Jasper Therapeutics

JASPER THERAPEUTICS

Corporate presentation
January 2025

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Briquilimab: Franchise Potential in Mast Cell Mediated Diseases

c-Kit Inhibition

A clinically validated MOA

- Mast cells are the primary driver in multiple allergic and atopic diseases including urticarias, asthma, food allergy and others
- c-Kit inhibition is the only therapeutic mechanism shown to significantly deplete mast cells for durable and well tolerated disease control
- c-Kit inhibition has demonstrated clinical proof of concept in multiple mast cell mediated diseases

Clinical Profile

Supports optimal biologic dosing

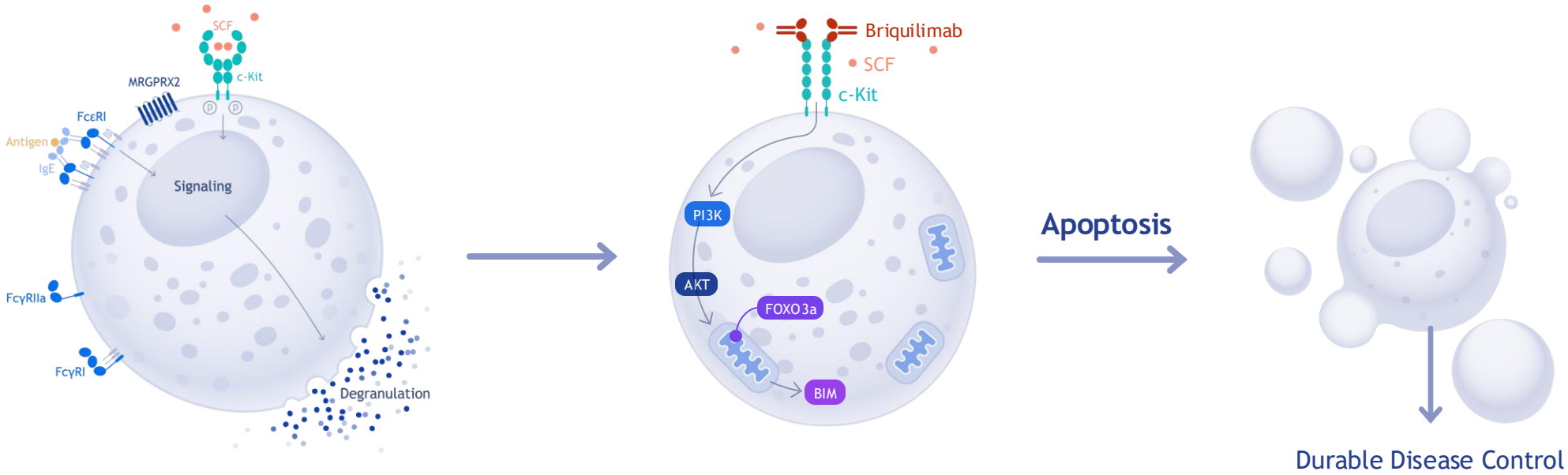
- BEACON results show rapid onset of deep and durable responses with up to 100% complete response through 8 weeks
- SPOTLIGHT results show rapid onset of effect and 83% complete response rate
- BEACON and SPOTLIGHT data demonstrate briquilimab was well tolerated with a favorable safety profile in both CIndU and CSU

Franchise Potential

In mast cell driven diseases

- CSU: data from additional BEACON cohorts expected by mid-year 2025
- CIndU: SPOTLIGHT study additional data expected 1H 2025
- Asthma: Enrollment in ETESIAN study ongoing, initial data expected 2H 2025
- Additional mast cell mediated diseases under evaluation

Depletion of mast cells with briquilimab has been shown to be an effective therapeutic strategy in multiple clinical studies

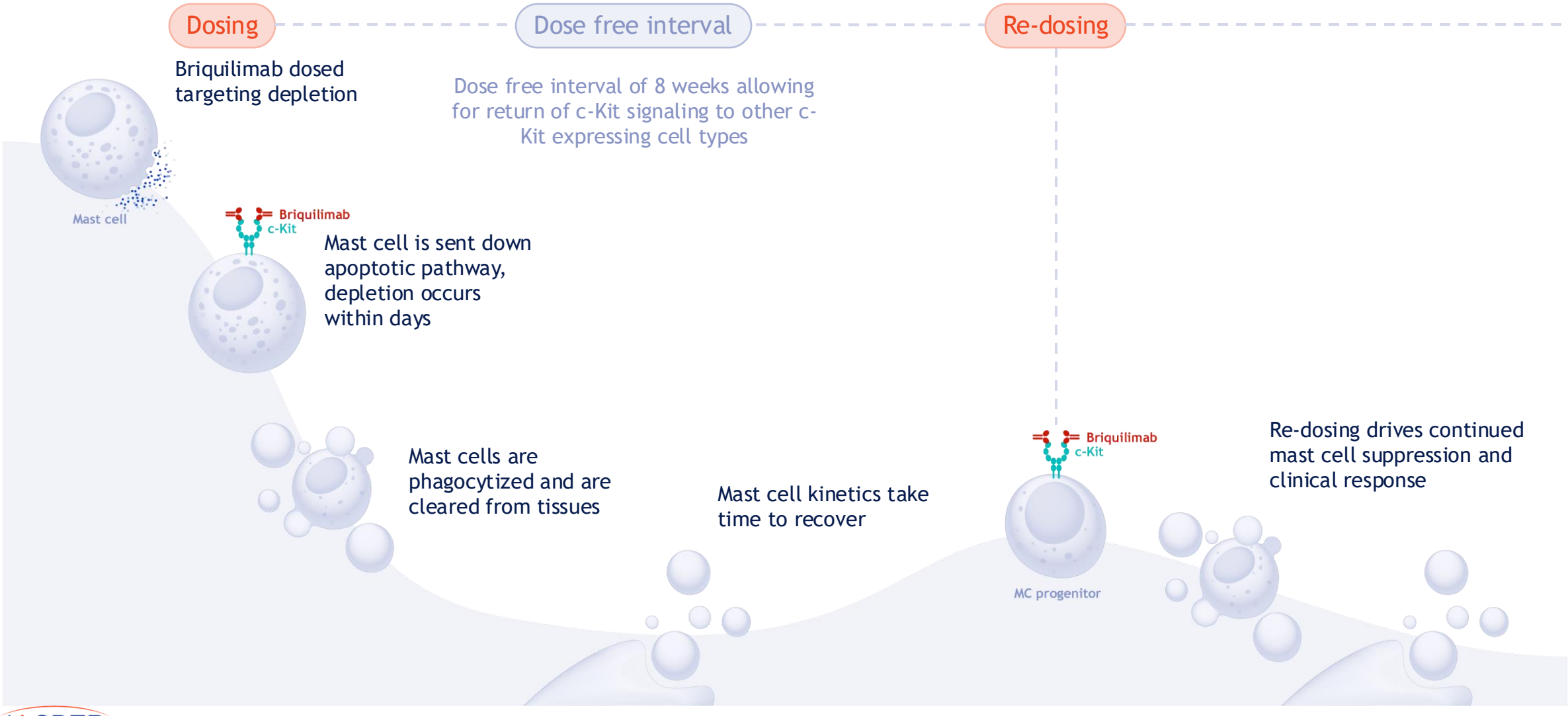


- Mast cells play a central role in driving inflammation in a large number of immunologic and inflammatory diseases
- Currently approved therapies that rely on inhibiting single pathways of mast cell activation and have limited efficacy and durability of response[1]
- Inhibiting SCF/ c-Kit signaling has been shown to prevent activation and lead to mast cell depletion[2]

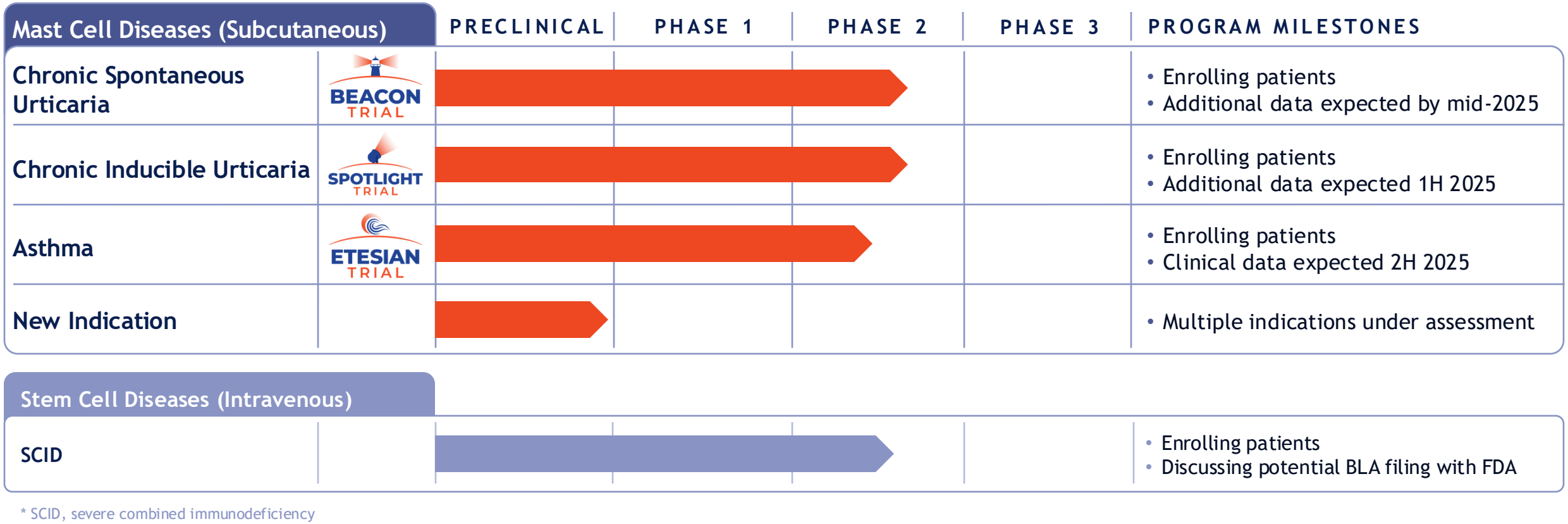
- Briquilimab directly inhibits SCF/ c-Kit signaling leading to the mast cell depletion through a controlled apoptotic pathway
- Mast cell kinetics in the skin take time to recover[2], potentially leading to durable disease control
- Briquilimab efficacy and safety has been shown in Phase 1b/2a clinical studies in CSU (BEACON) and CIndU (SPOTLIGHT)

1. Metz M, et al. Allergy. 2024;79:37-51.
2. Dickson MC, et al. Br J Clin Pharmacol.
3. Maurer et al, GA²LEN Global Urticaria Forum - Berlin, December 6, 2022

Briquilimab design and characteristics enable optimal biologic dosing and could minimize unwanted effects of c-Kit inhibition



Expanding portfolio presents exciting opportunities in mast cell driven diseases



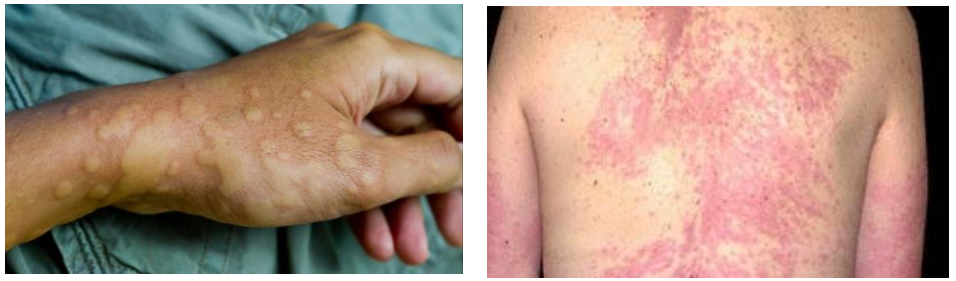
* SCID, severe combined immunodeficiency

Jasper maintains full worldwide rights to develop and commercialize briquilimab in all indications

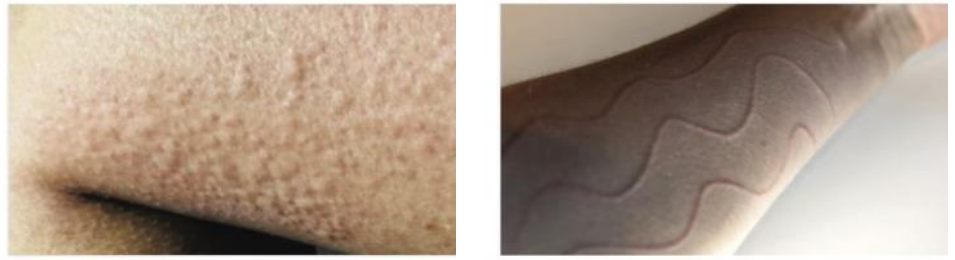
Chronic Urticaria

Chronic urticaria can be a severe & debilitating disease with negative impacts on quality of life for patients

- Chronic Urticarias (CU) are debilitating inflammatory conditions of the skin lasting 6 weeks or more that are characterized by the development of itchy wheals (hives), angioedema, or both
- Chronic Urticarias are classified as either spontaneous (CSU) or, if a specific trigger is identified, inducible (CIndU)
- Mast cell degranulation, leading to release of histamine and other inflammatory mediators, is the key driver of severe itching, hives and angioedema
- CU patients suffer both physically and psychologically. Severe disease has a similar negative impact on QoL as plaque psoriasis or atopic dermatitis



Chronic Spontaneous Urticaria



Chronic Inducible Urticaria

1. Munoz M, et al. Current Allergy and Asthma Reports June 2024 2. Ozdemir SO, et al. JEADV Mar 2024 3. Maurer M, et al. J Allergy Clin Immunol 2017 4. Nikolaev I, et al. EAACI Hybrid Congress, July 1-3, 2022 5. Mauer M, et al. EAACI Hybrid Congress, May 31- June 3 2024 6. Balp MM, et al. JEADV Clin Pract. 2024;3:508-520.

