

WVE-006: RNA Editing for AATD Interim RestorAATion-2 Clinical Data

ATS International Conference 2026 | Investor
Webcast

May 18, 2026

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Today's agenda

Opening remarks

Paul Bolno, MD, MBA
President and CEO

Clinician perspective on AATD and treatment gaps

D. Kyle Hogarth, MD, FCCP
Professor of Medicine at The University of Chicago

RestorAATion-2 clinical data

Chris Wright MD, PhD
Chief Medical Officer

Closing remarks

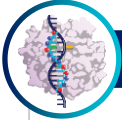
Paul Bolno, MD, MBA
President and CEO

Q&A

Opening remarks

Paul Bolno, MD, MBA
President & CEO

WVE-006, RNA editing for AATD: Produces wild-type M-AAT protein, reduces Z-AAT protein, restores dynamic acute phase response



RNA editing for AATD

- **Significant unmet need remains in AATD**
 - Approximately 200,000 individuals living with Pi*ZZ AATD in US and Europe
 - Weekly IV augmentation therapy is the only treatment option for AATD lung disease
 - No approved therapies for AATD liver disease
- **Wave's RNA editing offers a differentiated approach**
 - RNA editing aims to address the root cause of both lung and liver manifestations of AATD and restore dynamic production of AAT with a safe and convenient therapy
 - No risk of permanent bystander edits, indels, off-target edits (including cancer-associated genes) which have been connected to DNA editing¹
- **WVE-006**
 - WVE-006 is a GalNAc-conjugated, subcutaneously delivered, RNA editing oligonucleotide (AIMer) for AATD that utilizes Wave's proprietary best-in-class chemistry

Treatment with WVE-006 achieves Pi*MZ profile across doses: delivering potential liver and lung benefits with a safe and convenient therapy

Protecting the liver

Protecting the lung

Safe and convenient

WVE-006	Total AAT	Reduce Z-AAT	MZ-like dynamic AAT production	Generate healthy, wild-type M-AAT	
200 mg biweekly	11.9 μ M	71% reduction	Three acute phase responses	64% M-AAT of total AAT	<ul style="list-style-type: none"> • Generally safe and well tolerated • Subcutaneous delivery, with potential for self-administration • Potential for monthly dosing
400 mg monthly	13.6 μ M	68% reduction	CRP increases correlated with AAT increases	59% M-AAT of total AAT	

Regulatory feedback on accelerated approval pathway for WVE-006 expected mid-2026

Guest speaker: D. Kyle Hogarth, MD, FCCP

Professor of Medicine and Director of the Alpha-1 Clinical Resource Center University of Chicago

- D. Kyle Hogarth, MD, FCCP, is a Professor of Medicine in the Section of Pulmonary and Critical Care Medicine at The University of Chicago. He is the Director of Bronchoscopy and is heavily involved in the field of advanced bronchoscopy and interventional pulmonary with numerous publications. He also runs the Alpha One Antitrypsin Deficiency Clinical Resource Center, one of the largest in the Midwest with over 250 patients.
- Dr. Hogarth received his medical degree at Case Western Reserve University School of Medicine in Cleveland, Ohio. He then completed a residency in Internal Medicine and a fellowship in Pulmonary and Critical Care at The University of Chicago.
- He has been published in the New England Journal of Medicine, Chest, ERJ and many other journals. He previously served on the editorial board of CHEST, where he was the section editor for the podcast section and giants in chest medicine series. He helped write the 2016 Alpha One Antitrypsin deficiency Clinical Practice Guidelines. He has won numerous clinical awards and teaching awards from his University. He is a founding member and a Past President of the Society for Advanced Bronchoscopy.

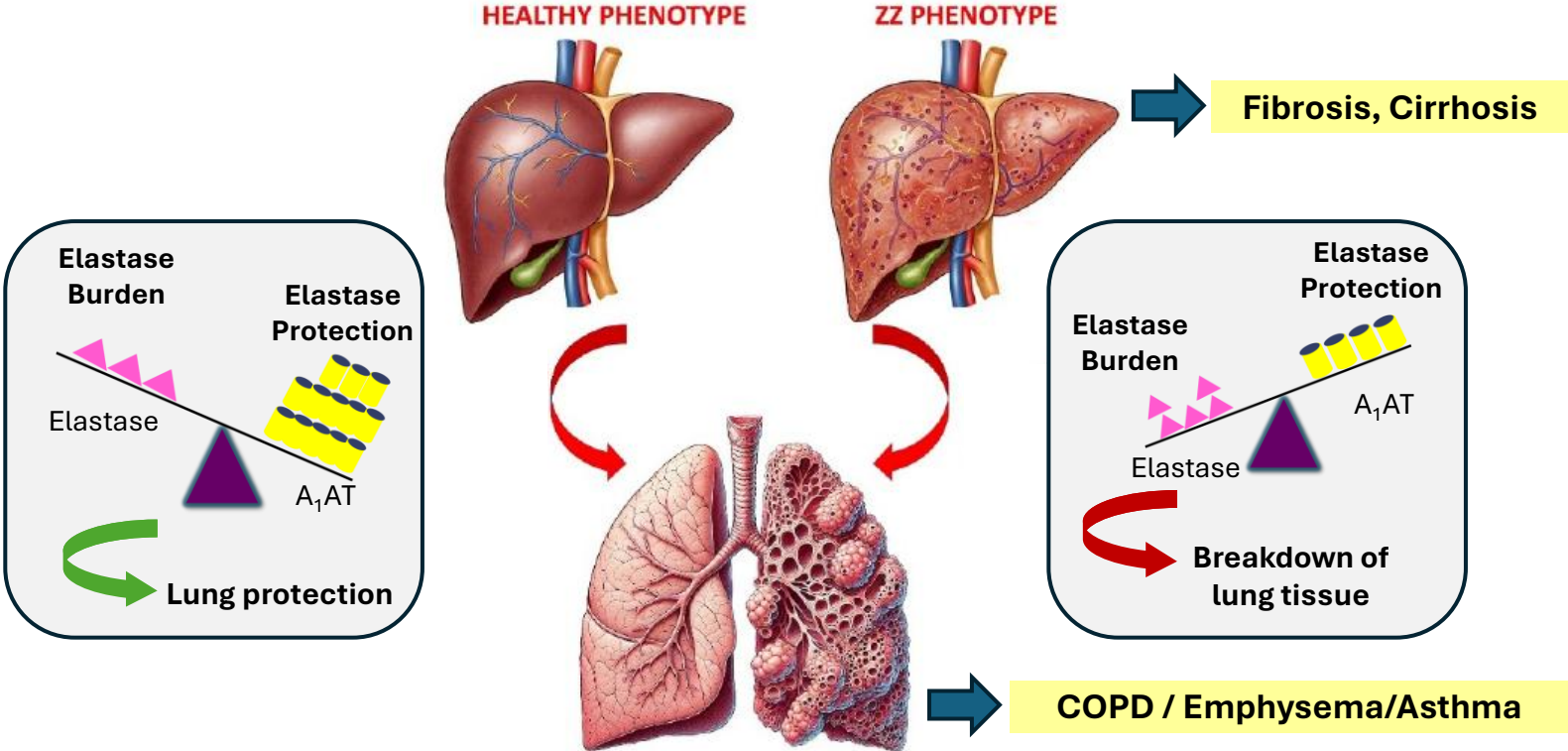


**Professor of Medicine, Section of
Pulmonary and Critical Care Medicine
University of Chicago
Director of Bronchoscopy
Director of the Alpha One Antitrypsin
Deficiency Clinical Resource Center
Director of the Pulmonary Rehab**

Clinician perspective on AATD and treatment gaps

D. Kyle Hogarth, MD, FCCP

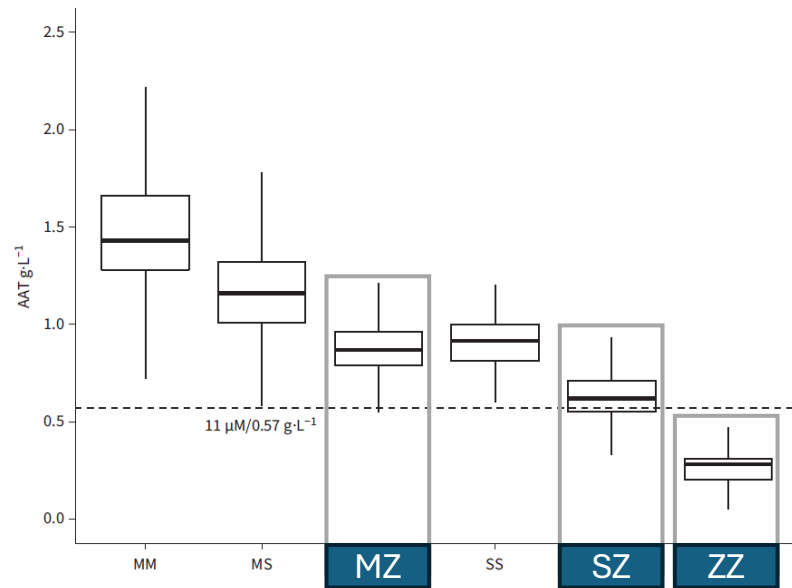
Alpha-1 antitrypsin deficiency (AATD) results from the SERPINA1 Z mutation and can lead to both liver and lung disease



