Jasper Therapeutics

SPOTLIGHT Data Update

June 16, 2025

JASPER THERAPEUTICS

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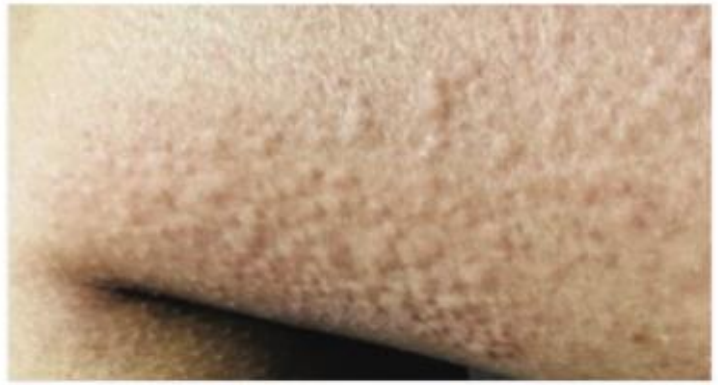
Today's Agenda

- Opening Remarks
- SPOTLIGHT 180mg Results Summary
- Upcoming Milestones and Closing Remarks
- Question & Answer Session

SPOTLIGHT 180mg Results Summary

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

- Chronic inducible urticaria (CIndU) is a debilitating inflammatory condition of the skin with a specific trigger such as heat, cold, sunlight, rubbing or scratching the skin or tight clothing
- Mast cell degranulation, leading to the release of histamine and other inflammatory mediators, is the key driver of severe itching, hives and angioedema in CIndU patients
- CIndU patients **suffer both physically and psychologically.** Severe disease has a similar **negative impact on QoL** as other dermatologic diseases like plaque psoriasis
- Targeting the KIT receptor with briquilimab disrupts a critical survival pathway on mast cells leading to mast cell apoptosis and disease resolution



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

Phase 1b/2a SPOTLIGHT Study in Chronic Inducible Urticaria

Open-label, single 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

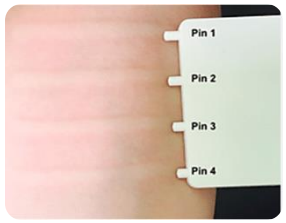
- **Provocation Test:** TempTest® (ColdU), FricTest® (SD)
- **Disease Scores:** UCT
- **Mast Cell Depletion & Recovery:** Serum Tryptase, Skin Biopsies
- **Safety:** TEAEs, SAEs

Provocation Test Measured at 12 Weeks (Primary Endpoint)

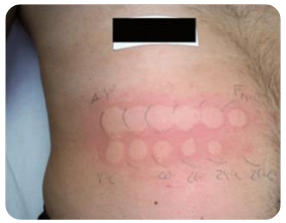
Dose	Patients	Schedule	Key Assessments & Follow-up
40 mg	n=3	Single Dose	**12 Week Efficacy Observation Period (6 Week Preliminary Analysis)**
120 mg	n=12		**+ 24 Week Additional Safety Observation**
180 mg	n=12		

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 ≤ 4ºC
PR - Improvement by ≥ 4ºC



Open-Label Extension

Patients may roll over to open-label extension study evaluating briquilimab at 180mg Q8W

Rapid Onset of Deep and Durable Efficacy Observed at 180mg Dose

SPOTLIGHT TRIAL

Depth of Response

- 12 of 12 patients (100%) at 180mg achieved clinical response following single-dose of briquilimab
- 11 of 12 patients (92%) at 180mg achieved complete response (CR)
- 10 of 12 patients (83%) at 180mg had tryptase measurements below lower limit of quantification