BEACON TRIAL

Briquilimab in Chronic Spontaneous Urticaria

Phase 1b/2a BEACON Study in Chronic Spontaneous Urticaria

Randomized, Double-Blind, Placebo-Controlled, Multiple Ascending Dose Study

BEACON TRIAL

Screening/Eligibility

- CSU diagnosis ≥ 6 mos.
- UAS7 ≥ 16
- 18+ years
- H1-antihistamine-failed
- Inadequate response to omalizumab

Study Operations

- **US Lead: Tom Casale, MD**
- **EU Lead: Martin Metz, MD**
- ~30 sites in the US & EU

Key Assessments

- **Disease Scores:** UAS7, UCT
- **Safety:** TEAEs, SAEs
- **PK**
- **Mast Cell Depletion & Recovery:** Serum Tryptase, Skin Biopsies

	Dose	Patients (Randomization)	Schedule
Open Label (n=6)	10mg	n=3+3	Weeks 0, 4, 12, 20
	40mg	n=3+3	
Double-Blind Placebo-Controlled (n=63)	80mg	n=8 (3:1)	Q8W
	120mg	n=6 (2:1)	Q8W
		n=6 (2:1)	Q12W
	180mg	n=10 (3:1)	Q8W
		n=9 (3:1)	Q12W
	240mg → 180mg	n=8 (3:1)	Q8W
	240mg	n=8 (3:1)	Q8W
		n=8* (3:1)	Single Dose
	360mg	n=8* (3:1)	Single Dose

*Expanding 240mg and 360mg SD cohorts to 8 patients

Cohorts included in January 2025 preliminary data cut

Initial data expected by mid-year 2025

Additional data expected by mid-year 2025

Preliminary BEACON study results demonstrate potential for differentiated efficacy and safety profile in CSU

BEACON TRIAL

Briquilimab demonstrated a rapid onset of deep clinical responses

- UAS7 reductions as much as 29 points noted 4 weeks post-dose (120mg Q12W)
- Clinical responses seen as early as 1 week post dose and complete responses demonstrated as early as week 2
- 100% complete responses through 8 weeks demonstrated at the 240 mg dose level

Dose dependent durability observed in complete responses and well-controlled disease

- Complete responses showed durability out to 4 weeks (120mg), 6 weeks (180mg) and 8 weeks (240mg)
- Well controlled disease durable to 4 weeks at 120mg (50%), 6 weeks at 180mg (43%) and 8 weeks at 240mg (100%)

Briquilimab was well tolerated and demonstrated a favorable safety profile

- C-kit related AEs were low frequency, transient, low-grade events
- The majority of AEs observed resolved while on study prior to subsequent doses
- No dose delays, missed doses or discontinuations reported due to AEs possibly related to c-Kit blockade

Data support advancing into registrational program 2H 2025

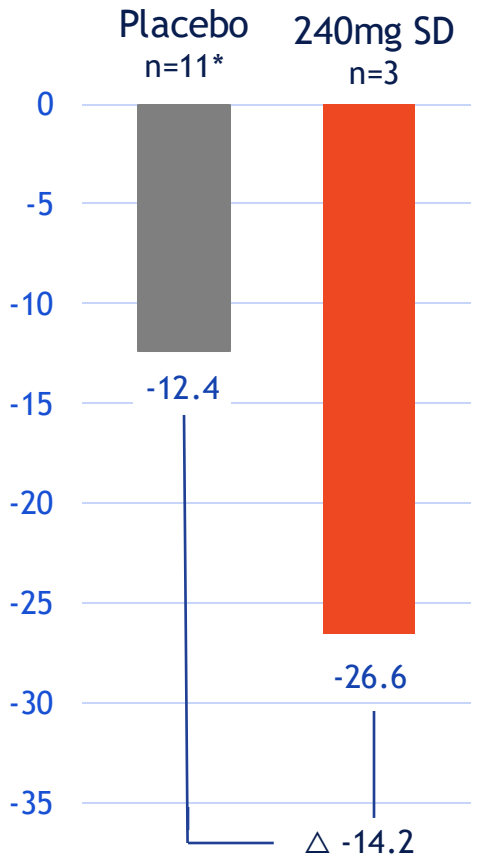
- 240mg Q8W and 120mg Q4W dosing regimens supported by preliminary data
- Final dose selection to be informed by additional data expected by mid-year 2025

Briquilimab demonstrated deep reductions in UAS7 scores

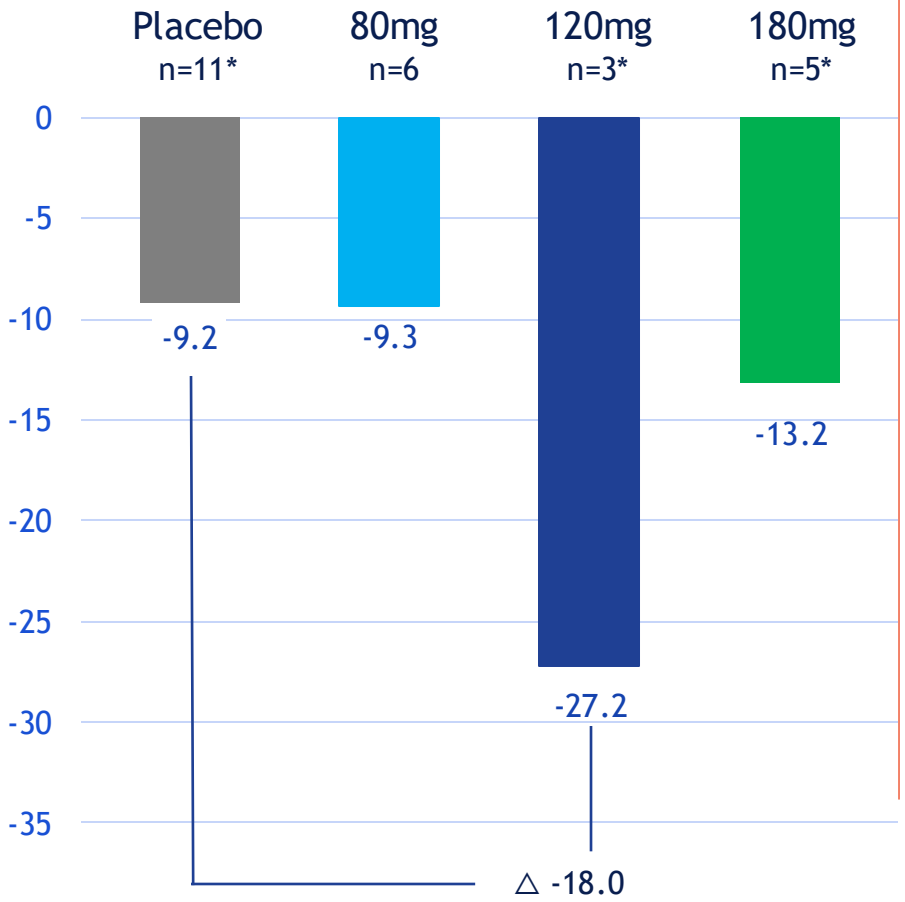
>25pt reduction in UAS7 noted in multiple dosing regimens ≥120mg

BEACON TRIAL

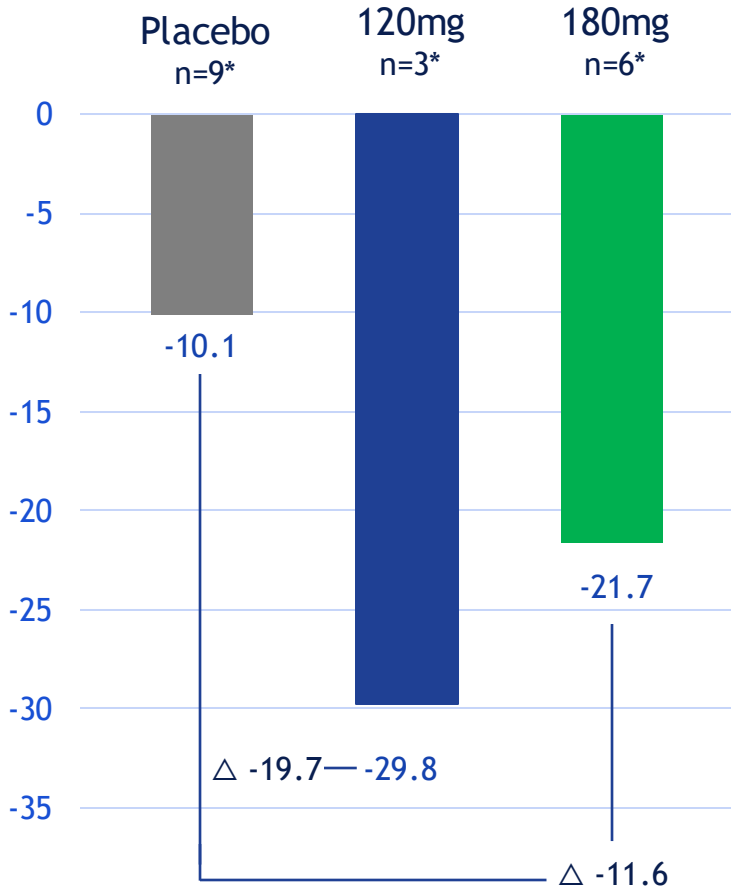
240mg SD UAS7 Mean Change from Baseline at Week 8



Q8W regimens UAS7 Mean Change from Baseline at Week 12



Q12W regimens UAS7 Mean Change from Baseline at Week 16



Data cut-off 31 Dec 2024

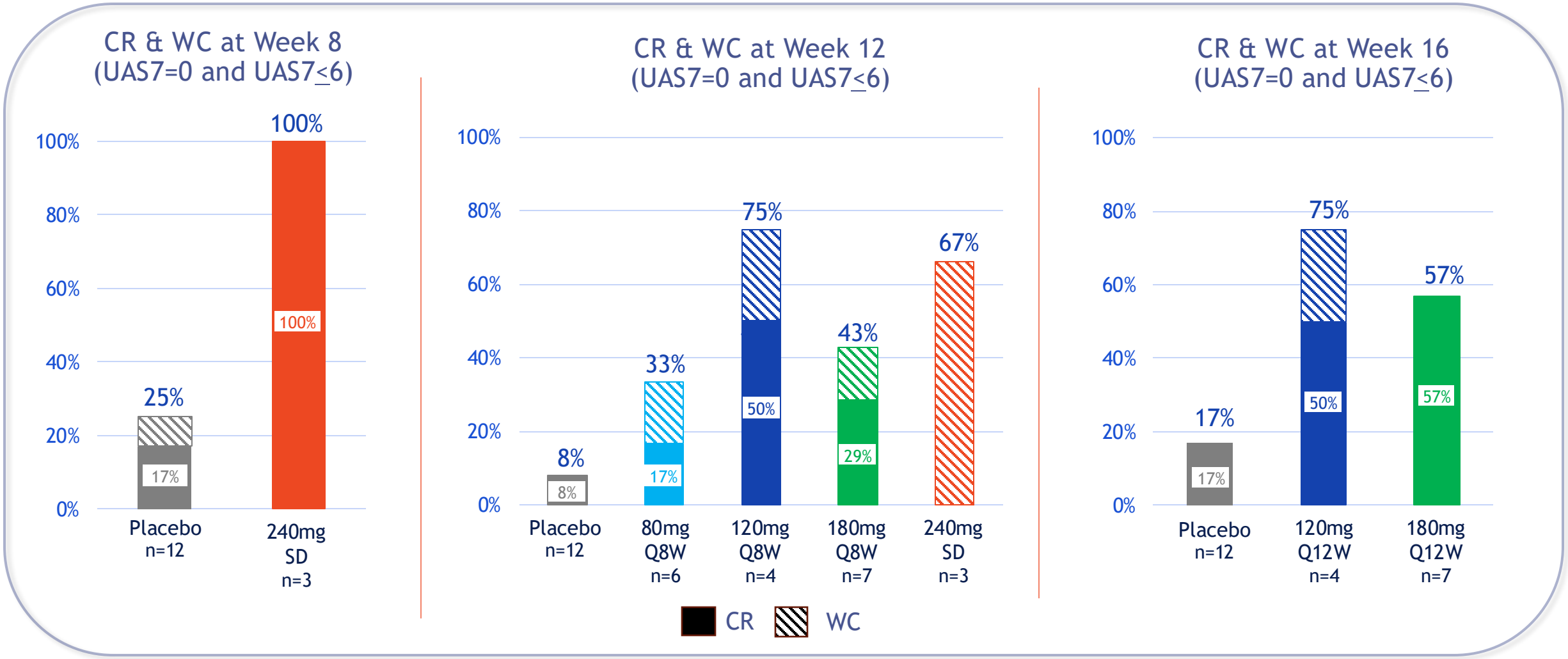
BRIQUILIMAB IS AN INVESTIGATIVE DRUG AND IS NOT APPROVED FOR ANY INDICATION

*Analysis of mean UAS7 change from baseline was conducted using observed cases at the designated analysis time point. If a patient did not report UAS7 for the relevant weekly timepoint, or discontinued treatment, they were not included in this analysis.

