Krystal®

Second Quarter 2025 Financial and Operating Results

August 4, 2025

Forward Looking Statements and Disclosures

This presentation and the accompanying oral presentation contain forward-looking statements that involve substantial risks and uncertainties. Any statements about future expectations, plans, and prospects for Krystal Biotech, Inc. (together with its subsidiaries, the "Company"), including but not limited to, statements about the global expansion of VYJUVEK® and R&D execution propelling the Company into its next stage of growth; the Company being well positioned to deliver sustainable, profitable growth for years to come; the Company's U.S. commercial launch of VYJUVEK, including the impact of the sales force expansion, the expectation that compliance to weekly therapy will trend down in coming quarters, and the expectation that U.S. usage patterns will stabilize, quarterly performance swings will subside, and transformative patient outcomes will drive long-term, sustainable growth; the current expectation that 3Q 2025 revenues will come in below 2Q 2025, with a return to growth in 4Q 2025; the expectation of a pricing decision in Japan and launch before year end and Japan adding meaningfully to the Company's gross revenue in 2026; the Company's EU commercial launch, including the market size in Germany and France, expected timing of commercial launch in Germany and France, and a path to steady, multi-year growth; the blockbuster trajectory for VYJUVEK; advanced clinical development of KB408, including potential accelerated approval; the expectation to soon have five TDN sites up and running to support KB407 clinical trials; timing of data readouts from clinical studies, including multiple eye and lung readouts expected in the upcoming months; a potential KB304 Phase 2 study starting in the first half of 2026; the breadth of opportunity that exists with the Company's HSV-1 based platform across multiple tissues that could open up blockbuster product opportunities; opportunities to build significant shareholder value; the Company's 2025 non-GAAP combined R&D and SG&A expense guidance; and other statements containing the words "anticipate", "believe", "estimate", "expect", "intend", "may", "plan", "predict", "project", "target", "potential", "likely", "will", "would", "could", "should", "continue", and similar expressions, constitute forward-looking statements within the meaning of The Private Securities Litigation Reform Act of 1995. Actual results may differ materially from those indicated by such forward-looking statements as a result of various important factors, including: uncertainties associated with regulatory reviews and the content and timing of regulatory authorities' decisions; uncertainties in the initiation and conduct of clinical trials and availability and timing of data from clinical trials; whether results of early clinical trials will be indicative of the results of ongoing or future trials; the availability or commercial potential of product candidates; and such other important factors as are set forth in the Company's filings with the U.S. SEC. The forward-looking statements represent the Company's views as of the date of this presentation and should not be relied upon as representing the Company's views as of any subsequent date. The Company specifically disclaims any obligation to update forward-looking statements.

This presentation includes non-GAAP combined R&D and SG&A expense guidance, a supplemental measure of the Company's performance that is not required by, or presented in accordance with, U.S. GAAP and should not be considered as an alternative to R&D and SG&A expense or any other performance measure derived in accordance with GAAP. The Company defines non-GAAP combined R&D and SG&A expense as GAAP combined R&D and SG&A expense excluding stock-based compensation. The Company cautions investors that amounts presented in accordance with its definition of non-GAAP combined R&D and SG&A expense may not be comparable to similar measures disclosed by other companies because not all companies calculate this non-GAAP financial measure in the same manner. The Company has not provided a quantitative reconciliation of forecasted non-GAAP combined R&D and SG&A expense to forecasted GAAP combined R&D and SG&A expense because the Company is unable, without making unreasonable efforts, to calculate the reconciling item, stock-based compensation expenses, with confidence. This item, which could materially affect the computation of forward-looking GAAP combined R&D and SG&A expense, is inherently uncertain and depends on various factors, some of which are outside of the Company's control.

This presentation may contain estimates and statistical data. Estimates involve assumptions and limitations, and investors are cautioned not to give undue weight to estimates. Neither the Company nor any other person makes any representation as to the accuracy or completeness of such estimates or data or undertakes any obligation to update such estimates or data. Any projections, assumptions, and estimates of the Company's future performance and the future performance of the markets in which the Company operates are necessarily subject to a high degree of uncertainty and risk.

