



Pioneering CAR T in Autoimmune Diseases

Jefferies Global Healthcare Conference, London
November 2025

Cindy
MG Warrior



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This presentation includes results from named-patient basis access. Similar to expanded access or compassionate use in the United States, "IH" or "Individueller Heilversuch," also known as "named-patient basis access," is a regulatory scheme in Germany that allows for the supply of a treatment that has not received marketing authorization for an individual patient in response to a request by the treating physician on behalf of the named patient. This option can be pursued for the expected benefit of a patient who has exhausted all available treatment options, under the discretion of the treating physician, with the patient's consent. The use of KYV-101 in the IH settings is not a substitute for, or intended to replace, our clinical trials. The goal is not to assess the effectiveness of a potential therapy, but rather to provide an individual patient with a possible efficacious approach when all other treatment options have failed, as determined by the patient's physician. While we do not expect to be able to use the results from these activities as the basis for approval in our applications for marketing approval to the U.S. Food and Drug Administration (FDA) or other foreign regulatory agencies, we believe such activities may provide additional clinical insights beyond highly focused clinical trials in specific geographies.

Kyverna Is Poised to Deliver on the Curative Potential of CAR T for Autoimmune Patients



**Unique
CAR Construct
Optimal for
Autoimmune**



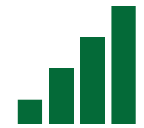
**>100 patients
treated
with KYV-101**



**Derisked
Opportunity with
Near-Term
Catalysts**



**Potential to be
First-in-Class
with Clear
Path to BLA**



**Experienced Cell
Therapy
Leadership &
Strong Financial
Position**



Executing on Long-Term Vision to Be the Leader in CAR T Across Autoimmune Diseases

Establish First-Mover Advantage

- Build First-in-Class Neuroimmunology Franchise with **SPS and MG**
- Lay groundwork for future **indications**



TODAY

Broaden Patient Access

- Unlock additional patient value with KYV-102, rapid whole blood approach requiring no apheresis



NEAR TERM

Expand Our Reach

- Additional studies across B-cell driven autoimmune diseases (MS, RA, LN, others)
- Total estimated market opportunity of **8.3M patients**¹



FUTURE DATA DRIVEN OPPORTUNITIES

Fast to Market Strategy with Opportunity to Rapidly Expand into Additional Indications

1. Published literature through GlobalData market analysis reports 2022.

KYV-101: Ideal Modality for Treating Autoimmune Diseases

TARGETED ATTRIBUTES	KYV-101	Alternate Modalities			
		Antibodies	T-Cell Engagers	In-Vivo	Allogeneic
Single dose	✓	✗	✗	?	?
Deep B-cell depletion in tissue	✓	✗	✗	?	?
On-target specificity	✓	✓	✓	?	✓
Drug-free, durable remission	✓	✗	✗	?	?

Helping Autoimmune Patients Achieve Drug-Free, Disease-Free Remission with KYV-101

Free of active disease and off immunosuppressants and glucocorticoids



First SPS patient

> 23 Months



First MG patient

> 24 Months

Building a First-in-Class Neuroimmunology Franchise

Stiff Person Syndrome

Myasthenia Gravis



Strategic Rationale



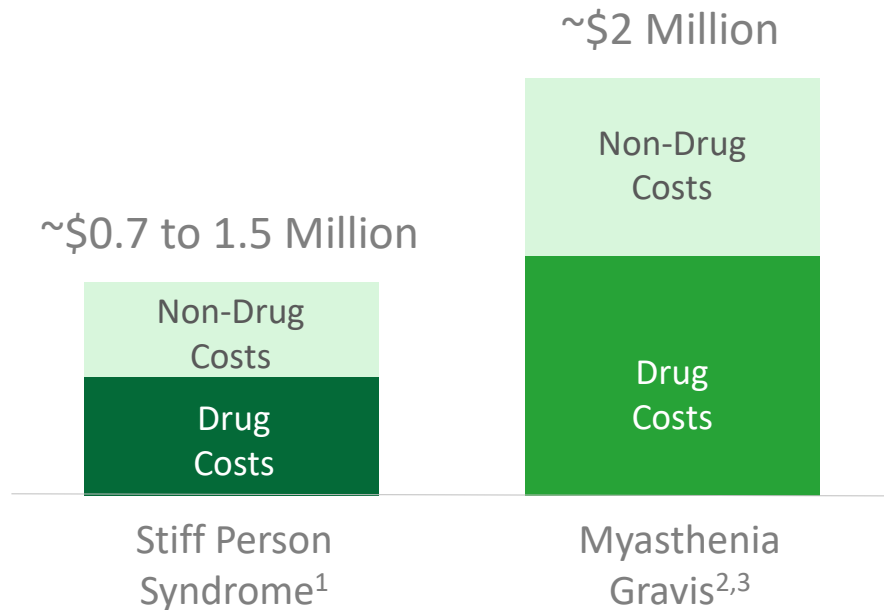
- ✓ Compelling initial clinical data in both indications
- ✓ High unmet patient needs
- ✓ SPS: highly debilitating and progressive disease with no FDA-approved therapies
- ✓ MG: suboptimal outcomes and high-cost burden with existing chronic therapies
- ✓ First-mover advantage
- ✓ Fast to market
- ✓ Shared infrastructure drives operational & cost synergies
- ✓ Amplification of neurology call point

Current Treatment Options in SPS and MG Have High-Cost Burden and Suboptimal Patient Outcomes Creating an Opportunity for KYV-101