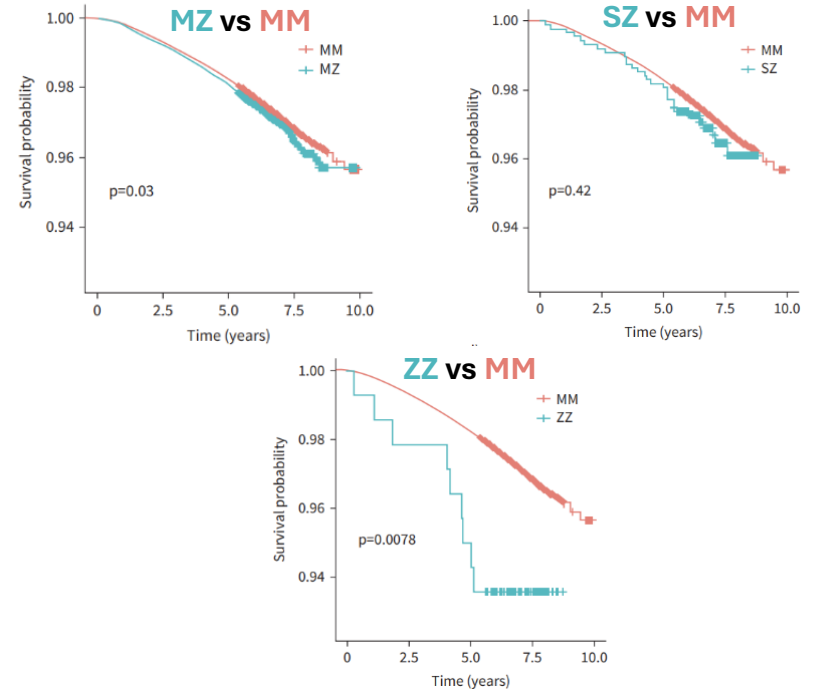
Adapted from Grignano, et al. *Int. J. Mol. Sci.* 2025, 26(11):5085

AATD genotypes have varying levels of AAT and disease risk, with Pi*ZZ at significantly greater risk for poorer outcomes

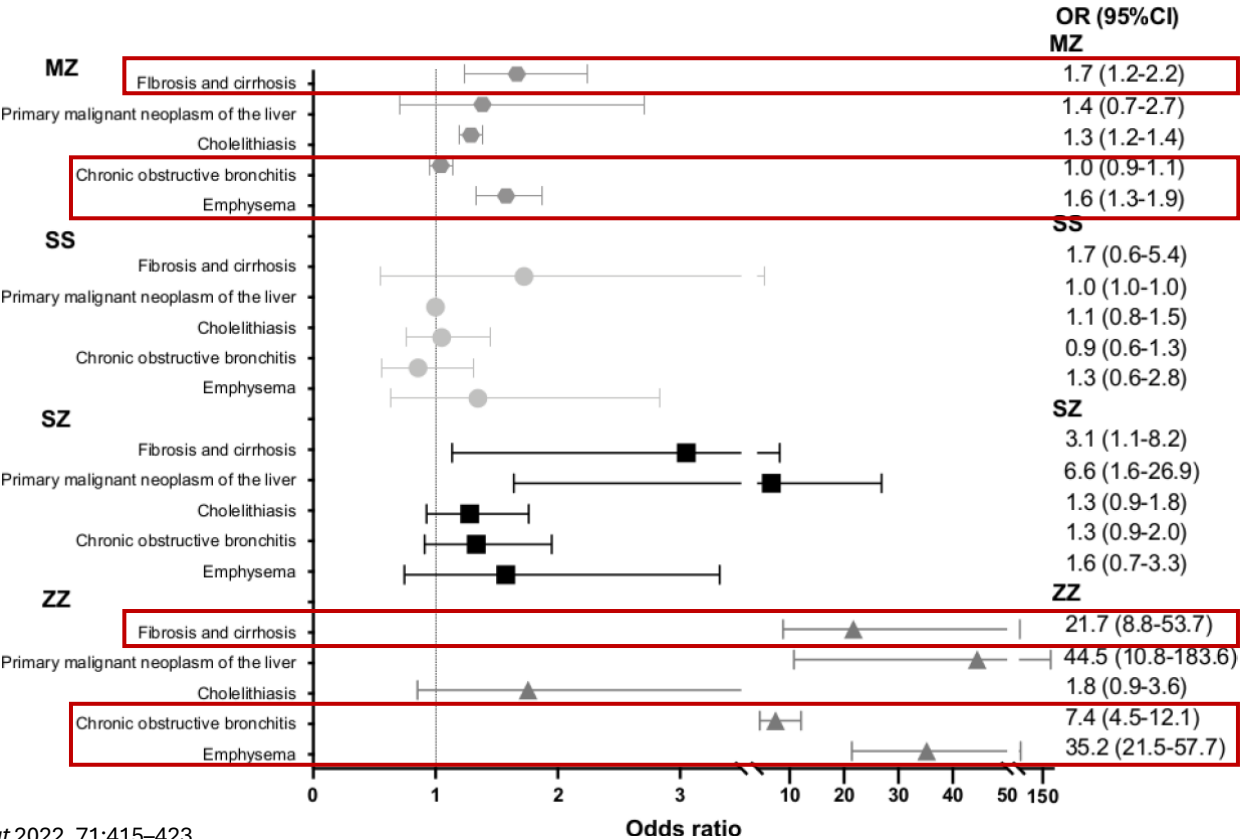
Common AATD genotypes and associated AAT levels



Survival curves of all-cause mortality by SERPINA1 genotype in UK Biobank



Individuals with Pi*ZZ genotype have significantly higher risk of lung and liver disease vs. those with Pi*MZ genotype

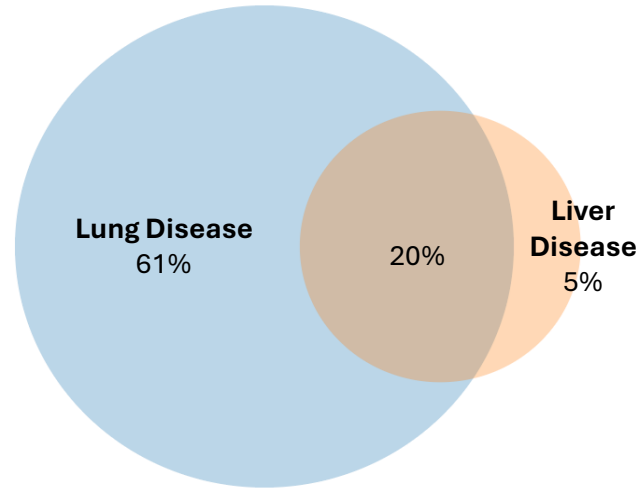


All Pi*ZZ individuals are at risk for liver and lung disease, with diagnosis rates expected to increase with greater disease awareness and screening

AATD is highly underdiagnosed today

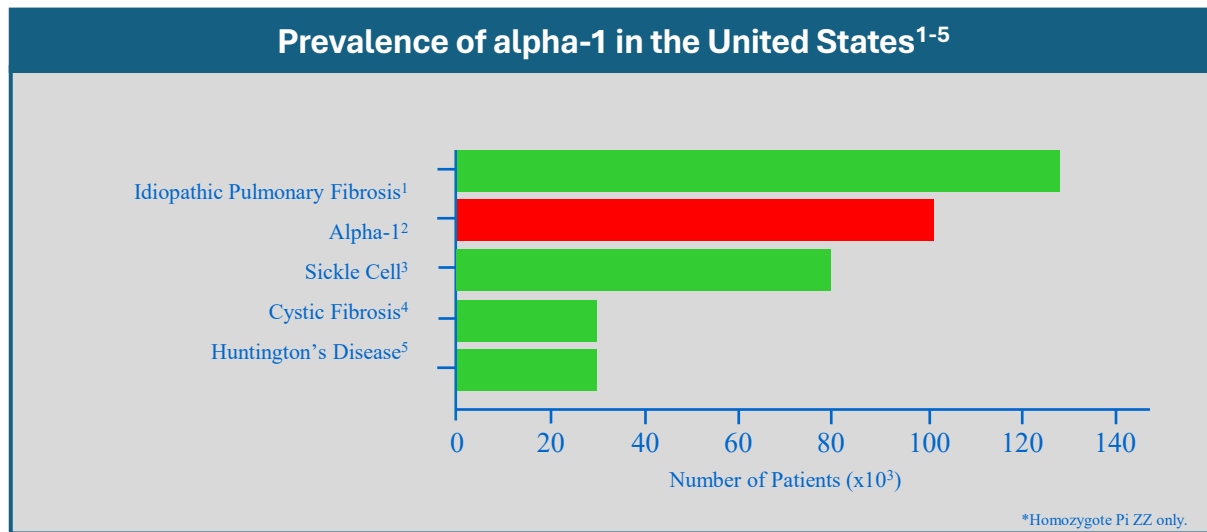
- ~200K Pi*ZZ individuals in US and Europe,¹ but only ~10% are diagnosed
- Average age of diagnosis of AATD lung disease is **46 years**²
- Average age of adult-onset liver disease is **61 years**³