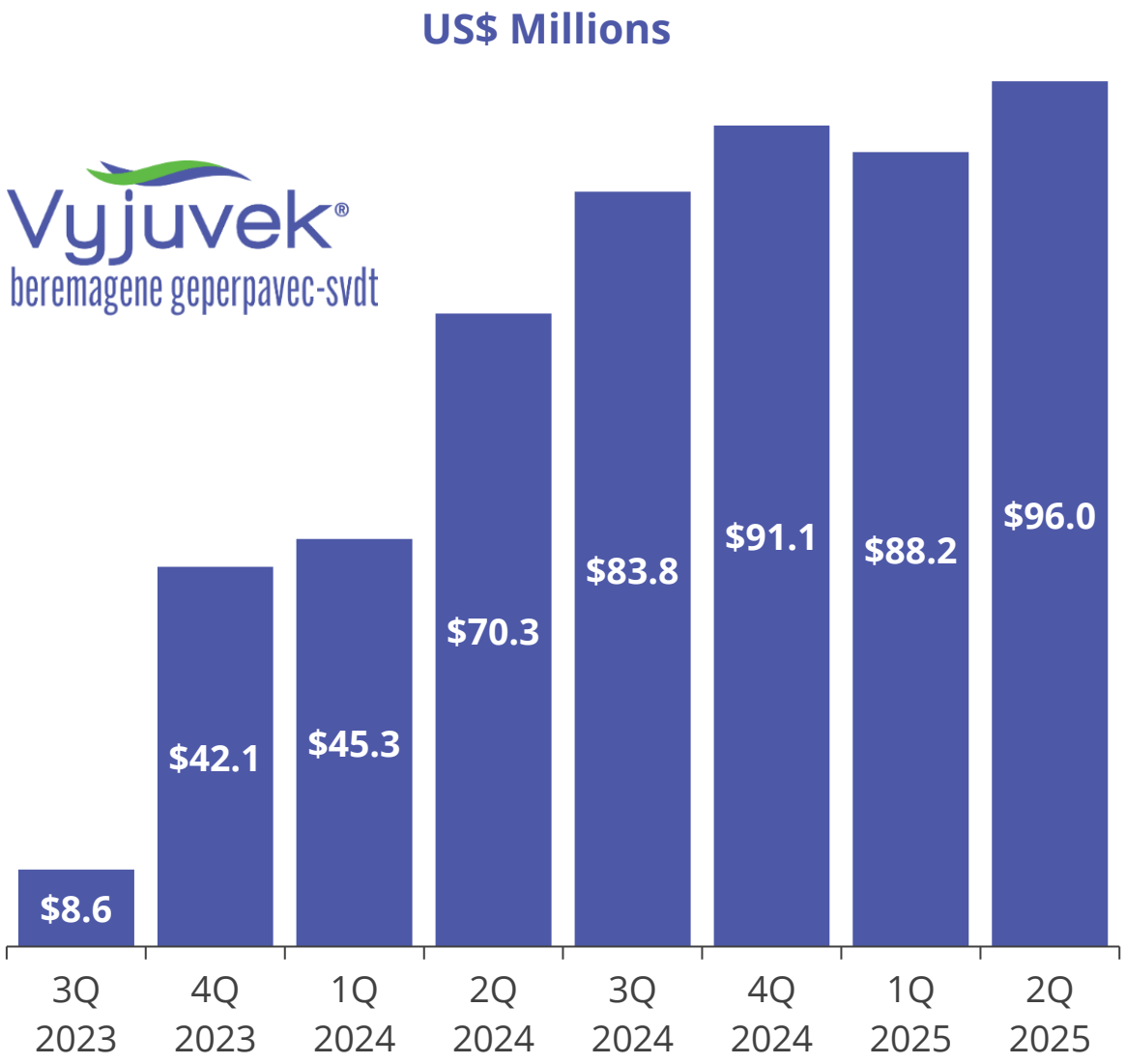
Other than VYJUVEK, all products described in this presentation are investigational therapies.

The Company is using the Aerogen Solo® Nebulizer System and Aerogen® Ultra in its clinical trials evaluating KB407, KB408, and inhaled KB707.

