

# TOURMALINE

## Corporate Overview

August 2025

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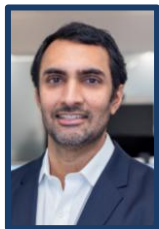
# Our mission

*We are driven by our mission to develop transformative medicines that establish new standards of care for patients with life-altering inflammatory and immune diseases*

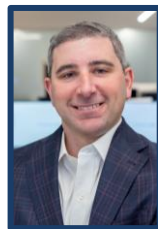


# Experienced leadership team

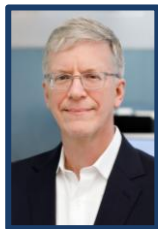
## Management Team



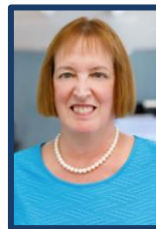
**Sandeep Kulkarni, MD**  
*Co-Founder and  
Chief Executive Officer*



**Ryan Robinson, CPA**  
*Chief Financial Officer*



**Brad Middlekauff, JD**  
*Chief Business Officer and  
General Counsel*



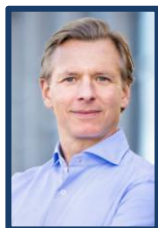
**Susan Dana Jones, PhD**  
*Chief Technology Officer*



**Kevin Johnson, PhD**  
*Chief Regulatory Officer*



**Emil deGoma, MD**  
*Senior Vice President,  
Medical Research*



**Gerhard Hagn**  
*Senior Vice President,  
Head of Commercial & BD*



**Don Fitch**  
*Senior Vice President,  
Product Development*



**Dora Rau**  
*Senior Vice President,  
Head of Quality*

## Board of Directors

**Clay Siegall, PhD**  
*Chairman*

**Caley Castelein, MD**

**Aaron Kantoff**

**Mark McDade**

**Sapna Srivastava, PhD**

**Parvinder Thiara**

**Sandeep Kulkarni, MD**

# Key highlights



**An IL-6 renaissance is underway:** new insights emerging about a broad range of indications where IL-6 may be clinically validated

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**Pacibekitug has demonstrated best-in class potential:** long-acting, low immunogenicity, and low-volume subcutaneous administration observed in clinical trials to date

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**A late-stage clinical company:** Phase 2 TRANQUILITY trial in CV and pivotal Phase 2b spiriTED trial in TED ongoing; Phase 2 proof-of-concept trial in AAA expected to be initiated in H2 2025

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**Transformative data in hand:** positive topline data from TRANQUILITY trial reported in Q2 2025 with plan to conduct end of Phase 2 meeting with FDA by end of year

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**Well-financed:** cash expected to fund operations into H2 2027, enabling the delivery of key anticipated milestones for both paths

# Pacibekitug: a long-acting anti-IL-6 monoclonal antibody with best-in-class potential



## Attributes observed to date

Long-acting with terminal half-life of ~7 weeks<sup>1</sup>

>90% pathway inhibition after single 10mg dose<sup>2</sup>

Fully human with ADAs in only 0.5% of patients<sup>3</sup>

High affinity to IL-6<sup>4</sup>






Existing data from approximately 450 study participants<sup>1</sup>



## Potential value to patients

- Dosing quarterly<sup>5</sup> (CV) or every 8 weeks<sup>6</sup> (TED)
- Rapid and robust impact across diseases
- Durable benefit **without need to increase dose**
- Volume of ≤1ml for **SC injection**<sup>5,6</sup>
- Generally **well-tolerated safety profile** observed to date

# Clinical development plan for pacibekitug

Disease Focus	Indication	Preclinical	Phase 1	Phase 2	Phase 3	Status
Cardiovascular inflammation	Atherosclerotic cardiovascular disease (ASCVD)					Reported positive  Phase 2 topline data; study completion expected Dec. 2025
	Abdominal aortic aneurysm (AAA)					Phase 2 PoC trial initiation expected H2 2025
Autoimmune disease	Thyroid eye disease (TED)					 Phase 2b topline data expected early 2026

Note: the hatched bar represents a trial that has not yet commenced  
The timing of clinical trial milestones is subject to change and additional discussion with the FDA

# Cardiovascular Inflammation

# Reducing inflammation: the next frontier in CV diseases



Increasing validation for IL-6 driven inflammation as a critical and modifiable risk factor driving residual cardiovascular risk

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Potential of IL-6 inhibition spans a broad range of cardiovascular indications, affecting tens of millions of patients globally

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Converging lines of human evidence across multiple settings support the transformative potential of IL-6 inhibition

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Pacibekitug is Phase 3-ready with a potentially best-in-class profile, including quarterly SC administration, and is supported by positive topline data from Phase 2 TRANQUILITY trial

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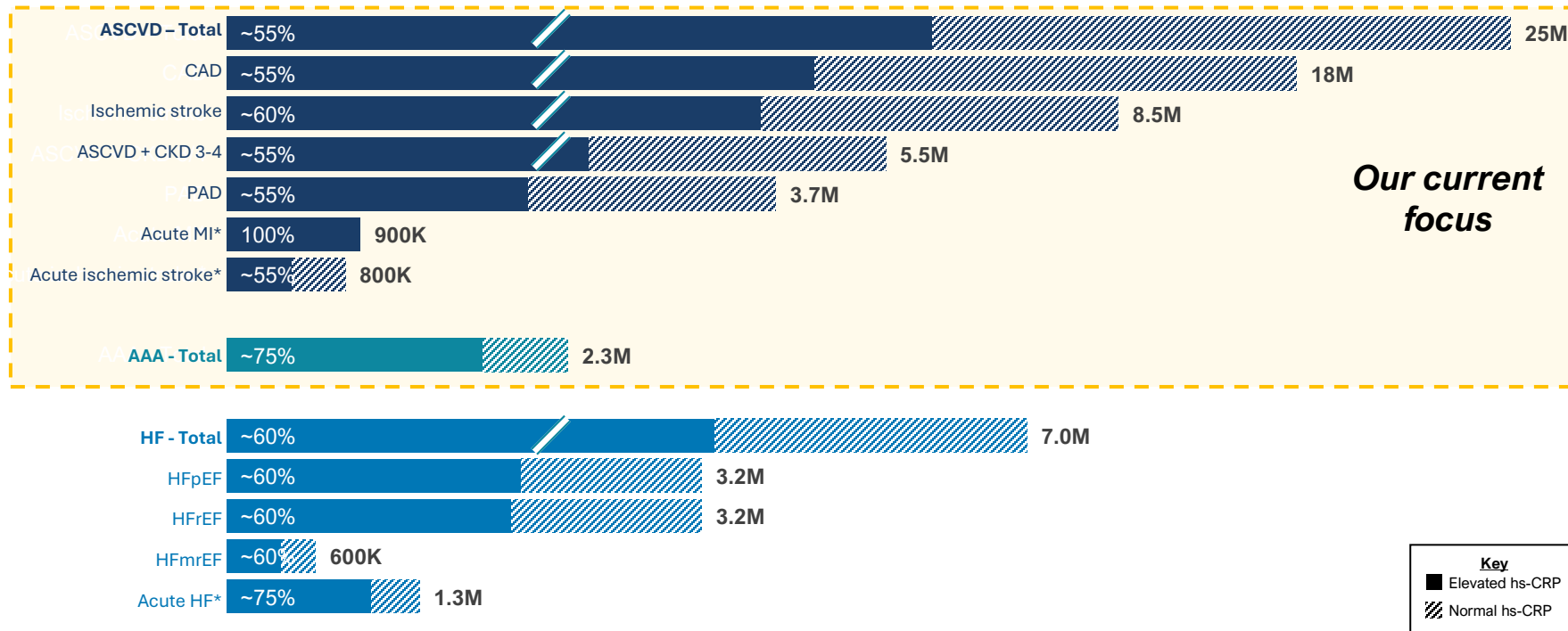