Dose dependent increase in patients achieving disease control

21 of 25 of patients treated at 120mg and above achieved Well Controlled disease

BEACON TRIAL



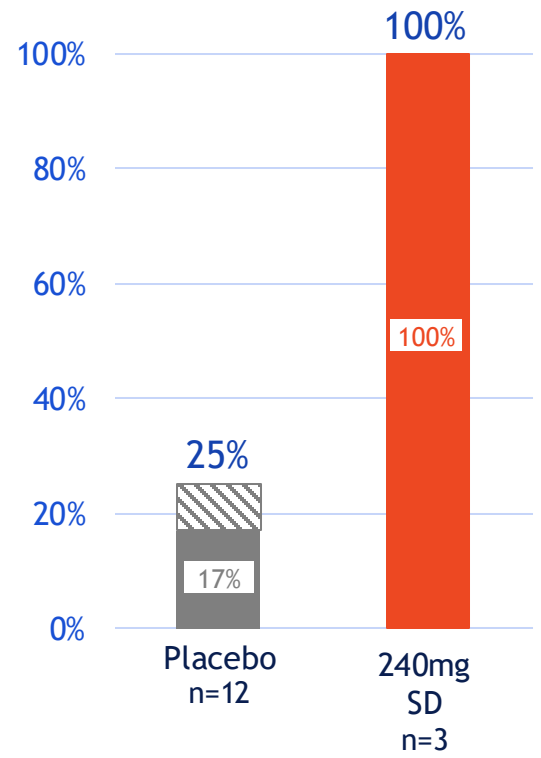
Data cut-off 31 Dec 2024

Note: Last observation carried forward (LOCF) method was used for data imputation

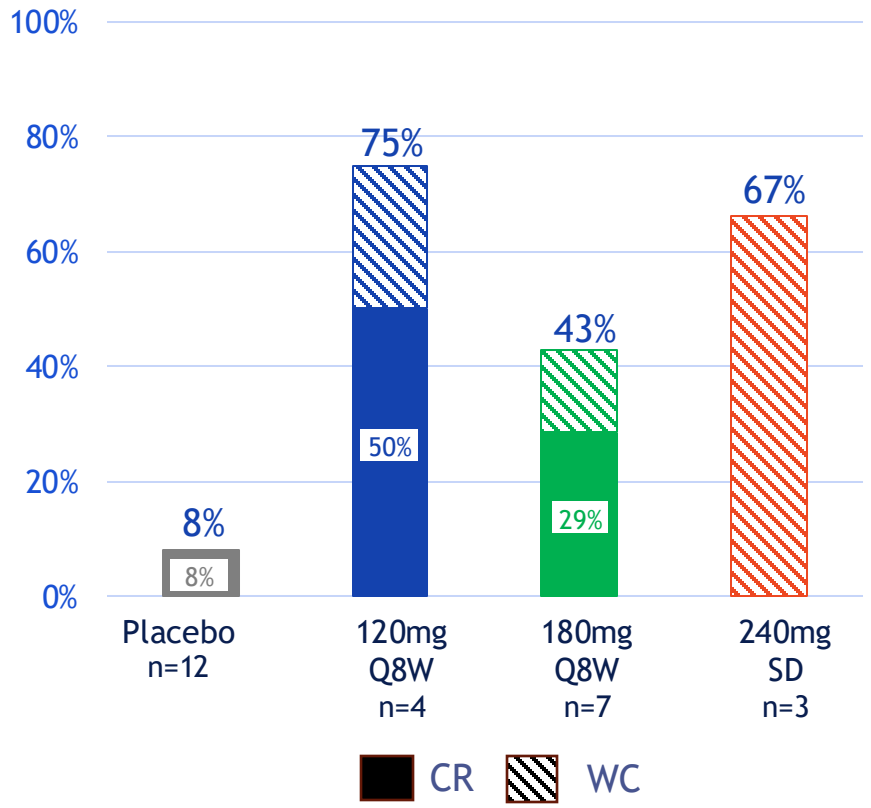
Deep & durable responses demonstrate potential for differentiated briquilimab efficacy at multiple doses

BEACON TRIAL

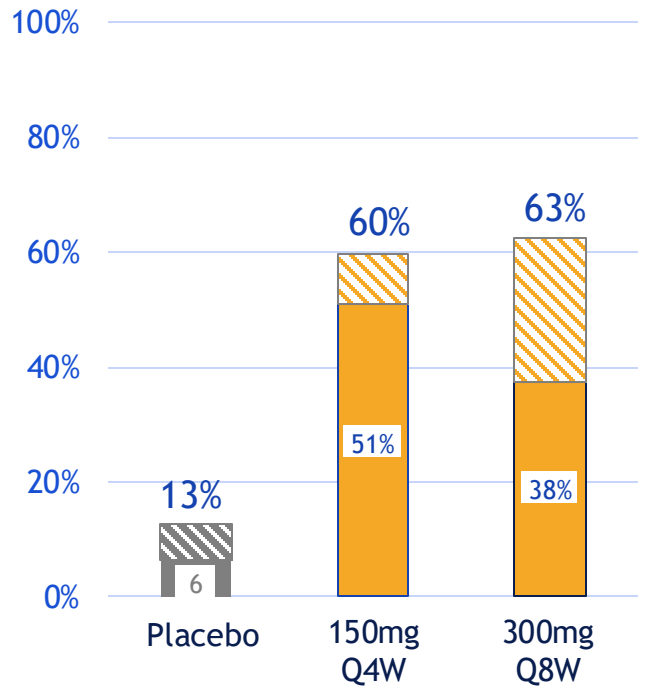
240 mg Complete Response at Week 8 (UAS7=0)



Q8W CR & WC at Week 12 (UAS7=0 and UAS7≤6)



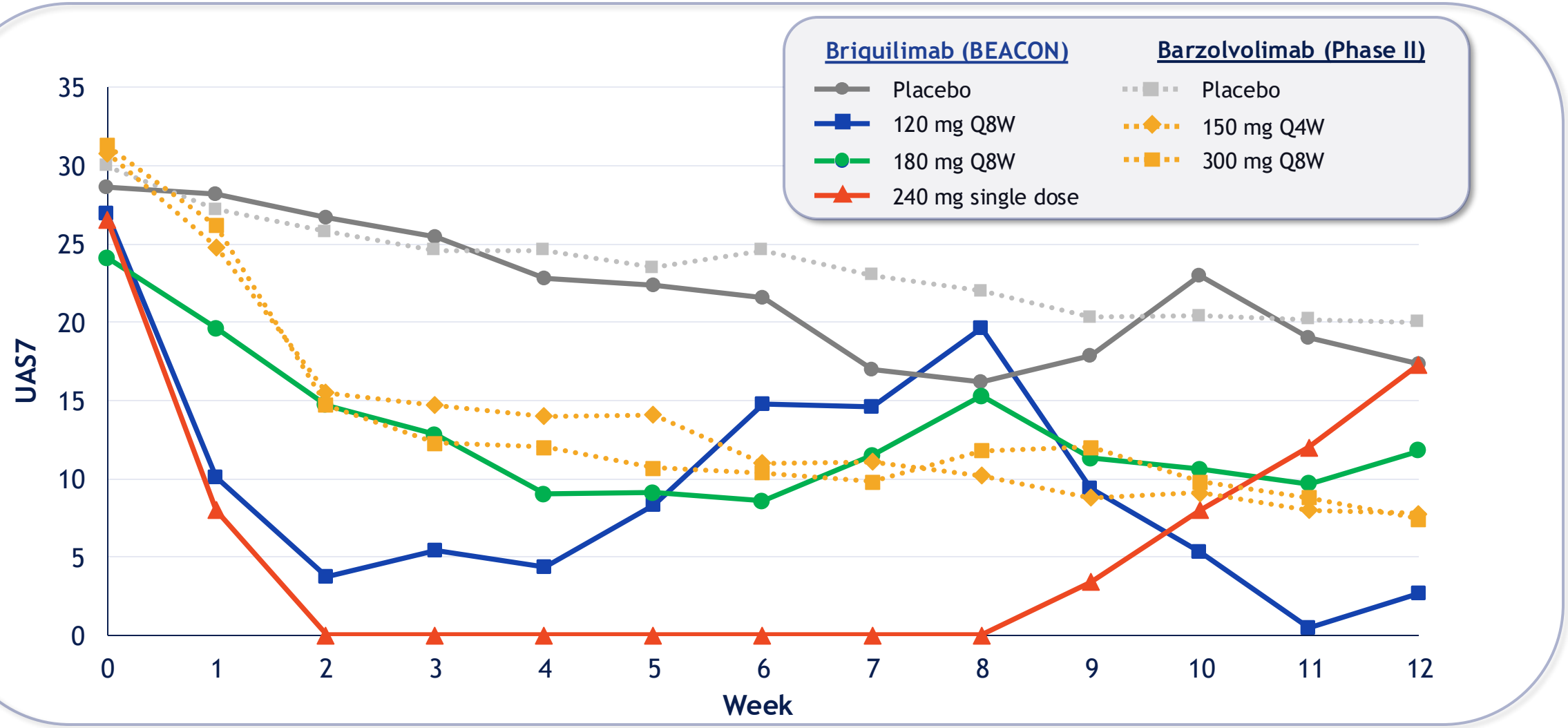
Barzolvolimab CR & WC at Week 12 (UAS7=0 and UAS7≤6)[1]



1 Barzolvolimab Phase 2 CSU Topline Results

Note: Last observation carried forward (LOCF) method was used for data imputation

Briquilimab demonstrated rapid onset of durable disease control



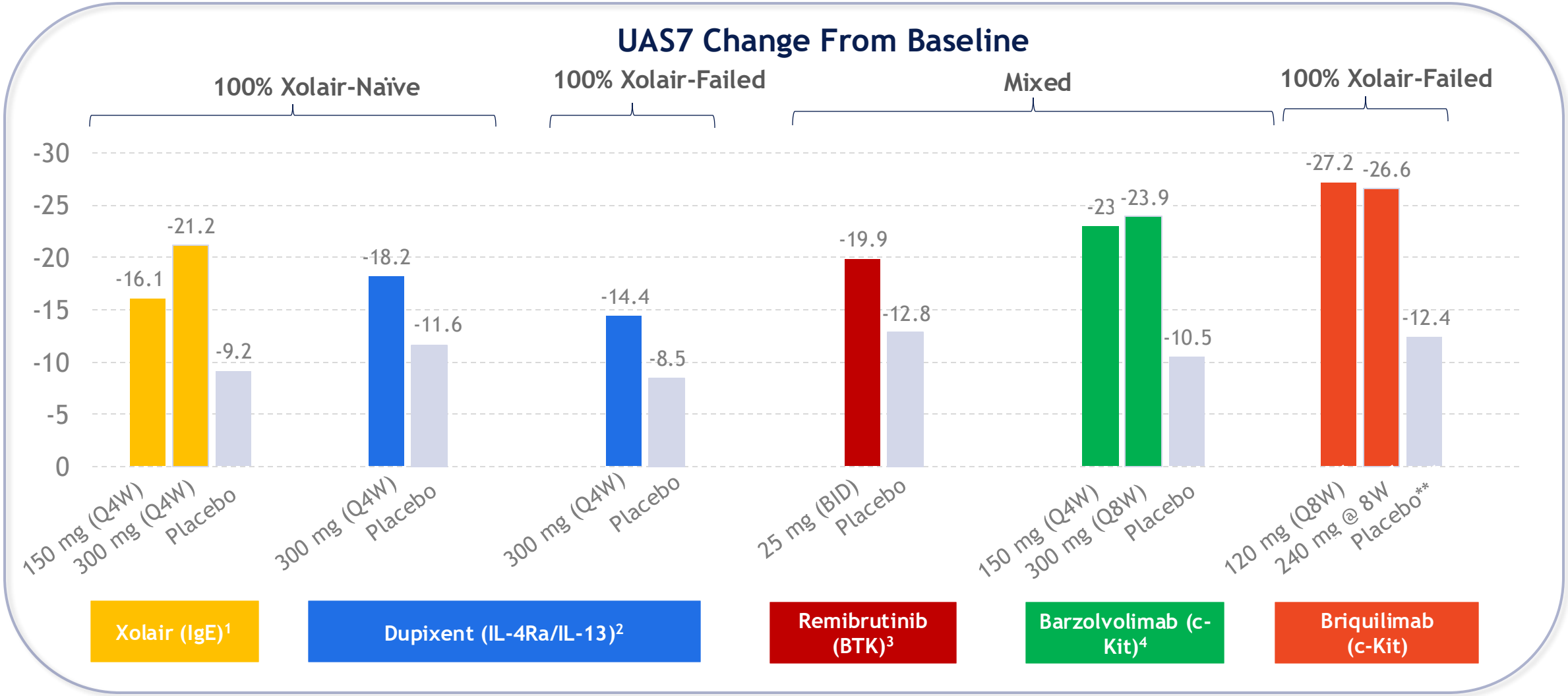
*Note: At Week 6 in the BEACON study, patients in the placebo arm were allowed rescue medications.

