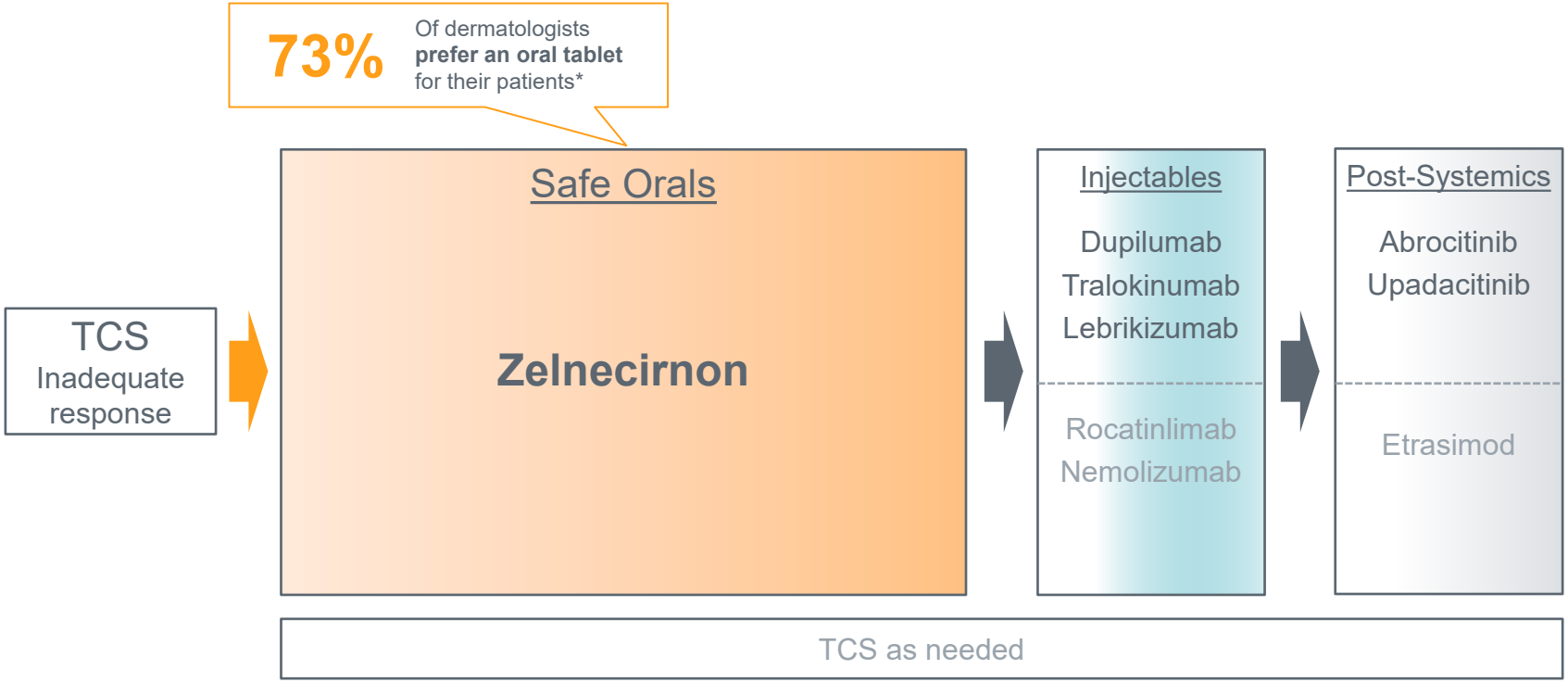


Zelnecirnon Phase 2b Success

- Efficacy in target range (≥2/3 of dupilumab) and statistically significant on any primary or pivotal endpoint
- Upside: Efficacy similar or greater than dupilumab (≥90% of dupilumab)
- Phase 3 dose(s) identified