IL-6 inhibition is being evaluated in multiple cardiovascular outcomes trials; external readouts expected over the next 12 to 24 months have the potential to further validate IL-6 mechanism in cardiovascular disease

# IL-6 inhibition has the potential to benefit millions of patients across a wide range of inflammation-mediated CV conditions

## Estimated US prevalence (2024)<sup>1</sup>

Populations are not mutually exclusive



# World-class Cardiovascular Scientific Advisory Board guiding our development strategy for pacibekitug



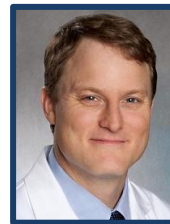
**Deepak L. Bhatt, MD, MPH, MBA**  
**SAB Chair**  
*Mount Sinai Fuster Heart Hospital*



**Paul M. Ridker, MD, MPH**  
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**Marc P. Bonaca, MD, MPH**  
*University of Colorado  
CPC Clinical Research*



**Robin Choudhury, MA, DM**  
*University of Oxford*



**Dipender Gill, MD, PhD**  
*Sequoia Genetics*



**Douglas L. Mann, MD**  
*Washington University  
School of Medicine*



**James Min, MD**  
*Cleerly, Inc.*



**Pradeep Natarajan, MD, MMSC**  
*Massachusetts General Hospital  
Harvard Medical School*



**Michael D. Shapiro, DO, MCR**  
*Wake Forest University*




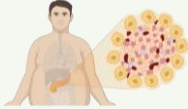
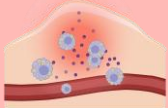


**Tabassome Simon, MD, PhD**  
*Sorbonne Université  
Assistance Publique-Hôpitaux de Paris*



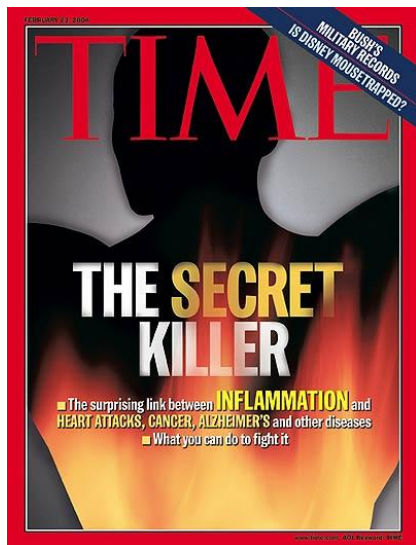
**Michael Szarek, PhD**  
*University of Colorado  
CPC Clinical Research*

# Cardiovascular inflammation largely unaddressed by existing treatments

Atherothrombotic Pathways	Thrombosis	Hypertension	Atherogenic lipoproteins	Diabetes, Insulin resistance, Obesity	Inflammation
					
<b>Biomarkers</b>	None readily available	Blood pressure	ApoB, Non-HDL-C, LDL-C, Triglycerides, Lipoprotein(a)	HbA1c, Fasting glucose, Weight	C-reactive protein
	↓	↓	↓	↓	↓
<b>Approved Therapies</b>	Aspirin P2Y12R inhibitors Factor Xa inhibitors PAR-1 antagonists	ACEI/ARB Calcium channel blockers Thiazide diuretics Renin inhibitors Beta-blockers Mineralocorticoid antagonists	Statins PCSK9 inhibitors Icosapent ethyl NPC1L1 inhibitors ACL inhibitors Bile acid sequestrants MTP inhibitors ANGPTL3 inhibitors Apheresis	SGLT2 inhibitors GLP-1 agonists GIP/GLP-1 agonists	Colchicine
<b>Therapies in Late-Stage Development</b>	Factor XI inhibitors Factor XIa inhibitors	Angiotensinogen inhibitors Aldosterone synthase inhibitors Endothelin antagonists Renal denervation Baroreceptor activation	CETP inhibitors Lipoprotein(a) inhibitors ApoC3 inhibitors Fibrates CRISPR PCSK9 base editing	GIP/GLP-1/glucagon agonists Amylin agonists GIP-1/amylin agonists	<b>IL-6 inhibitors</b> NLRP3 inhibitors

List of therapies not exhaustive. ACEI: angiotensin-converting enzyme inhibitor. ACL: adenosine triphosphate-citrate lyase. ANGPTL3: angiopoietin-like protein 3. ApoB: apolipoprotein B. ApoC3: apolipoprotein C3. ARB: angiotensin receptor blocker. CETP: Cholesteryl ester transfer protein. CRISPR: clustered regularly interspaced short palindromic repeats. GIP: gastric inhibitory polypeptide. GLP-1: glucagon-like peptide-1. IL-6: Interleukin-6. MTP: microsomal triglyceride transfer protein. NLRP3: nucleotide-binding domain, leucine-rich-containing family, pyrin domain-containing-3. NPC1L1: Niemann-Pick C1-Like 1. PAR: protease-activated receptors. PCSK9: proprotein convertase subtilisin/ kexin type 9. P2Y12R: purinergic 2Y type 12 receptor. SGLT2: sodium-glucose cotransporter 2.