2Q Earnings Call Topics

- Global VYJUVEK launch
- Clinical readouts in lung and eye
- Jeune Aesthetics
- Sustainable profitable growth

Over $525M in VYJUVEK Revenue Since Launch



- Gross margin of 93% in 2Q
- Gross to net in 2Q was 17%
- Now over 575 reimbursement approvals in the U.S.
- U.S. compliance to weekly therapy while on drug at 82% as of end of 2Q 2025

U.S., United States

VYJUVEK Receives Approval in Japan

Over 500

Estimated DEB Patients in Japan

Broad label provides maximal flexibility to prescribers and patients

- ✓ Recommended approval for treatment of DEB patients from birth
- ✓ Also includes option for home administration by either a patient or family member
- ✓ Label mandates a definite diagnosis of DEB but no genetic testing requirement

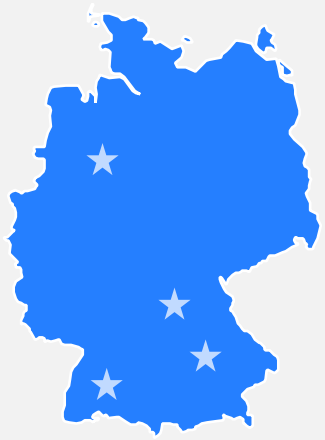
Pricing decision and launch expected in 4Q 2025

DEB, dystrophic epidermolysis bullosa; JNDA, Japanese New Drug Application; ODD, orphan drug designation; PMDA, Pharmaceuticals and Medical Devices Agency

On Track for European Launch Later this Quarter

3Q Launch

Germany



Over 575
Identified DEB Patients

4 + 38
Key DEB Centers

4Q Launch*

France

Over 500
Identified DEB Patients

4
Expert DEB Centers

* Subject to early access conditions under AP2 program

AP2, Accès Précoce 2; DEB, dystrophic epidermolysis bullosa

Clear Path to Blockbuster VYJUVEK Franchise

- Sales force expansion starting to drive penetration in the U.S.
- Europe poised to deliver steady, multi-year growth
- Broad label in Japan add another high-value market to VYJUVEK launch
- Meaningful opportunities in the rest of the world accessible through distributors

U.S., United States

Pipeline Topics

- Deepening and durable responses reported at ASCO in late-line NSCLC treated with KB707
- Confirmed AAT delivery in third patient dosed with KB408 and started repeat dosing
- 4 patients enrolled in CF study
- Positive KB304 readout in placebo-controlled Phase 1 study
- Two new ophthalmology study starts
  - KB803 Phase 3 for corneal abrasions in DEB
  - KB801 Phase 1/2 for NK

AAT, alpha-1 antitrypsin; ASCO, American Society of Clinical Oncology; CF, cystic fibrosis; DEB, dystrophic epidermolysis bullosa; NK, neurotrophic keratitis; NSCLC, non-small cell lung cancer

ASCO 2025 Update Showcases Potential of Inhaled KB707 Monotherapy

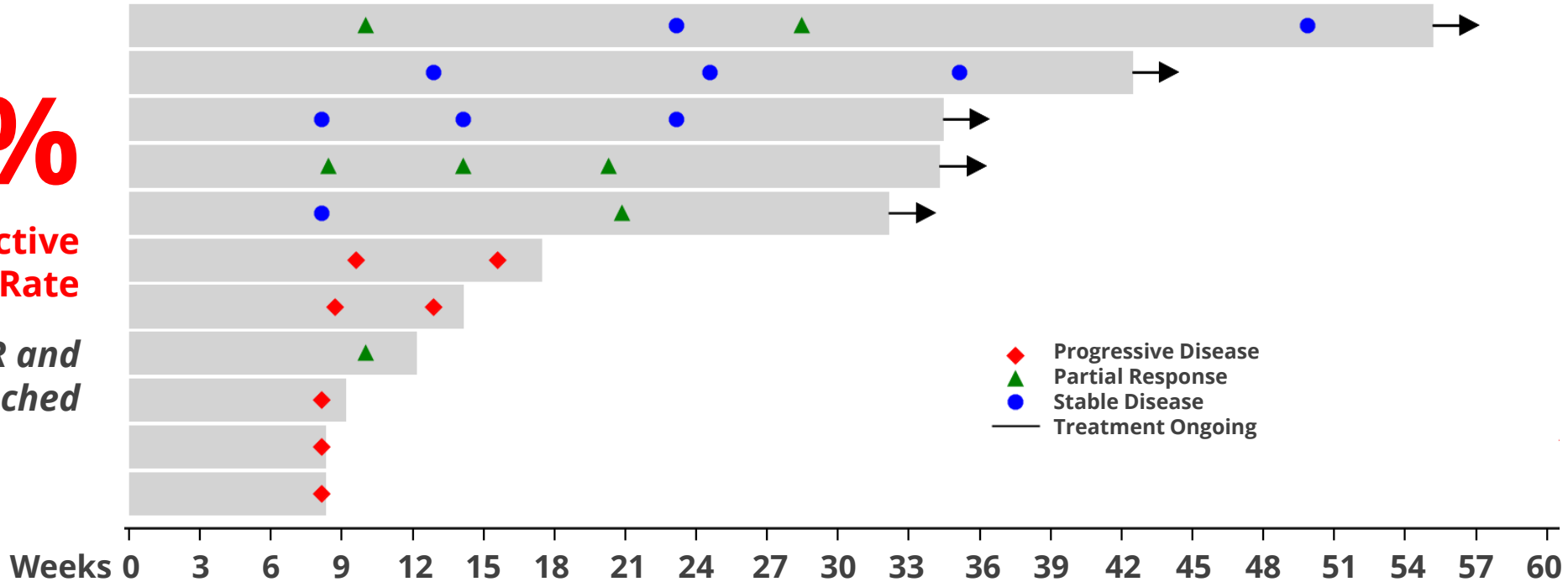
- KB707 continued to be safe and generally well tolerated across diverse, heavily pre-treated patient population (n = 39)
- Durable monotherapy responses detected in efficacy cohort patients with advanced NSCLC (n = 11)*
- All patients in efficacy cohort had received at least one prior line of immunotherapy, median four lines prior therapy