Frequency of Lung or Liver Disease of Pi*ZZ Patients at Diagnosis*



*From Alpha One International Registry (n=3,405)⁴ (13% reported no disease at diagnosis)

Genetic COPD: More common than previously thought



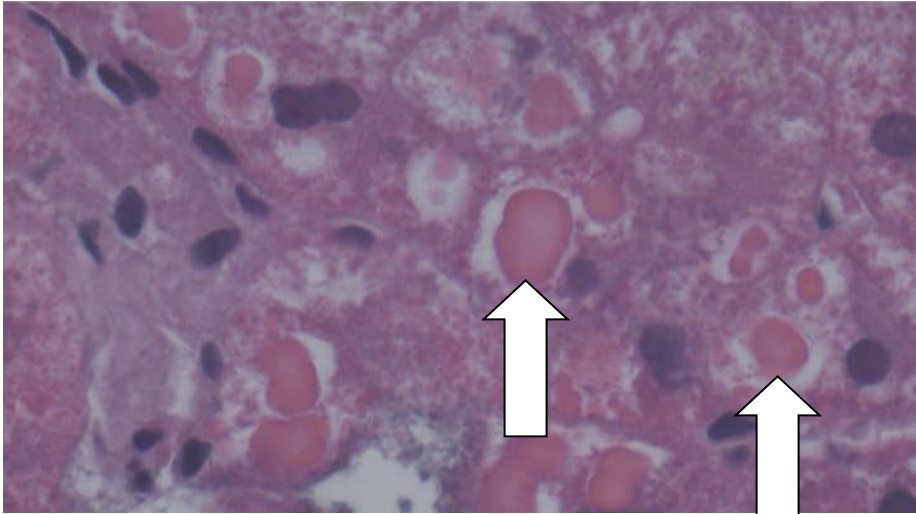
- **Not a rare disorder, JUST RARELY TESTED FOR.**⁶
 - Up to 90% of those with alpha-1 are undiagnosed²
 - In a registry study of more than 1000 patients, the average interval between onset of symptoms and diagnosis was 8.3 years²

1. http://www.coalitionforpf.org/cpf_faq.php. Accessed October 4, 2011. 2. Campos MA, et al. *Chest*. 2005;128(3):1179-1186.

3. <http://sicklecelldisorder.com/index.php/the-disease.html>. Accessed October 4, 2011. 4. http://www.cff.org/AboutCF/Faqs/#What_is_cystic_fibrosis? Accessed October 4, 2011.

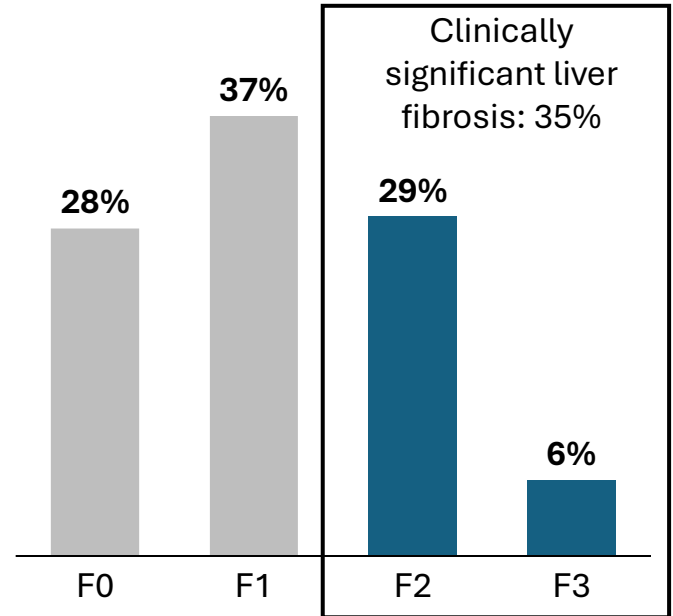
5. <http://www.hdsa.org/about/our-mission/what-is-hd.html>. Accessed October 4, 2011. 6. de Serres FJ. *Environ Health Perspect*. 2003;111(16):1851-1854.

Liver fibrosis in AATD is common and often asymptomatic in early stages



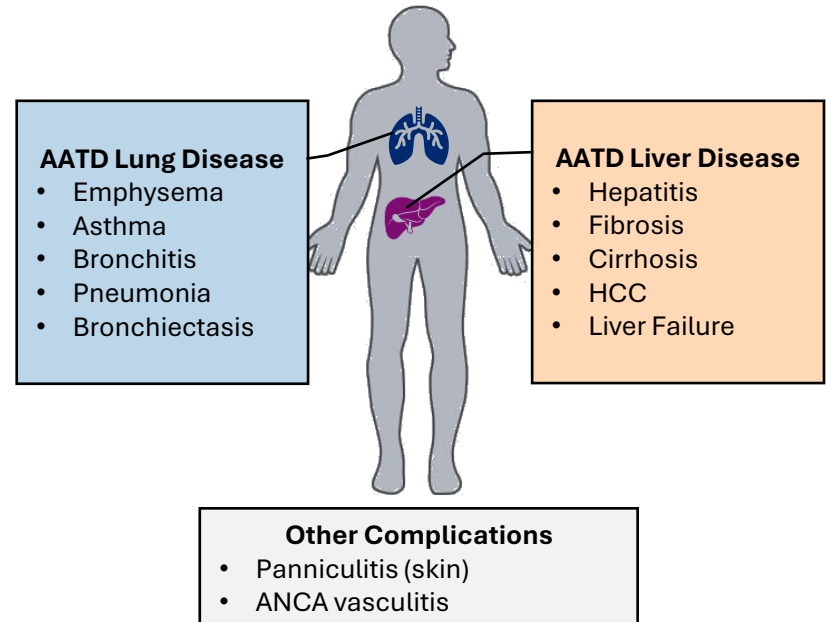
Build up of alpha1 Z within liver cells

Fibrosis as Assessed by Liver Biopsy in Pi*ZZ AATD Cohort (n=94 adults)

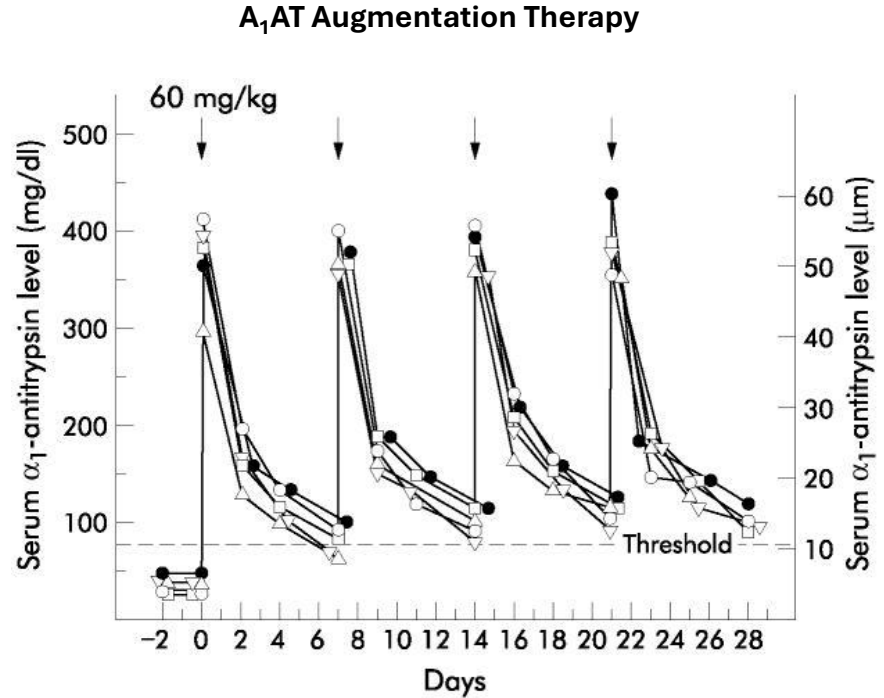
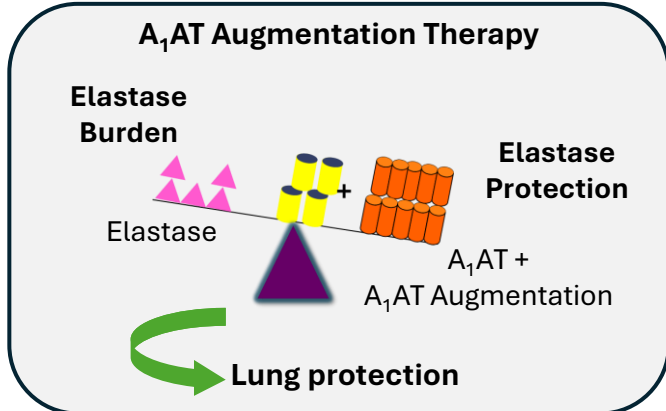
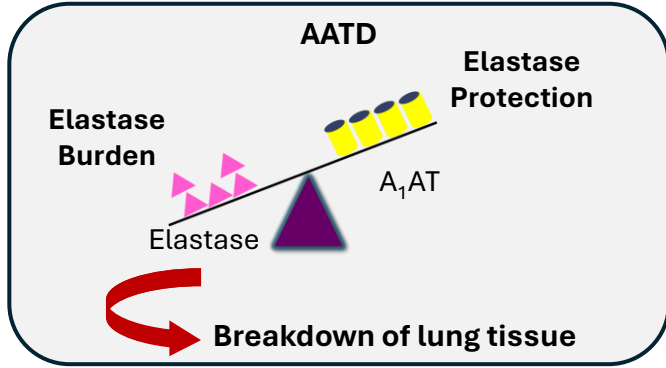