# Increasing recognition of inflammation & IL-6 as drivers of CV risk



## RESEARCH LETTER

### Genetically Downregulated Interleukin-6 Signaling Is Associated With a Favorable Cardiometabolic Profile

A Phenome-Wide Association Study

### Association of Interleukin 6 Receptor Variant With Cardiovascular Disease Effects of Interleukin 6 Receptor Blocking Therapy: A Phenome-Wide Association Study

Tiansi Cai, ScD; Yichi Zhang, PhD; Yuh-Lam Ho, MPH; Nicholas Link, BA; Jiehan Sun, PhD; Jie Huang, MS; Tianran A. Cai, MD; Scott Damrauer, MD; Yuli Ahuja, BS; Jacqueline Honerlaw, RN, BSN, MPH; Jie Huang, PhD; Lauren Costa, MPH; Petra Schubert, MPH; Chuan-Hong, PhD; David Gagnon, MD, MPH, PhD; Yan V. Sun, PhD; J. Michael Gaziano, MD, MPH; Peter Wilson, MD, PhD; Kelly Cho, PhD, MPH; Philip Tsao, PhD; Christopher J. O'Donnell, MD, MPH; Katherine P. Liao, MD, MPH; for the VA Million Veteran Program

## RESEARCH LETTER

### A Missense Variant in the IL-6 Receptor and Protection From Peripheral Artery Disease

Michael G. Levin, Derek Klarin, Marios K. Georgakis, Julie Lynch, Katherine P. Liao, Benjamin F. Voight, Christopher J. O'Donnell, Kyong-Mi Chang, Themistocles L. Assimes, Philip S. Tsao, Scott M. Damrauer, on behalf of the VA Million Veteran Program

### Interleukin-6 in Patients With Heart Failure and Preserved Ejection Fraction

Alessio Alogna, MD, PhD, Katlyn E. Koepp, PhD, Michael Sabbah, MD, Jair M. Espindola Netto, PhD, Michael D. Jensen, MD, James L. Kirkland, MD, PhD, Carolyn S.P. Lam, MBBS, Masaru Obokata, MD, PhD, Mark C. Petrie, MD, Paul M. Ridker, MD, MPH, Hidemi Sorimachi, MD, PhD, Tamara Tchoknia, PhD, Adriaan Voors, MD, PhD, Margaret M. Redfield, MD, Barry A. Borlaug, MD

Research Letter

### Genetically Proxied IL-6 Receptor Inhibition and Coronary Artery Disease Risk in a Japanese Population

Sizheng Steven Zhao<sup>1,\*</sup>, Dipender Gill<sup>2</sup>

<sup>1</sup> Centre for Musculoskeletal Research, Division of Musculoskeletal and Dermatological Sciences, School of Biological Sciences, Faculty of Biological Medicine and Health, The University of Manchester, Manchester Academic Health Science Centre, Manchester, UK

<sup>2</sup> Department of Epidemiology and Biostatistics, Imperial College London, London, UK

## RESEARCH ARTICLE

### Circulating Interleukin-6 Levels and Incident Ischemic Stroke

A Systematic Review and Meta-analysis of Prospective Studies

Andreas Papadopoulos, MD, Konstantinos Palaiozanos, MD, Harry Bijlhaeck, PhD, Annette Peters, PhD, James A. de Lencos, MD, Sudha Seshadri, MD, Martin Dichgans, MD, and Marios K. Georgakis, MD, PhD  
*Neurology* 2022;98:e1002-e1012. doi:10.1212/WNL.0000000000013274

Correspondence  
Dr. Georgakis  
marios.georgakis@  
med.uni-muenchen.de

### Quantifying inflammation using interleukin-6 for improved phenotyping and risk stratification in acute heart failure

Eleni Michou<sup>1</sup>, Desiree Wussler<sup>1,2</sup>, Maria Belkin<sup>1</sup>, Cornelia Simmen<sup>1</sup>, Ivo Strebel<sup>1</sup>, Albina Nowak<sup>3,4</sup>, Nikola Kozuharov<sup>1</sup>, Samyut Shrestha<sup>1</sup>, Pedro Lopez-Ayala<sup>1</sup>, Zaid Sabti<sup>1</sup>, Constantijn Mork<sup>1</sup>, Matthias Diebold<sup>1</sup>, Tiffany Péguignot<sup>1</sup>, Katharina Rentsch<sup>5</sup>, Arnold von Eckardstein<sup>6</sup>, Danielle M. Gualandro<sup>1</sup>, Tobias Breidhardt<sup>1,2</sup>, and Christian Mueller<sup>1\*</sup>

## ORIGINAL RESEARCH

### Elevated Interleukin-6 Levels Are Associated With an Increased Risk of QTc Interval Prolongation in a Large Cohort of US Veterans

Pietro Enza Lazzarini, MD, Michael Cupelli, PhD, Alessandra Caracciolo, MSc, Iacopo Bertozzi, MD, Viola Salvini, MD, Riccardo Accioli, MD, Fabio Salvadori, MD, Tommaso Marzotti, MD, Giacomo Varringa, MD, Gabriele Cevenini, BiEng, Shellenia Biagino, MD, Maurizio Biondi, MD, Giovanni Donati, MD, Similia Bernardini, MD, Franco Leghi-Pastri, MD, Maurizio Acampora, MD, Pier Leopoldo Capocchi, MD, PhD, Nabil El-Sherif, MD, Mohamed Boufdir, PhD

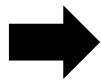
### Associations of genetically predicted IL-6 signaling with cardiovascular disease risk across population subgroups

Marios K. Georgakis<sup>1,2,\*</sup>, Rainer Malik<sup>1</sup>, Tom G. Richardson<sup>1</sup>, Joanna M. M. Howson<sup>1</sup>, Christopher D. Anderson<sup>1,2,3</sup>, Stephen Burgess<sup>4,5</sup>, G. Kees Hovingh<sup>6,7</sup>, Martin Dichgans<sup>8,10,11</sup> and Dipender Gill<sup>14,12,13</sup>