36%

Objective Response Rate

with median DOR and PFS not reached

Time on therapy and response in advanced NSCLC efficacy cohort



Data cutoff date of April 15, 2025

ASCO, American Society of Clinical Oncology; DOR, duration of response; IL-12, interleukin-12; IL-2, interleukin-2; NSCLC, non-small cell lung cancer; PFS, progression free survival

* Efficacy analysis conducted in all evaluable NSCLC patients with at least one radiographic scan and RECIST v1.1 evaluation as of data cutoff

Functional AAT Delivery to the Lungs in Third Patient Dosed with KB408

Key findings from third Cohort 2 patient with bronchoscopy data; patient was on background IV augmentation

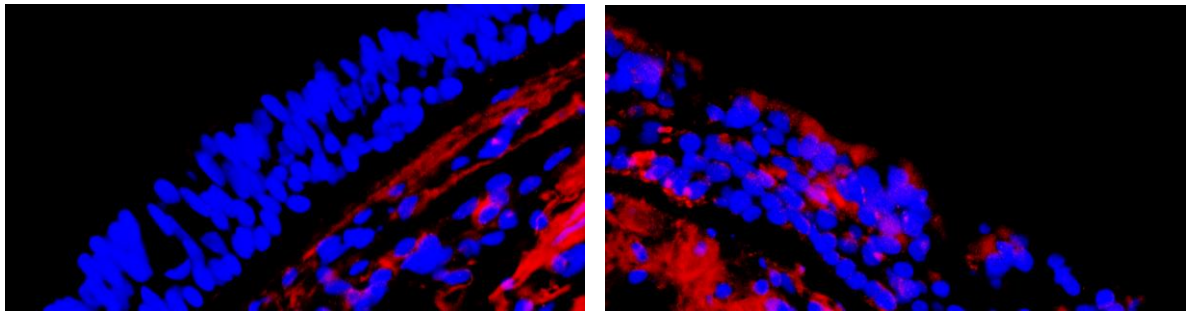
40%

AAT Positive Cells After KB408*

0% AAT Positive Cells At Baseline

High rates of transduction in conducting airways of the lung after single dose of KB408

Representative Images



Baseline **AAT** **DAPI** **After KB408**

Reduction in free neutrophil elastase in ELF**

79.3%

At Baseline

52.1%

After Single KB408 Dose

Transduction of over 30% of airway cells confirmed in all three Cohort 2 patients with bronchoscopies

Single dose KB408 continues to be well tolerated in all patients dosed to date

* Based on quantification of DAPI positive and DAPI + AAT co-positive cells lining the conducting airways of the lung by immunofluorescence; four biopsies assessed for post-dose DAPI + AAT co-positive cell quantification, total cell counts > 350; ** Average values of three lobes

AAT, alpha-1 antitrypsin; DAPI, 4',6-diamidino-2-phenylindole; ELF, epithelial lining fluid; IV, intravenous

All imaging conducted at 40× magnification
Post-dose biopsies harvested 24 hours after nebulization
Biopsy locations: Baseline biopsy #2, top: lingula (left lung); Post-dose biopsy #2, middle: lower lobe, right lung; Post-dose biopsy #3, bottom: lower lobe, right lung.