Adapted from William Blair Equity Research, Company reports

Change in UAS7 at week 12 (AH-failed)

Single dose 240mg briquilimab at 8 weeks shown for comparison

BEACON TRIAL



*ASTERIA 1 and 2 (Xolair), CUPID-A and C (Dupixent), and REMIX-1 and 2 (Remibrutinib) results are averaged. CUPID A-C results are at 24 weeks and not 12 weeks. **Briquilimab placebo is at week 8

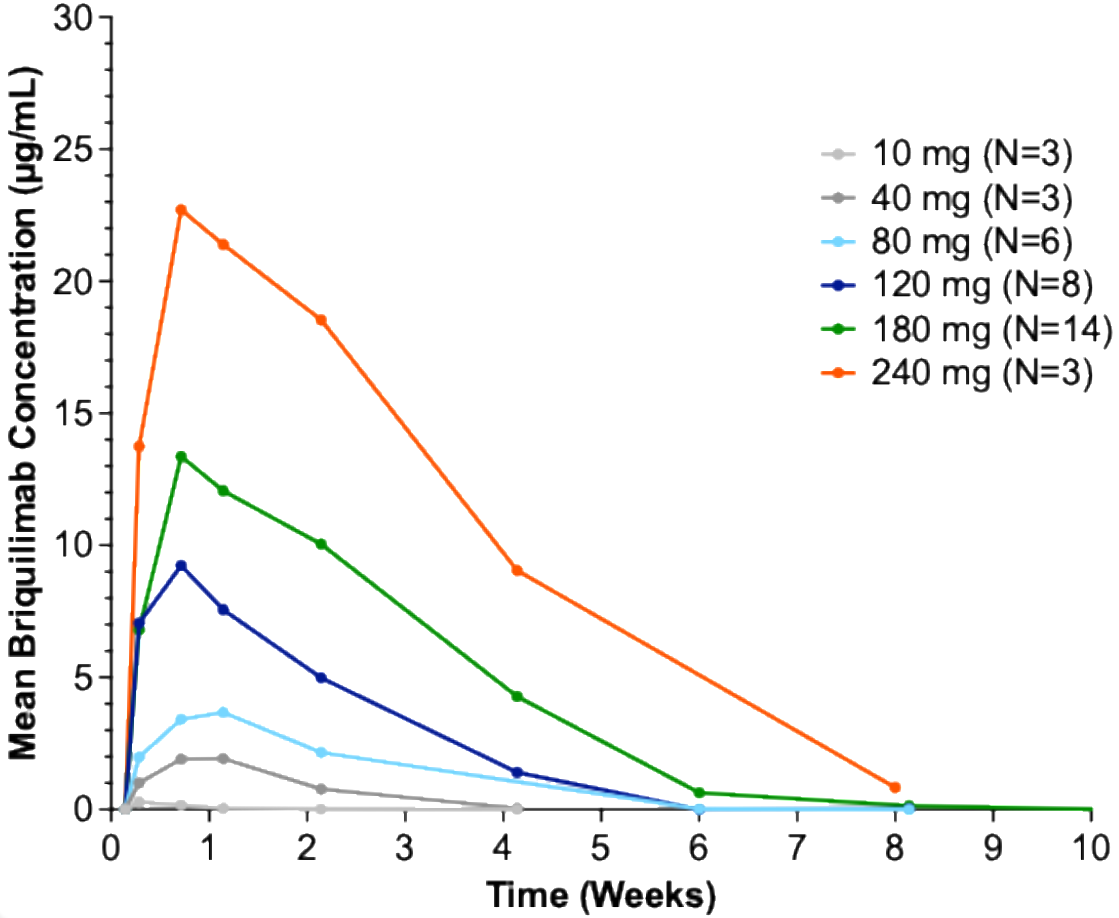
1 Saini. Journal of Investigative Dermatology. 2015; Casale. J Allergy Clin Immunol. 2015
2 Sanofi Press Release, October 24, 2024; Mauer. JACI. 2024
3 Saini et al. 2023 (Remix-1/2 Phase 3 Remibrutinib studies)
4 Barzolvolimab Phase 2 CSU Topline Results

Briquilimab PK demonstrates early Cmax consistent with rapid onset of response in patients with CSU

BEACON TRIAL

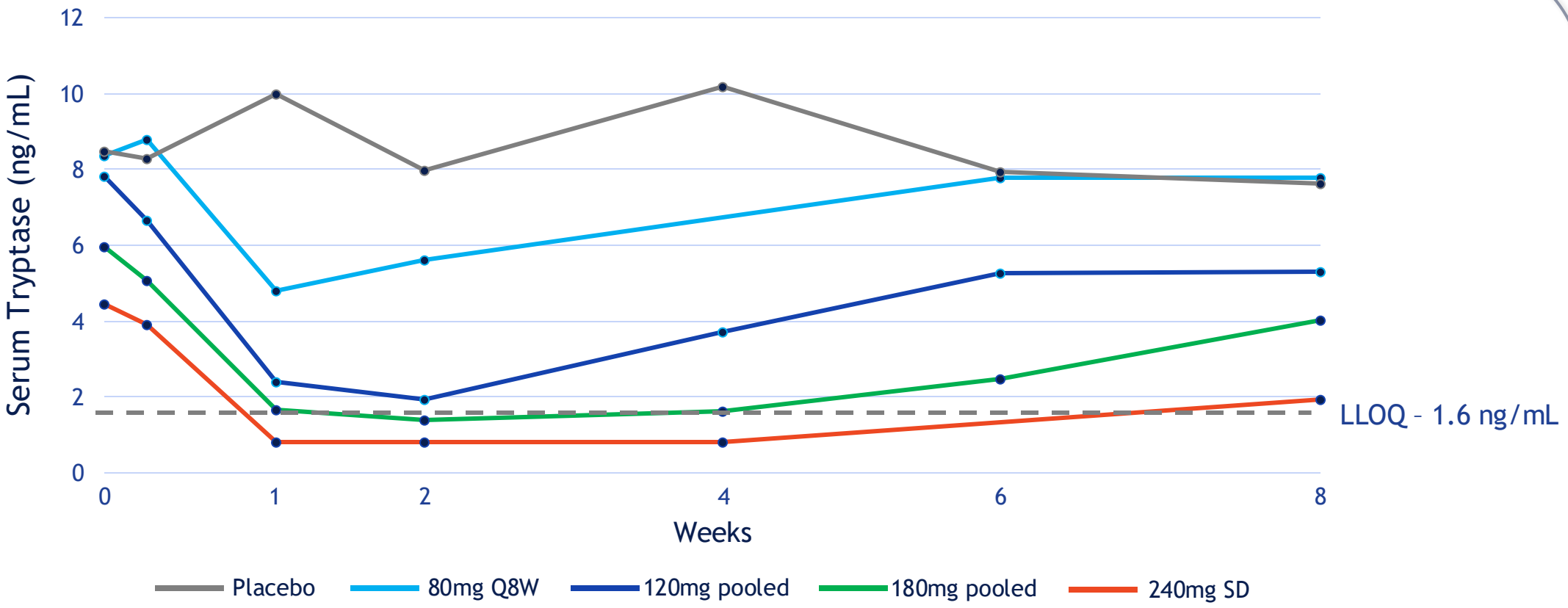
- Preliminary PK data in patients with CSU indicates briquilimab PK is comparable to historical data in healthy volunteers
- 240mg briquilimab SC Tmax is 4-7 days with a half-life of approximately 9 days
- No accumulation predicted for repeat dosing of 240mg SC briquilimab on a Q8W dosing schedule
- Preliminary data indicate 34% incidence of anti-drug antibodies (ADA) and no clinically meaningful effect of ADAs on briquilimab PK in CSU patients

Briquilimab Serum Concentration over Time in CSU Patients Following SC Administration



Dose dependent reductions in serum tryptase

Reduction to LLOQ seen in multiple patients at 180mg Q8W and all patients at 240mg dose levels



* All values below LLOQ (1.6 ng/ml) are represented as 50% of LLOQ (0.8 ng/ml)