High-Cost Burden

Estimated 3-Year Total Cost per Patient in the U.S.*



⚠️ Suboptimal Patient Outcomes^{4,5}

- Residual symptoms and disease burden impacting patient quality of life
- High treatment burden from frequent, chronic therapy
- Many patients unable to function independently with impact on ability to work and drive
- Portion of patients have crisis events requiring hospital and/or ICU visits

Multiple, Value-Creating Near-Term Catalysts

Program	Anticipated Milestones
<p>Stiff Person Syndrome RMAT, ODD</p>	<ul style="list-style-type: none"> ✓ Complete Pivotal Phase 2 Enrollment mid-2025 + Report Topline Pivotal Phase 2 Data in early 2026 + BLA filing in 1H 2026
<p>Myasthenia Gravis RMAT, ODD*, FTD[†]</p>	<ul style="list-style-type: none"> ✓ Confirm Registrational Path with Regulators 1H 2025 ✓ Reported Positive Interim Phase 2 Data Q4 2025 + Initiate Patient Enrollment for Phase 3 Registrational Trial by Year-End 2025
<p>Additional Indications</p>	<ul style="list-style-type: none"> ✓ Multiple Sclerosis (MS): Reported Positive Phase 1 IIT Data Q3 2025 ✓ Rheumatoid Arthritis (RA): Reported Positive Phase 1/2 IIT Data Q4 2025 + Lupus Nephritis (LN): Report Phase 1 Data in a Peer-Reviewed Publication in 2026
<p>Future Pipeline</p>	<ul style="list-style-type: none"> + File KYV-102 IND Application Q4 2025

✓ COMPLETED

RMAT, Regenerative Medicine Advanced Therapy; ODD, Orphan Drug Designation; FTD, Fast Track Designation.
 *EU & US. †Fast track designation does not assure that we will experience a faster development process, regulatory review or regulatory approval process compared to conventional FDA procedures.



Stiff Person Syndrome (SPS)

SPS is a Progressive Disease with Significant Disease Burden and Symptom Severity that Can Lead to Mortality



SPS Symptoms¹

PSYCHIATRIC SYMPTOMS

generalized anxiety disorder, depression, and specific phobias

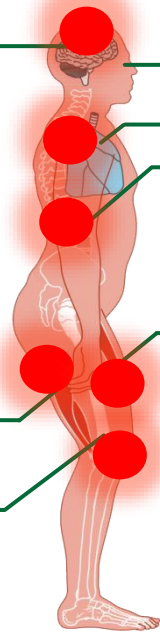
MUSCULAR RIGIDITY

taut facial expression
difficulty breathing
stiffness, hyperlordosis

MUSCULAR SPASMS

intermittent painful spasms

fracture of bones and joint dislocations



proximal limb weakness

Patients are often under or misdiagnosed


DISEASE PROGRESSION

80% of patients lose mobility, needing walking aid assistance or wheel-chair²⁻⁴

“Freezing attacks” and sudden falls requiring ER care^{2,3}

Can lead to permanent disability and increased risk of mortality⁴

SPS diagnosis based on symptoms and antibody testing³

1. Adapted from <https://www.medicalnewstoday.com/articles/stiff-person-syndrome#Symptoms>. 2. Rakocevic G, et al. *BMC Neurol.* 2019;19:1. 3. Dalakas MC. *Nat Rev Neurol.* 2024;20(10):587-601. 4. Duddy ME, Baker MR. *Front Neurol Neurosci.* 2009;26:147-165.

No FDA-Approved Therapies for SPS; Off-Label Treatments Fail Majority of Patients



Most SPS patients receive symptomatic therapies and many eventually advance to off-label immunotherapies