Rapid Onset of Effect

- 67% of 180mg patients with CR or partial response (PR) at week 2 assessment

Durability of Effect

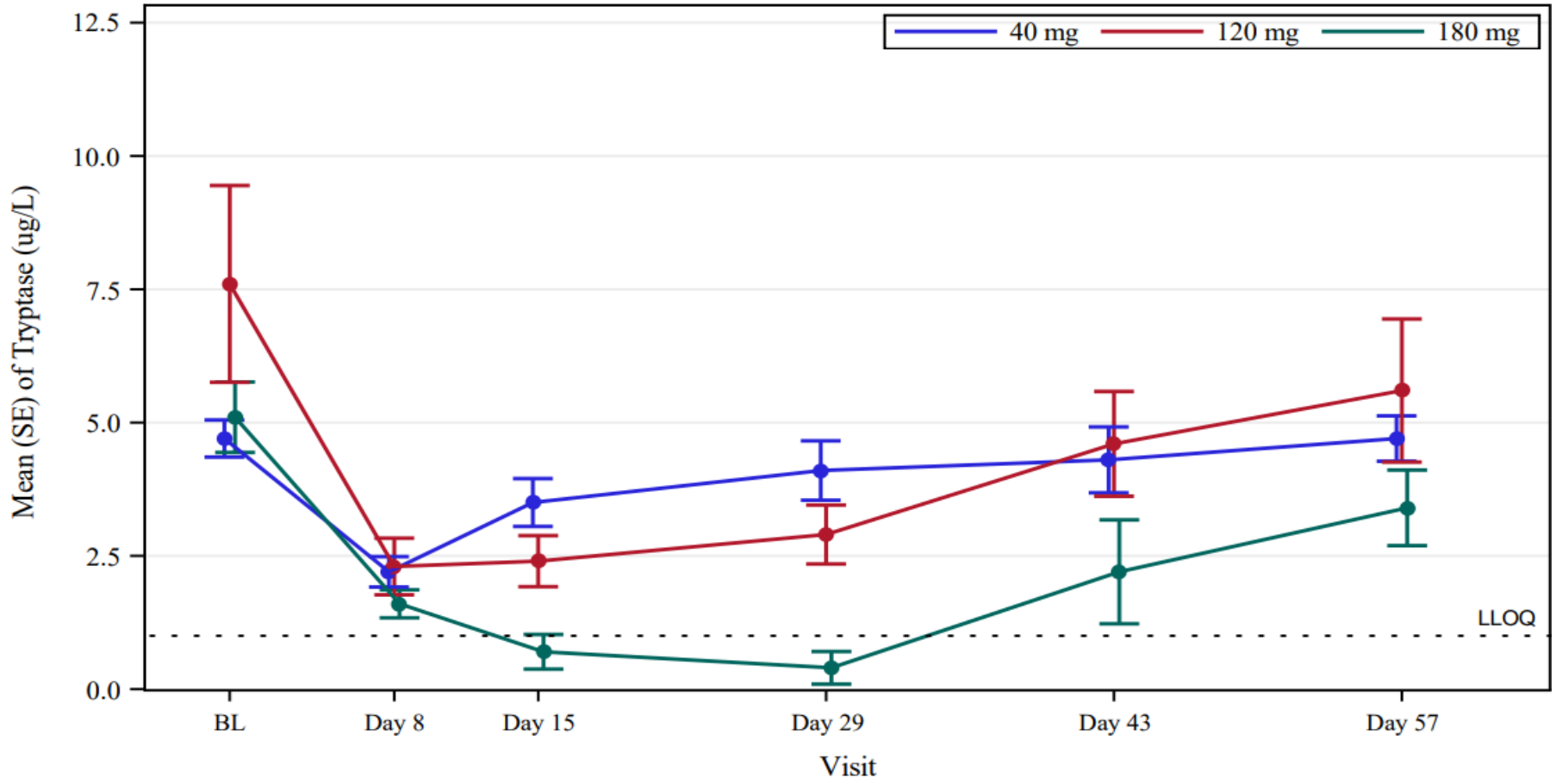
- 5 CRs and 2 PRs maintained at week 8 (58%, 7/12), durability assessment ongoing

SPOTLIGHT Baseline Demographics

	Briquilimab 40mg (n=3)	Briquilimab 120mg (n=12)	Briquilimab 180mg (n=12)
Age (years), mean (SD)	35.3 (8.0)	46.4 (13.8)	39.9 (16.0)
Female, n (%)	1 (33%)	8 (67%)	7 (58%)
Weight (kg), median (range)	86.0 (69-94)	99.0 (57-115)	86.5 (54-104)
Cold Urticaria, n	1	4	3
Symptomatic Dermographism, n	2	8	9
Baseline Provocation Threshold			
TempTest™ (°C), mean (range)	16.0 (16-16)	20.8 (15-27)	18.7 (10-26)
FricTest™ (Pin Count), mean (range)	3.5 (3-4)	3.9 (3-4)	3.7 (3-4)
Urticaria Control Test (UCT) score, mean (SD)	3.7 (2.5)	6.3 (3.3)	6.5 (2.7)
Tryptase (ng/ml), mean (range)	4.7 (4.1-5.3)	7.6 (3.6-25.7)	5.1 (3.2-11.2)