AATD significantly impacts patient quality of life and has limited treatment options

- **Augmentation therapy** is only treatment option for AATD lung disease and requires weekly IV infusions
- **No treatment for AATD liver disease**, other than liver transplant



Augmentation therapy increases AAT levels with weekly IV infusions but does not address AATD liver disease

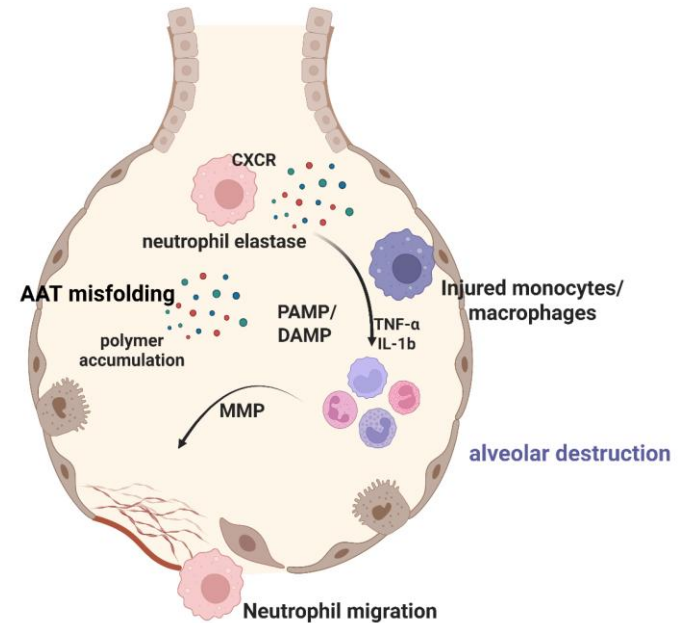
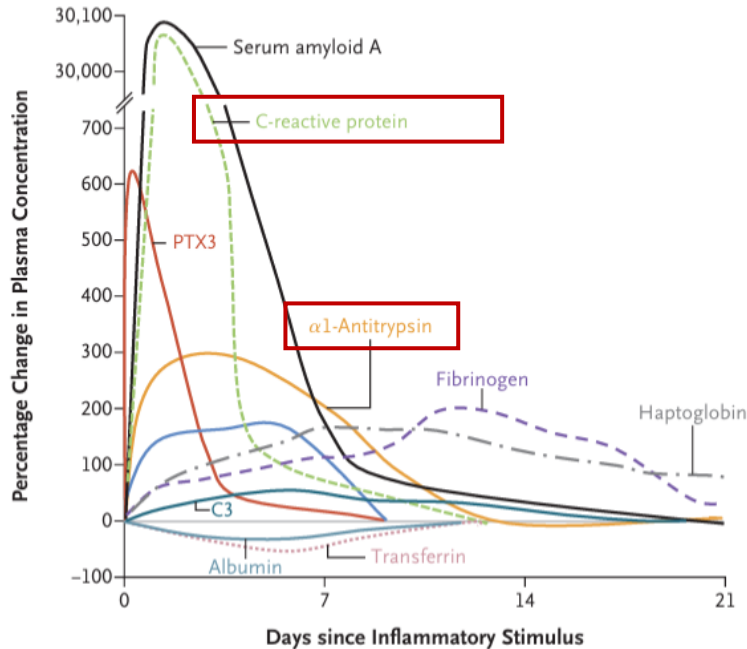


Thorax 2004;59 708-712
Wewers in NEJM 1987;316:1055

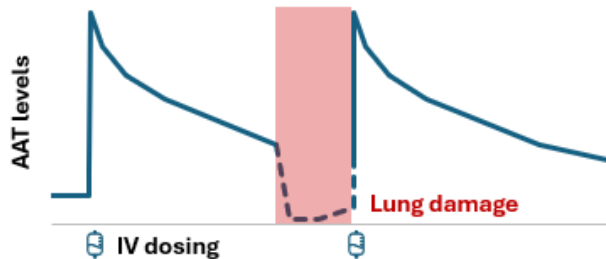
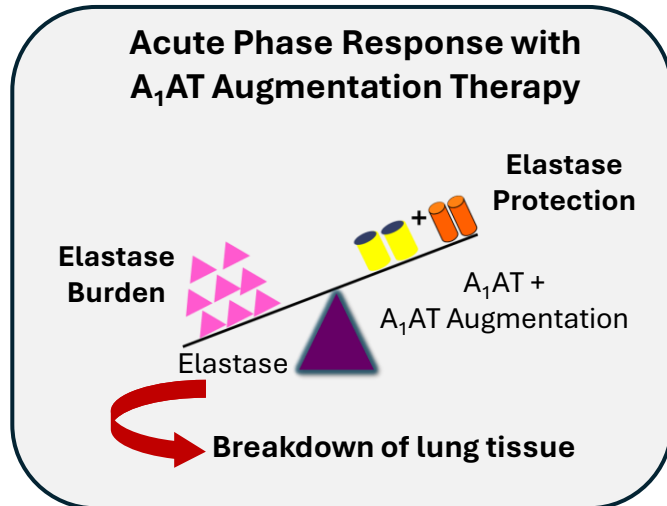
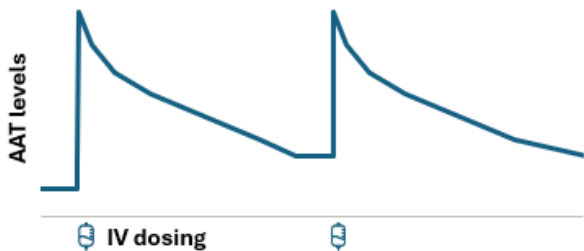
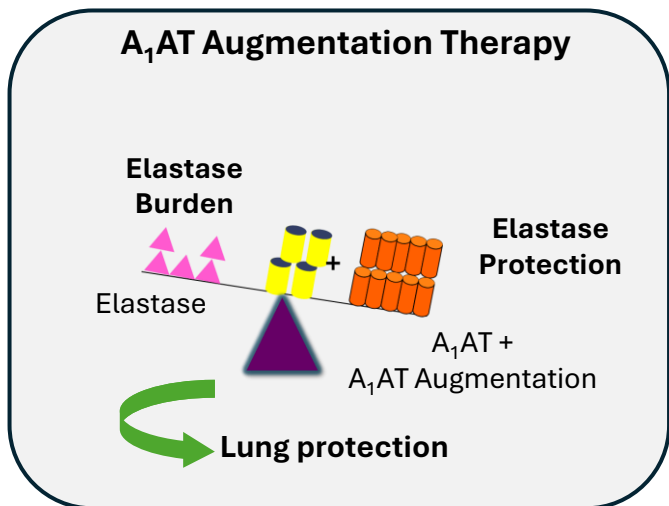
Alpha-1 antitrypsin is a key player in the acute phase response

In healthy individuals, AAT levels increase rapidly following an inflammatory stimulus

Pathophysiology of AATD-Associated Alveolar Injury



During acute phase responses, A1AT is consumed and can leave lungs at risk for proteolytic damage, even with augmentation therapy



Select emerging treatment options

Lung Only

Liver Only

Lung and Liver Disease

Recombinant Augmentation Therapy

AAT siRNA

RNA Editing

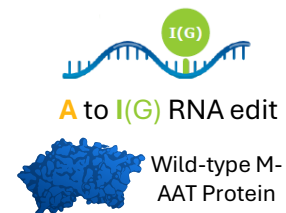
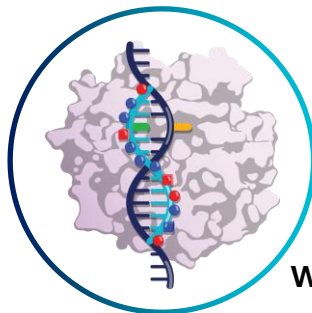
DNA Base Editing

WVE-006: RNA editing for AATD

Chris Wright, MD, PhD
Chief Medical Officer

WVE-006 corrects the SERPINA1 transcript to convert the Z mutation to wild-type, restore M-AAT production

WVE-006 (RNA editing)



Proprietary chemistry



Highly specific (no bystander edits)