Symptomatic Treatments¹⁻³

Muscle relaxants and anti-seizure



Immunotherapy¹⁻³

Off-Label immunosuppressants, rituximab and IVIg



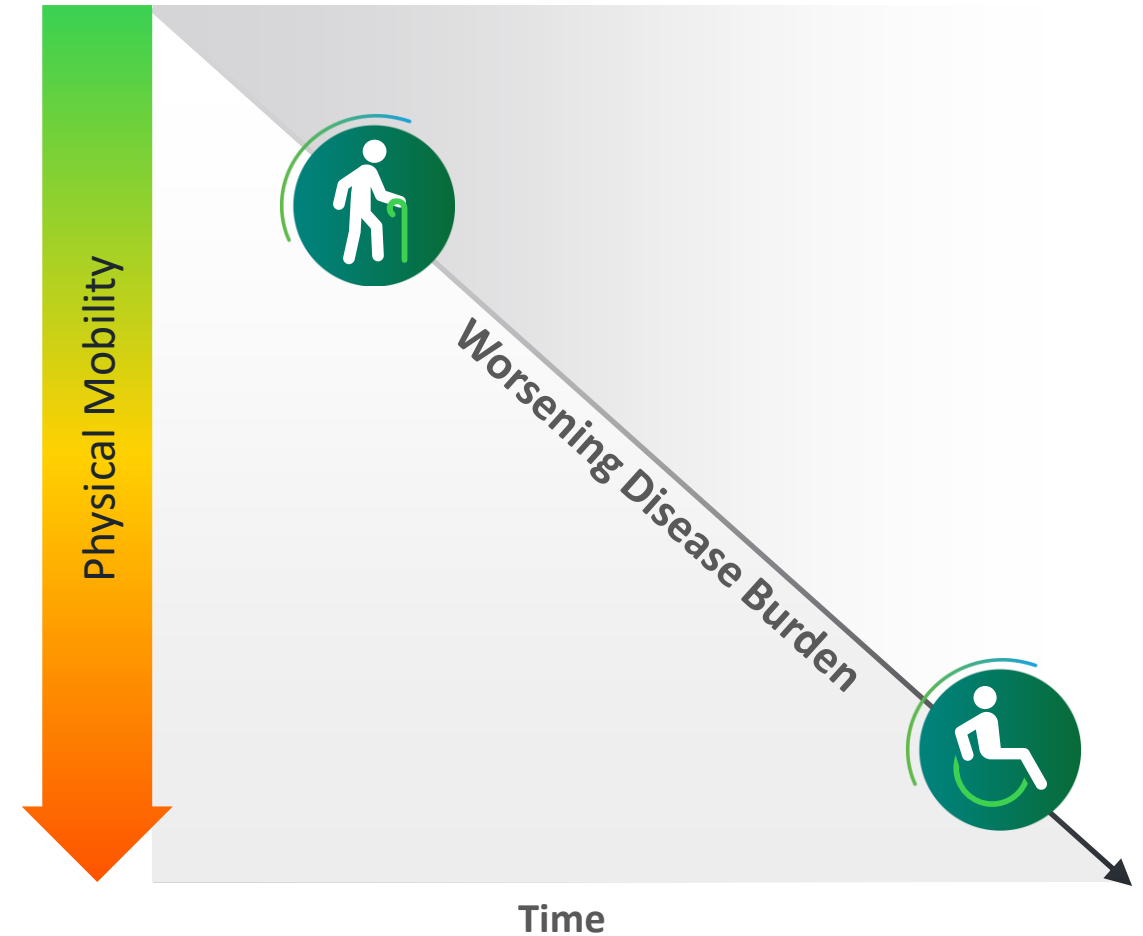
Therapy and Supportive Care^{4,5}

Physical, speech and occupational therapy



Psychiatric Therapy¹⁻⁴

Anti-depressants and benzodiazepines

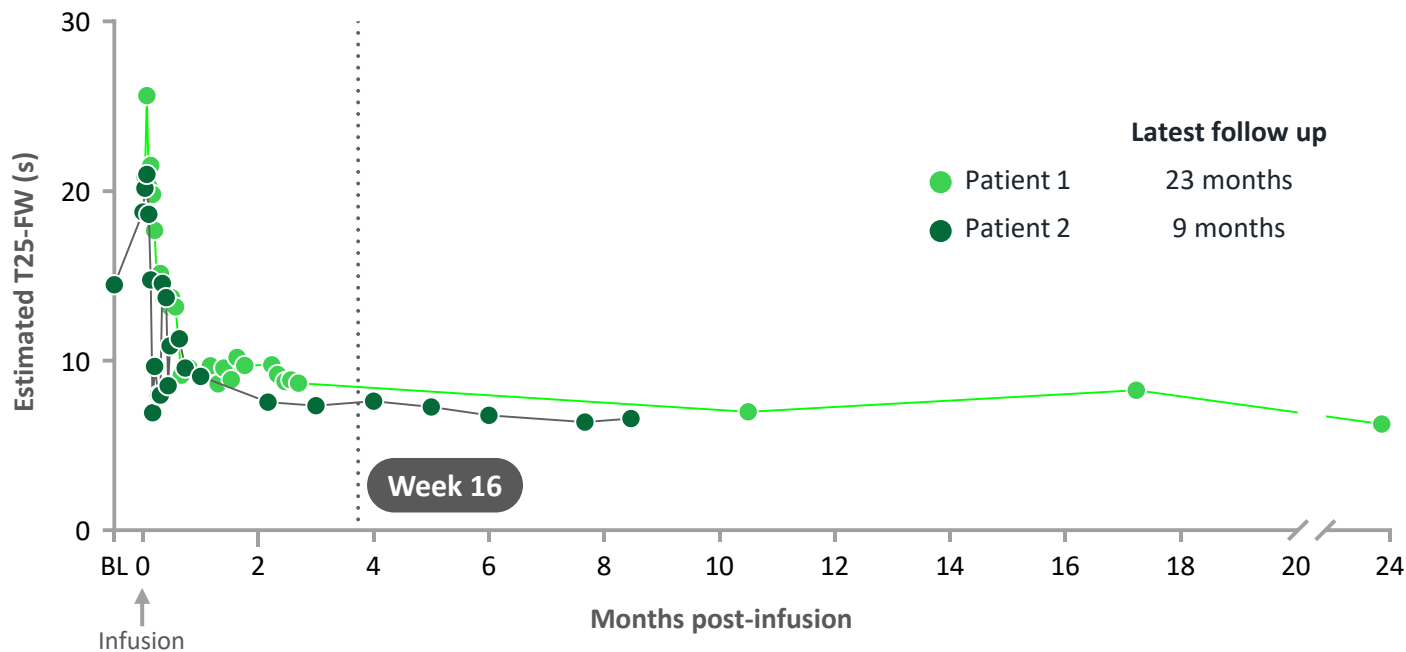


KYV-101 in SPS: Longer Term Follow-Up Data Demonstrates Strong Clinical Activity and Potential for Deep and Durable Responses



Kyverna Experience at Therapeutic Dose in Initial 2 Compassionate Use Patients

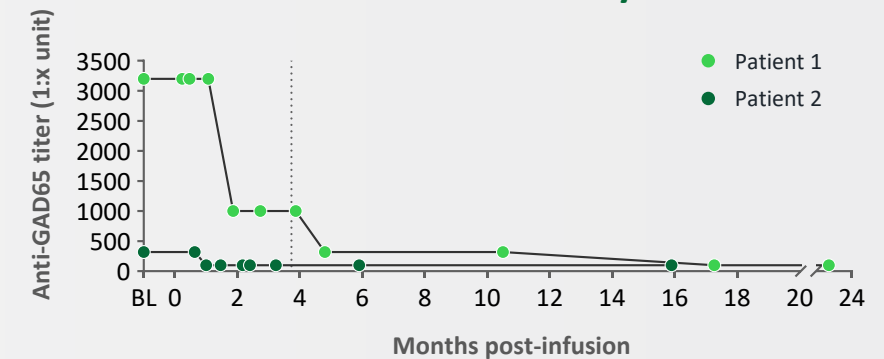
Improvement in Mobility



Drug-Free Remission: All Patients off Background Therapies*

No. of Immunosuppressant Therapies	Before KYV-101	After KYV-101
Patient 1 (anti-GAD65)	6	0
Patient 2 (anti-GAD65)	8	0

Reduction of Autoantibody Titers



GAD, glutamic acid decarboxylase; T25-FW, timed 25-foot walk test.