# Convergence of human evidence supports therapeutic potential of IL-6 inhibition for ASCVD



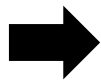
**Human genetic evidence**



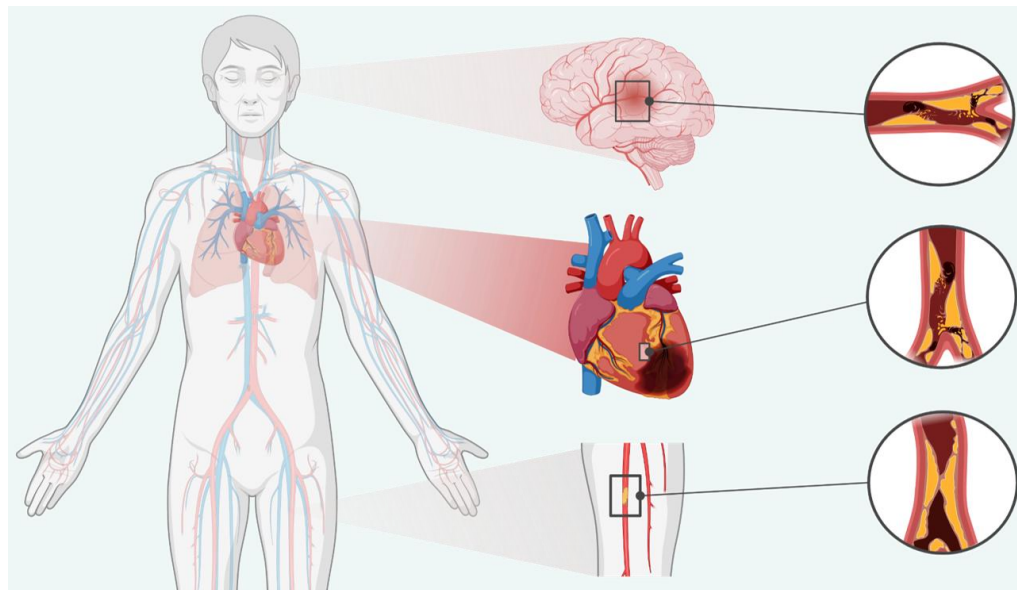
**Epidemiological evidence**



**Clinical trial evidence**



**Evidence suggests IL-6 may drive ASCVD risk**



# Human genetic studies support a causal effect for IL-6 pathway inhibition to lower ASCVD risk<sup>1</sup>



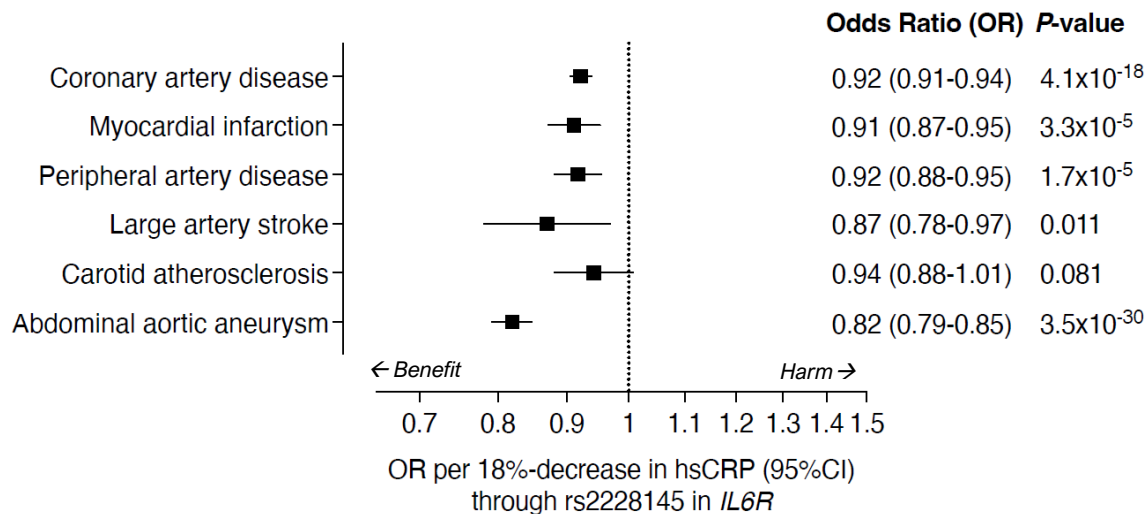
## Concordance between results of human genetic studies and randomized clinical trials

Therapeutic target	Genetic Result	RCT Result
Lowering LDL-C to lower ASCVD risk <sup>2,3</sup>	Positive	Positive
Inhibiting IL-6 to treat polymyalgia rheumatica <sup>4,5</sup>	Positive	Positive
Lowering blood pressure to lower ASCVD risk <sup>6,7</sup>	Positive	Positive
Raising HDL-C to lower ASCVD risk <sup>8,9</sup>	Negative	Negative
Inhibiting LpPLA2 to lower ASCVD risk <sup>10,11</sup>	Negative	Negative
Lowering Lp(a) to lower ASCVD risk <sup>12</sup>	Positive	Trials Ongoing
Inhibiting IL-6 to lower ASCVD risk <sup>1,13-17</sup>	Positive	Trials Ongoing

# IL-6R gene variant mimicking low-dose IL-6 pharmacological blockade causally associated with lower ASCVD risk<sup>1</sup>



## IL-6R gene variant rs2228145 associated with lower risk of ASCVD<sup>2</sup>



- rs2228145 is a common functional IL-6R gene variant (p.Asp358Ala)
- Prevalence of 30-40% (Europe)<sup>1,3-5</sup>
- Increased IL-6R ectodomain splicing by ADAM10/17<sup>3</sup>
- Carriers of rs2228145 demonstrated concordant changes in downstream biomarkers compared with tocilizumab (↓CRP, fibrinogen; ↑albumin, sIL-6R)<sup>1,3-5</sup>
- Modest reduction in hs-CRP ~9% per allele<sup>6</sup>

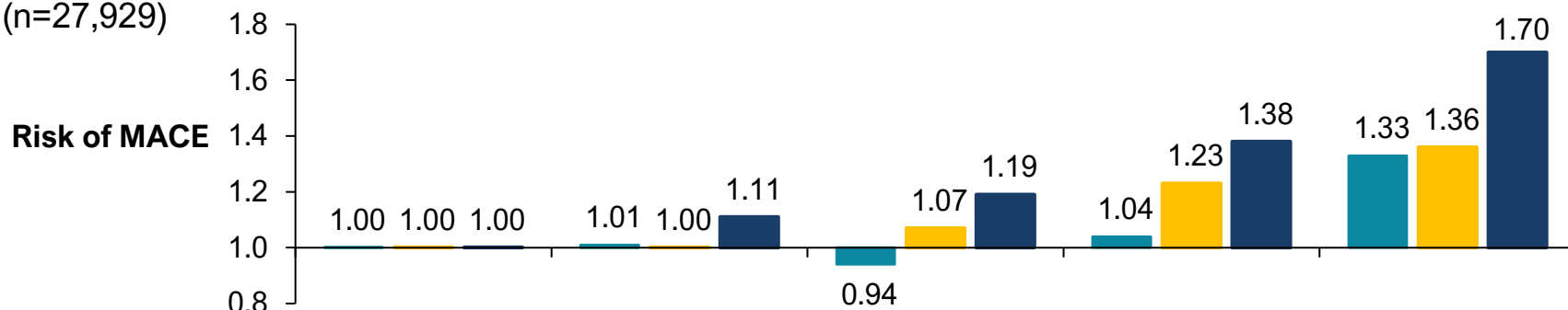
# Emerging evidence suggests that hs-CRP is more strongly associated with MACE than both LDL and Lp(a)



Late breaking data presented at European Society of Cardiology 2024 Congress and simultaneously published in the New England Journal of Medicine

## 30-year longitudinal data from the Women's Health Study<sup>1</sup>

(n=27,929)