Subcutaneous delivery (GalNAc)



Infrequent dosing



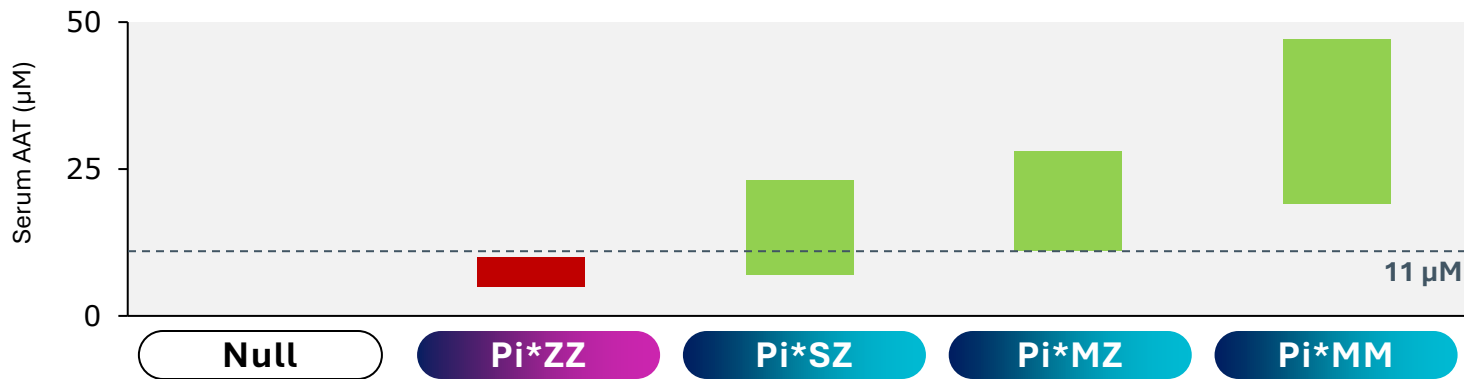
Reduce Z-AAT protein aggregation in liver



Restore circulating M-AAT and physiological AAT protein production

Treatment target: Heterozygous MZ genotype with M-AAT >50% AAT and a dynamic CRP response has low risk of liver and lung disease

Serum AAT Protein Levels by Genotype¹

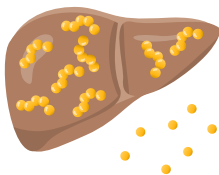


Serum AAT composition	No AAT	100% Z-AAT	S-AAT and Z-AAT	Mean 64% M-AAT (range: 57%-71%) ²	100% M-AAT
Risk of lung disease ³	Very high	High	Low	Low	Normal
Risk of liver disease ³	Normal	High	Low	Low	Normal
AAT levels increase with acute phase response ⁴	N/A	No	Yes	Yes	Yes

RNA editing expected to deliver even greater impact over time with continued treatment and improved liver health

Pi*ZZ

Liver disease



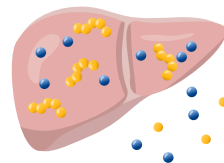
High Z-AAT aggregation and liver inflammation

WVE-006



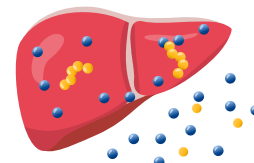
Pi*MZ-like

Reduce Z-AAT to prevent liver damage



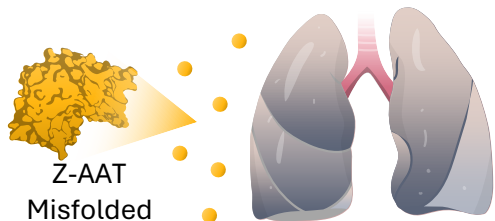
~50% M-AAT produced in liver

Z-aggregate clearance over time



Increasing hepatocyte health

Lung disease

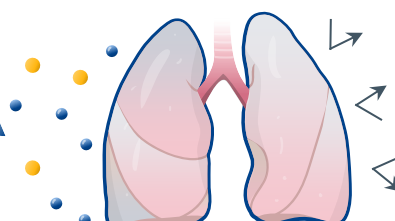


Z-AAT Misfolded Protein

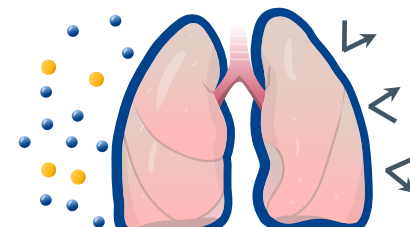
100% Z-AAT, 0% M-AAT



Wild-type M-AAT Protein



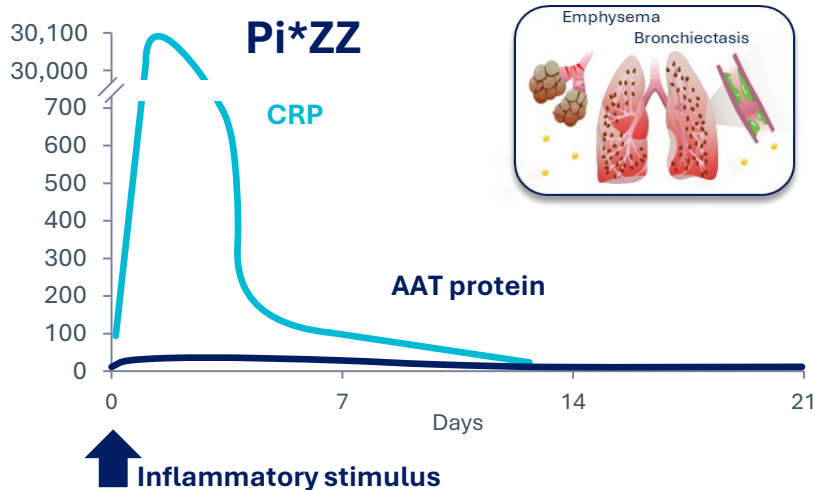
>50% M-AAT
AAT levels responsive to CRP



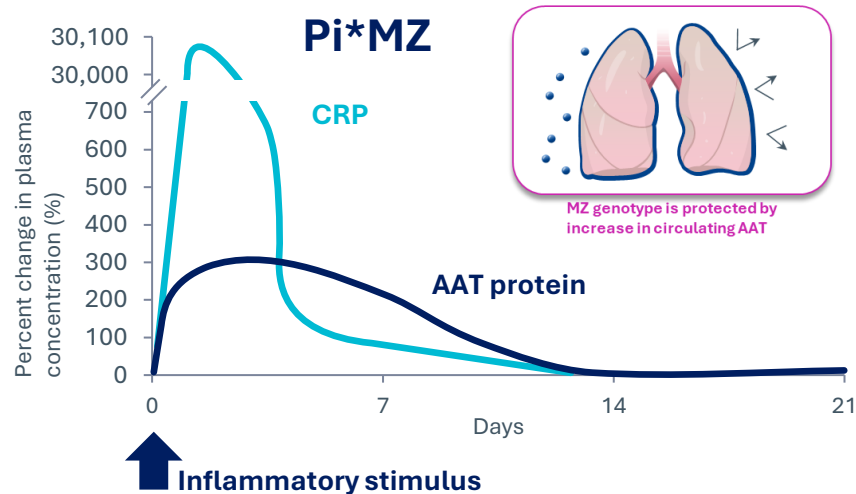
Potential for higher levels of serum AAT

Pi*ZZ individuals have an impaired serum AAT increase during acute-phase responses (APRs), when they need it most

Lung damage occurs during exacerbations, when more AAT protein is needed for protection



AAT protein has protective functions and is produced during acute phase response



RNA editing has potential to restore dynamic AAT response to inflammation

WVE-006 restores dynamic production of AAT protein as part of APRs to protect lungs from damage

APRs require a rapid rise in AAT levels to prevent lung damage

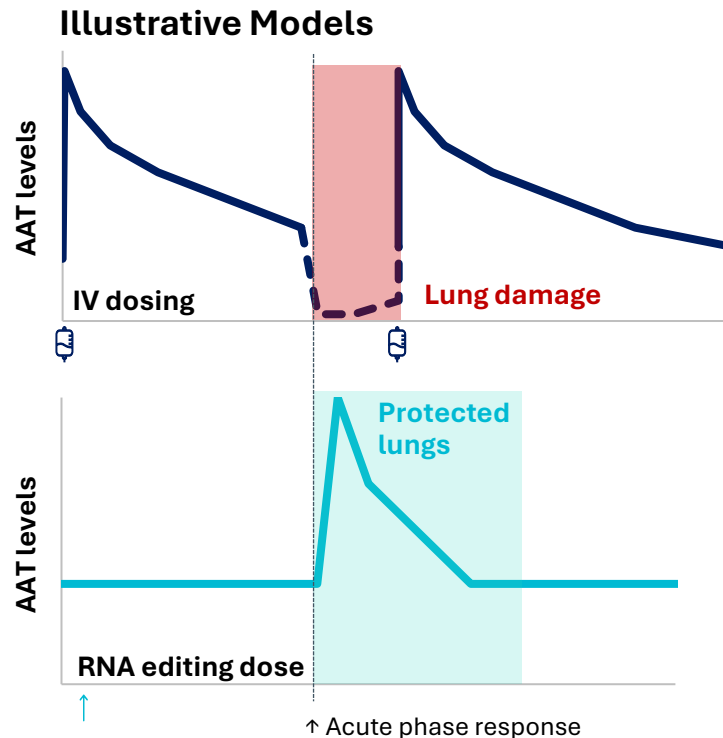
- Even with augmentation therapy, in ZZ individuals, exacerbations occur on average 1–2x yearly
- These exacerbations could deplete AAT levels within hours¹
- In healthy (including MZ) individuals, AAT levels rise quickly (24–72 hours) after stimulus