SPOTLIGHT: Dose dependent reductions in serum tryptase

Reduction to below Lower Limit of Quantification (LLOQ) (1 µg/L) seen in 83.3% (10/12) participants at 180mg



* All values below LLOQ (1.0 µg/L) are represented as 0 µg/L

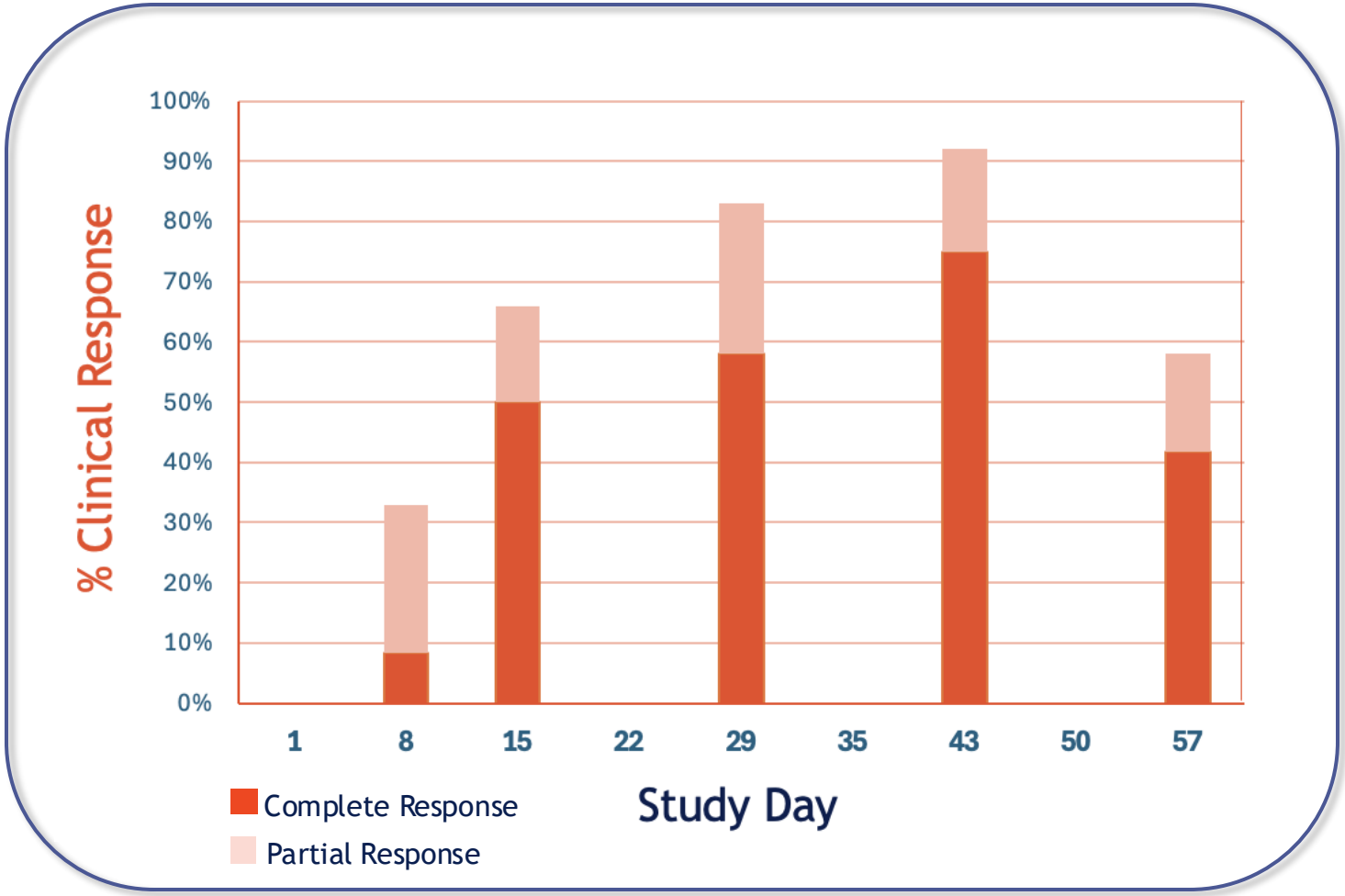
SPOTLIGHT Efficacy Evaluation

Briquilimab 180mg single dose achieved 92% (11 of 12) CR by week 8

	Briquilimab 40mg (n=3)	Briquilimab 120mg (n=12)	Briquilimab 180mg (n=12)	Briquilimab All doses (n=27)
Complete Response, n (%)	1 (33%)	10 (83.3%)	11 (92%)	22 (82%)
ColdU, n	0	3	3	6
Symptomatic Dermographism, n	1	7	8	16
Partial Response, n (%)	2 (67%)	1 (8%)	1 (8%)	4 (15%)
ColdU, n	1	0	0	1
Symptomatic Dermographism, n	1	1	1	3
Complete or Partial Response at any time, n (%)	3 (100%)	11 (92%)	12 (100%)	26 (96%)

SPOTLIGHT: Clinical response through 8 weeks with briquilimab 180mg (n=12)

- 12 of 12 patients (100%) achieved either CR or PR by week 8
- 8 of 12 patients (67%) achieved clinical response by the week 2 assessment
- 11 of 12 participants (92%) reported either CR or PR at week 6
  - 9 of 12 patients (75%) achieved complete response at week 6
- 5 CRs and 2 PRs (58%) maintained through week 8, durability assessment ongoing