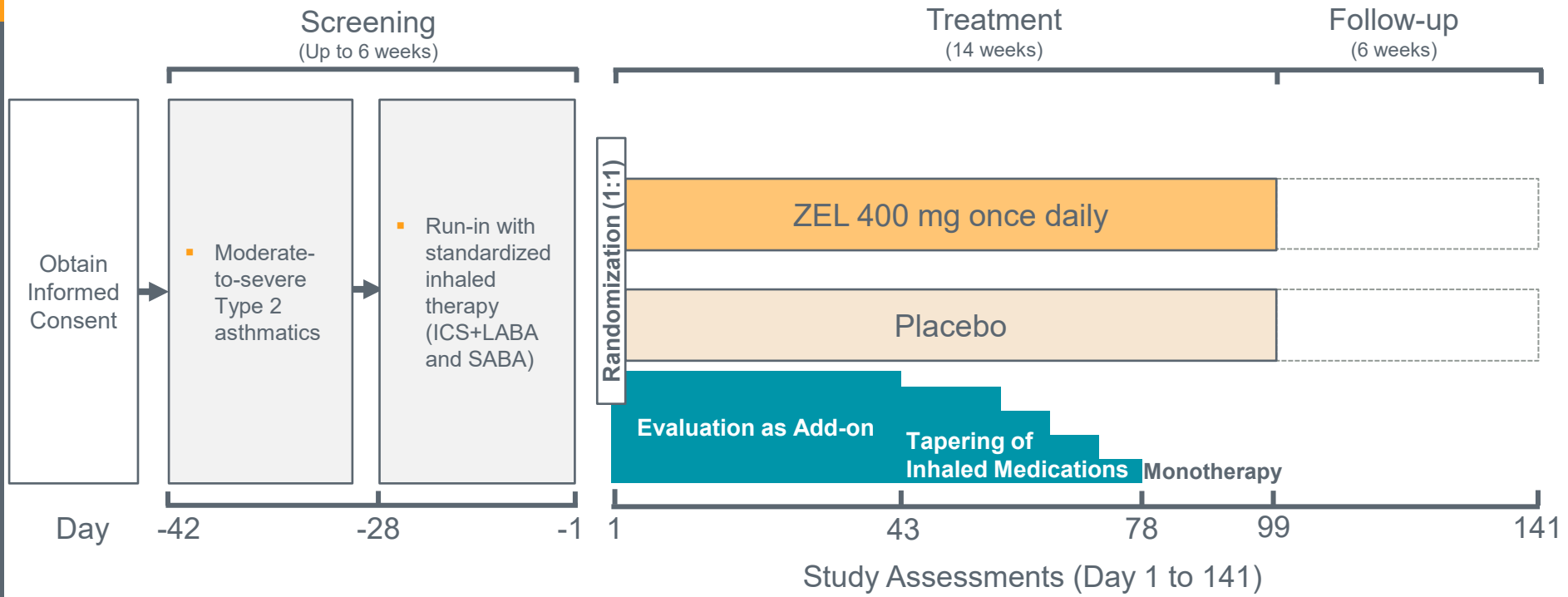
RAPT THERAPEUTICS

Expect Zelnecirnon to Be Positioned as the Preferred First Option After TCS Inadequate Response