Standard of care (augmentation therapy) may leave patients at risk

- Exogenous AAT levels risk **depletion** before next scheduled IV dose

WVE-006 treatment response is dynamic

- Endogenous AAT levels increase during acute phase response



RestorAATion-2 clinical update

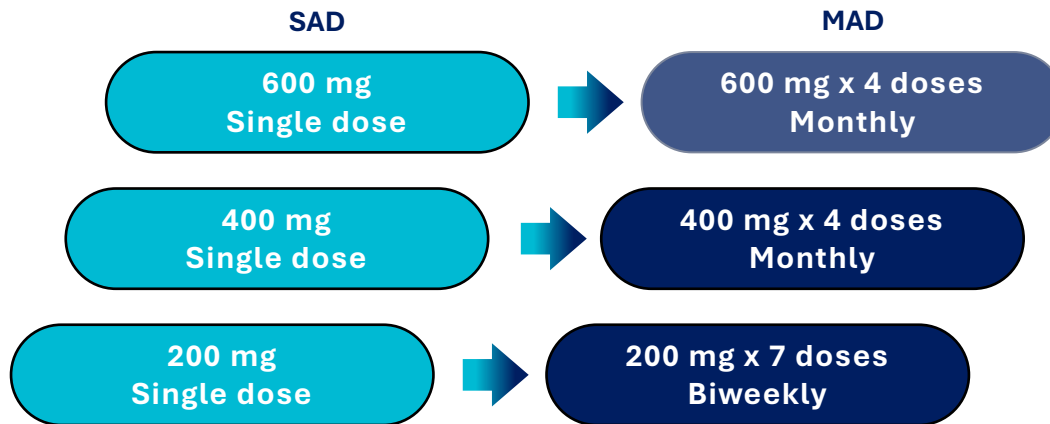
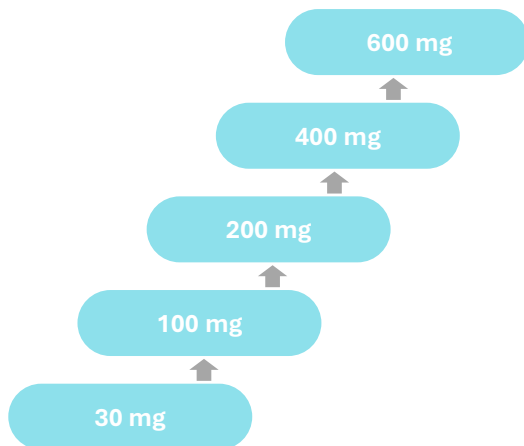
RestorAATion-2: 200 mg biweekly and 400 mg monthly cohorts complete; 600 mg monthly ongoing



RestorAATion-1: Healthy Volunteers

RestorAATion-2: AATD Patients

SAD → MAD Multi-dosing complete



Study key objectives

Safety and tolerability

Pharmacokinetics

Serum M-AAT levels

Baseline characteristics were similar across the cohorts and included participants with liver disease

Key Inclusion Criteria

- Pi*ZZ genotype
- 18 to 70 years of age
- Healthy or mild to moderate AATD-induced lung disease and/or stable mild AATD-induced liver disease
- Non-smoker for at least 1 year prior to screening

RestorAATion-2 Baseline Participant Characteristics	200 mg N=8 n (%)	400 mg N=8 n (%)	600 mg N=8 n (%)
Age at consent (years) (mean (SD))	51.4 (12.0)	49.4 (18.1)	51.3 (15.5)
Gender, N (%)			
Male	2 (25.0)	4 (50.0)	6 (75.0)
Female	6 (75.0)	4 (50.0)	2 (25.0)
Weight (kg), Median (min, max)	79.6 (64.8, 100.0)	84.0 (65.6, 97.5)	78.5 (64.4, 96.5)
Years since AATD diagnosis (mean)	15.9	16.2	10.9
Baseline Day 1 FEV1 (mean (L) (min, max))	3.2 (2.2, 5.8)	2.9 (1.3, 5.1)	3.6 (2.4, 5.0)
Baseline Liver Elastography (N, F0-2 score; % of participants)	F0: 8 (100.0)	F0: 5 (62.5) F1: 2 (25.0) F2: 1 (12.5)	F0: 5 (62.5) F1: 2 (25.0) F2: 1 (12.5)

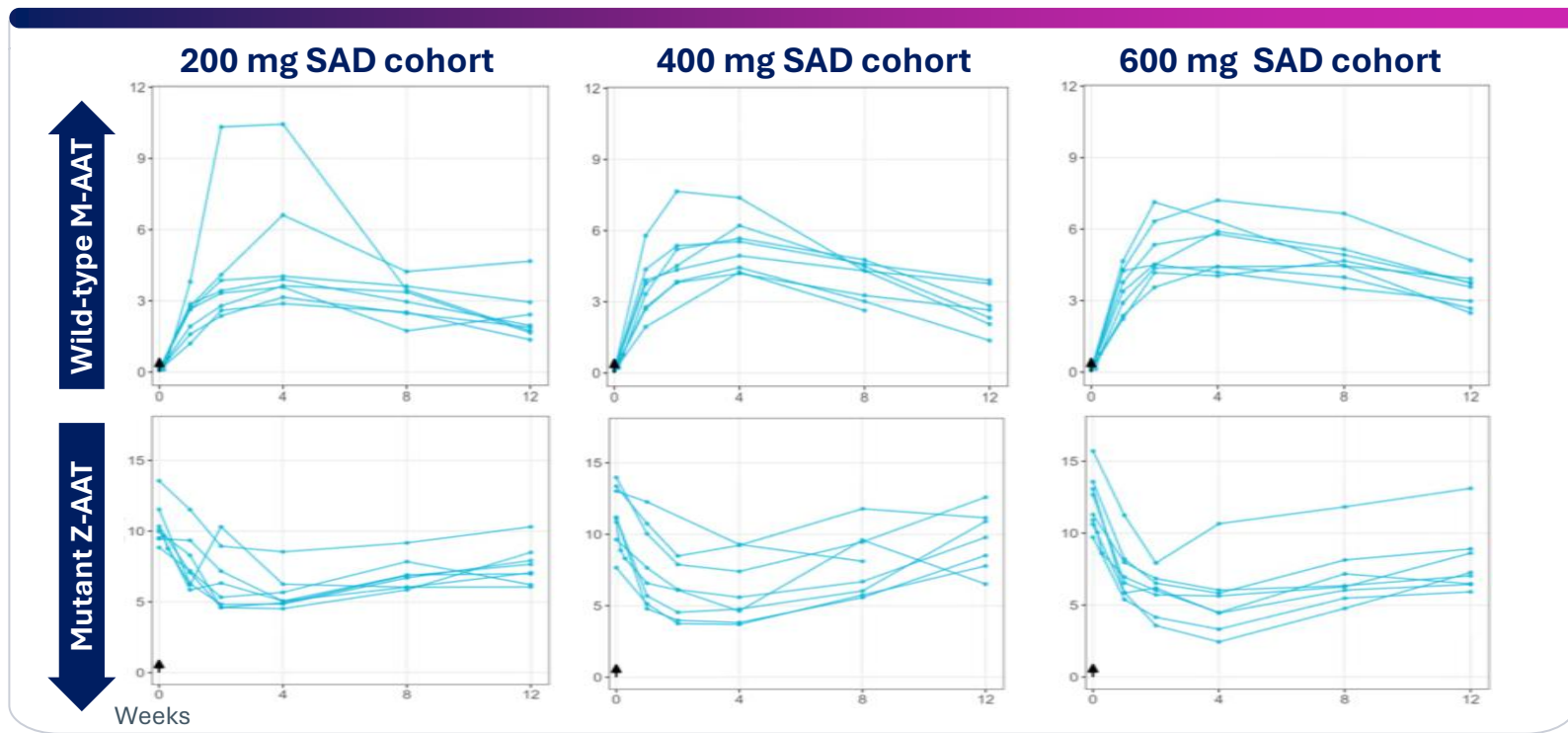
RestorAATion-2: WVE-006 continues to be generally safe and well tolerated through 600 mg