Named-patient basis access data. Data cutoff August 19, 2025. KYV-101 therapeutic dose is 1×10^8 CAR T cells/ μ L. Baseline (BL) value is the most recent assessment prior to lymphodepletion.

*Data shown for immunosuppressant and immunomodulatory agents only; does not include physiologic replacement steroids ≤ 7.5 mg/day.

Focused Registrational Study Design Supports Rapid Path to Potential BLA Approval in SPS



KYSA-8: Open-label, single-arm, multicenter study

N = 25

- Age 18 to 75 years
- Diagnosis of SPS
- Inadequate response to immunomodulatory therapy
- Stiffness index ≥ 2

Cy/Flu lymphodepletion
+
Single infusion of KYV-101
(1×10^8 CAR T cells)

Primary endpoints

- Change in T25-FW at 16 weeks
- Safety

Key secondary endpoints

- Modified Rankin Scale at 16 weeks
- Distribution of Stiffness Index at 16 weeks

Key exploratory endpoint

- Change in anti-GAD65 or anti-glycine R antibody titer



One-
year
Follow
Up



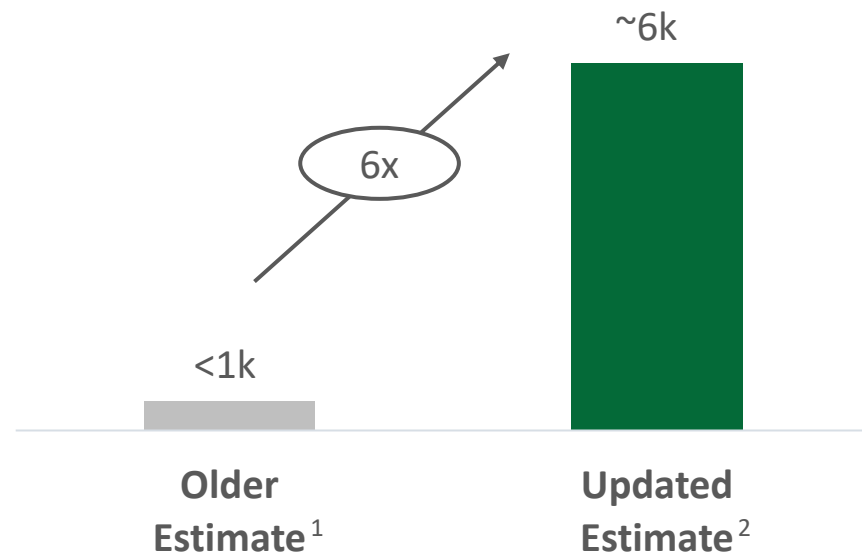
Timed 25-foot walk test is a validated tool to assess walking ability. This test has been used to capture stiffness and loss of mobility in SPS^{1,2}

Topline Data Expected Early 2026

Recent Epidemiology Study Indicates that U.S. SPS Patient Population Is Significantly Larger than Previously Reported



U.S. Diagnosed SPS Patients



SPS Market Overview

- Recent epidemiology study from University of Colorado indicates that SPS affects 1.4 to 2.1 per 100,000 individuals²
 - Kyverna U.S. claims analysis confirms 1.8 per 100,000 individuals (i.e., ≥ 2 SPS ICD-10 codes over ≥ 30 days)³
- Previously reported figures based on 2018 analysis of US VA system do not reflect recent trends¹
 - Historically, SPS patients were significantly under and/or misdiagnosed⁴
 - Awareness of disease and use of standard diagnostic testing is also increasing⁴



~6k diagnosed SPS patients in the U.S.

SPS is a Valuable Commercial Opportunity with Potential for KYV-101 to Quickly Set a New Treatment Standard as First Approved Therapy



~6k

**U.S. Diagnosed
SPS Patients^{1,2}**



**KYV-101
Addressable Market^{2,3}**

**Initial
Priority**

~2.0 to 2.5k Patients

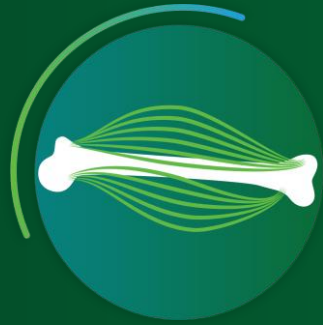
*30-40% of total diagnosed
Patients treated with
off-label immunotherapy**

**Total KYV-101
Addressable Market**

~5.5k Patients

*90% of total diagnosed
Patients treated with
symptomatic therapies*

*Immunotherapy defined as off-label immunosuppressants (e.g., prednisone), rituximab and/or IVIg.
1. Crane PD, et al. *Neurology*. 2024;103(12):e210078. 2. Analysis of 2024 Komodo U.S. Claims Data.
3. Kyverna Patient Journey and Demand Study (data on file).



