



Pegtibatinase and Initial Results from the COMPOSE Clinical Trial for Classical HCU



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Disclaimers



Pegtibatinase (TVT-058) is a drug that is currently being studied and it is not approved by any health authority

Pegtibatinase is currently being studied for the first time in humans in the COMPOSE clinical trial for classical HCU

The safety and effectiveness of pegtibatinase are not established

Traverse Therapeutics: Focused on Treatments for Rare Diseases



WHO WE ARE

Traverse Therapeutics is a biopharmaceutical company specializing in identifying, developing, and delivering life-changing therapies to people living with rare disease.

Traverse acquired Orphan Technologies and the pegtibatnase program (previously OT-58) at the end of 2020.

TEAM



Almost 350 team members worldwide led by President & CEO, Eric Dube, PhD

LOCATIONS



Headquarters:
San Diego, CA, USA

Other offices:
Switzerland, Ireland

Our Focus Is on Rare Diseases With Unmet Medical Needs

Program	Therapeutic Area	Preclinical	Phase 1	Phase 2	Phase 3
Sparsentan	Focal Segmental Glomerulosclerosis (FSGS)	Progress bar (dark purple) showing completion of Preclinical, Phase 1, and Phase 2.			
Sparsentan	IgA Nephropathy (IgAN)	Progress bar (dark purple) showing completion of Preclinical, Phase 1, and Phase 2.			
Chenodeoxycholic Acid (CDCA)*	Cerebrotendinous Xanthomatosis (CTX)	Progress bar (dark blue) showing completion of Preclinical and Phase 1.			
Pegtibatinase (TVT-058)**	Classical Homocystinuria (HCU)	Progress bar (light blue) showing completion of Preclinical and Phase 1.			
NGLY1 Collaboration	NGLY1 Deficiency	Progress bar (green) showing completion of Preclinical.			
ALGS Collaboration	Alagille Syndrome (ALGS)	Progress bar (orange) showing completion of Preclinical.			

*CDCA is not approved for use in the treatment of CTX but has received a medical necessity determination in the US by the FDA for CTX. Traverre Therapeutics is conducting a Phase 3 clinical trial to examine the safety and efficacy of CDCA (Chenodal®) for the treatment of CTX.

**Pegtibatinase (TVT-058) is currently being studied in a Phase 1/2 clinical trial.

Adapted from: Traverre Therapeutics, Inc website. <https://traverre.com/our-pipeline/>. Accessed May 23, 2022.

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New Treatments Are Needed for Classical HCU



Classical HCU is a slowly progressive genetic disease¹

- Caused by a deficiency in the enzyme that breaks down homocysteine (a by product of processing methionine, a building block that comes from protein in our diet)
- Causes elevated levels of homocysteine in the body



High levels of homocysteine lead to complications in the eye, skeleton, brain, and blood vessels¹



Current treatment may include a low protein diet (typically with metabolic formula), Cystadane[®] (betaine), and/or vitamin B₆²



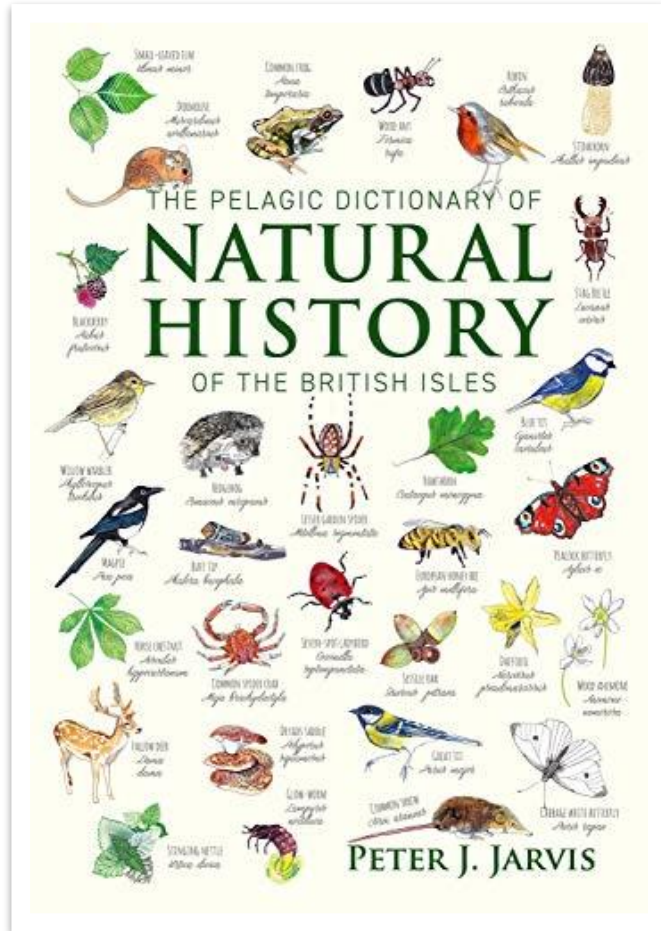
Even with treatment, many patients *are unable to keep their homocysteine levels below 100 μ M* as recommended²

HCU, homocystinuria.