TEAE Category	200 mg SAD N=8 n (%)	200 mg MAD N=8 n (%)	400 mg SAD N=8 n (%)	400 mg MAD N=9 n (%)	600 mg SAD N=8 n (%)
Any TEAE	6 (75.0)	6 (75.0)	7 (87.5)	7 (77.8)	8 (100.0)
Mild	2 (25.0)	0	1 (12.5)	3 (33.3)	6 (75.0)
Moderate	4 (50.0)	6 (75.0)	6 (75.0)	4 (44.4)	2 (25.0)
Severe	0	0	0	0	0
Any drug-related TEAE	1 (12.5)	3 (37.5)	2 (25.0)	5 (55.6)	5 (62.5)
Mild	1 (12.5)	3 (37.5)	0	2 (22.2)	4 (50.0)
Moderate	0	0	2 (25.0)	3 (33.3)	1 (12.5)
Severe	0	0	0	0	0
Any serious TEAE	0	0	0	0	0
Any TEAE leading to discontinuation	0	0	1 (12.5)	0	0
Any TEAE leading to death	0	0	0	0	0

- No SAEs and all TEAEs were mild to moderate in severity
- No treatment-related, clinically relevant changes in labs (including liver function tests), ECG, or vital signs

Rapid and consistent increases in M-AAT and reductions in Z-AAT following single dose of WVE-006

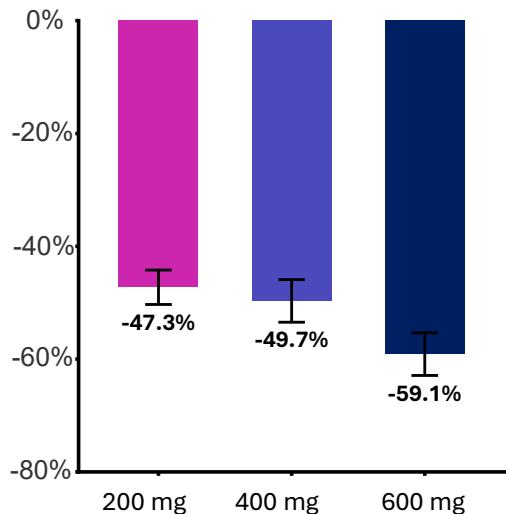
Increases in neutrophil elastase inhibition from baseline confirmed production of functional AAT



Up to 71% reduction in circulating, mutant Z-AAT supporting potential improvement in liver health

SAD cohorts: Dose-dependent Z-AAT reductions

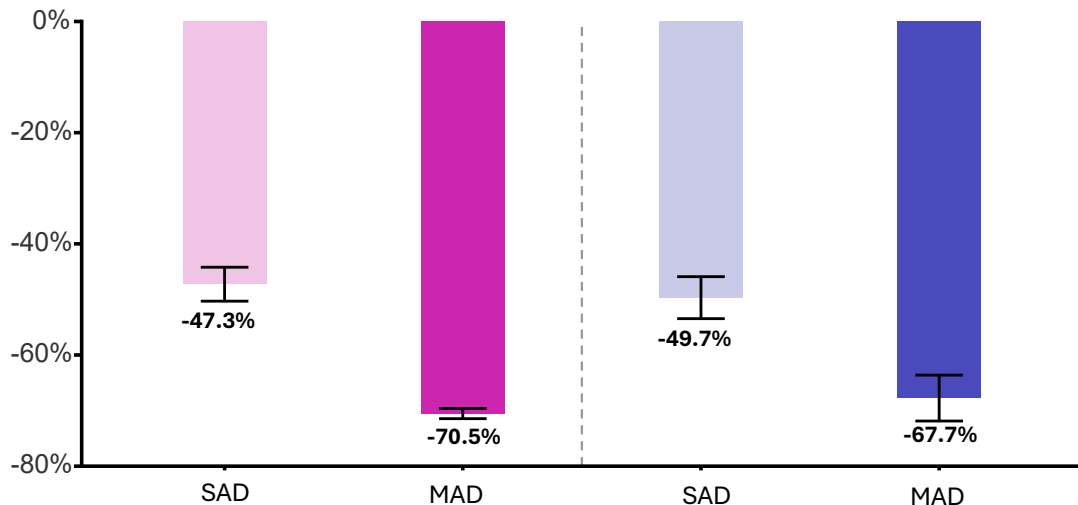
Mean max reduction of serum Z-AAT from baseline following single dose



MAD cohorts: Similar reductions with extended dosing interval

Biweekly (200 mg x 7 doses) Monthly (400 mg x 4 doses)

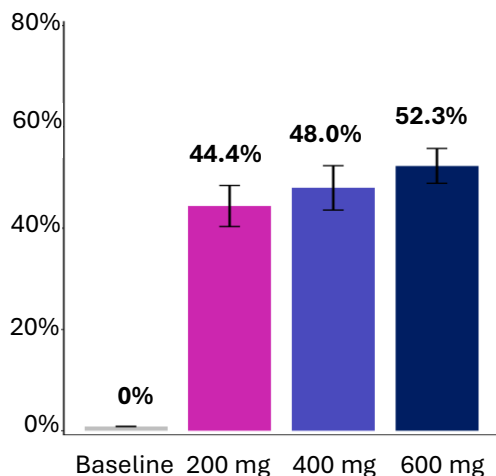
Mean max reduction of serum Z-AAT from baseline



WVE-006 generated circulating wild-type M-AAT within the MZ range (up to 64%) with no bystander edits, supporting potential improvement in lung health

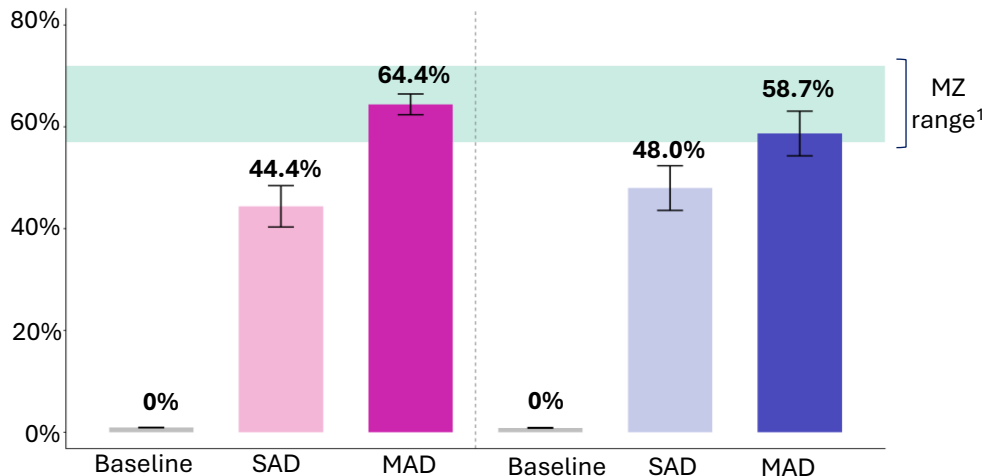
SAD cohorts: Dose-dependent M-AAT restoration

Mean max M-AAT (% of total AAT) following a single dose



MAD cohorts: Similar M-AAT% with extended dosing interval Biweekly (200 mg x 7 doses) Monthly (400 mg x 4 doses)

Mean max M-AAT (% of total AAT)