* RAPT Therapeutics US quantitative market research N=50 US dermatologists

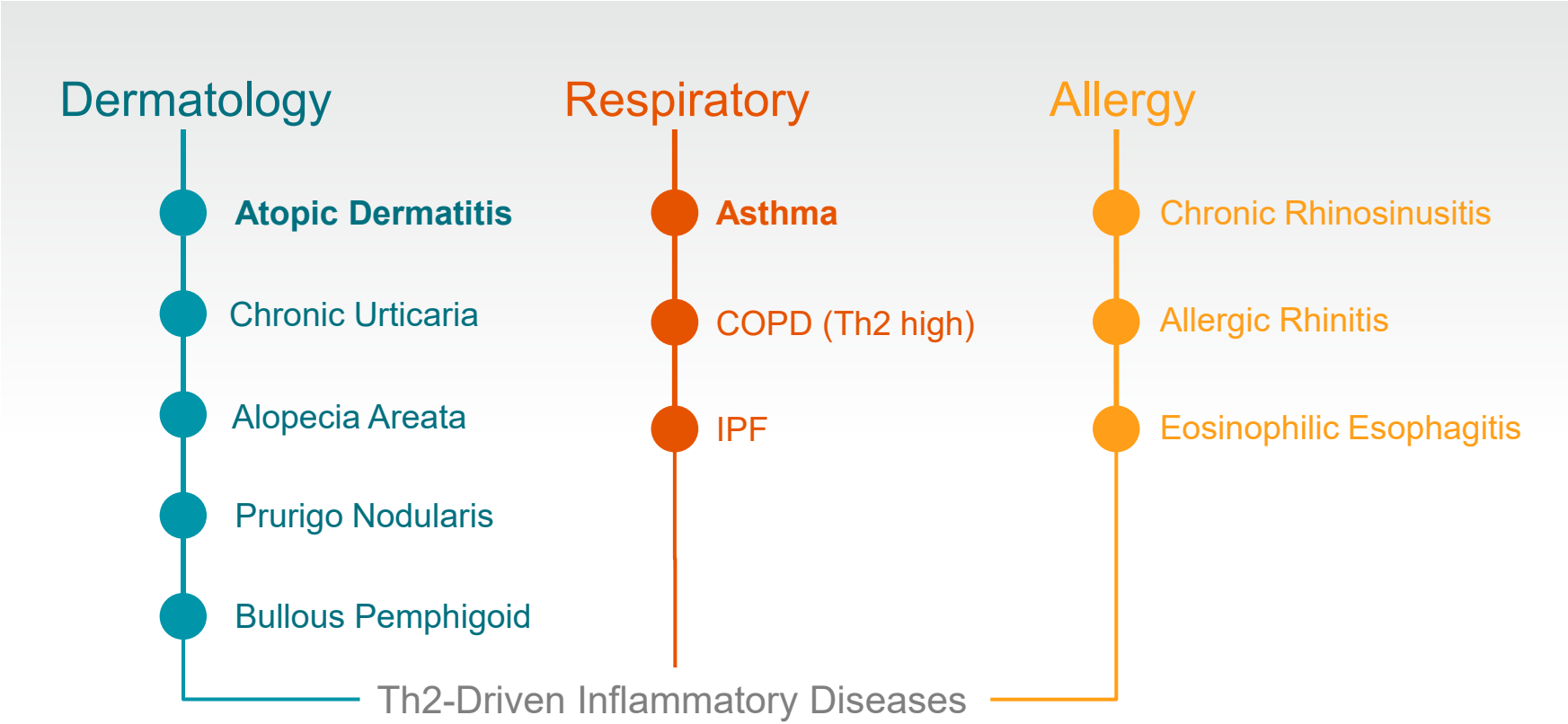
Phase 2a Asthma Trial Design



- **Goal enrollment**: ~100 patients, ~50 per arm
- **Primary Endpoint:** "Loss of Asthma Control"
- **Secondary Endpoint**: ACQ-5, FEV1, etc.

RAPT THERAPEUTICS

Potential “Pipeline in a Product”



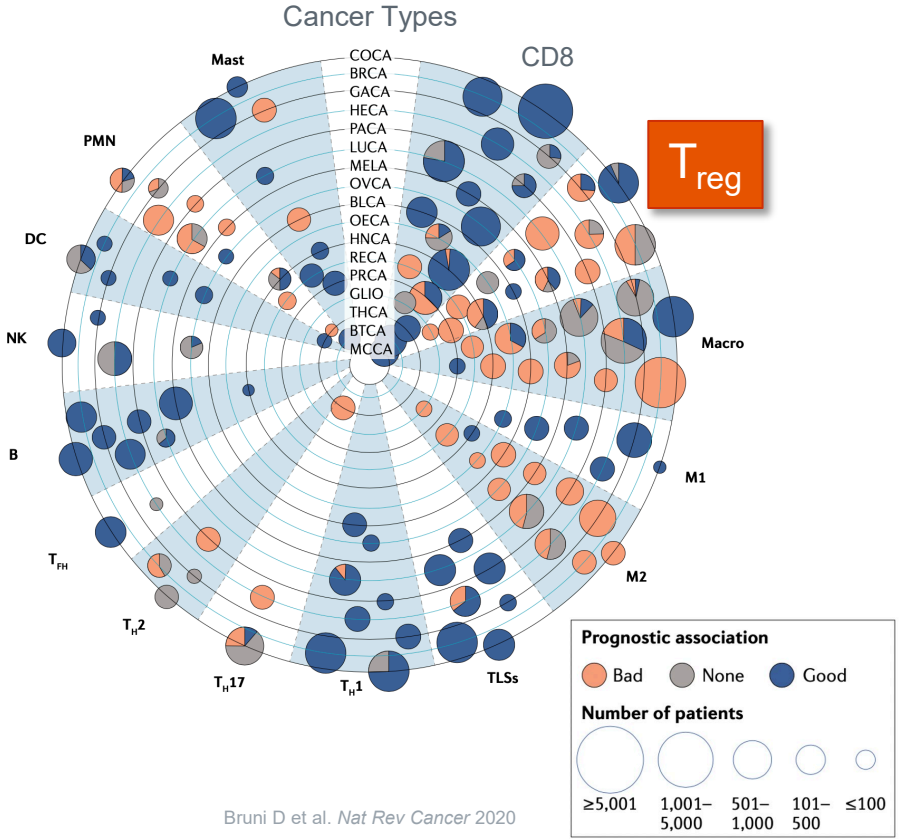
Tivumecirnon (FLX475): CCR4 Antagonist for Oncology