1. Sacharow SJ, et al. 2004 Jan 15 [Updated 2017 May 18]. In: Adam MP, Ardinger HH, Pagon RA, et al., editors. GeneReviews[®] [Internet]. Seattle (WA): University of Washington, Seattle; 1993-2022. **2.** Morris AAM, et al. *J Inherit Metab Dis*. 2017;40:49-74.

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A Natural History Study: What and Why?



- Rare diseases are often not well-studied and poorly understood by the medical community
- A natural history study increases what we know about a disease and provides a “reference point” for testing the impact of new treatments
- Natural history studies provide ways to better understand a disease and design clinical trials

Travere's Natural History Study Began in 2016

Travere began a natural history study of classical HCU in 2016 to better understand how to develop a new treatment for this disease



Objectives



Study homocysteine levels over time



Study the complications of classical HCU over time



Study what current treatments are being used



Study the impact of diet

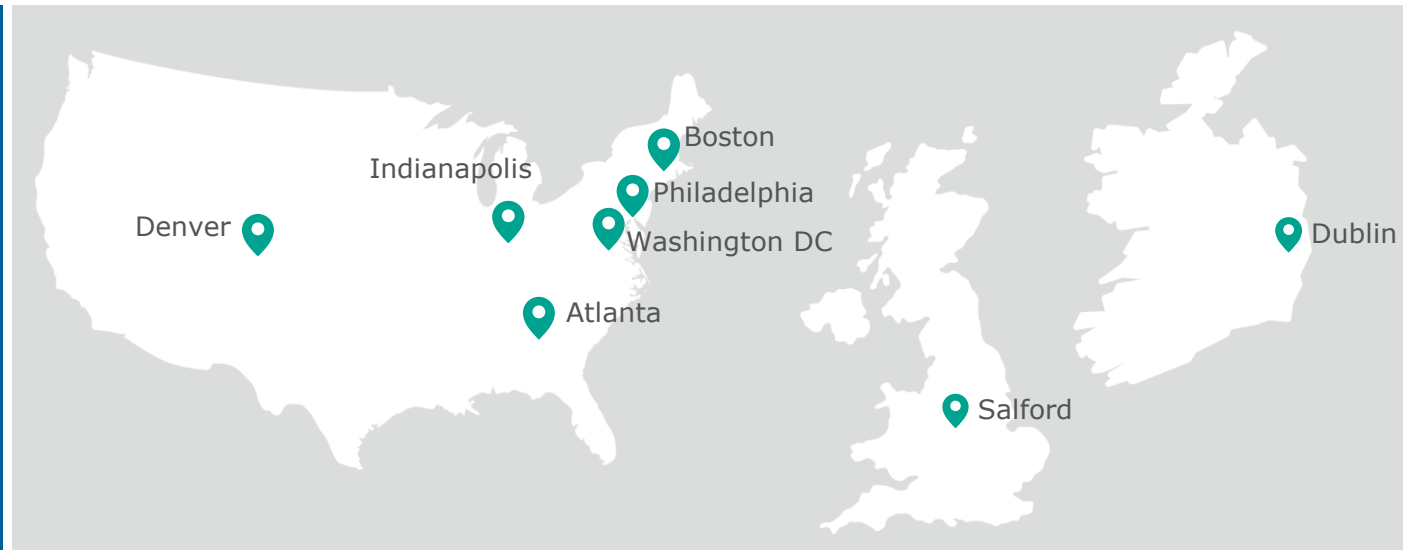
Understanding the current challenges of classical HCU helps provide a "reference point" for testing the potential benefit of pegtibatinase treatment

Traverse's Natural History Study Is Enrolling

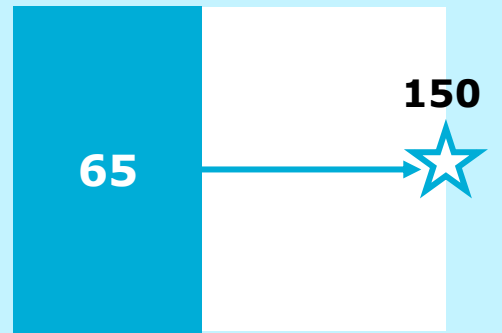


STUDY GOAL: To observe patients with classical HCU over 6 ½ years to understand the course of the disease as it is treated under regular circumstances

Ongoing study at eight clinical sites in the US, UK, and Ireland



65 patients enrolled to date, targeting approximately 150



Note: This is an observational study, no treatments are provided

Traverse's Natural History Study: Who and How?

Key eligibility criteria



Age 5-65 years old



Confirmed diagnosis of classical HCU



Willingness to visit clinic for testing and bloodwork every 6 months



Willingness to provide diet diaries for 3 days before clinic visits

The study has 5 main parts, all of which are provided free of charge to participants