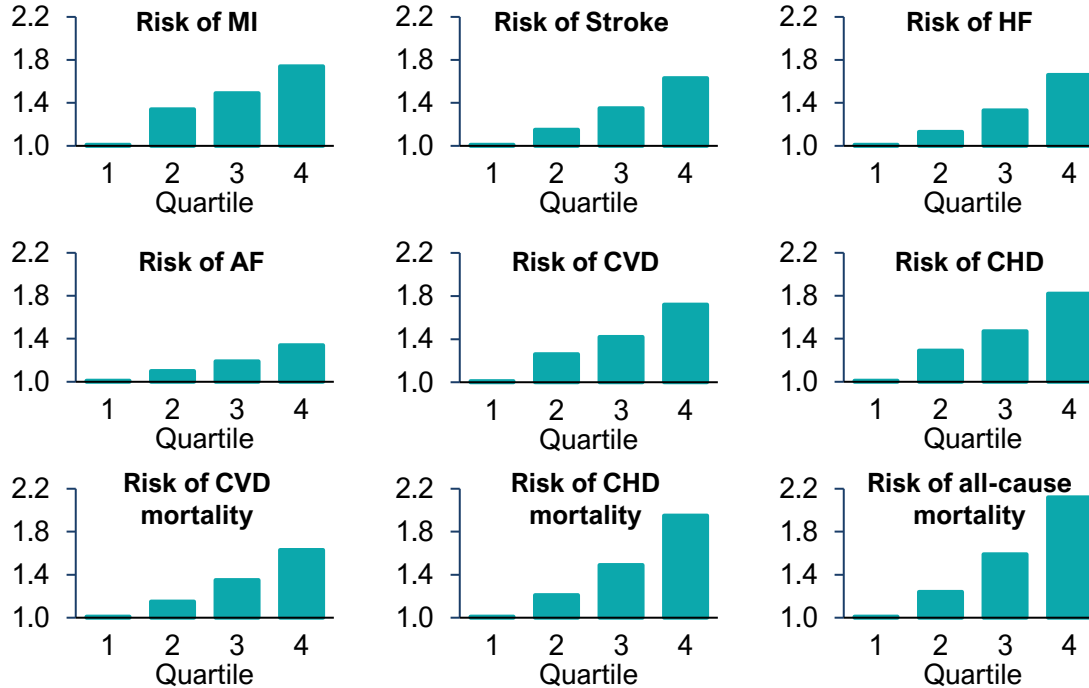
	Quintile (reference)	Quintile 2	Quintile 3	Quintile 4	Quintile 5
■ hs-CRP mg/L baseline	<0.65	0.65 to <1.47	1.47 to <2.75	2.75 to <5.18	≥5.18
■ LDL-C mg/dL baseline	<96.1	96.1 to <113.5	113.5 to <129.7	129.7 to <150.7	≥150.7
■ Lp(a) mg/dL baseline	<3.6	3.6 to <7.6	7.6 to <15.5	15.5 to <44.1	≥44.1

<sup>1</sup>Women's Health Study. MACE: CV death, MI, stroke, coronary revascularization. Increased risk defined as 1-relative risk, compared to lowest quintile of Lp(a) and hs-CRP population, adjusted for age, initial randomization treatment group, smoking (current, past, never), presence of diabetes, and Framingham blood pressure categories. Table 2. Ridker et al, NEJM (2024).

# IL-6 levels were strongly associated with cardiovascular outcomes in a large study from the Cross-Cohort Collaboration<sup>1</sup>



## Risk of cardiovascular and mortality outcomes by IL-6 quartile



- Cross-Cohort Collaboration Consortium (CCC) aggregates and harmonizes data across multiple large prospective cohort studies<sup>2</sup>
- Nine prospective cohorts, ~42,000 participants, median follow-up 16 years
- Significant, dose-dependent, independent association of IL-6 levels with all nine CV outcomes

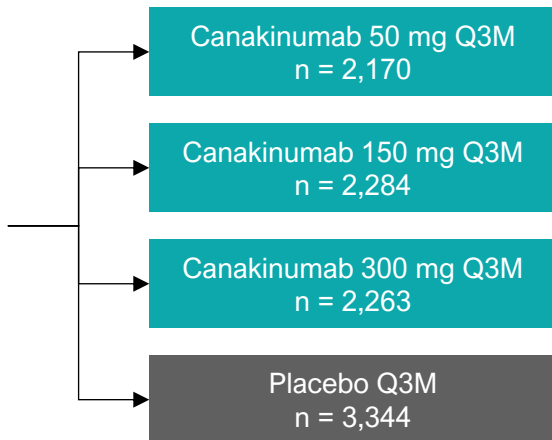
# Landmark CANTOS study validated therapeutic potential of addressing inflammation in ASCVD



## Canakinumab Anti-inflammatory Thrombosis Outcomes Study (CANTOS) Trial Design<sup>1</sup>

### 10,061 patients

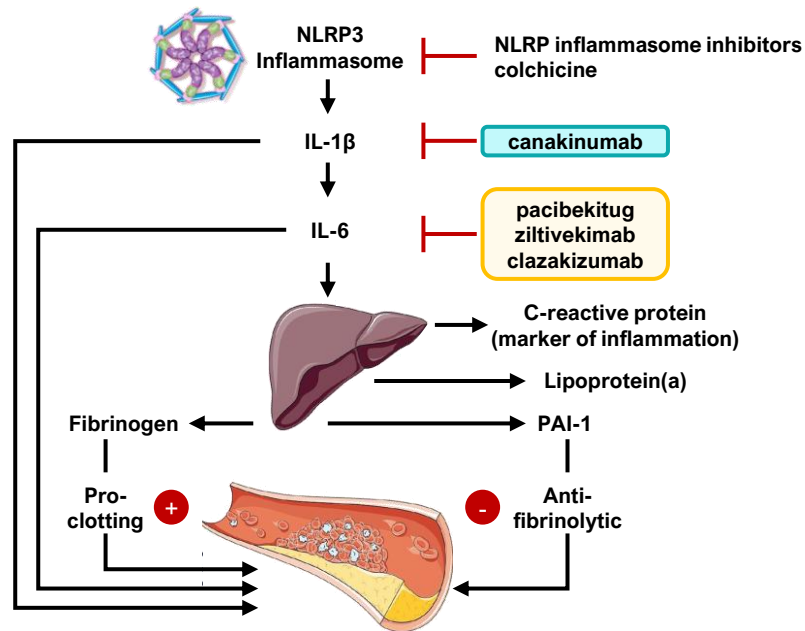
- Stable CAD (post MI)
- On Statin, ACE/ARB, BB, ASA
- hs-CRP  $\geq 2$  mg/L