Tivumecirnon: First-in-Class T_{reg} Inhibitor for Cancer

- **Oral CCR4 antagonist selectively inhibits tumor T_{reg} trafficking**
- **Positive TIVU/anti-PD-1 efficacy** in PD-L1+ CPI-naïve NSCLC
  - 45% confirmed ORR: numerically superior to anti-PD-1 and TIGIT/anti-PD-1
  - Differentiated efficacy in “cool” PD-L1 low tumors
  - Initial PFS 6.3 months; data continuing to mature
- **Positive tivumecirnon/anti-PD-1 efficacy** in EBV+ gastric cancer (Hanmi)
- **Monotherapy efficacy**: deep responses in NK/T cell lymphoma and beneficial biomarker changes in solid tumors
- **Favorable safety profile** in >300 patients support broad combinability

T_{reg} Are Key Targets in the Tumor Microenvironment (TME)

- Potent suppressors of effector T cells and antigen presenting cells
- Correlate with poor prognosis across most cancers
- Mechanism for immune evasion by viruses and tumors
- Barrier to checkpoint inhibitor efficacy
- **Challenge**: selective inhibition of T_{reg} specifically in the tumor



Bruni D et al. *Nat Rev Cancer* 2020

Tivumecirnon's Advantage: Selective Inhibition of Tumor T_{reg}

Traditional Approach: Depleting Antibodies

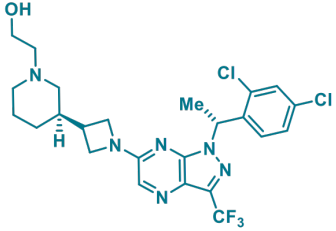
Examples: anti-CD25, anti-CCR4, anti-CCR8

ADCC-mediated T_{reg} depletion

POTENTIAL ISSUES

- Systemic depletion of T_{reg} = **increases toxicity**
- Poor/variable T_{reg} depletion in the tumor = **reduces efficacy**
- Nonspecific depletion of antitumor T cells = **reduces efficacy**

RAPT's Solution: **Tivumecirnon**

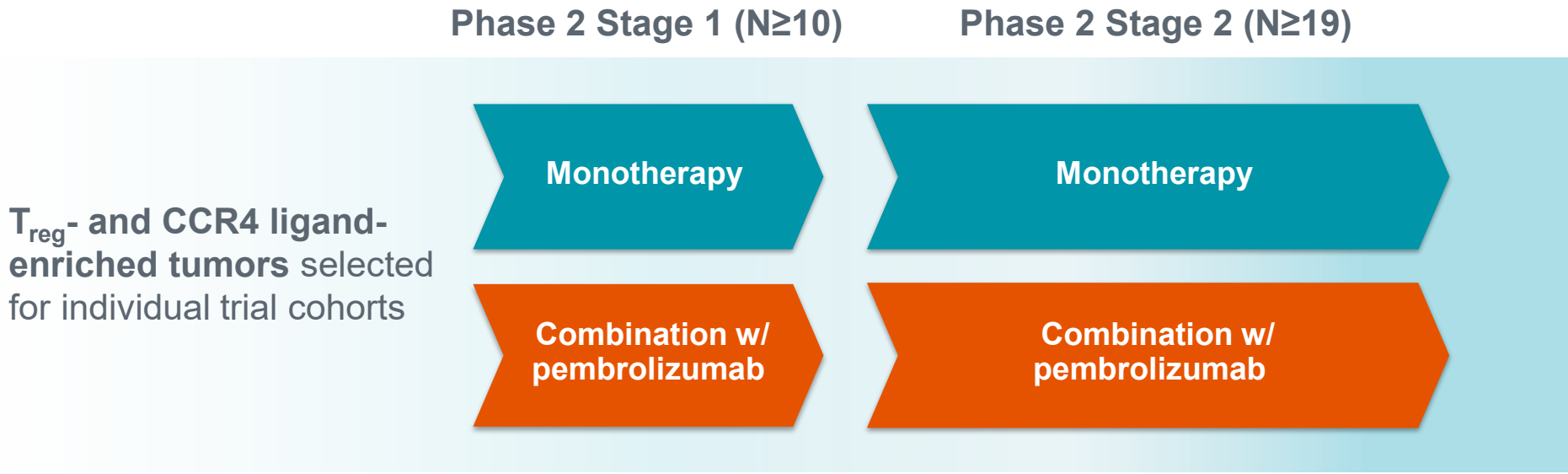


Blocks **tumor-specific** T_{reg} trafficking

ADVANTAGES

- Specific reduction of tumor T_{reg} = **reduces toxicity**
- Robust reduction of tumor T_{reg} = **increases efficacy**
- No depletion of anti-tumor T cells = **increases efficacy**