Cognitive testing



Bone exam



Physical exams



Complete eye exam



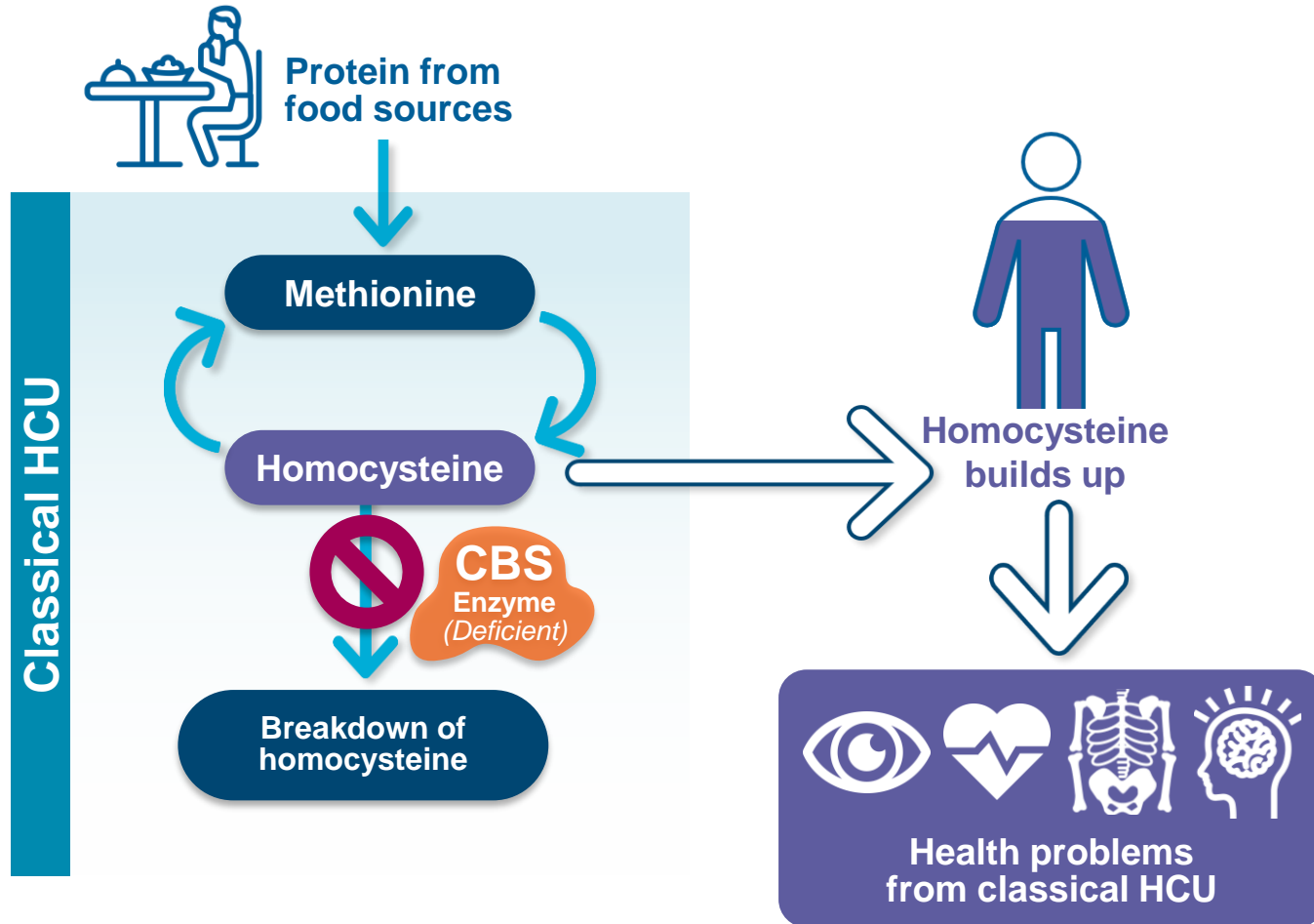
Blood draws for important health tests

To learn more about the study:

Go to: [ClinicalTrials.gov NCT02998710](https://clinicaltrials.gov/NCT02998710)

Contact: Traverse Medical Information
📞 1-877-659-5518
✉ medinfo@traverse.com

Pegtibatinase: An Enzyme that Breaks Down Homocysteine



The CBS enzyme is deficient in patients with classical HCU, which leads to the build up of toxic levels of homocysteine¹

Pegtibatinase is a modified version of the human CBS enzyme²

Pegtibatinase is administered by injection under the skin (subcutaneous injection)²

CBS, cystathionine β -synthase; HCU, homocystinuria.

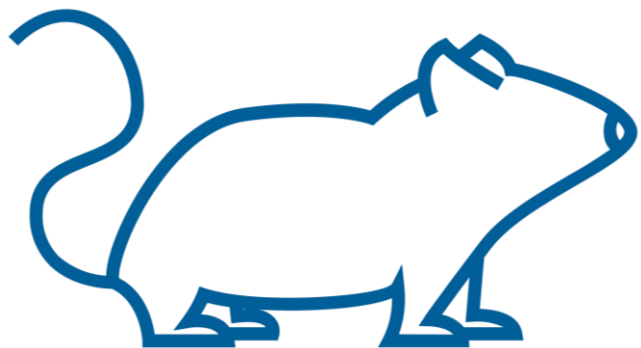
1. Morris AAM, et al. *J Inherit Metab Dis*. 2017;40:49-74. 2. Majtan T, et al. *Life Sci*. 2018;200:15-25.

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Previous Animal Studies of Pegtibatinate

In studies using mice with classical HCU, pegtibatinate improved HCU-related complications

- Reduced both blood and tissue levels of homocysteine¹
- Tested extensively for safety



In these early studies, pegtibatinate:

	EYES		Improved eye health ¹
	SKELETON		Improved bone health ¹⁻⁴
	BRAIN		Improved learning ³
	BLOOD VESSELS		Improved function ³

HCU, homocystinuria.