AD_T0003, AD_T0004, AD_L0001, AD_L0002

Clear Dose Response Demonstrated at 6 Weeks Post-Dose

75% CRs at 180mg dose improved on 50% CRs observed at 120mg

SPOTLIGHT TRIAL

	Briquilimab 40mg (n=3)	Briquilimab 120mg (n=12)	Briquilimab 180mg (n=12)
Complete Response, n (%)	0 (0%)	6 (50%)	9 (75%)
ColdU, n	0	1	3
Symptomatic Dermographism, n	0	5	6
Partial Response, n (%)	0 (0%)	1 (8%)	2 (17%)
ColdU, n	0	0	0
Symptomatic Dermographism, n	0	1	2
Complete or Partial Response at week 6, n (%)	0 (0%)	7 (58%)	11 (92%)

SPOTLIGHT Safety and Tolerability

	Briquilimab 40mg (n=3)	Briquilimab 120mg (n=12)	Briquilimab 180mg (n=12)
Any adverse event	2	12	10
Any serious adverse event	0	2*	0
Any adverse event leading to discontinuation	0	0	0
Adverse event leading to death	0	0	0
Adverse event ≥ grade 3	0	1*	0

*SAE: Biliary colic leading to cholecystectomy, Grade 3 Fracture of the right shoulder (both unrelated to treatment)

AEs occurring in ≥3 participants: Nasopharyngitis, neutrophil count decrease, fatigue, headache, abdominal pain, COVID-19, diarrhea, dizziness, nausea

SPOTLIGHT Safety/Tolerability Observations Possibly Related to KIT Blockade Were Generally Limited to Low Grade Events