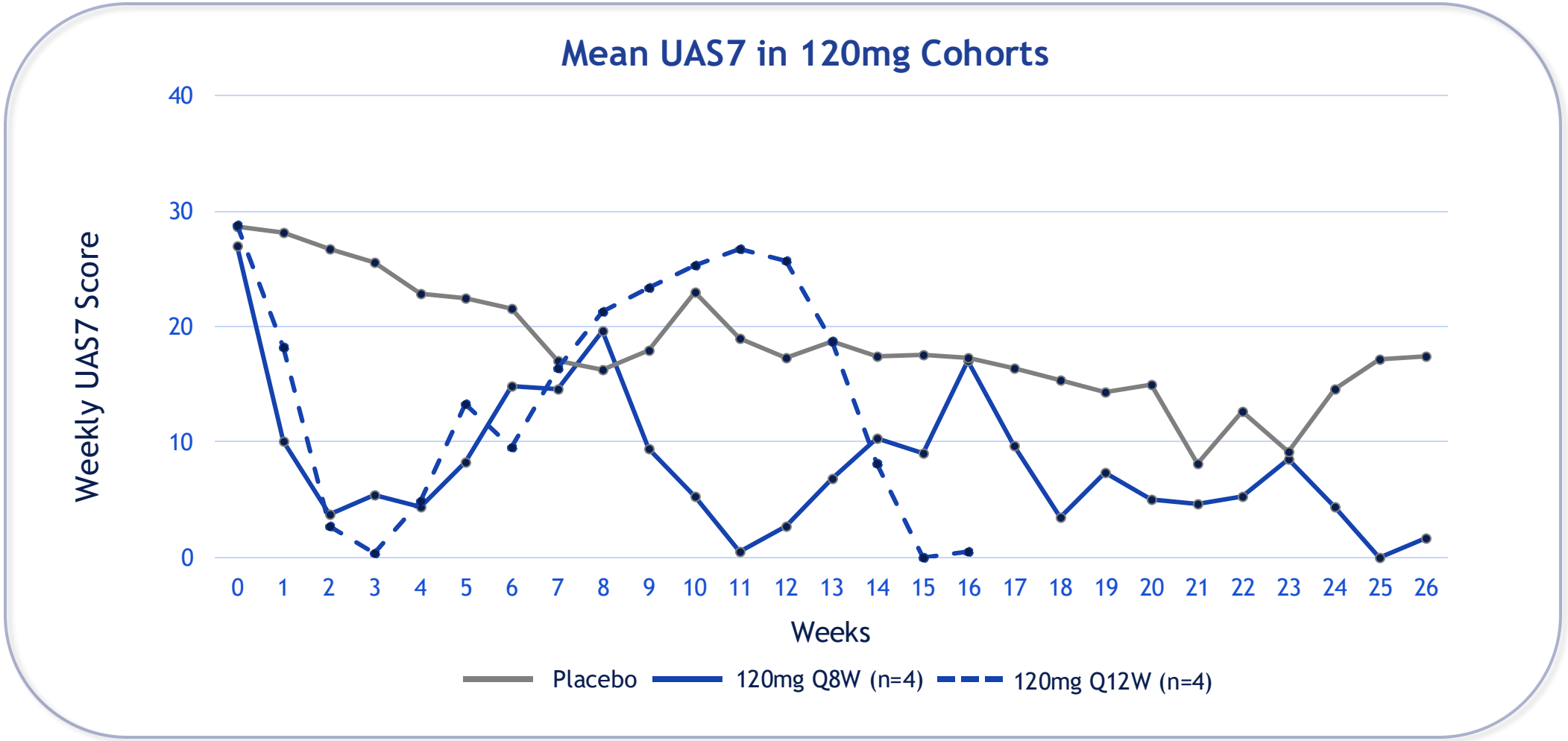
Data cut-off 31 Dec 2024

120mg doses demonstrated rapid onset of substantial UAS7 reductions

UAS7 reductions deepened on subsequent doses

All patients in 120mg Q8W and Q12W cohorts achieved UAS7=0 upon second dose

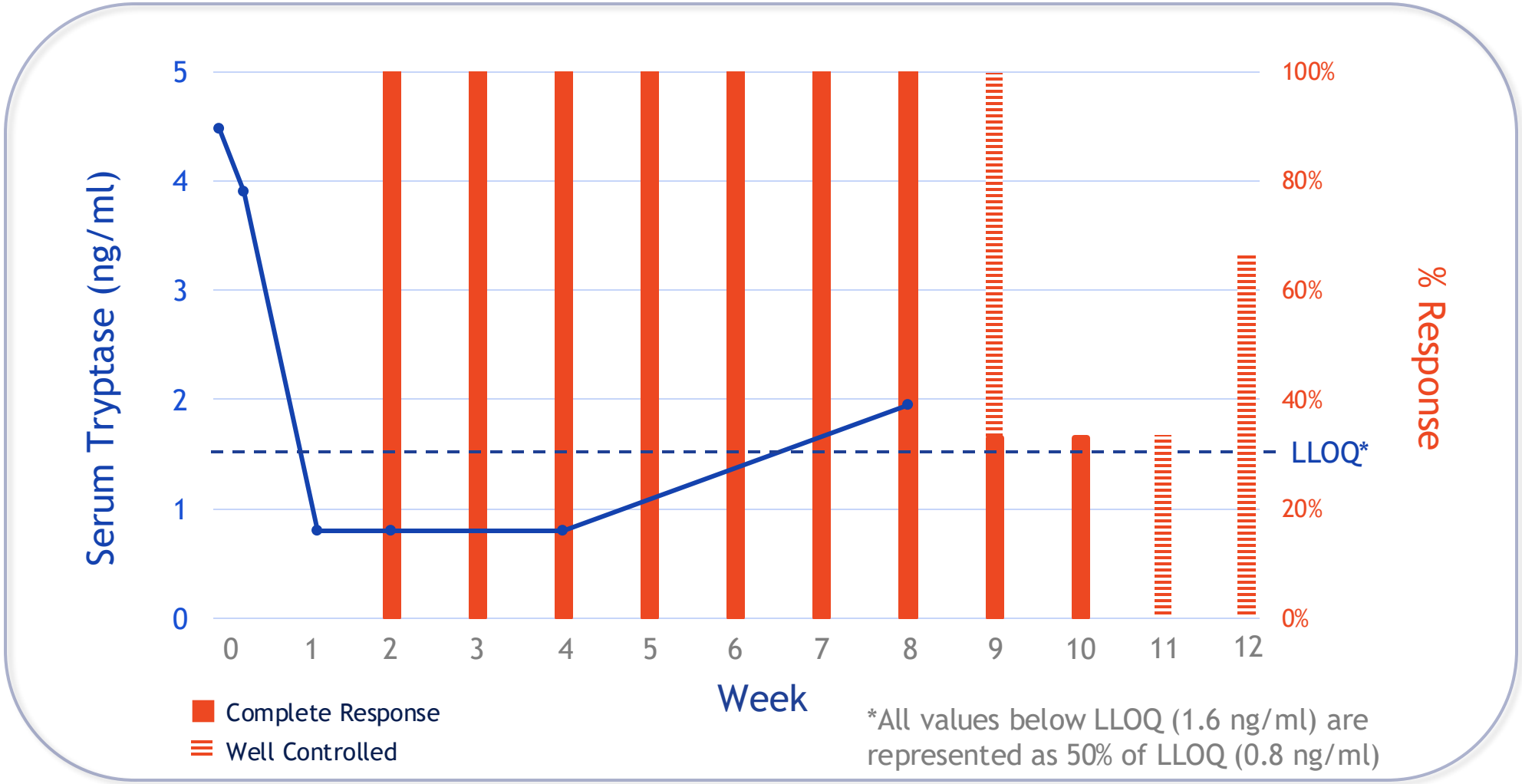
BEACON TRIAL



100% of patients at 240mg single-dose maintained CR to 8 weeks

All patients achieved CR by week 2, with 66% Well Controlled at Week 12

BEACON TRIAL



Briquilimab demonstrated a favorable safety profile

>24-week exposure for 10mg-180mg doses, 12-weeks for 240mg dose as of 31Dec24 data cut

BEACON TRIAL

Number of Participants With:	Pooled Briquilimab (N=37), n (%)	Pooled Placebo (N=12), n (%)
Any DLT	0 (0)	0 (0)
Any TEAE	26 (70.3)	8 (66.7)
Any Treatment-Related Serious TEAE	1 (2.7)[1]	0 (0)
Any Hypersensitivity	1 (2.7)[1]	0 (0)
Any Anaphylaxis	0 (0)	0 (0)
Any TEAE Leading to Discontinuation of IP	1 (2.7)[1]	0 (0)
Adverse Event ≥ Grade 3	1 (2.7)[2]	1 (8.3)[3]

Most commonly reported AEs (≥5 participants): nasopharyngitis, fatigue, hair color change, taste changes

[1]Single participant, 180mg Q8W, CoFAR grade 2 hypersensitivity reaction
[2]Single participant, 180mg Q12W, CTCAE grade 3 AE: neutropenia, unrelated - prior history of idiopathic neutropenia, thrombocytopenia
[3]Single participant, placebo, CTCAE grade 3 bronchitis

Safety observations possibly related to c-Kit blockade were infrequent and generally limited to low grade events

Majority resolved during repeat dosing and none resulted in discontinuations or dose delays

Adverse Event	Pooled Briquilimab N=37 (%)	Pooled Placebo N=12 (%)	CTCAE Grade / Comments
Hair color changes	4 (10.8)	1 (8.3)	• 4 reported as Grade 1, 1 Grade unreported • 2 cases reported to be resolved/resolving • 1 at 80mg, 1 at 120mg, 2 at 180mg and 0 at 240mg
Skin discoloration	0 (0)	1 (8.3)	• No skin discoloration observed with patient exposure up to 24 weeks
Taste change/ Hypogeusia	6 (16.2)	0 (0.0)	• All mild, Grade 1 occurring on first dose, 1 recurrence (resolved) • Taste reductions: bitter, salt, umami • Resolved in 4 patients: Median time to resolution of 31 days • 1 at 80mg, 1 at 120mg, 1 at 180mg and 3 at 240mg
Neutropenia / Neutrophil count decreased	5 (13.5)	1 (8.3)	• All resolved while on therapy prior to subsequent dose • Grade 3 neutropenia in a single participant with prior history of idiopathic neutropenia and thrombocytopenia, resolved on therapy • Grade 1 neutropenia/neutrophil count decrease in 5 participants, all resolved on therapy • No associated fevers or infections • 0 at 80mg, 2 at 120mg, 2 at 180mg and 1 at 240mg

Preliminary BEACON study data demonstrate potential for a differentiated safety profile

BEACON TRIAL

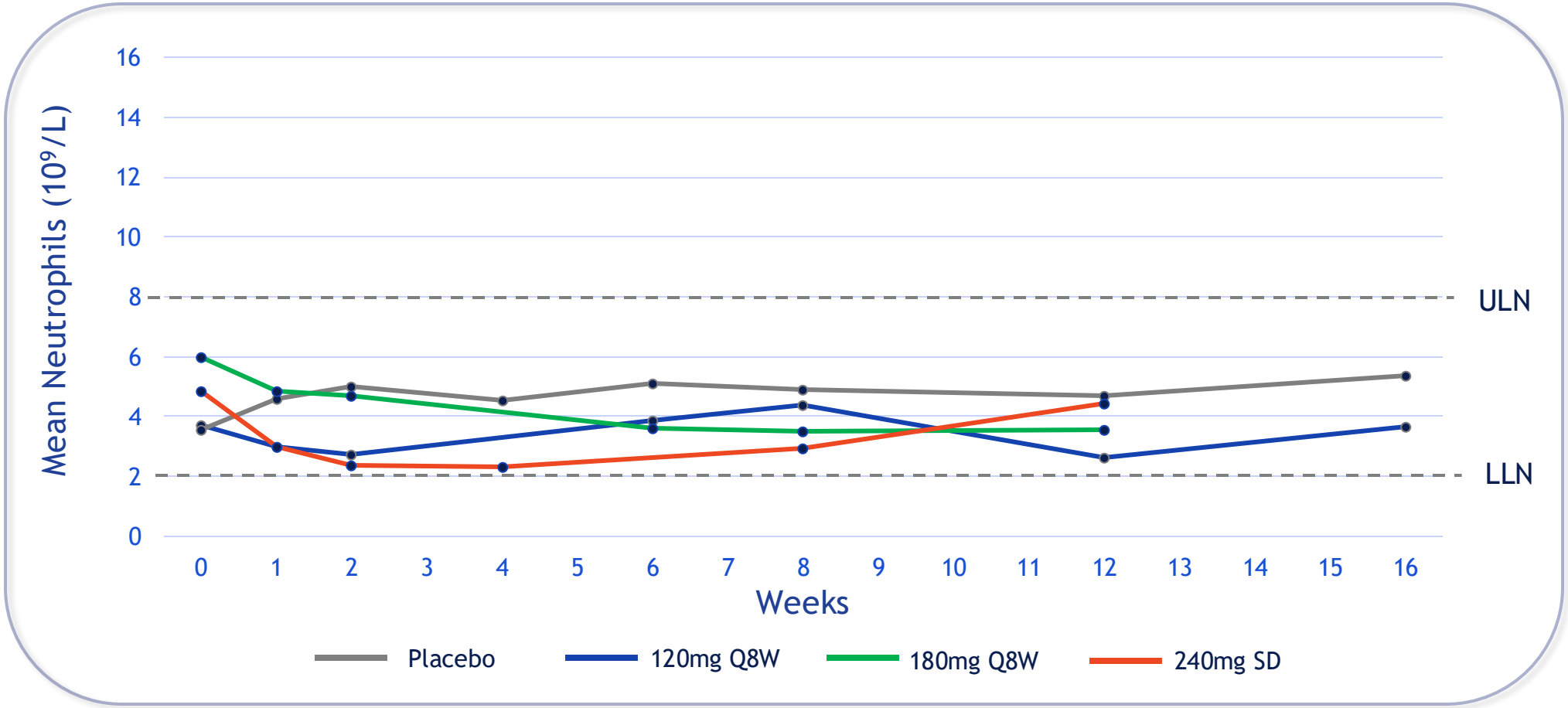
Adverse Event	Barzolvolimab[2,3]		Briquilimab[1]	Briquilimab AE Description
Average Time on Study	**16 weeks[2]** (W16 data cut)	**52 weeks[2]** (W52 data cut)	**28 weeks*** (Range: 12 – 45 weeks)	--
Hair Color Change	**14.1%[2]**	**28.8%[2]**	**10.8%**	Mild, transient
Skin Discoloration	**1.3%[2]**	**13.5%[2]**	**0%**	-
Taste Change	**38%[3]** ** (IV dose @12 wks)	**Not Shown**	**16.2%**	Mild, transient impairment of salt and umami, majority resolved on treatment
Neutropenia / Neutrophil Count Decreased	**9.0%[2]**	**18.7%[2]**	**13.5%**	Mild, transient drop in neutrophils, all of which resolved on treatment. Not associated with infection

*Final dose of briquilimab was administered at Week 24.
**Barzolvolimab's "taste change" events may be encompassed within "Nervous System Disorders" in Celldex's Ph2 presentation
***Discontinuations due to AE: neutropenia, abdominal pain, hair color change, hair color change/dizziness, urticaria, neutropenia/thrombocytopenia

1 Jasper Therapeutics: Preliminary BEACON Results, January 8th, 2025; 2 Barzolvolimab Phase 2 Study 52 Week CSU Results, September 25, 2024 (EADV); 3 Terhorst-Molawi D, et al. Allergy, May 2022

Neutrophil counts generally remained stable, with predictable reduction which subsequently resolved

No discontinuations or dose delays due to reductions in neutrophil counts



Data cut-off 31 Dec 2024

Source: Figure 14.3.4.1

Preliminary BEACON data support advancing 240mg Q8W & 120mg Q4W dosing regimens

BEACON TRIAL

Potential for meaningful differentiation at both dose levels

120mg Dosing

- Showed rapid onset of deep reductions in UAS7
- Clinical responses durable out to 4+ weeks
- Deep reductions in tryptase correlated with onset of clinical response
- Favorable safety profile observed
- Potential for differentiated 120mg Q4W therapeutic profile:
  - Mean UAS7 reductions as high as 29.8 points
  - 75% Well Controlled disease 4 weeks post-dose
  - 120mg PK supports optimal biologic dosing at Q4W
  - Potentially c-Kit related AEs were generally:
    - Low-grade, transient events, and;
    - Majority resolved while on therapy prior to subsequent dose

240mg Dosing

- Showed rapid onset of deep reductions in UAS7
- Clinical responses durable out to 8+ weeks
- Tryptase reductions below LLOQ observed in all patients
- Favorable safety profile observed
- Potential for differentiated 240mg Q8W therapeutic profile:
  - Mean UAS7 reduction of 26.6 points
  - 100% Complete Responses at 8 weeks post-dose
  - 240mg PK supports optimal biologic dosing at Q8W
  - Potentially c-Kit related AEs were generally:
    - Low-grade, transient events, and;
    - Majority resolved while on therapy prior to subsequent dose

Preliminary BEACON data support commencing registrational program 2H 2025

240mg Q8W and 120mg Q4W doses demonstrated potential for best-in-class therapeutic profile