Myasthenia Gravis (MG)

Despite Available Treatment Options, High Disease Burden Remains in Generalized Myasthenia Gravis (gMG)

- MG is a B-cell and antibody-mediated neuromuscular autoimmune disease that causes fluctuating muscle weakness and fatigue^{1,2}

Novel therapies are needed that minimize or eliminate symptoms of disease while reducing risks associated with chronic immunosuppression

Current State of Treatment for Patients With gMG



Inadequate symptom control^{3,4}



Few reach minimal symptom expression (MSE)^{1,5-6}



Majority require ongoing immunosuppressant therapy¹⁻⁴



Costly and chronic treatment options^{1,7}

KYV-101's Potential to Change the Treatment Paradigm in gMG

Only KYV-101 is Demonstrating the Potential to Deliver ALL Four Components of a Paradigm-Shifting Therapy

1.

Unprecedented
Disease Control +
Manageable Safety
Profile

2.

More Patients to
Minimal Symptom
Expression (MSE)

3.

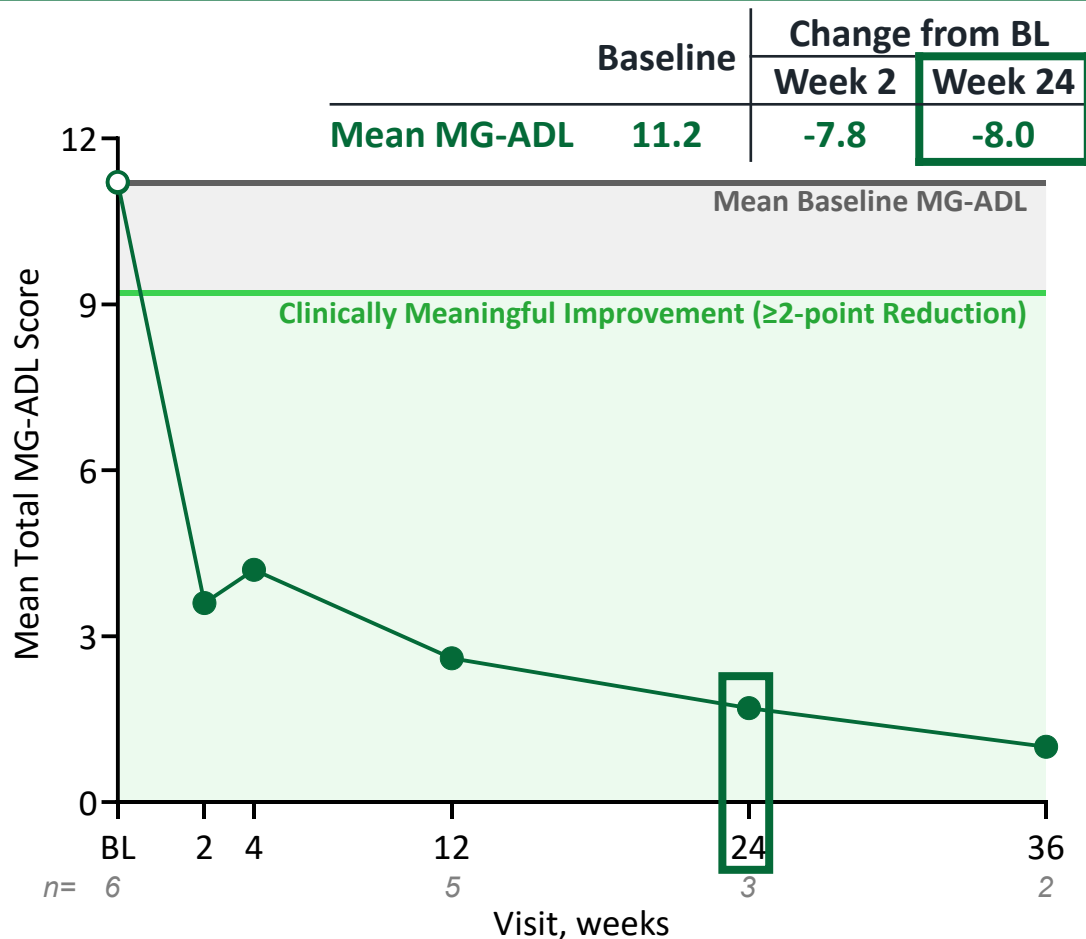
Opportunity to
Remove Background
Therapies

4.