1. Majtan T, et al. *Mol Ther.* 2018;26(3):834-844. 2. Majtan T, et al. *FASEB J.* 2017;31(12):5495-5506. 3. Majtan T, et al. *FASEB J.* 2019;33(11):12477-12486.

4. Majtan T, et al. *Hum Mutat.* 2018;39:210-218.

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COMPOSE Clinical Trial to Study Pegtibatinate in Classical HCU

COMPOSE is a clinical trial (first study in humans) to evaluate the safety and drug effects of pegtibatinate in patients with classical HCU

Compose

Objectives



How safe is pegtibatinate in adults and children with classical HCU aged 12 and over?



How does pegtibatinate behave in the human body?



What happens to homocysteine levels after treatment with pegtibatinate?



What are the effects of pegtibatinate on complications of classical HCU?

COMPOSE Study Design



Determine patient eligibility for study within 8 weeks of starting main treatment period

Main Treatment Period

- ▶ Main treatment period (at least 12 weeks) was “double blind” (doctor and patient were not told if they were receiving pegtibatnase or placebo)
- ▶ Each dosing group enrolled up to 4 patients, one group after the other
- ▶ For every 3 patients getting pegtibatnase, one patient received placebo (👤)
- ▶ Doses were given by injection under the skin

Group 1: 0.33 mg/kg once a week



Group 2: 0.66 mg/kg once a week



Group 3: 1.0 mg/kg once a week



Group 4: 1.0 mg/kg twice a week



Group 5: 1.5 mg/kg twice a week



18 of 19 patients completed this 12-week treatment period (one person had to stop the trial for unrelated reasons)

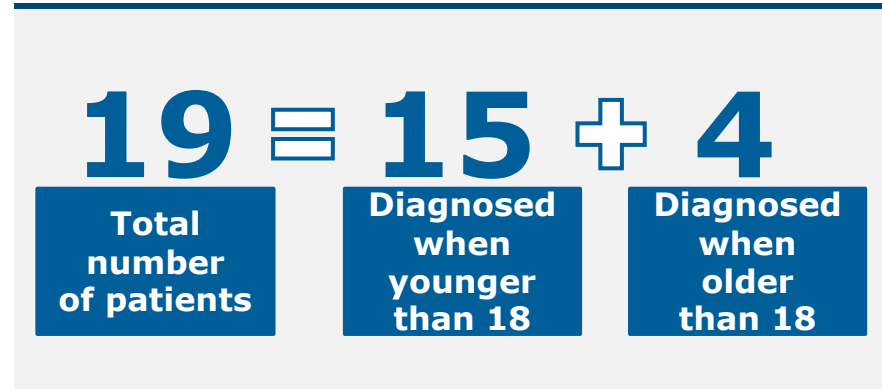


Optional Treatment Period

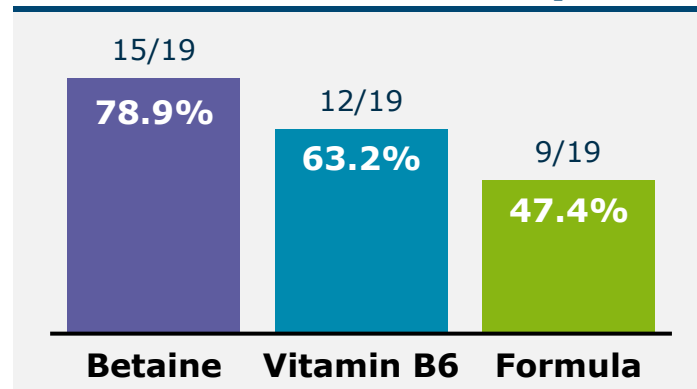
- ▶ Patients who complete the main treatment period have the option to receive pegtibatnase (no placebo) for up to 138 weeks