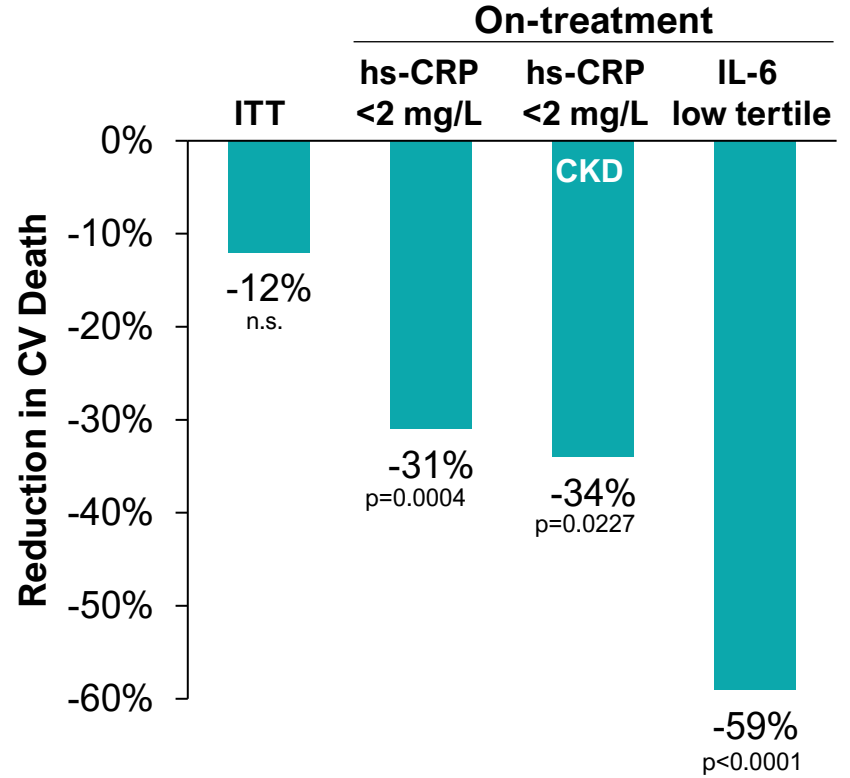
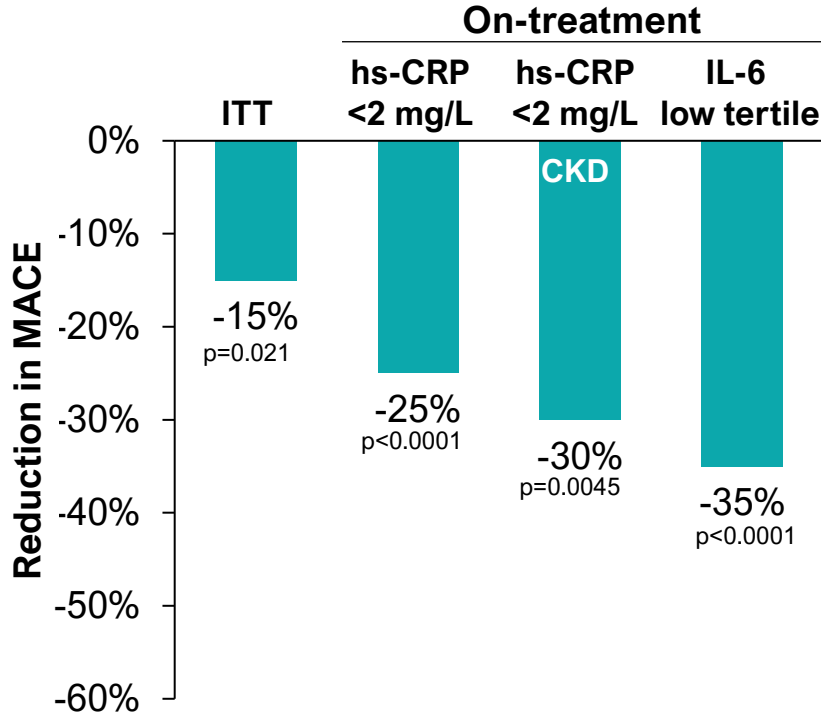
### Primary endpoint:

Time to the first occurrence of MACE (CV death, non-fatal MI, or non-fatal stroke)

## IL-1 $\beta$ is upstream of IL-6<sup>2</sup>

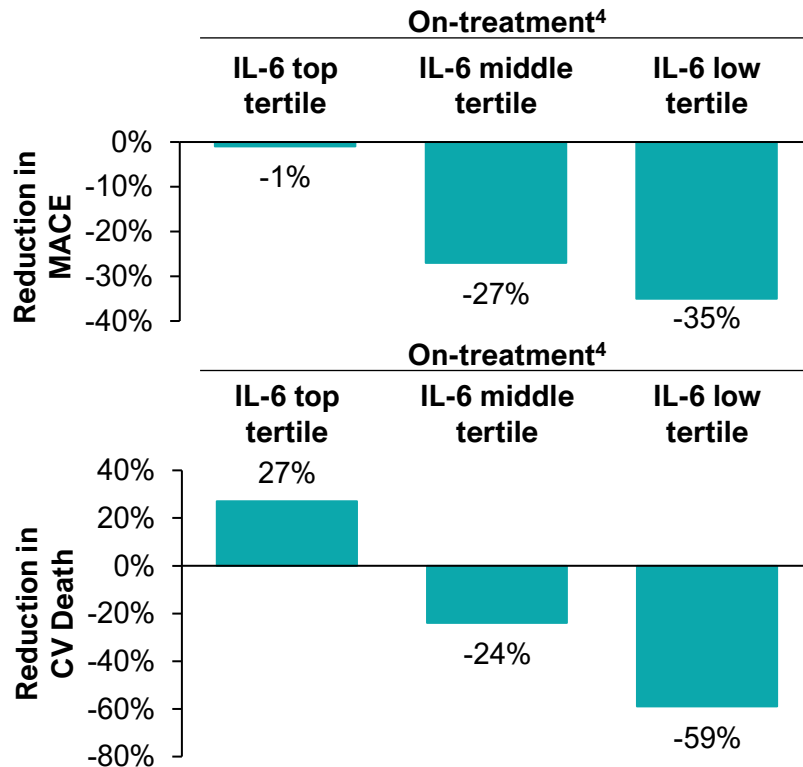
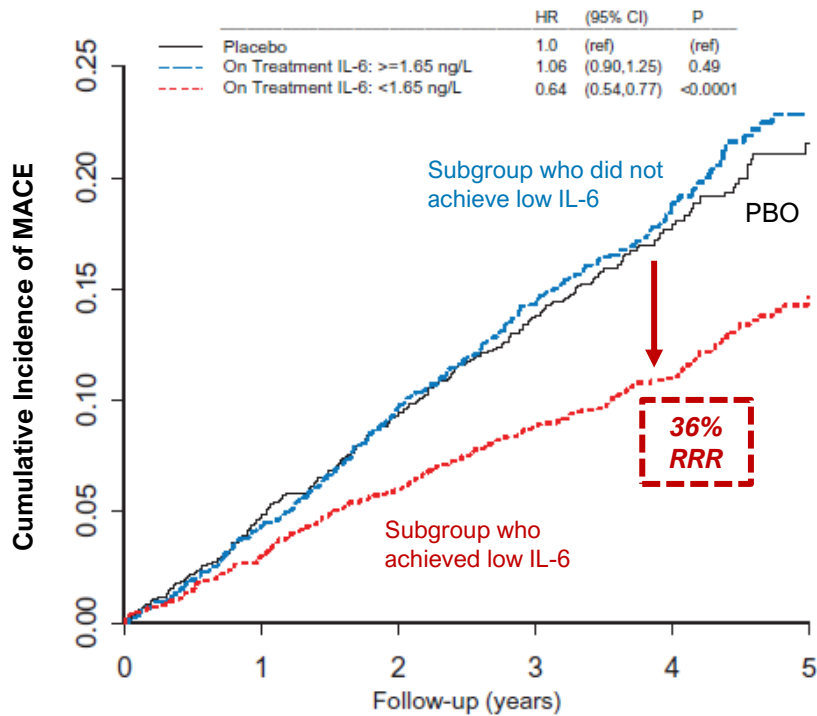


# Lessons from canakinumab (anti-IL-1 $\beta$ mAb): Robust IL-6 pathway inhibition associated with improved outcomes



Reduction in MACE shown as 1-Hazard Ratio vs placebo. ITT: intent to treat. MACE: major adverse cardiovascular events including CV death, myocardial infarction (MI), stroke. n.s.: not statistically significant. ITT CANTOS analysis presents data for 150mg dose group; values for CANTOS subanalyses combine all doses (50, 150, 300 mg). Ridker et al., NEJM (2017). Ridker et al., Lancet (2018). Adjusted for age, gender, smoking, hypertension, diabetes, BMI, baseline hs-CRP, baseline LDL-C. Ridker et al., Eur Heart J (2018). Adjusted for age, gender, smoking, hypertension, diabetes, BMI, baseline IL-6, baseline LDL-C. Ridker et al., JACC (2018).