Phase 2b adaptive study to finalize Phase 3 dose expected to commence 2H 2025

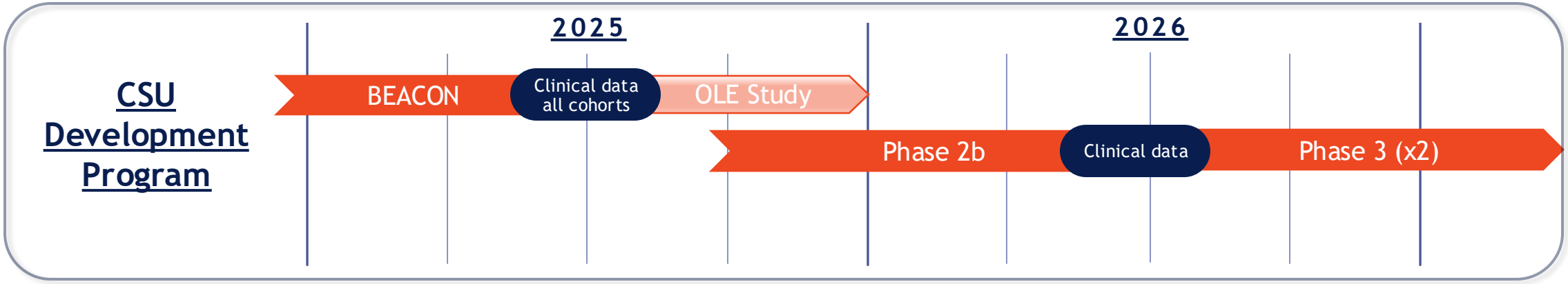
- 240mg Q8W and 120mg Q4W dosing regimens supported by preliminary BEACON data

Final Phase 2b dose selection will be informed by additional data coming mid-year 2025

- 240mg single dose (4 additional patients)
- 360mg (8 patients)
- 180mg Q8W Open Label Extension
- 240mg Q8W (8 patients)
- 240mg -> 180mg Q8W (8 patients)
- Additional SPOTLIGHT cohort at 180mg

Phase 3 studies expected to require 1,200-1,500 patients based on regulatory guidance

- Target enrollment expected to be driven by size of required safety database given robust efficacy



SPOTLIGHT TRIAL

Briquilimab in Chronic Inducible Urticaria

Briquilimab Phase 1b/2a SPOTLIGHT Study in CIndU

Randomized, Double-Blind, Placebo-Controlled, Multiple Ascending Dose Study

SPOTLIGHT TRIAL

Screening/Eligibility

- Diagnosis of Cold Urticaria (ColdU) or Symptomatic Dermographism (SD) for ≥ 3 mos
- H1-antihistamine-failed
- 18+ years

Study Operations

- **EU Lead : Martin Metz, MD**
- ~5 sites in the EU
- N = ~27

Key Assessments

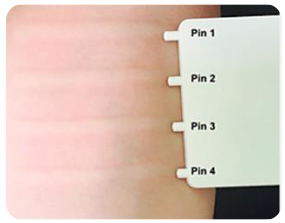
- **Provocation Test:** TempTest (ColdU), FricTest (SD)
- **Disease Scores:** UCT
- **Mast Cell Depletion & Recovery:** Serum Tryptase, Skin Biopsies, Codeine Skin Tests
- **Safety:** TEAEs, SAEs

Provocation Test Measured at 12 Weeks (Primary Endpoint)

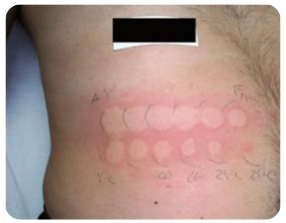
Dose	Patients	Schedule	Key Assessments & Follow-up
40 mg	n=3	Single Dose	**12 Week Efficacy Observation Period (6 Week Preliminary Analysis)**
120 mg	n=12		**+ 24 Week Additional Safety Observation**
180 mg	n=12		

Provocation Tests Used for Clinical Evaluation

Symptomatic Dermographism
FricTest™
CR - No response at Fric Level 4
PR - > 2 pin improvement



Cold Induced Urticaria
TempTest™
CR - Negative test at < 4°C
PR - Improvement by > 4°C



SPOTLIGHT 6 Week Efficacy Evaluation

SPOTLIGHT TRIAL

Rapid Onset of Effect

- >70% of 120mg patients with a CR or PR at 1 week assessment

Depth of Response

- 93% (14 of 15) of patients reporting a clinical response
- 92% (11 of 12) patients at the 120mg dose achieving a CR or PR by week 2
- 83% (10 of 12) patients at the 120 mg dose reported as well controlled or complete disease control by UCT score at week 4

Durability of Effect

- 6 CRs and 1 PR continued at six weeks, durability assessment ongoing

AD_T0003, AD_T0004, AD_L0001, AD_L0002

SPOTLIGHT 6 Week Efficacy Evaluation

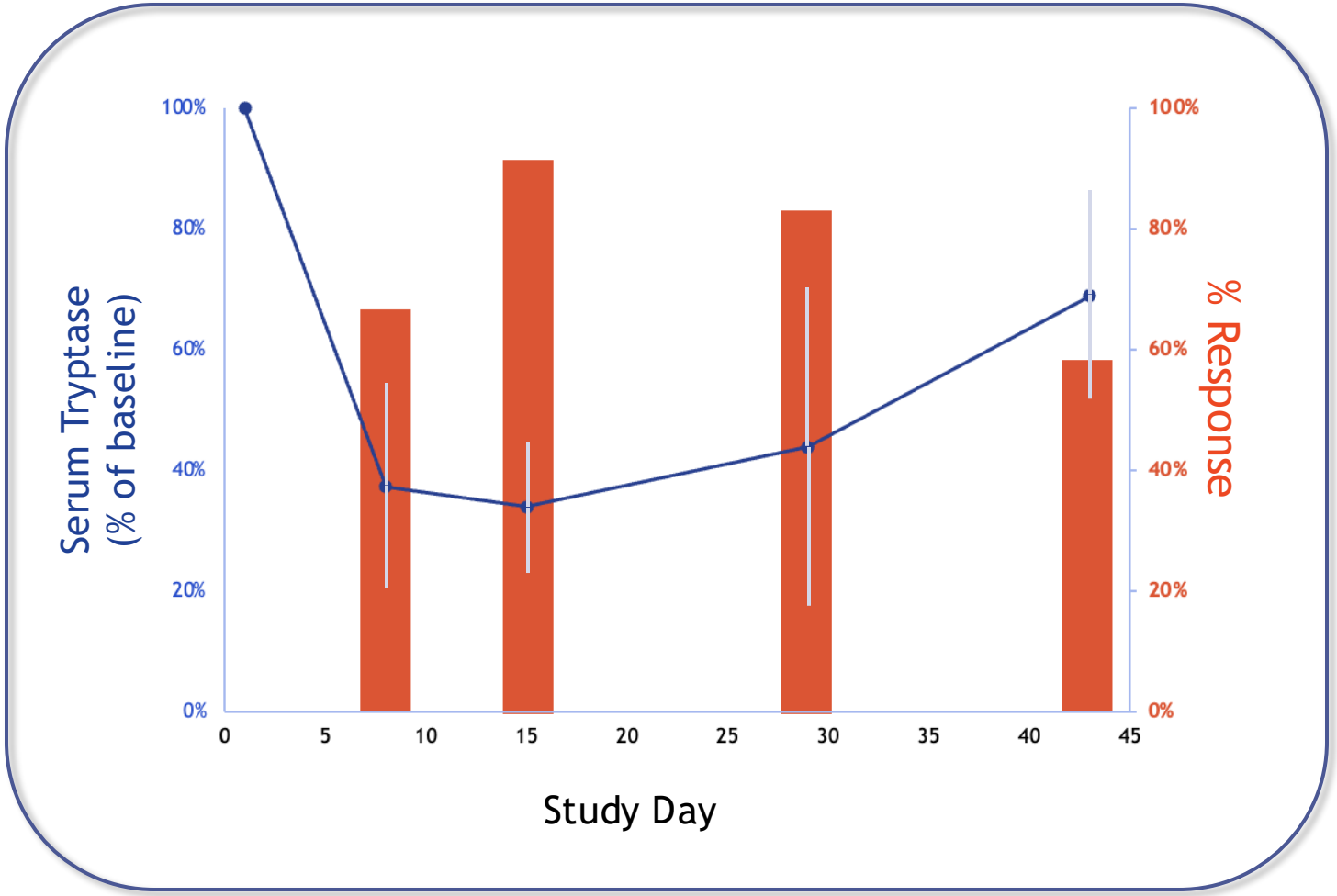
Briquilimab 120mg single dose achieved 83% (10 of 12) complete response

	Briquilimab 40mg (n=3)	Briquilimab 120mg (n=12)	Briquilimab All doses (n=15)
Complete Response, n (%)	1 (33%)	10 (83%)	11 (73%)
ColdU, n	0	3	3
Symptomatic Dermographism, n	1	7	8
Partial Response, n (%)	2 (66%)	1 (8%)	3 (20%)
ColdU, n	1	0	1
Symptomatic Dermographism, n	1	1	2
Complete or Partial Response at any time, n (%)	3 (100%)	11 (92%)	14 (93%)

AD_L0001, AD_L0002

SPOTLIGHT: Complete or partial response and serum tryptase through 6 weeks with briquilimab 120mg (n=12)

- Significant clinical response occurs within one week following dosing
- Serum tryptase reductions occur within the first week following dosing
  - Tryptase reductions as low as 50% associated with Complete Response in preliminary SPOTLIGHT data
- Serum tryptase recovery does not predict the timing of return of symptoms
  - Patients maintained CR even with tryptase recovering to 70%+ of baseline in preliminary SPOTLIGHT data



AD_T0003, AD_T0004, AD_L0001, AD_L0002

SPOTLIGHT Safety and Tolerability

	Briquilimab 40mg (n=3)	Briquilimab 120mg (n=12)
Any adverse event*	2**	10***
Any serious adverse event	0	0
Hypersensitivity reaction	0	0
Any adverse event leading to discontinuation	0	0
Adverse event leading to death	0	0
Adverse event ≥ grade 3	0	0

*AEs occurring in ≥2 participants: fatigue, dizziness, headache, nasopharyngitis, blood CK increased, diarrhea, muscle tightness, nausea
**AE report of Grade 1 neutropenia at Day 94, ANC 1825, resolved by Day 164
***AE report of Grade 1 neutrophil decreased at Day 29, ANC 1570, resolved by next measurement, Day 39

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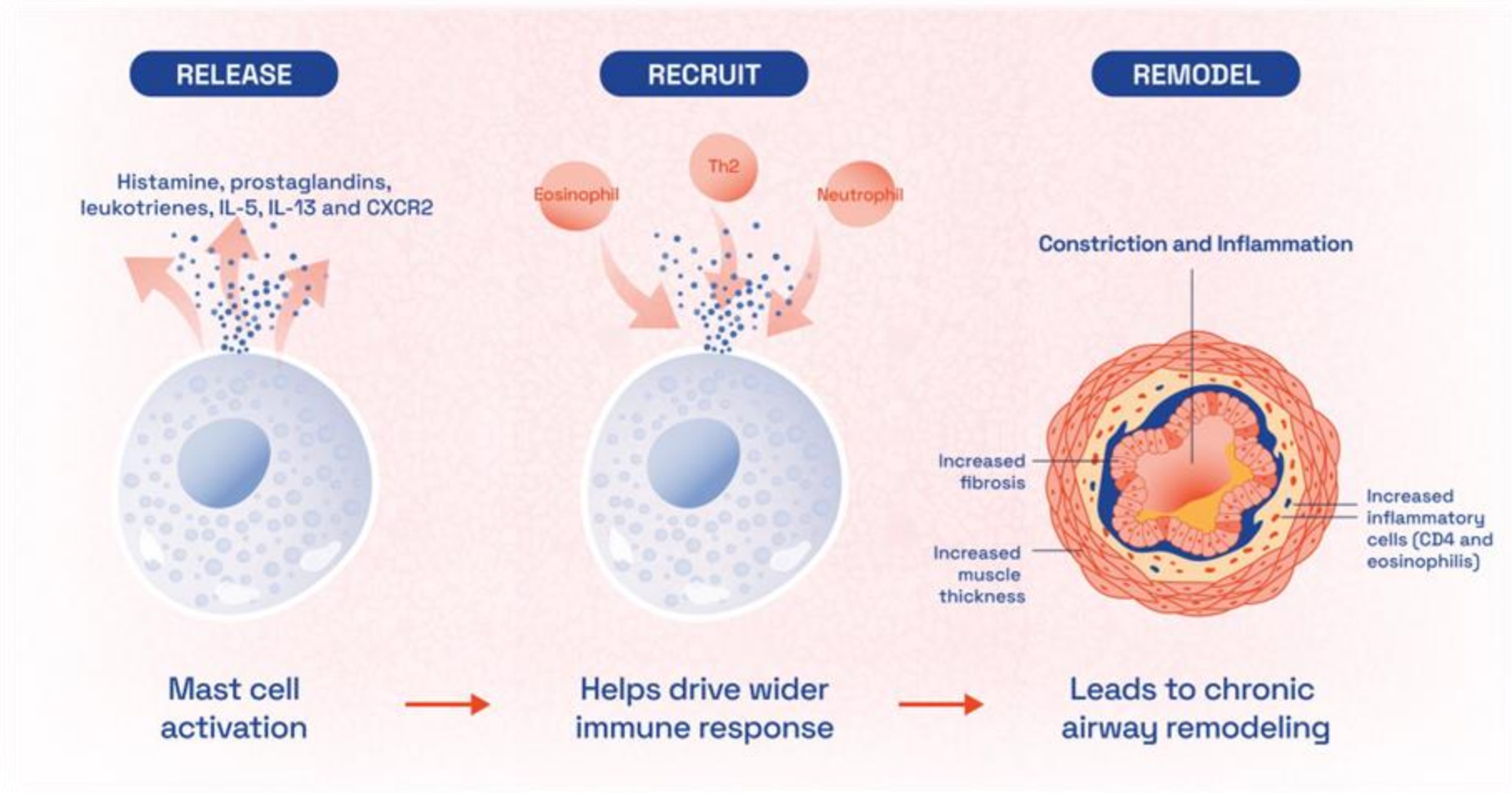
ETESIAN TRIAL