COMPOSE Patients: Who Are They?^{1,2}

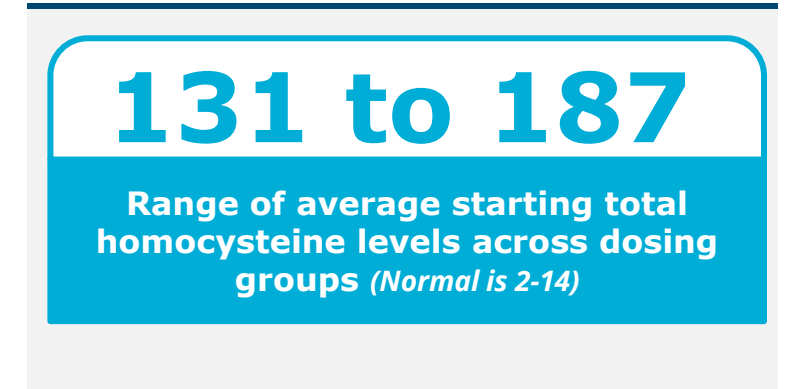
Number of patients



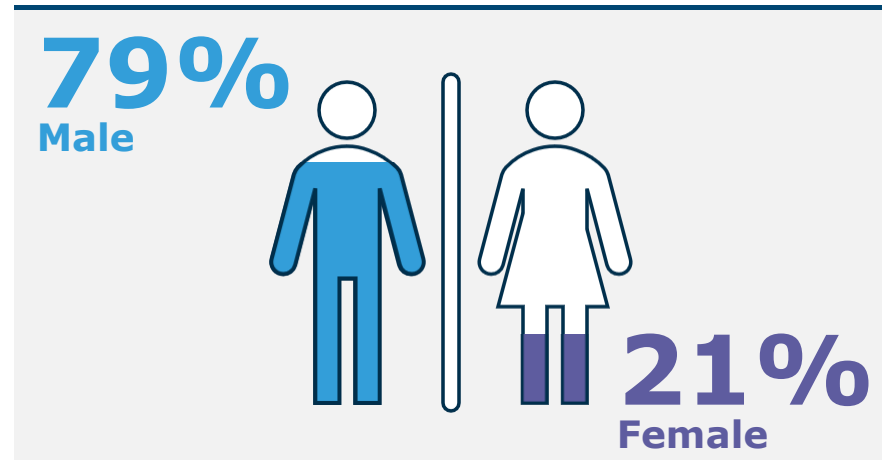
Treatment before study start



Starting homocysteine levels



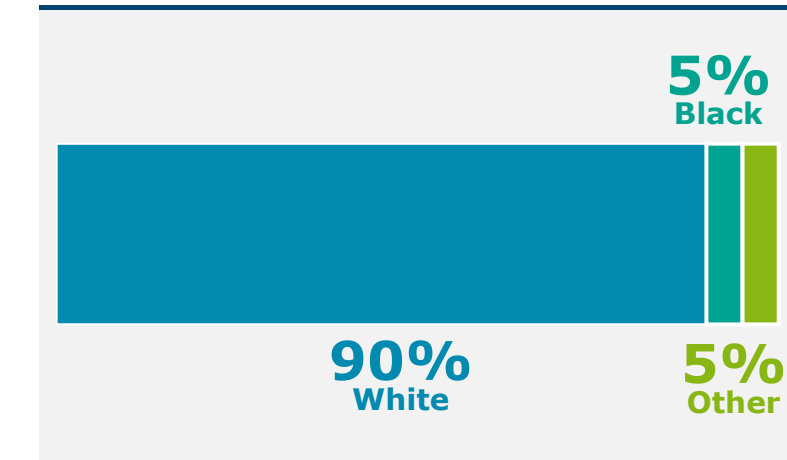
Gender



Age



Race



1. Levy HL, et al. Poster presented at: SIMD 2022; April 10-13, 2022; Orlando, FL. 2. Greblikas F. "COMPOSE Phase 1/2 Study: Interim Results." GMDI 2022, May 5-7, 2022, Lake Las Vegas, NV. Invited Presentation.

COMPOSE Initial Safety Results

Pegtibatinase was generally well-tolerated

Most side effects were mild, did not last long, and did not increase with higher doses



Most common side effects