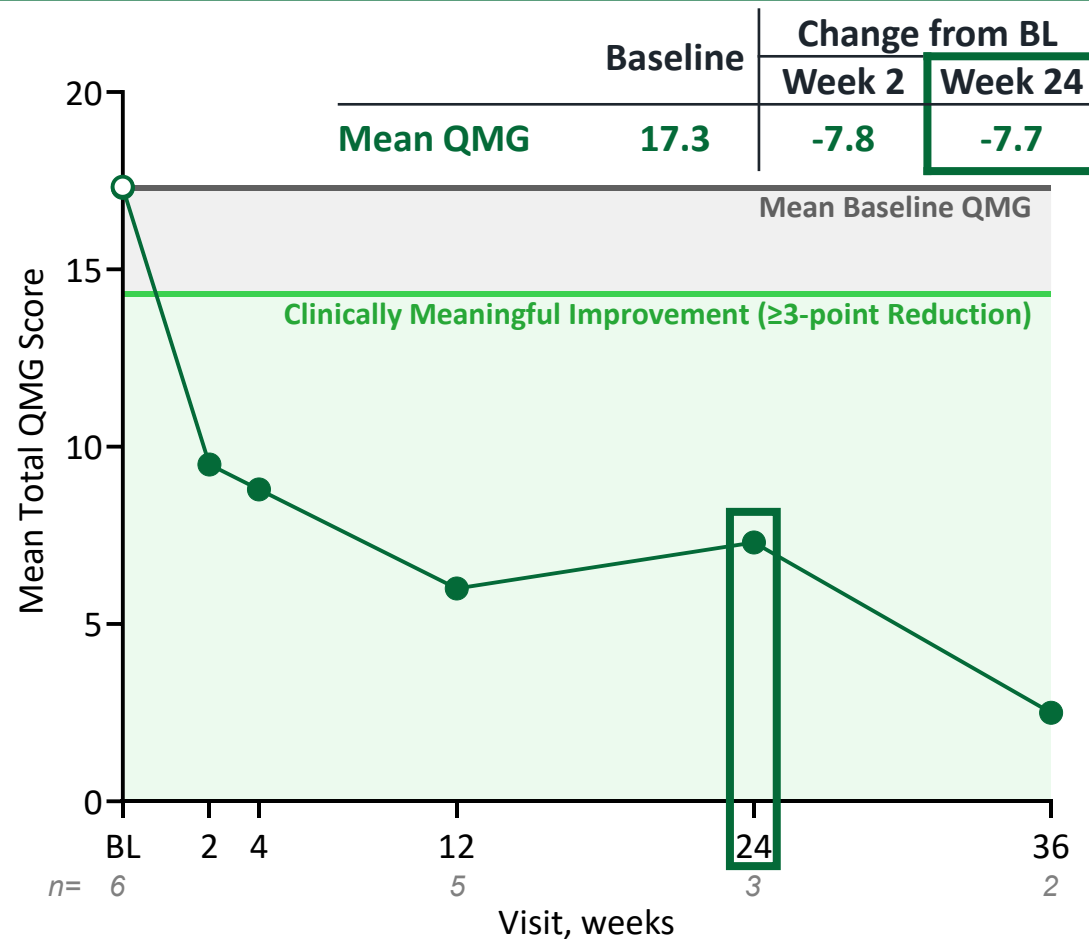
Single-Dose
Treatment

KYV-101 Demonstrated Rapid, Robust, and Sustained Reductions in MG-ADL and QMG

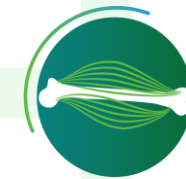
MG-ADL score



QMG score



Phase 2 Interim Data - Substantial, Clinically Meaningful Reductions in MG Outcome Scores and Treatment Burden after a Single Dose



Robust, Rapid, and Sustained Improvements Regardless of Prior Biologic Exposure

100% clinically meaningful response by MG-ADL & QMG (Reduction of ≥ 2 by MG-ADL, ≥ 3 by QMG)

- Mean reductions of MG disease scores at 24 weeks: **-8.0 for MG-ADL and -7.7 for QMG**
- Mean reductions at Week 2: -7.8 for MG-ADL and -7.8 for QMG

100% responders by MG-ADL (≥ 3 point reduction by MG-ADL)

Most patients at or trending to MSE

- 67% reached MSE (n=3 with ≥ 24 weeks follow up)

100% clinically meaningful response by MGC with -12.0 mean reduction at 24 weeks (Reduction of ≥ 3 by MGC)

Reduced Treatment Burden

100% free of nonsteroidal immunosuppressants (NSISTs), high-dose steroids (>10mg), and FcRn and complement inhibitors up to 24 weeks

- Of the 6 patients, 5 remained free of these agents as of their last follow-up

Consistent, Well-Tolerated, and Manageable Safety Profile

No high-grade CRS and No ICANS observed; no new safety signals

Data cutoff: October 3, 2025.

CRS, cytokine release syndrome; FcRn, neonatal fragment crystallizable receptor; ICANS, immune effector cell-associated neurotoxicity syndrome; MG-ADL, myasthenia gravis activities of daily living; MGC, Myasthenia Gravis Composite; MSE, minimal symptom expression; QMG, quantitative myasthenia gravis.

Unprecedented MG Clinical Outcome Measures Achieved with a Single Dose of KYV-101



		Approved		Investigational*		
		FcRn Inhibitor ¹ VYVGART®	Complement Inhibitor ^{2,3} ULTOMIRIS®	CD19 mAb ^{4,5} UPLIZNA®	BCMA mRNA CAR T ⁶ Descartes-08	KYV-101 CD19 CAR T (KYSA-6, n=3)
Primary Endpoint		4 weeks	6 months	6 months	3 months	6 months
Depth of Response <i>Mean reduction from baseline to primary endpoint (non-placebo adjusted)</i>	MG-ADL Reduction	~4.6	3.1	4.2	~4.2	8.0
	QMG Reduction	~6.2	2.8	4.8	~3.9	7.7
% Responders <i>Patients with ≥3-point MG-ADL improvement from baseline to primary endpoint (non-placebo adjusted)</i>		~73%	~57%	~79%	~70%	100%
Achieve Minimal Symptom Expression (MSE) <i>% of patients achieving MG-ADL of 0 or 1</i>		40% <i>At any point before primary endpoint</i>	43%	Not reported	33% <i>6 months to 1 year</i>	67% <i>At any point before primary endpoint</i>

Note: These observations are derived from separate clinical settings; comparisons across trials are not based on head-to-head studies.

BCMA, b-cell maturation antigen; FcRn, neonatal fragment crystallizable receptor; mAb, monoclonal antibody; MG-ADL, myasthenia gravis activities of daily living; mRNA, messenger RNA; QMG, quantitative myasthenia gravis score.

*Under investigation in MG.

1. Howard Jr JF, et al. *Lancet Neurol.* 2021;20(7):526-536. 2. Vu T, et al. *NEJM Evid.* 2022;1(5):EVID0a2100066. 3. AstraZeneca. ULTOMIRIS® efficacy data from CHAMPION-MG. <https://ultomirishcp.com/gmg/efficacy>. Accessed 20 Aug 2025.