Briquilimab in Asthma

Mast cells play a critical role in inflammation and tissue remodeling in asthma

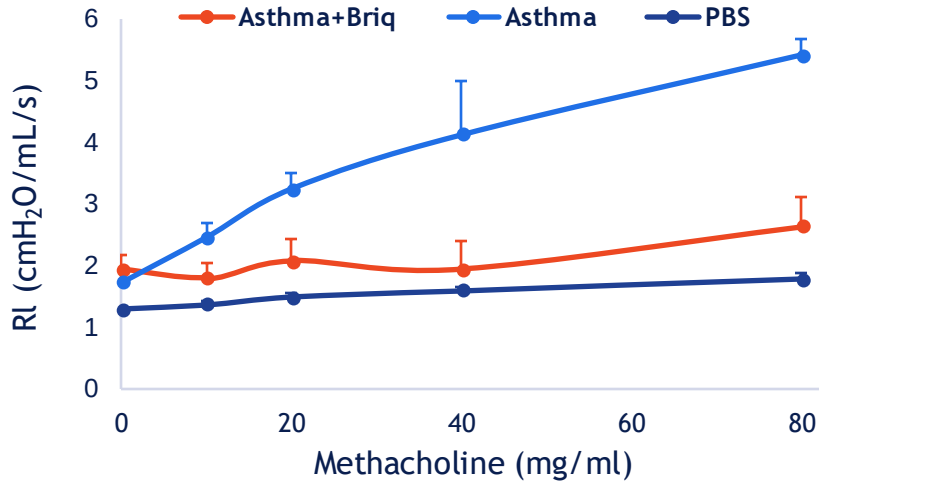
- The presence or accumulation of mast cells within the lung are pathological features of asthma[1]
- Mast cells release mediators and recruit other cell types into the airway that drive inflammation throughout all phases of the asthmatic response [2]



[1] Méndez-Enríquez E, Hallgren J. Mast cells and their progenitors in allergic asthma. Front Immunol. 2019;10:442022.
[2] Galli SJ, Tsai M, Piliponsky AM. The development of allergic inflammation. Nature. 2008;454(7203):445-454.

c-Kit inhibition in severe asthma is well supported across data sets

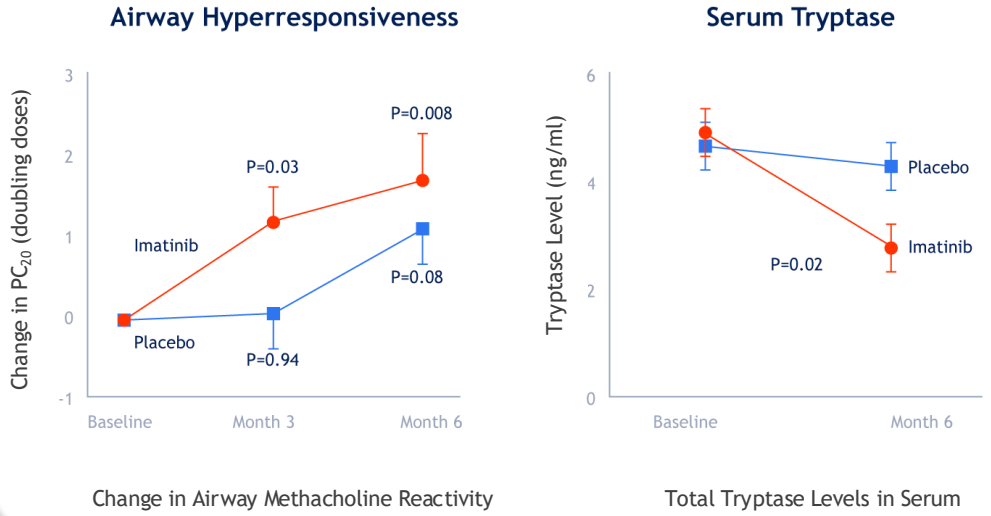
Jasper c-Kit Mouse ™ — Pulmonary Resistance



Jasper internal data

- Preclinical evidence shows that briquilimab depletes lung mast cells and reduces asthmatic response to allergen[1]

Ph2 Trial of Imatinib in Patients with Severe Refractory Asthma



- Imatinib decreased airway hyperresponsiveness, MC counts, and tryptase release in patients with severe asthma in a Phase 2 trial[2]
- Masitinib also demonstrated a 33% reduction in exacerbations in a Phase 3 trial in patients with severe asthma[3]

[1] Yu, M, et al. "Briquilimab, an Anti-CD117 (c-Kit) Antibody, Prevents Cockroach Allergen-Induced Allergic Asthma in Mice Expressing Chimeric Human and Mouse CD117.", AAAAI February 23-26, 2024.
[2] Cahill KN, Katz HR, Cui J, et al. "Kit inhibition by imatinib in patients with severe refractory asthma." N Engl J Med. 2017;376(20):1911-1920.
[3] Davidescu L, Ursol G, Korzh O, et al. "Efficacy and safety of masitinib in corticosteroid-dependent severe asthma: a randomized placebo-controlled trial." J Asthma Allergy. 2022;15:737-747.

Briquilimab Phase 1b/2a ETESIAN study in allergic asthma

Double-blind, placebo-controlled, single dose, challenge study

ETESIAN TRIAL

Screening/Eligibility

- Diagnosis of stable allergic asthma
- Baseline FEV1 70% of predicted value
- Positive methacholine challenge at baseline
- 18-65 years of age

Study Operations

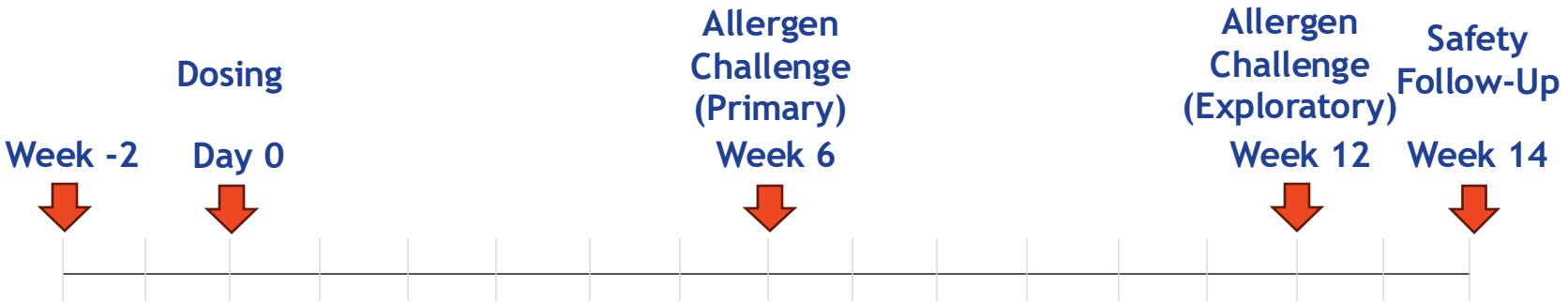
- **Lead Investigator: Paul O'Byrne, MD**
- Up to 7 centers in Canada
- N = 30 patients

Key Assessments

- **Early & Late Asthmatic Response:** % decrease in FEV_1 from baseline
- **Changes in Airway Hyperresponsiveness:** Methacholine PC20 24 hours after allergen challenge
- **Mast Cell Depletion & Recovery:** Serum Tryptase
- **Safety:** TEAEs, SAEs

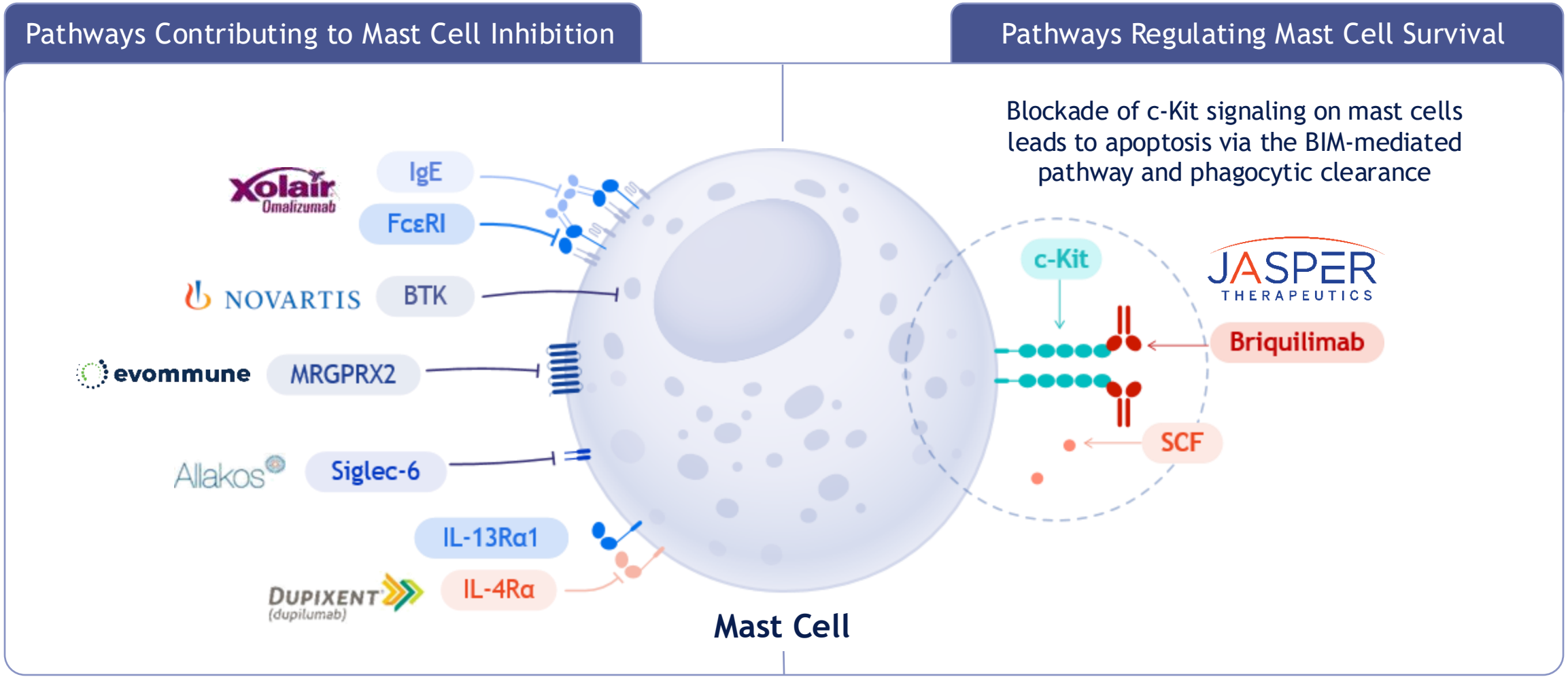
Allergen Challenge & Methacholine PD20 Measured at 6 weeks (Primary Endpoint) and 12 weeks (Exploratory Endpoint)

Patients (Randomization)	Dose	Timeline
n=30 (1:1)	180 mg (Single Dose)	Dosing: Week -2 / Day 0; Allergen Challenge (Primary): Week 6; Allergen Challenge (Exploratory): Week 12; Safety Follow-Up: Week 14



Opportunity in Mast Cell Diseases

Mast cell depletion may lead to deeper and more durable efficacy compared to inhibition and silencing approaches



BRIQUILIMAB IS AN INVESTIGATIVE DRUG AND IS NOT APPROVED FOR ANY INDICATION

Chronic urticaria is one of the most prevalent immunological conditions with ~1.4 million biologic eligible patients in the G6

Chronic urticaria is a devastating disease characterized by severe itching, hives/wheals, inflammation, and/or angioedema occurring for >6 weeks

Chronic urticaria symptoms can arise spontaneously (CSU) or after known triggers (CIndU)

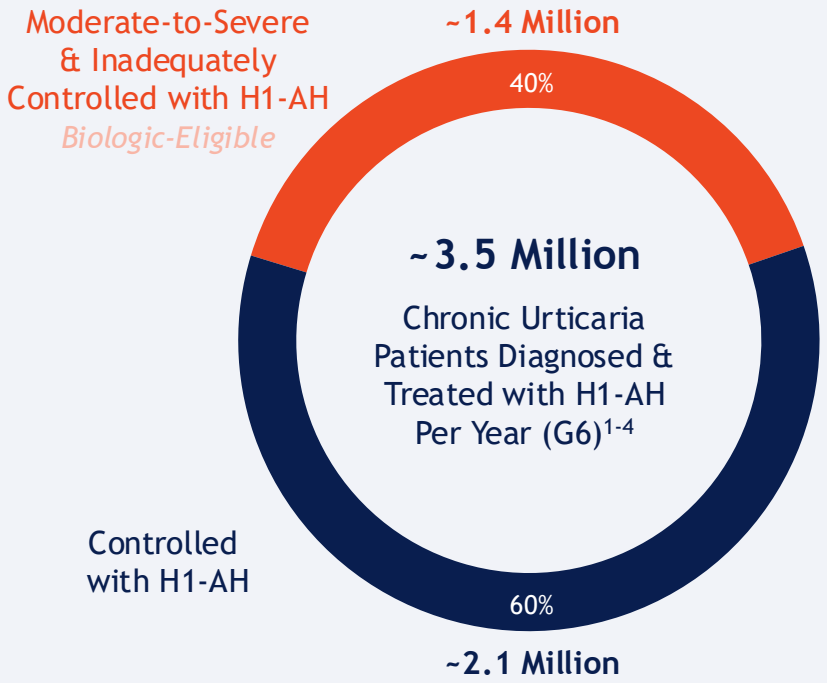
~1.4 million patients

have moderate-to-severe disease, in which the disease commonly persists for 5+ years [6]

*Approximately 50% of patients receiving Xolair have an inadequate response (Xolair prescribing information); H1-AH = H1-antihistamines.