- Injection site reaction (3 people)
- Injection site redness (3 people)
- Injection site pain (3 people)
- Hives (3 people)
- Injection site itching (2 people)



Serious side effects

- Only 1 serious side effect was reported that was considered likely related to the drug
- It was a case of acute hives which cleared up in 11 days and did not happen again after the patient restarted treatment



Other

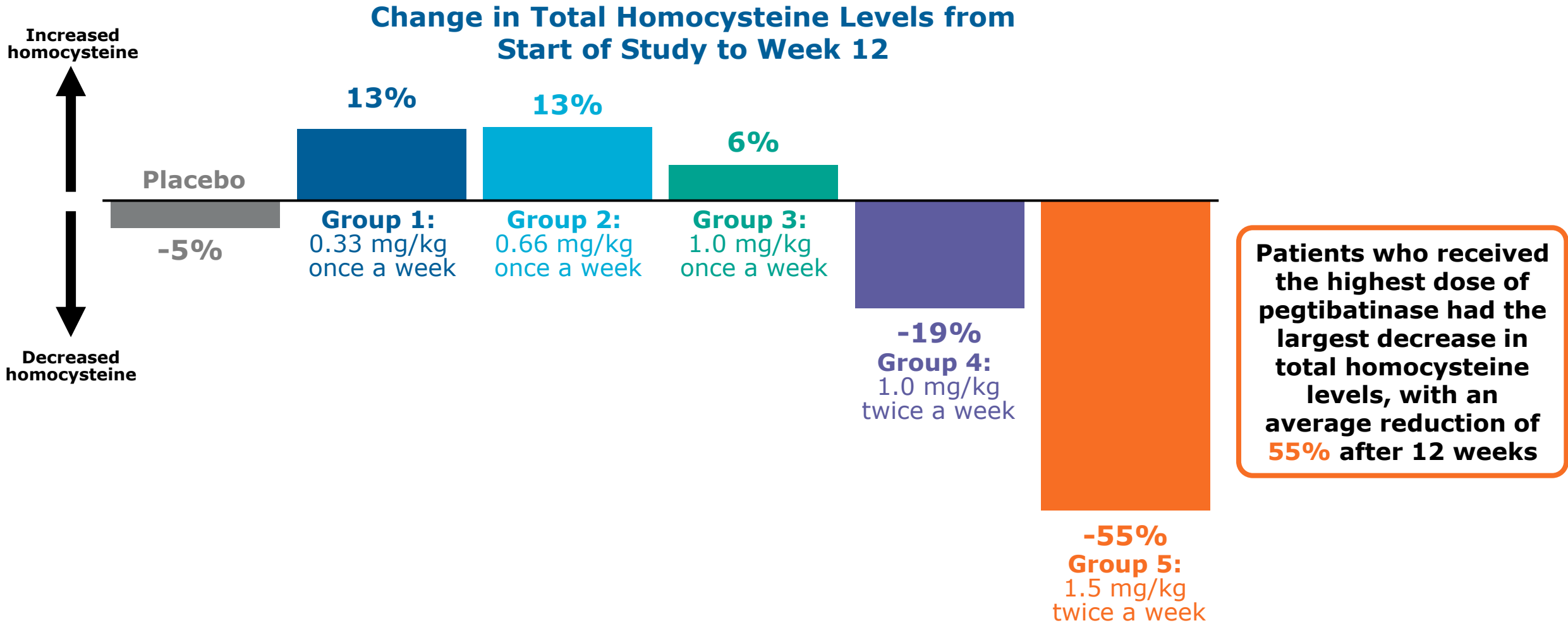
- No patient stopped treatment due to a side effect related to the drug
- There were no reports of severe allergic or immune reactions due to the drug
- Other general bloodwork and EKG results were unremarkable