# Lessons from canakinumab (anti-IL-1 $\beta$ mAb): Prespecified analysis showed that reductions in IL-6 predicted CV benefit<sup>1-3</sup>



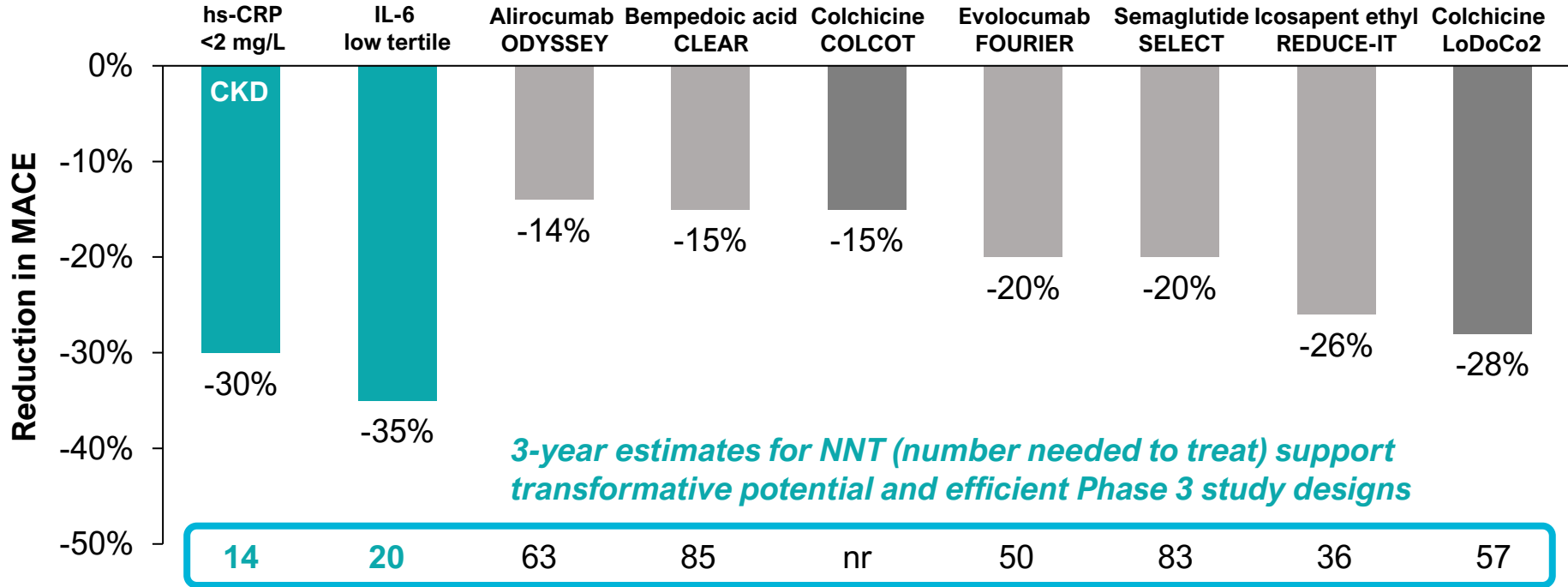
<sup>1</sup>Ridker et al., Eur Heart J (2018). <sup>2</sup>Ridker et al., Circulation (2021). <sup>3</sup>Libby et al., Eur Heart J (2018). Reduction in MACE shown as 1-Hazard Ratio vs placebo.

<sup>4</sup>Covariates included in the adjusted multivariable model include age, gender, smoking status, hypertension, diabetes, body mass index, baseline level of IL-6, and baseline level of LDL cholesterol.

# Lessons from canakinumab (anti-IL-1 $\beta$ mAb): Robust inhibition of IL-6 pathway has transformative potential in ASCVD

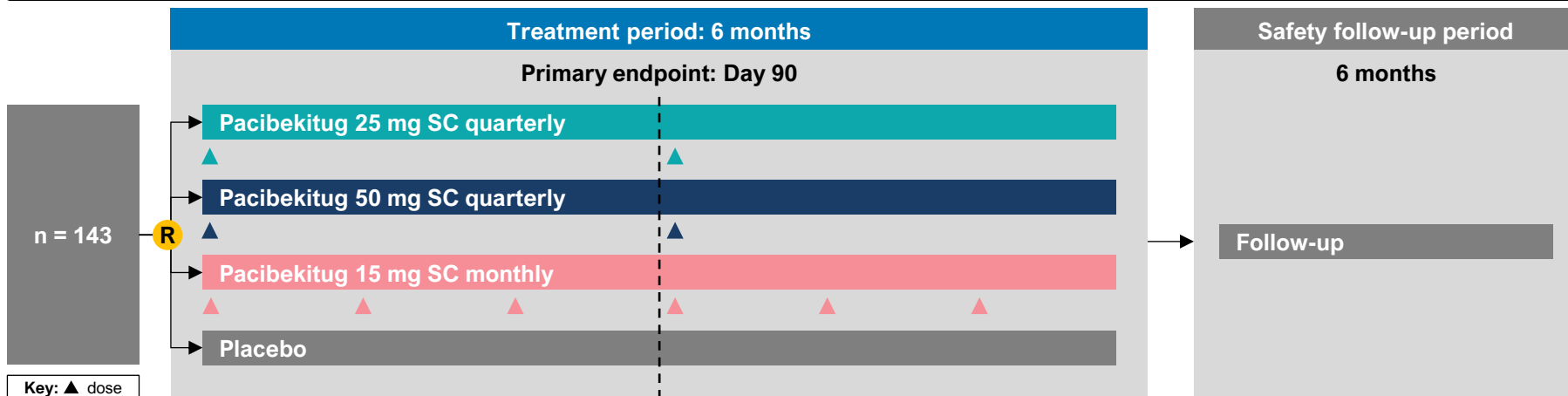


CANTOS: On-treatment



# TRANQUILITY<sup>6</sup> Phase 2 trial supporting development in CVD

Randomized, double-blind, placebo-controlled Phase 2 trial (NCT06362759)