Repeat Dosing Now Under Evaluation in KB408 Phase 1 SERPENTINE-1

Objectives

Evaluate safety and tolerability of repeat dosing at Cohort 2 dose level, as well as assess additive efficacy of repeat dosing and explore optimal dosing timing based on durability of effect

Study Population

PI*ZZ or Pi*ZNull genotype patients either not taking or washed out of IV augmentation therapy

Key Assessments

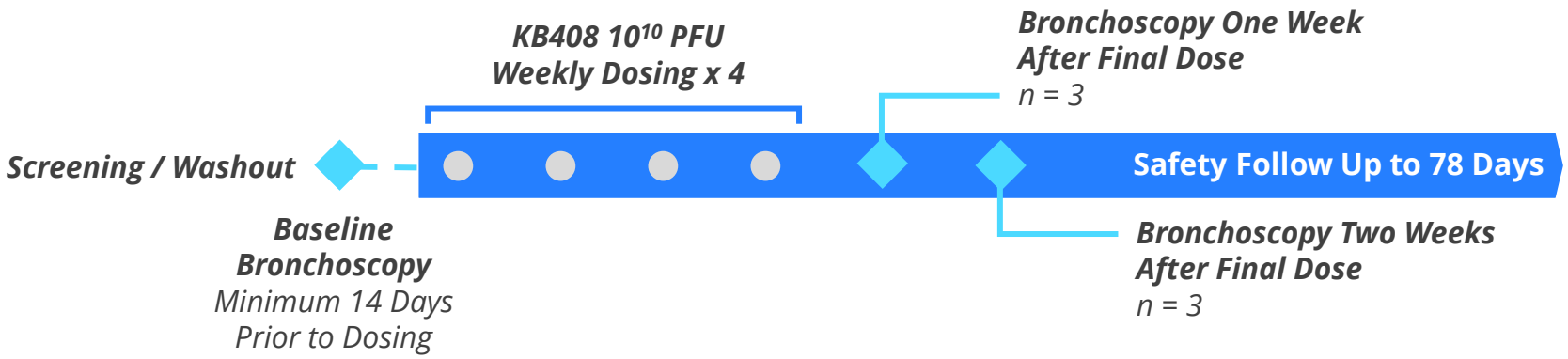
Lung samples will be collected at baseline for all subjects and then for 3 subjects one week after the final dose, and 3 subjects two weeks after the fourth and final dose, readouts will include

- Cell transduction and AAT expression rates in endobronchial biopsies
- Quantification of *SERPINA1* levels in bronchial brushings
- AAT levels and % free neutrophil elastase in lavage

Serum will also be collected for assessment of circulating AAT levels

Dosing and Schedule of Events

Cohort 2B
Repeat Dose
10^{10} PFU
n = 3+3



First patient dosed earlier this month

AAT, alpha-1 antitrypsin; IV, intravenous; PFU, plaque forming unit

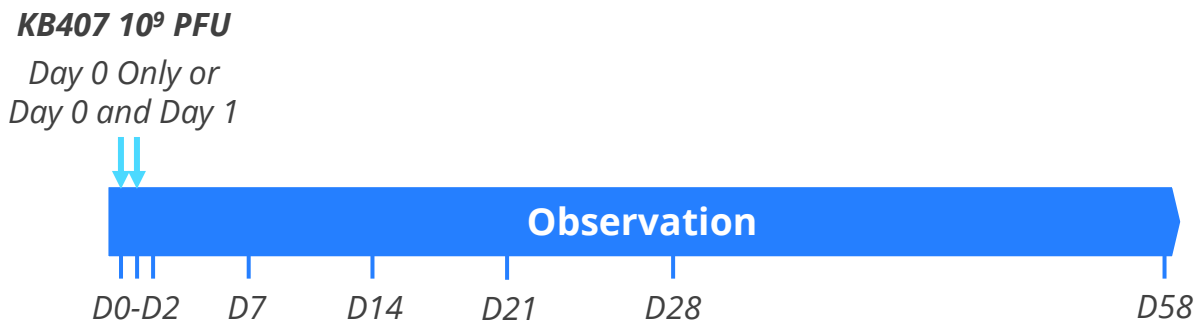
Fourth Patient Enrolled in Cohort 3 of KB407 Phase 1 CORAL-1