EKG, electrocardiogram.

Levy HL, et al. Poster presented at: SIMD 2022; April 10-13, 2022; Orlando, FL.

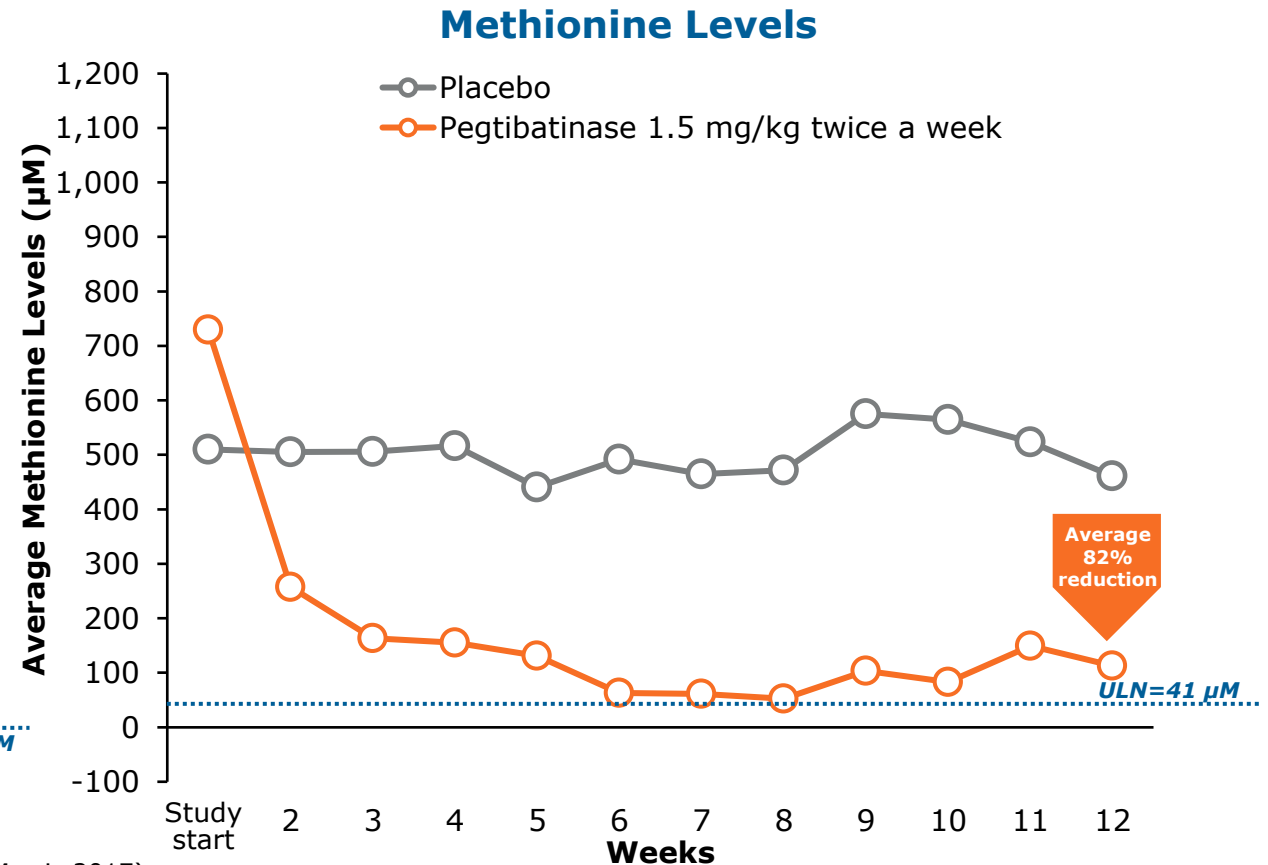
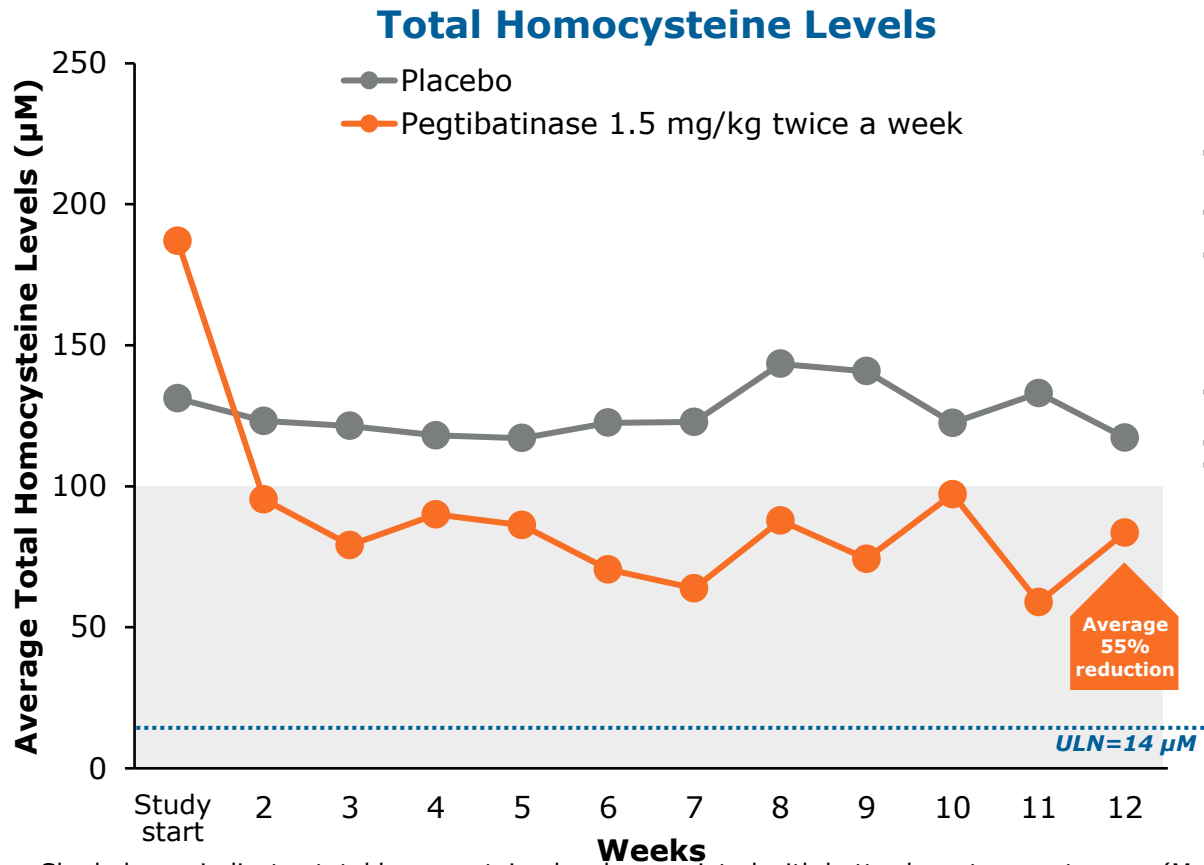
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How Pegtibatinate Affected Homocysteine Levels