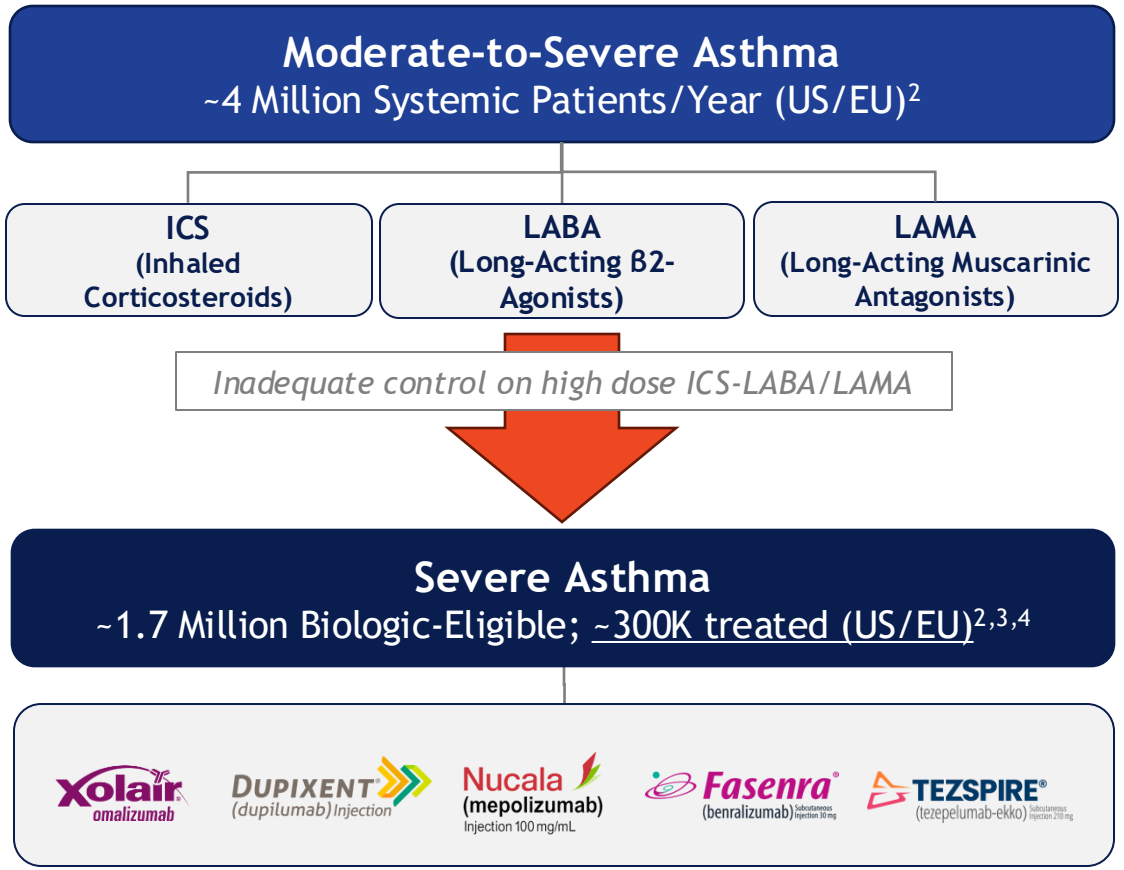
[1] Kolkhir P, et al. Nature Reviews. 2022; [2] Balp MM, et al., EADV 2023; [3] Novartis R&D Day, Dec. 2021; [4] Decision Resources Group, Chronic Urticaria, Dec. 2023; [5] IQVIA sales data; [6] Saini S, Kaplan A. JACI Practice. 2018.

Chronic Urticaria Market Opportunity



~2/3 chronic urticaria cases are CSU. ~1/3 are CIndU (~15% of patients have both) [1]

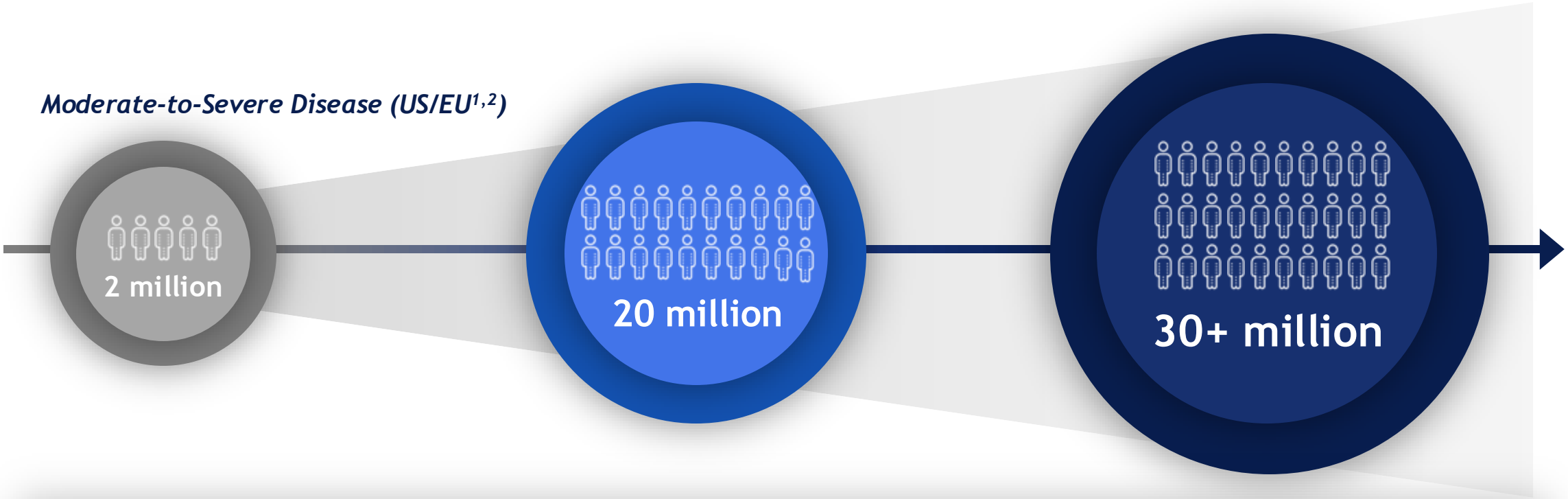
The global asthma biologics market is ~$10B today and is expected to grow with new therapies



- Severe asthma is a potentially life-threatening disorder characterized by **poor QoL, persistent symptoms, and frequent emergency room visits**[1,2]
- Approved biologics have limited efficacy, and are concentrated on only patients with high eosinophils
- Only **~17% of severe asthma patients receive biologic treatment.** Penetration is expected to grow with new therapies for patients with allergic or Type 2-low disease (~50% of patients)[4,5,6]

1 2022 GINA Main Report, Global Initiative for Asthma – GINA; 2 Qin. J Asthma. 2021; 3 GlobalData; 4 Sanofi R&D Day, Dec. 2023; 5 TD Cowen Respiratory Outlook 2024 (Sanofi/Regeneron/AstraZeneca); 6 Jasper Primary Research 2024.

Briquilimab has the potential to be a major immunology franchise by delivering control to millions of patients with mast-cell driven diseases



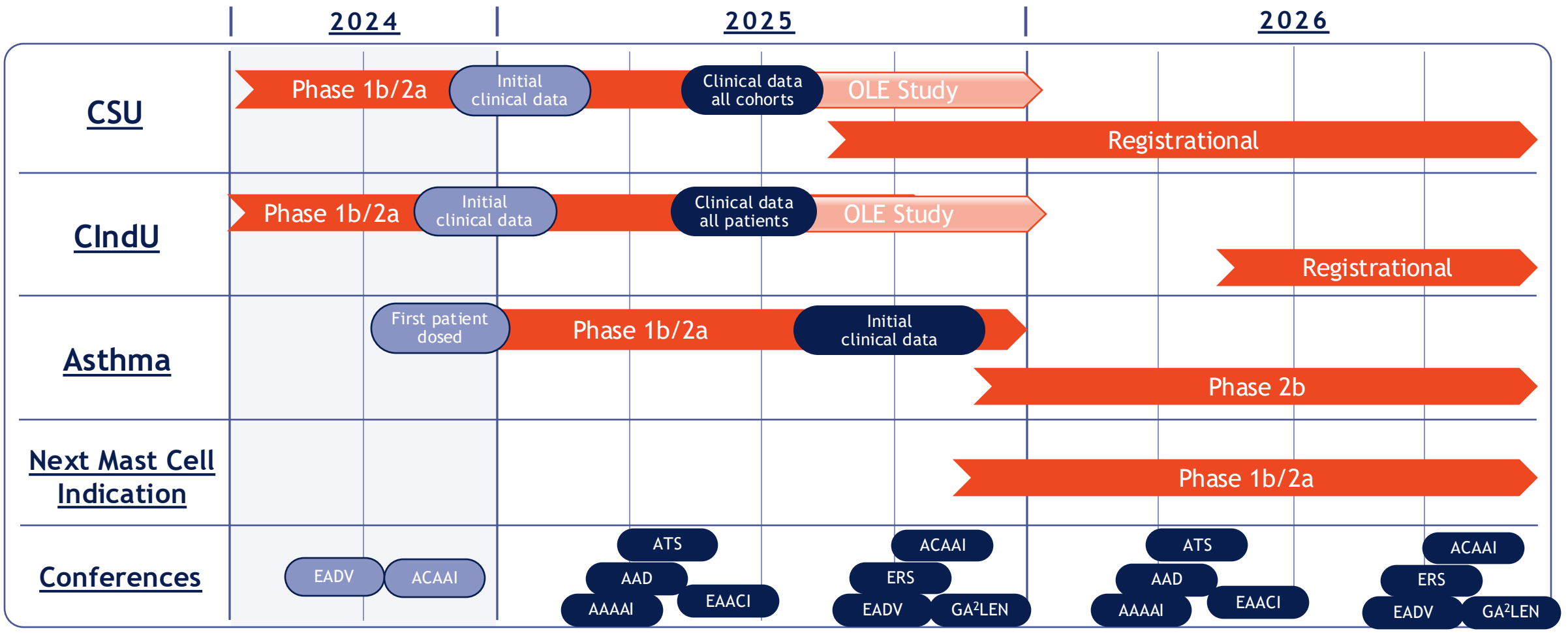
Chronic Atopic and Mast Cell Driven Diseases

- Chronic Spontaneous Urticaria
- Chronic Inducible Urticaria
- Asthma
- COPD
- Chronic Rhinosinusitis with Nasal Polyps
- Prurigo Nodularis
- Atopic Dermatitis
- Eosinophilic Esophagitis
- IBD
- Food Allergies

BRIQUILIMAB IS AN INVESTIGATIVE DRUG AND IS NOT APPROVED FOR ANY INDICATION

1 EvaluatePharma; 2 Databridge Market Research

Key milestones & financials



Financial Overview	$92.5M cash & investments at 9/30/24	Cash runway through 3Q25

Briquilimab: Franchise Potential in Mast Cell Mediated Diseases

c-Kit Inhibition

A clinically validated MOA

- Mast cells are the primary driver in multiple allergic and atopic diseases including urticarias, asthma, food allergy and others
- c-Kit inhibition is the only therapeutic mechanism shown to significantly deplete mast cells for durable and well tolerated disease control
- c-Kit inhibition has demonstrated clinical proof of concept in multiple mast cell mediated diseases

Clinical Profile

Supports optimal biologic dosing

- BEACON results show rapid onset of deep and durable responses with up to 100% complete response through 8 weeks
- SPOTLIGHT results show rapid onset of effect and 83% complete response rate
- BEACON and SPOTLIGHT data demonstrate briquilimab was well tolerated with a favorable safety profile in both CIndU and CSU

Franchise Potential

In mast cell driven diseases

- CSU: data from additional BEACON cohorts expected by mid-year 2025
- CIndU: SPOTLIGHT study additional data expected 1H 2025
- Asthma: Enrollment in ETESIAN study ongoing, initial data expected 2H 2025
- Additional mast cell mediated diseases under evaluation

Jasper Therapeutics

NASDAQ: JSPR January 2025

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