Cohorts 1 and 2 Completed

Cohort 1
Single 10^9 PFU Dose
n = 3

Cohort 2
Two 10^9 PFU Doses
n = 3*

*One patient rolled over from Cohort 1 to Cohort 2



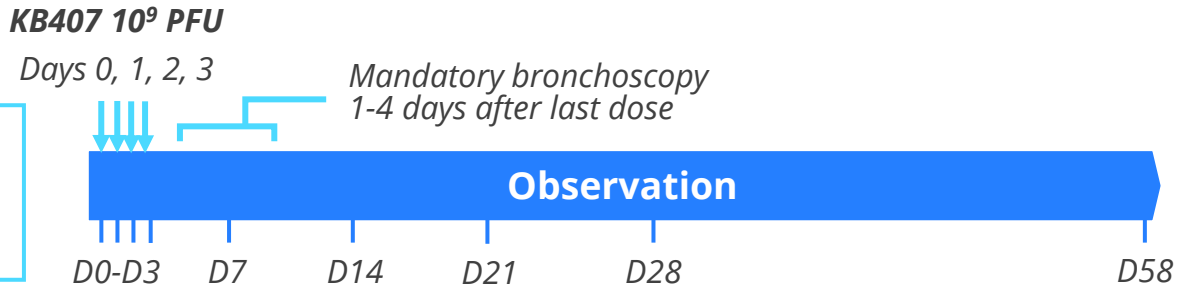
- ✓ No serious adverse events or dose-limiting toxicities observed
- ✓ All KB407-related adverse events mild-to-moderate and transient
- ✓ No evidence of significant neutralizing antibody response