How Pegtibatinate Affected Homocysteine and Methionine Levels Over the 12 Weeks of Double-blind Treatment of the Study

Patients who received the highest dose of pegtibatinate rapidly reduced total homocysteine and methionine levels; average homocysteine levels were reduced below 100 μM as recommended



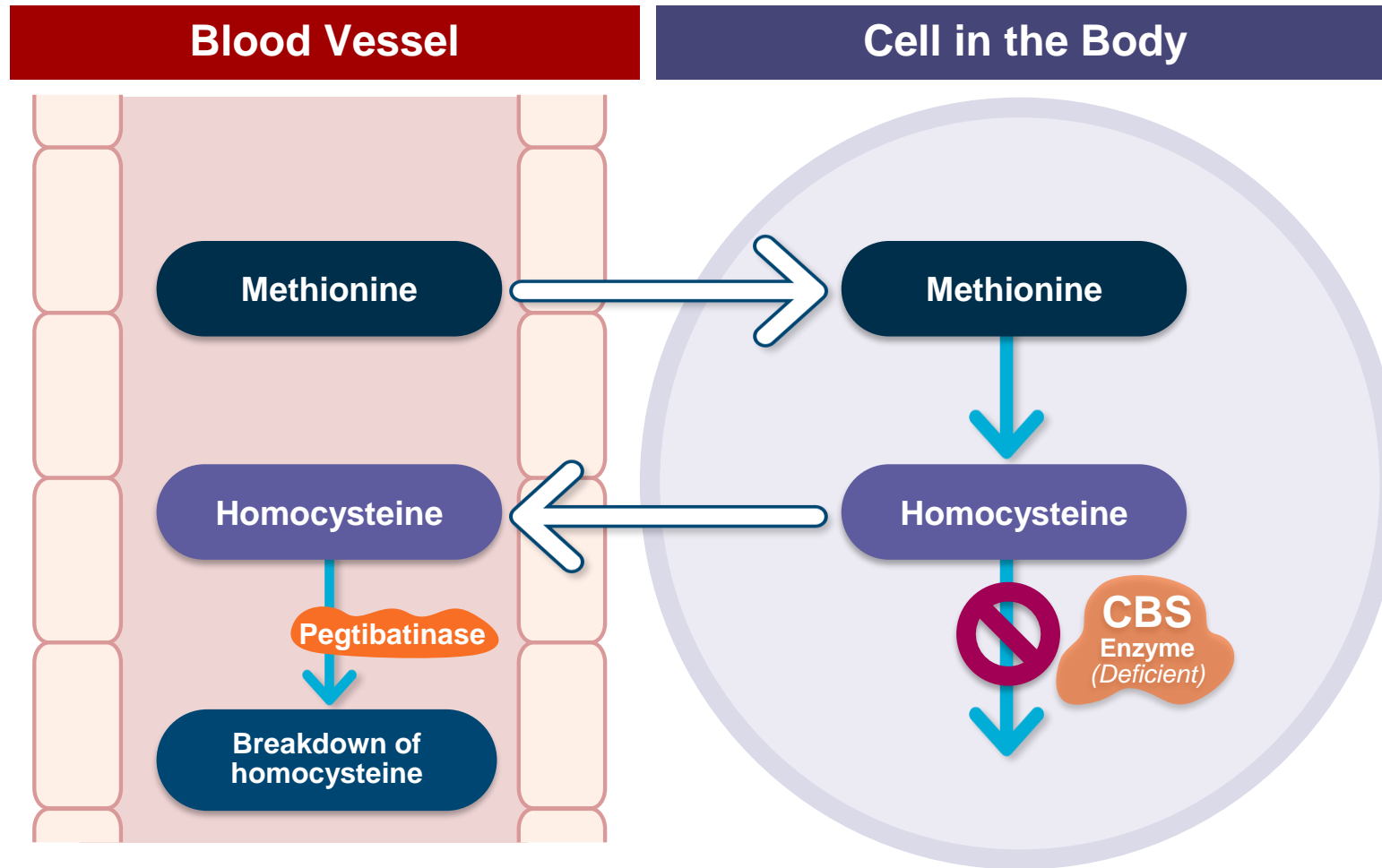
Shaded area indicates total homocysteine levels associated with better long-term outcomes (Morris 2017).

ULN, upper limit of normal.

Levy HL, et al. Poster presented at: SIMD 2022; April 10-13, 2022; Orlando, FL.

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How Does Pegtibatinate Work? The Metabolic Sink Hypothesis

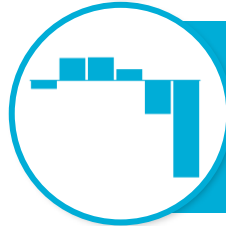


CBS, cystathionine β -synthase.
Levy HL, et al. Poster presented at: SIMD 2022; April 10-13, 2022; Orlando, FL.
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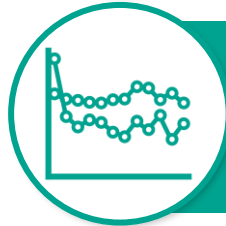
COMPOSE Initial Results Conclusions



Pegtibatinase was generally well tolerated at all doses tested and there were no reports of severe allergic or immune reactions due to study drug; no patients stopped treatment due to side effects



Patient groups on higher doses of pegtibatinase showed rapid reduction in total homocysteine levels; patients treated with the highest dose had an average reduction of 55% at 12 weeks



Patients treated with the highest dose of pegtibatinase twice weekly had a sustained reduction of homocysteine over 12 weeks and maintained their average homocysteine level below 100 μ M as recommended



These results suggest that pegtibatinase may have the potential to be a new treatment for classical HCU

HCU, homocystinuria.

Levy HL, et al. Poster presented at: SIMD 2022; April 10-13, 2022; Orlando, FL.

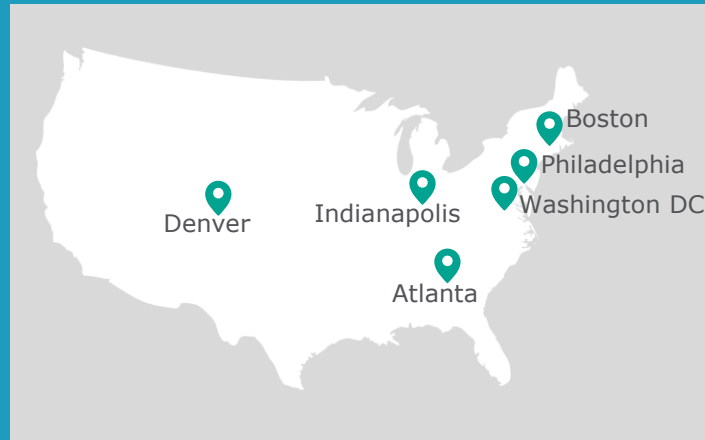
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Future Steps for Pegtibatinate Development

COMPOSE is enrolling one more group of patients to study a higher dose and new preparation of pegtibatinate

The logo for the COMPOSE study, featuring the word "Compose" in a blue, cursive script font with a decorative flourish underneath.

Work is being done to plan a Phase 3 study and reach agreement with the FDA and other regulatory authorities



Traverse is working with doctors, patients, and other interested parties to better understand classical HCU and the potential role of pegtibatinate treatment



Questions?



TRAVERE[™]
THERAPEUTICS