Tivumecirnon Phase 2 Clinical Development

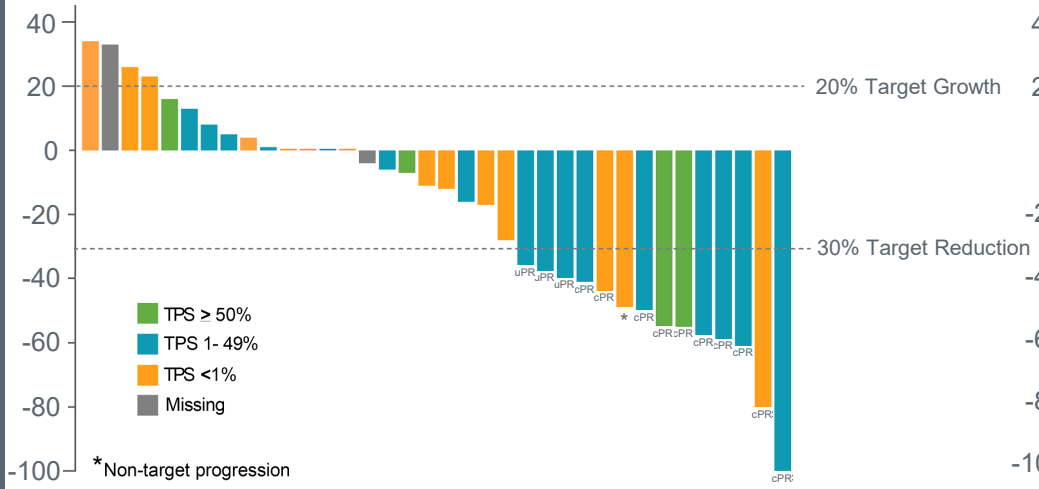


- **Design**: Open-label Phase 2, Simon 2-Stage Design
- **Doses**: TIVU 100 mg QD; pembrolizumab 200 mg Q3 wk
- **Endpoints:** Safety, PK, Biomarkers, Objective Response Rate

RAPT THERAPEUTICS

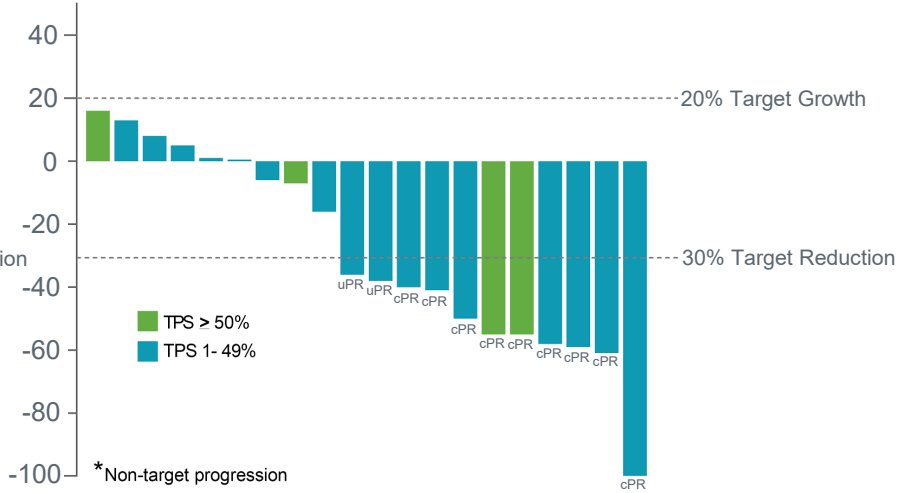
Positive Phase 2 Clinical Efficacy in CPI-Naïve NSCLC Presented at SITC 2023

BOR All Evaluable (n=36)



- Overall confirmed ORR: 31% (11/36), regardless of PD-L1 status
  - Post SITC: additional PR confirmed