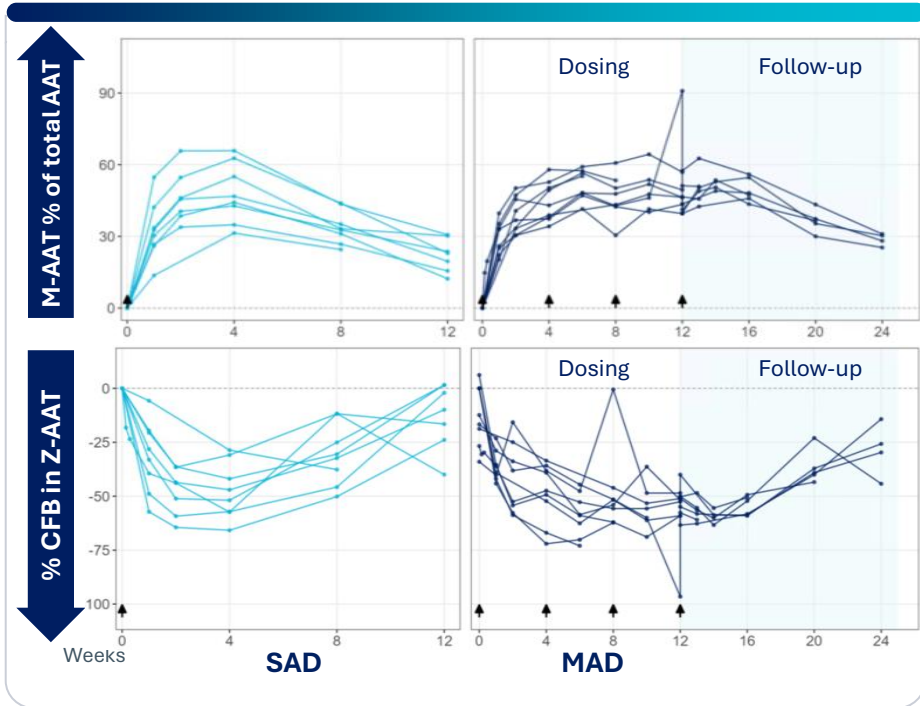
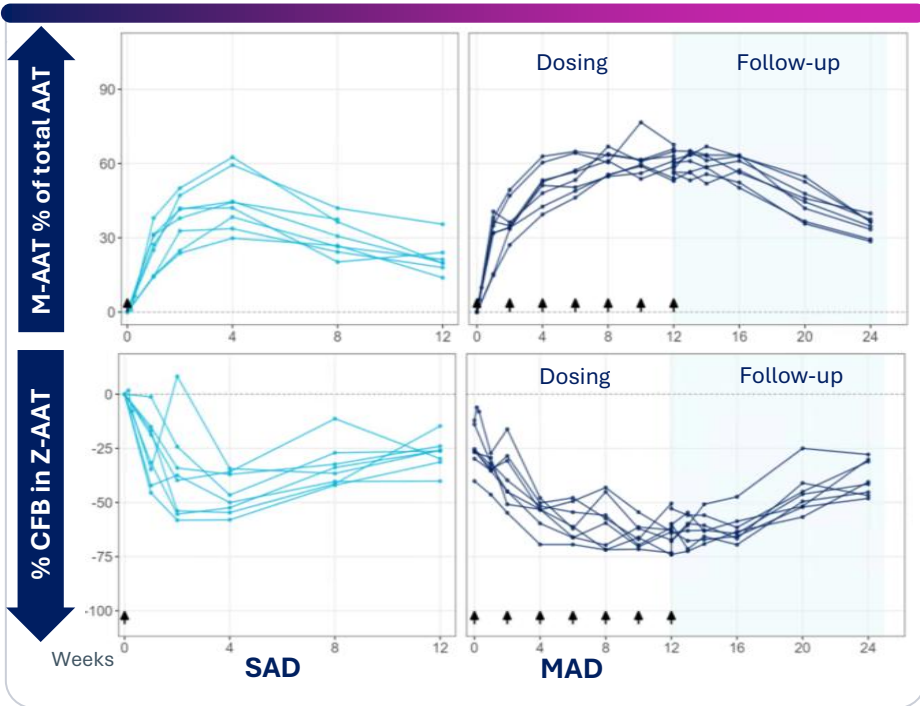


Consistent and durable generation of M-AAT and reductions of Z-AAT support monthly dosing

Editing sustained out to at least three months post last dose

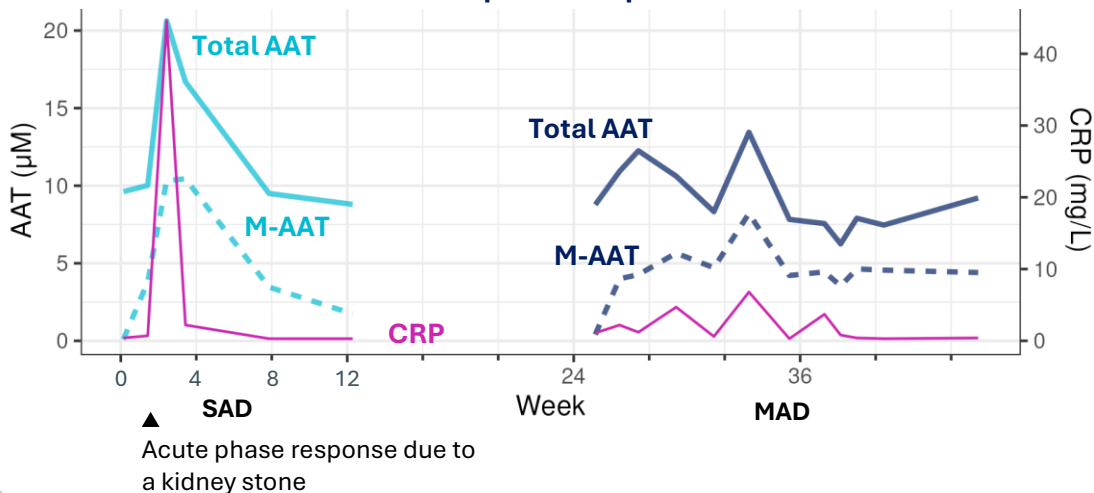
200 mg cohort: Single and biweekly doses

400 mg cohort: Single and monthly doses



WVE-006 continues to demonstrate dynamic increases of AAT during acute phase responses

Total AAT reached 20.6 μM two weeks post single 200 mg dose during acute phase response



CRP levels are correlated with AAT elevations across RestorAATion-2

- Two additional acute phase responses (URI-common cold) accompanied by 57.8% and 59.8% increases in AAT from pre-event¹
- CRP increases are strongly correlated with AAT increases ($r=0.73$, $p<0.001$, $n=19$)^{2,3}

Across RestorAATion-2 even low elevations in CRP are associated with increased production of AAT

WVE-006 continues to demonstrate potential as a best-in-class treatment option

- **Robust and durable RNA editing:**

- Reductions of circulating, mutant Z-AAT of up to 71% support potential improvement in liver health
- Restoration of M-AAT of up to 64% (no bystanders) of total, in line with MZ individuals
- Sustained editing supports monthly dosing

- **Dynamic AAT production:**

- WVE-006 restores dynamic production of AAT during acute phase responses
- Three acute phase responses observed; CRP increases correlated with AAT increases

- **Safe and convenient:**

- Treatment with WVE-006 continues to be safe and well tolerated across all doses, no liver toxicities to date

WVE-006 next steps

Regulatory feedback

- Engaging regulators on accelerated approval with feedback expected mid-2026

RESTOR**A**ACTION

Complete RestorAAtion-2 study

- Data from 600 mg monthly dose cohort expected in 2H 2026

Continue AATD community engagement

- Actively collaborating with global advocacy partners to increase awareness, shorten the diagnostic journey and incorporate community feedback in study protocols, consent forms, and educational materials



Closing remarks

Paul Bolno, MD, MBA
President & CEO

WVE-006 has the potential to transform AATD treatment



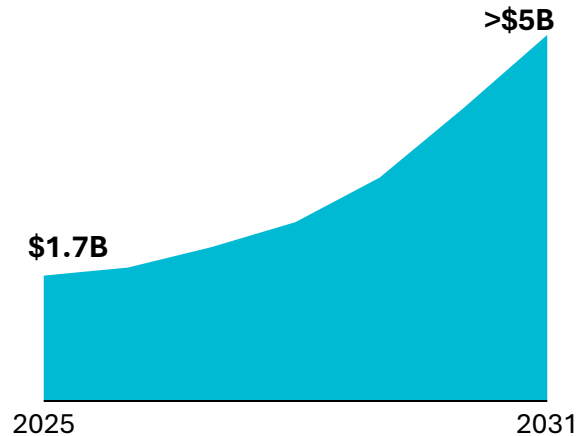
WVE-006 aims to support a differentiated value proposition for Pi*ZZ individuals, HCPs, and payers

AATD is a growing market estimated to reach >\$5B globally by 2031

Current Pi*ZZ AATD market

- ~\$1.7B global market
- ~200,000 Pi*ZZ individuals in US and Europe, but only ~10% are diagnosed
- No therapies for AATD liver disease
- Only weekly, IV augmentation therapy for AATD lung disease

AATD market projected to grow to >\$5B globally



Availability of new therapies expected to drive:

- Increased AATD awareness and diagnosis
- Increased treatment rate and potentially earlier treatment
- Better coverage outside US vs. augmentation therapy (which is not currently reimbursed in many countries)

WVE-006 offers a differentiated treatment approach for AATD compared to current standard of care and other therapies in clinical development

	Protecting the liver	Protecting the lung		Safe and convenient	
	Reduce Z-AAT	Enable dynamic AAT production	Provide healthy, wild-type M-AAT	Infrequent SC dosing	Safe & well-tolerated
WVE-006 <i>(investigational)</i>	✓	✓	100% wild-type M-AAT	SC, Q4W	✓
Approved augmentation therapy¹	✗	✗	100% wild-type M-AAT	IV, weekly	✓
Recombinant augmentation therapy² <i>(investigational)</i>	✗	✗	100% Fc-dimerized AAT	IV, Q3-4W	✓
DNA base editing <i>(investigational)</i>	✓	✓	Less than 50% wild-type M-AAT ⁴	IV, single dose (uncertain durability, redosing may not be possible)	Liver enzyme elevations ³ ; Requires LNPs; Risk of permanent off-target effects, including in cancer-associated genes ⁵
AAT siRNA⁶ <i>(investigational)</i>	✓	✗	✗	SC, Q3M	Potential exacerbation of lung disease due to AAT knockdown ⁶

Poised for significant and sustained growth driven by RNAi and RNA editing



RNAi
SpiNA

WVE-007
Obesity

Other hepatic targets

Extra-hepatic targets

Bifunctional single oligonucleotide constructs

Other hepatic targets

Extra-hepatic targets



RNA Editing
AIMers

WVE-006
AATD
WVE-008
PNPLA3 I148M liver disease

**Thank you to the participants, families,
clinicians, and study site staff who are
participating in this study**

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Q&A



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