4. Nowak RJ, et al. *N Engl J Med.* 2025;392(23):2309-2320. 5. Nowak RJ, et al. *AAN* 2025. LS2.002. 6. Vu T, et al. *AAN* 2025. S34.002.

Phase 2 Results Strengthen Confidence in Phase 3 Powering Assumptions, Efficient Trial-Size, and Co-primary Endpoint Measurement



Reductions in MG-ADL and QMG **exceeded the magnitude of effect** assumed for Phase 3 co-primary endpoints



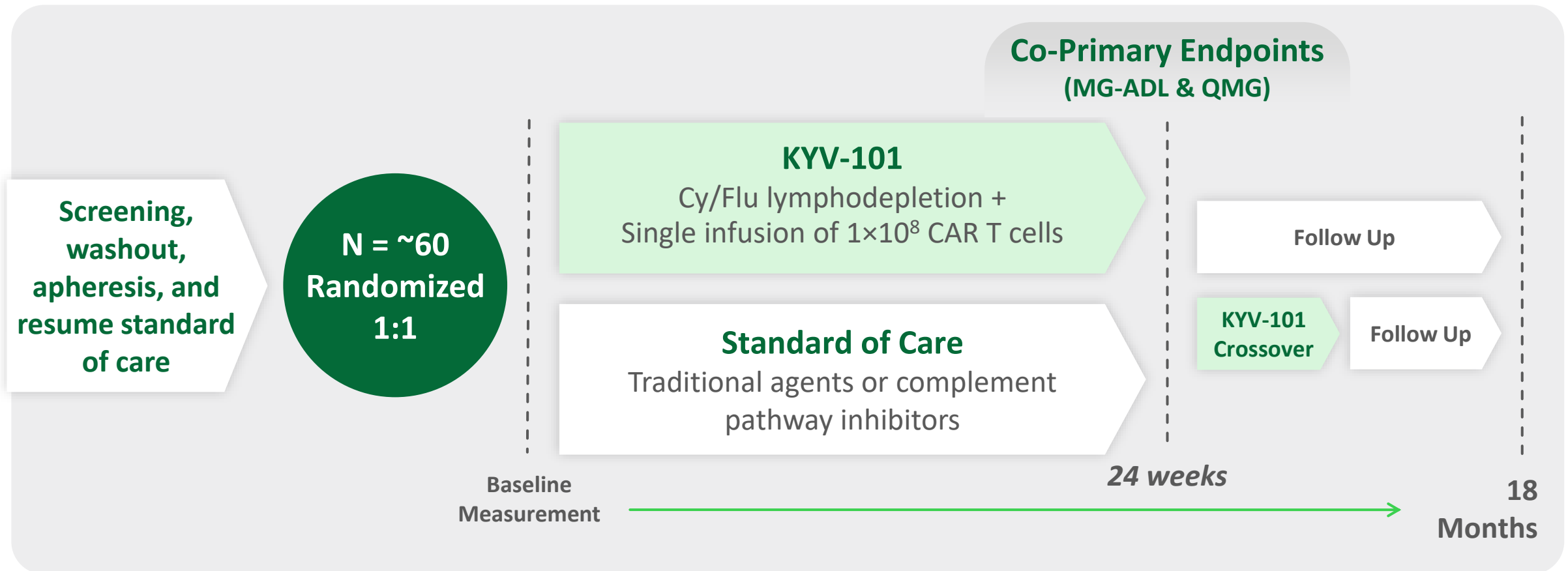
Deep, sustained treatment effect was observed at **week 24** - the timepoint of assessment for Phase 3 co-primary endpoints

Interim Phase 2 Results Increase Phase 3 Probability of Success

Innovative and FDA-Aligned Registrational Phase 3 Trial Design

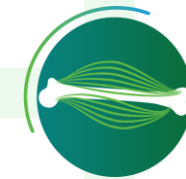


~60-patient, global, open-label, randomized controlled Phase 2/3 trial with crossover design