Cohort 3 Ongoing

Four patients enrolled in Cohort 3

Molecular data before end of year

Cohort 2
Four 10^9 PFU Doses
n = 6



PFU, plaque forming unit

Progressing KB304 to Phase 2 Based on Positive Results in PEARL-2

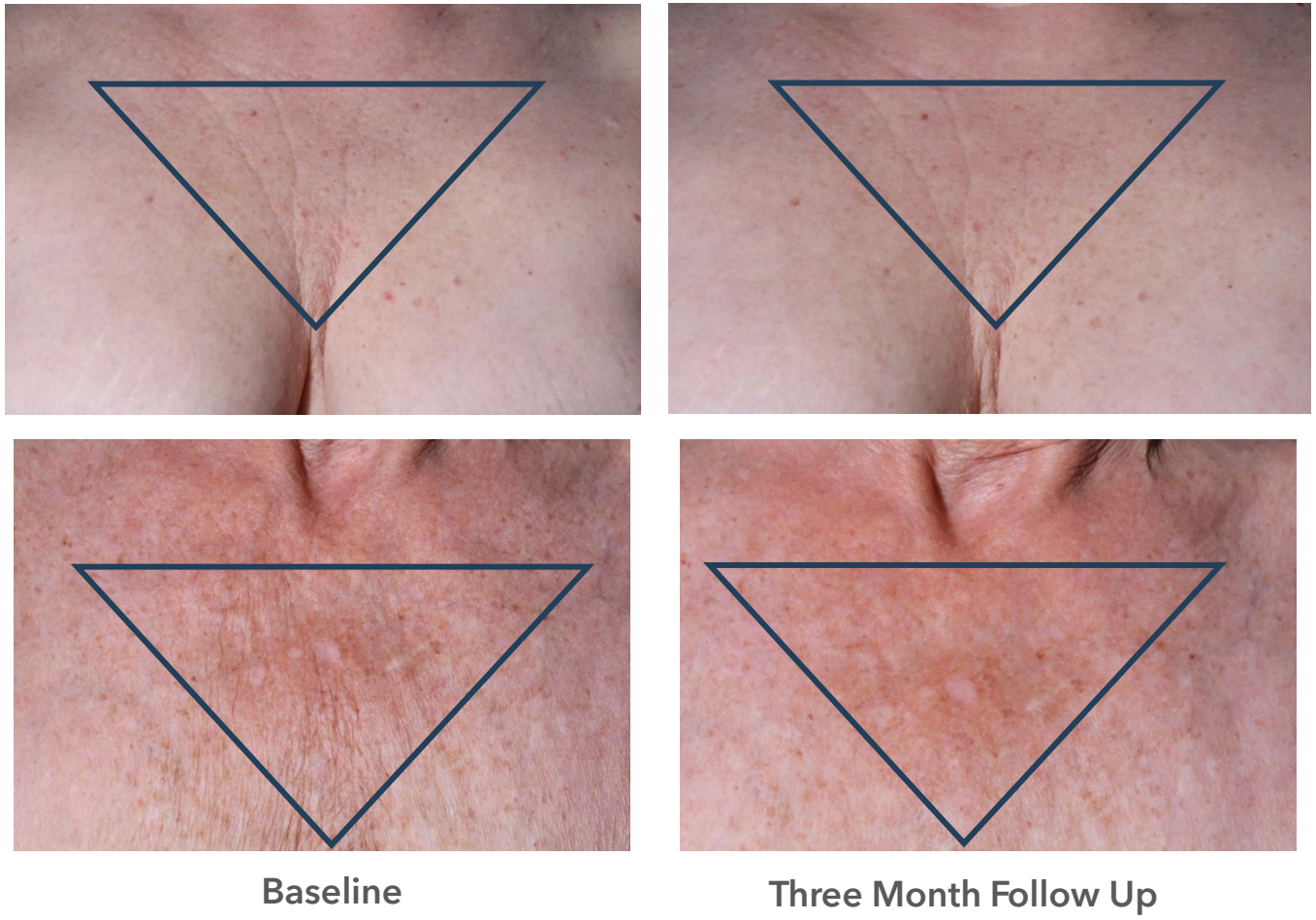
PEARL-2 Study Design

- 2:1 randomized, double-blind, placebo-controlled Phase 1 evaluating KB304 for the treatment of wrinkles of the décolleté
- Efficacy evaluation included investigator and subject assessments of aesthetic improvement on the 5-point GAIS scale; multiple skin attributes evaluated
- 19 subjects enrolled and 18 assessed through three month follow up, assessed subjects were all female with median age of 62 years (range 47-75)

✓ **Meaningful aesthetic improvements following KB304 treatment with clear and statistically significant advantages over placebo**

✓ **Safety profile consistent with prior clinical experience in KB301 and all adverse events were mild-to-moderate and transient**

Décolleté Before and After Images



Baseline | Three Month Follow Up

GAIS, Global Aesthetic Improvement Scale

Second Quarter 2025 Financial Highlights

Cash and investments: $820.8 million as of June 30, 2025

Diluted EPS: $1.29

	Three Months Ended June 30		Six Months Ended June 30	
	2025	2024	2025	2024
Product revenue, net	$96.0M	$70.3M	$184.2M	$115.5M
Cost of goods sold	$7.2M	$6.0M	$12.2M	$8.4M
Gross margin	93%	91%	93%	93%
R&D expenses	$14.4M	$15.6M	$28.7M	$26.5M
SG&A expenses	$35.2M	$27.6M	$67.9M	$53.7M
Stock-based compensation expense[1]	$14.1M	$13.2M	$27.6M	$22.5M
Net income	$38.3M	$15.6M	$74.1M	$16.5M
Net income per share (basic)	$1.33	$0.54	$2.57	$0.58
Net income per share (diluted)	$1.29	$0.53	$2.48	$0.56

Non-GAAP R&D and SG&A Expense Guidance for Full Year 2025 of **$150M to 175M[2]**

GAAP, generally accepted accounting principles; R&D, research and development; SG&A, selling, general, and administrative expenses

1. Represents the amount of stock-based compensation expense included in R&D and SG&A expenses
2. Non-GAAP combined R&D and SG&A expense guidance does not include stock-based compensation, for more information refer to Forward Looking Statements and Disclosures on slide 2

Upcoming Readouts

- KB407 Cohort 3 molecular data in CF
- Repeat dosing data for KB408 in AATD
- Top-line data from KB803 Phase 3 for corneal abrasions in DEB
- Top-line data from KB801 Phase 1/2 for NK
- KB707 for NSCLC – Readouts to follow

AATD, alpha-1 antitrypsin deficiency; CF, cystic fibrosis; DEB, dystrophic epidermolysis bullosa; NK, neurotrophic keratitis; NSCLC, non-small cell lung cancer

Krystal®

Developing Genetic Medicines to Treat Diseases with High Unmet Medical Needs