SPOTLIGHT TRIAL

All events were grade 1 or 2 and none resulted in discontinuations

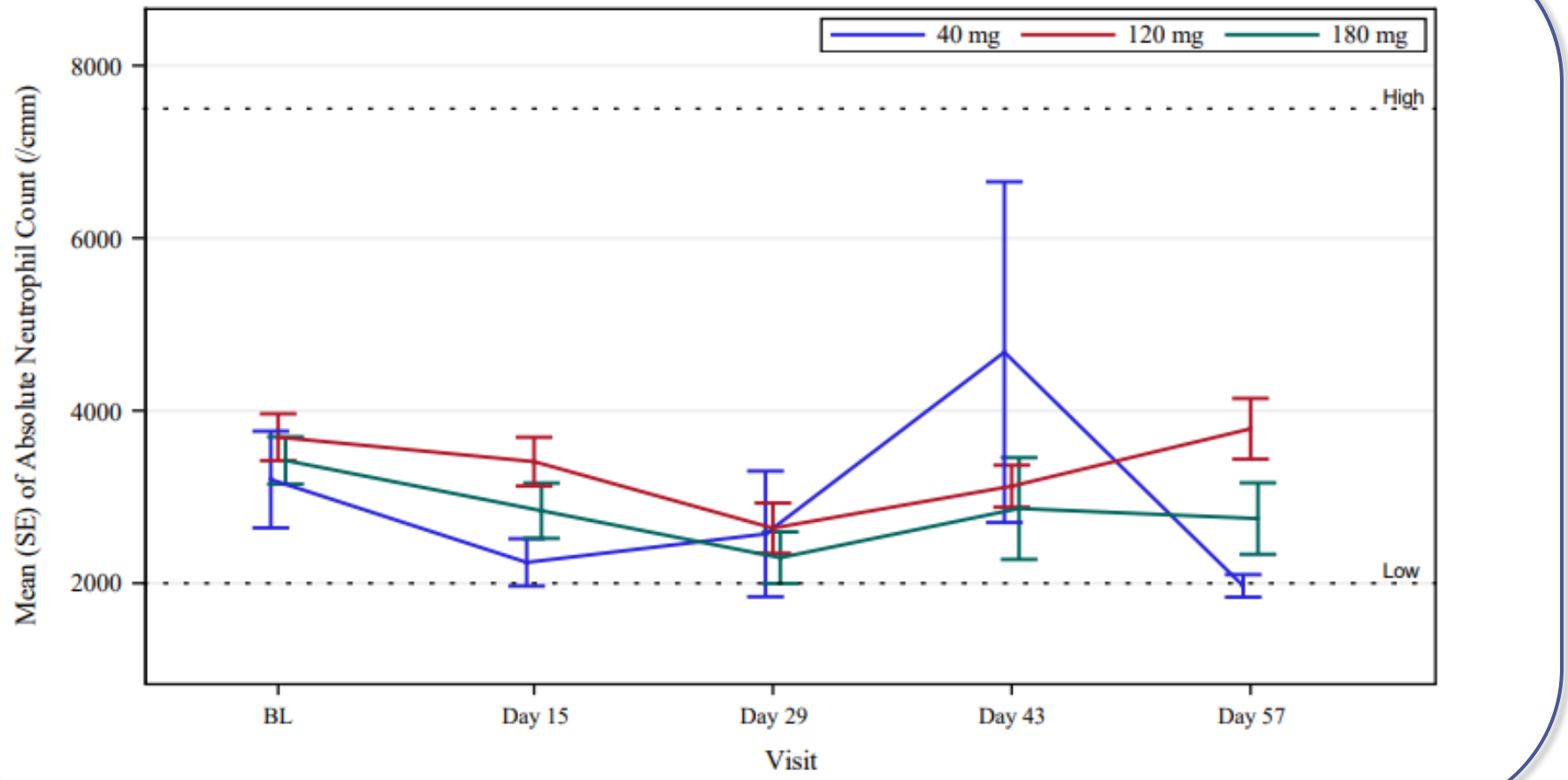
Adverse Event as reported term	Briquilimab 40mg (n=3) n (%)	Briquilimab 120mg (n=12) n (%)	Briquilimab 180mg (n=12) n (%)	Briquilimab All doses (n=27) n (%)
Hair color changes	0 (0)	0 (0)	0 (0)	0 (0)
Skin discoloration	0 (0)	0 (0)	0 (0)	0 (0)
Taste change/Hypogeusia	0 (0)	1 (8.3)	2 (16.7)	3 (11.1)
Neutrophil count decreased	1 (33.3)	1 (8.3)	6* (50)	8 (29.6)

* Four participants with Grade 1, two with Grade 2 ; median time to resolution 16d; four of six observations occurred proximal to a common cold diagnosis, one of six observations occurred proximal to COVID 19 diagnosis

Grade 1 neutrophil count decrease defined as ANC between 1,500 – 1,700/mm^3
Grade 2 neutrophil count decrease defined as ANC between 1,000 – 1,500/mm^3