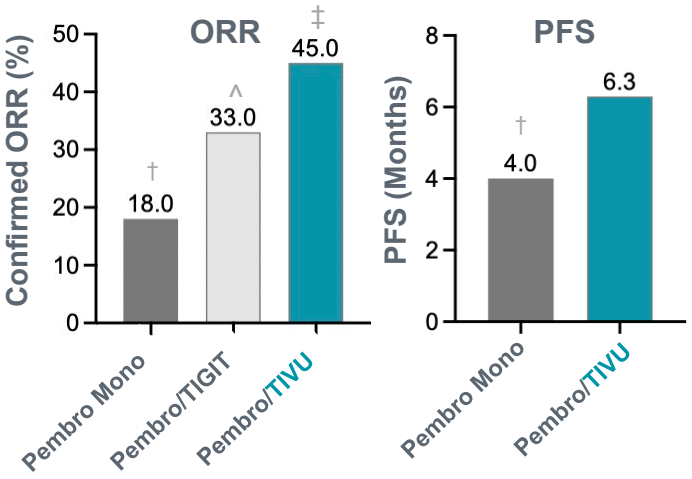
BOR PD-L1+ (n=20)



- **PD-L1+ confirmed ORR = 45% (9/20)**
  - Post-SITC: additional PR confirmed
- **PD-L1+ median PFS = 6.3 mo.**
- **Data expected to mature/improve**

Historical Context for Promising Tivumecirnon/Pembro Efficacy in CPI-naïve NSCLC

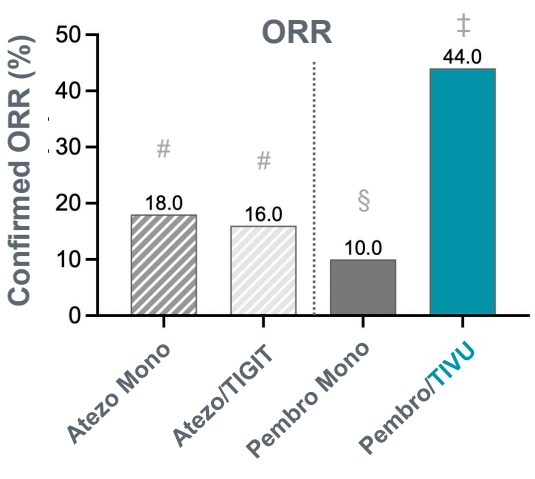
PD-L1+



*TPS ≥ 1%; †ORR and PFS from Keynote-010;
^Niu et al. Ann. Onc. 2022 (mixed 1L and 2L+)
‡Updated post SITC presentation

PD-L1 low*

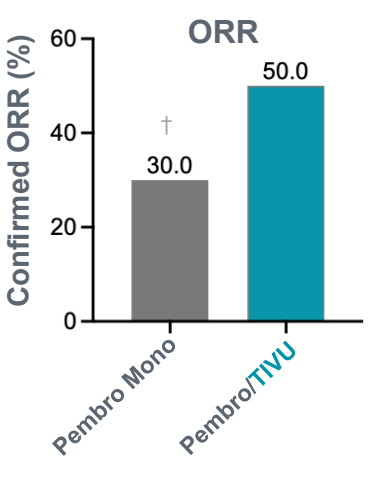
"Cool" Tumors



*TPS = 1-49%; #ORR from CITYSCAPE (1L);
§ORR from Keynote-010 (2L+)
‡Updated post SITC presentation

PD-L1 high*

"Hot" Tumors



*TPS ≥ 50%;
†ORR from Keynote-010 (2L+)

Cross trial comparisons; Data do not represent randomized comparisons

Large Commercial Opportunities in 1L NSCLC

Line of Therapy	Combination	NSCLC Segment	US Market Size
1L	PD-(L)1/TIVU	PD-L1 high (TPS ≥ 50%)	27,300
	PD-(L)1/TIVU/Chemo	All PD-L1 (TPS = 0-100%)	106,000
	PD-(L)1/TIVU/TIGIT	PD-L1 high (TPS ≥ 50%)	27,300

RAPT THERAPEUTICS

Key Takeaways and Upcoming Milestones

- **Zelnecirnon**: first-in-class safe oral designed to be the preferred option across a range of inflammatory diseases, now in a Phase 2b study in AD and a Phase 2a study in asthma
- **Tivumecirnon**: first-in-class selective tumor T_{reg} inhibitor with monotherapy efficacy and encouraging PD-1 combo efficacy in CPI-naïve NSCLC
- **Planned Key Milestone**
  - **mid 2024**: Zelnecirnon Phase 2b AD topline data

Thank You