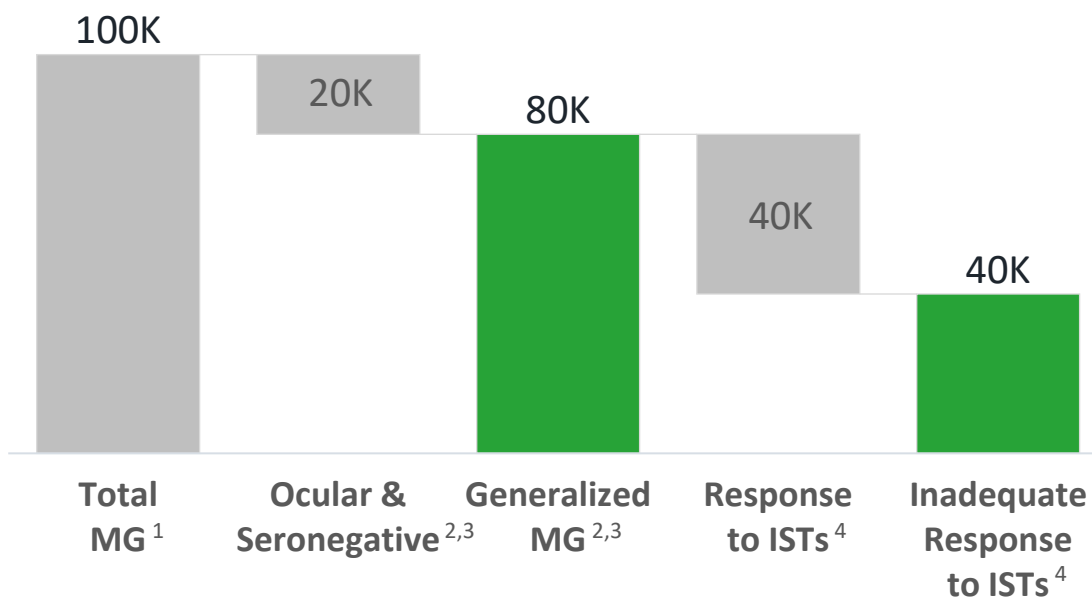


Standard of care may consist of traditional agents (e.g., prednisone, azathioprine, mycophenolate, methotrexate, chronic IVIG/PLEX) or complement pathway inhibitors (e.g., eculizumab, ravulizumab). Anti-CD20 or -CD19 monoclonal antibodies or FcRn inhibitors not allowed as defined in inclusion criteria.

U.S. MG Market is Significant and Continues to Grow Driven by Increasing Awareness and Adoption of New Therapies



U.S. Diagnosed MG Patients



MG Market Overview

- ~100K total diagnosed U.S. patients¹
 - ~80% with seropositive generalized MG^{2,3}
 - Robust prevalence growth in MG^{1,5}
 - ~50% of patients have an inadequate response to immunosuppressants and are considered for biologic⁴
- MG physicians and patients have historically quickly adopted new therapies^{4,6}
- Utilization of FcRn blockers and complement inhibitors continues to increase^{4,6}



~80K diagnosed generalized MG patients in the U.S.

IST, immunosuppressive therapies; FcRn, neonatal fragment crystallizable receptor.

1. Rodriguez E, et al. *Muscle. Nerve.* 2024;69(2):166-171. 2. Hendricks TM, et al. *Am J Ophthalmol.* 2019; 205:99-105. 3. Li Y, et al. *Ann. Transl. Med.* 2019; 11(7):290. 4. Clarivate DRG Report outlining use of immunosuppressants (2024). 5. Salari, et al. *J. Transl. Med.* (2021); 19(1):516. 6. Kyverna Patient Journey and Demand Study (data on file).



Additional Opportunities

Multiple Sclerosis: Encouraging IIT Data of KYV-101 in Progressive MS Highlights Broader Potential Within Neuroimmunology Autoimmune Diseases



Initial data on the first 6 patients treated in Phase 1 studies at Stanford Medicine and UCSF
Alternative bendamustine lymphodepletion regimen used in Stanford study

Biological Activity

- Robust CAR T cell expansion in blood and penetration into CNS
- Reconstitution of naïve B-cells supportive of immune reset

Efficacy

- Stable or improved expanded disability status scale scores (EDSS) in all patients
- Clinically meaningful improvement in fatigue scores in patients with available data

Safety

- Reinforces established tolerability profile
- No high-grade CRS/ICANS

KYV-101 MS IIT data demonstrate promising clinical activity, including robust CAR T penetration into the CNS and improved EDSS, with a tolerable safety profile

Rheumatoid Arthritis: IIT Data of KYV-101 Highlights Promising Safety and Efficacy in Difficult-to-Treat ACPA Positive Rheumatoid Arthritis Patients



Initial data on the first 6 patients treated in Phase 1/2 study at Charité, University of Berlin;
Phase 2 study is fully enrolled

Biological Activity

- CAR T-cells expanded rapidly, peaking between 14 and 21 days, and B-cell depletion occurred in all patients
- Profound reductions in pathogenic ACPA, and in RF-IgM titers were also observed

Efficacy

- With follow up ranging from 28 to 175 days, 4 out of 6 patients met the ACR20 response
- Two of these patients also achieved an ACR50 response (meeting 50% improvement thresholds)

Safety

- Reinforces established tolerability profile
- No high-grade CRS/ICANS

Profound reduction in disease-associated autoantibodies and impact on disease activity achieved patients with heavily pre-treated, refractory RA

Focused 2025 Pipeline Priorities

Opportunities to Expand into Additional Indications

	Indication	Candidate	Preclinical	Phase 1	Phase 2	Phase 3*	Regulatory Milestone Achieved
2025 Priorities	Stiff Person Syndrome	KYV-101	KYSA-8 Registrational				RMAT, ODD
	Myasthenia Gravis	KYV-101	KYSA-6 Registrational				RMAT, ODD [†] , FTD
	Rapid Whole Blood Process	KYV-102					
Additional Opportunities	Multiple Sclerosis	KYV-101	KYSA-7 [‡]				FTD
	Rheumatoid Arthritis	KYV-101	IIT				
	Lupus Nephritis	KYV-101	KYSA-1 & KYSA-3				FTD
	Systemic Sclerosis	KYV-101	KYSA-5				ODD
	Allogeneic	KYV-201					

RMAT, Regenerative Medicine Advanced Therapy; ODD, Orphan Drug Designation; FTD, Fast Track Designation, IIT, investigator-initiated trial. Fast track designation does not assure that we will experience a faster development process, regulatory review or regulatory approval process compared to conventional US Food and Drug Administration procedures.

*Phase 3 may not be required if Phase 2 is registrational. [†]EU & US. [‡]Kyverna is also exploring KYV-101 in multiple sclerosis through IITs.

Liberating Autoimmune Patients Through the Curative Potential of CAR T-Cell Therapy



KYV-101 has potential to deliver durable, disease-free, drug-free remission with single dose



First-in-class potential with neuroimmunology strategy



Attractive market opportunity supported by focused commercial approach



Strong financial position to support multiple near-term milestones



Continue to advance future pipeline opportunities, including next-gen KYV-102 and additional indications