SPOTLIGHT Absolute Neutrophil Count

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

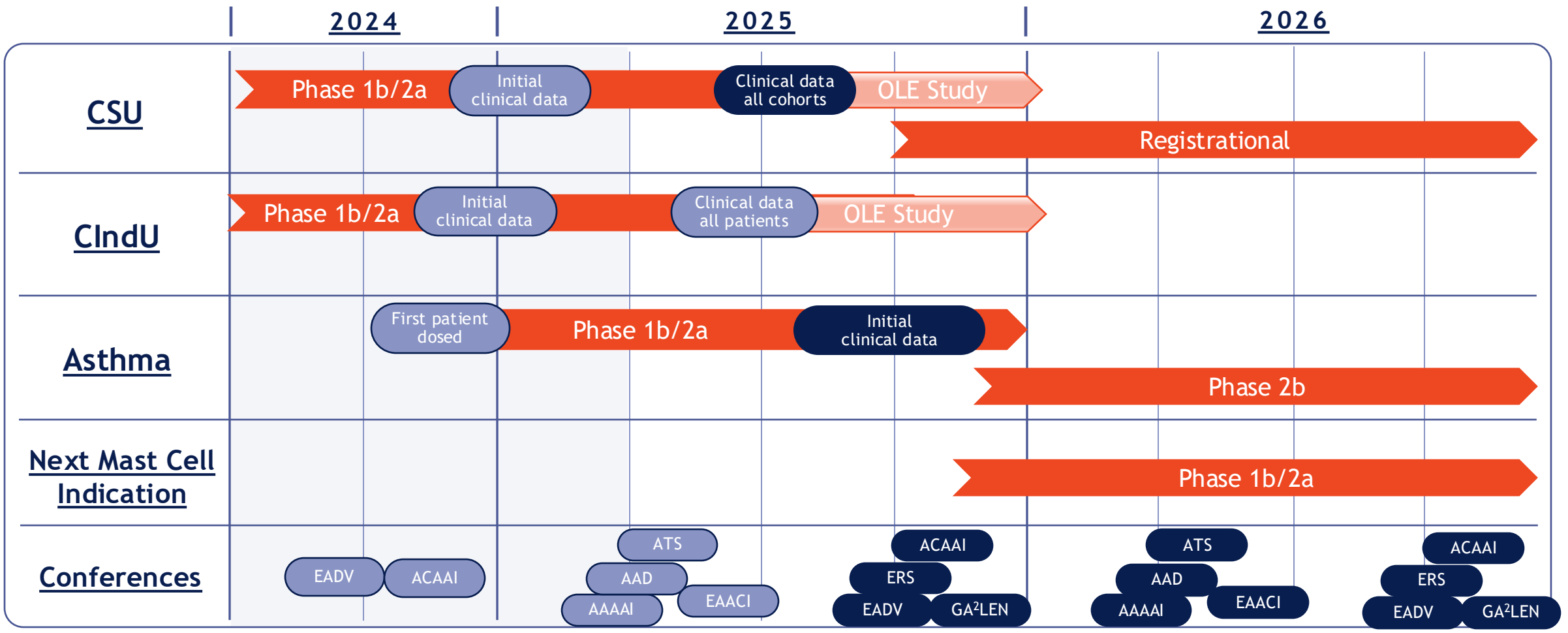


Upcoming Milestones and Closing Remarks

Takeaways

- Single 180mg dose of briquilimab demonstrated 100% clinical response in participants with CIndU
  - Deep reduction of tryptase observed with 83% of participants below LLOQ in 180 mg cohort
  - Rapid onset of symptom control with 67% achieving clinical response by week 2
  - 91.6% of participants in 180 mg cohort achieved CR vs 83% in 120 mg cohort
- Durability of 180mg dose shown with 58% clinical response maintained at 8 wks (5 CRs and 2 PRs)
- Briquilimab was well tolerated in participants with CIndU
  - All possibly KIT related adverse events observed were low-grade and transient in nature
- Briquilimab's robust efficacy and safety, supports continued evaluation in chronic urticaria
- Full SPOTLIGHT study results expected at medical conference in 2nd half of 2025

Key milestones



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