## Study population:

- High-sensitivity C-reactive protein (hs-CRP)  $\geq 2$  mg/L and  $< 15$  mg/L
- CKD stage 3-4 (eGFR 15-59 ml/min/1.73m<sup>2</sup>) or UPCR  $\geq 200$  mg/g
- Exclude patients at higher risk for safety complications (e.g., immunocompromised patients)

## Primary endpoint:

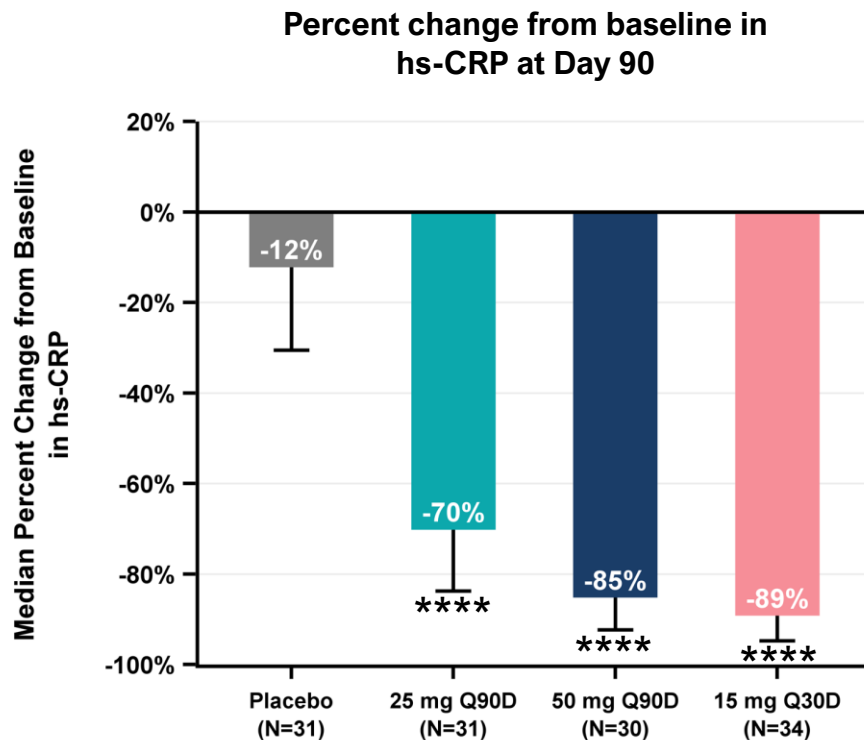
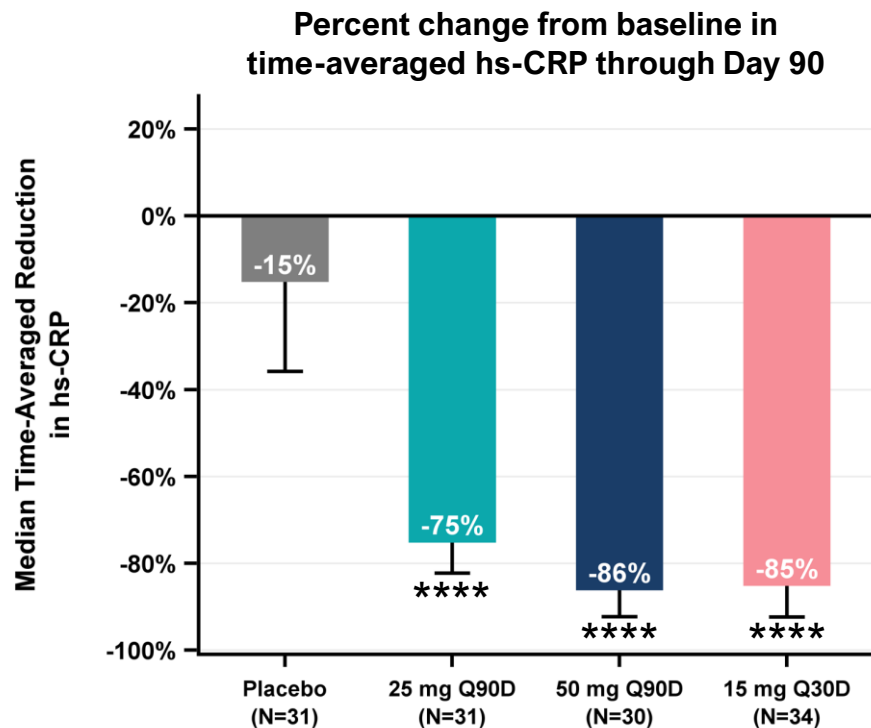
- Change from baseline in hs-CRP through Day 90

## Secondary endpoints:

- Percentage achieving hs-CRP  $< 2$  mg/L through Day 90
- Percentage achieving hs-CRP reduction  $\geq 50\%$  through Day 90
- Change from baseline in hs-CRP through Day 180
- Safety and tolerability

Participants randomized to pacibekitug 25 mg and 50 mg quarterly dosing arms receive matching placebo doses on Days 30, 60, 120, and 150. Participants randomized to placebo receive monthly placebo doses during the treatment period. CKD: chronic kidney disease. CVD: cardiovascular disease. eGFR: estimated glomerular filtration rate. hs-CRP: high-sensitivity C-reactive protein. SC: subcutaneous. UPCR: urine protein-creatinine ratio.

# Pacibekitug demonstrated deep and highly statistically significant reductions in hs-CRP across all pacibekitug dosing arms

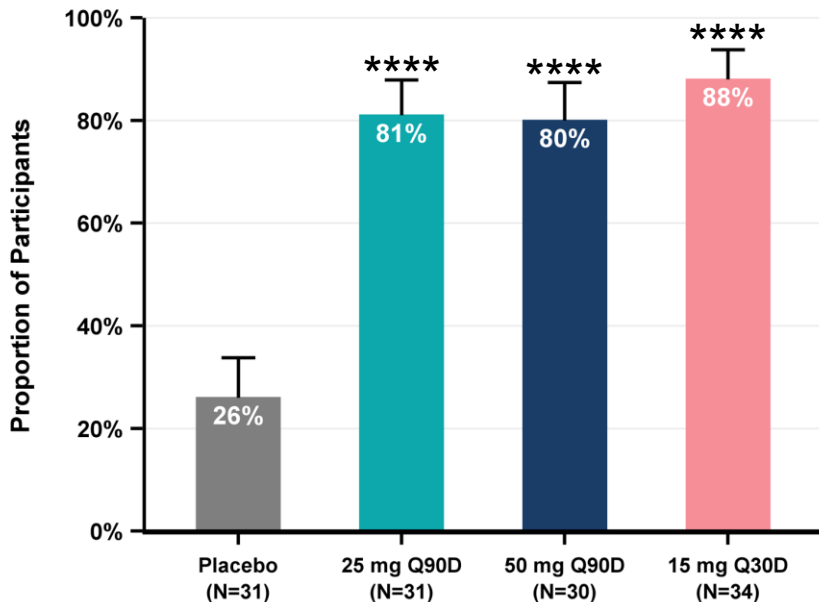


\*\*\*\*  $p < 0.0001$  for all comparisons to placebo

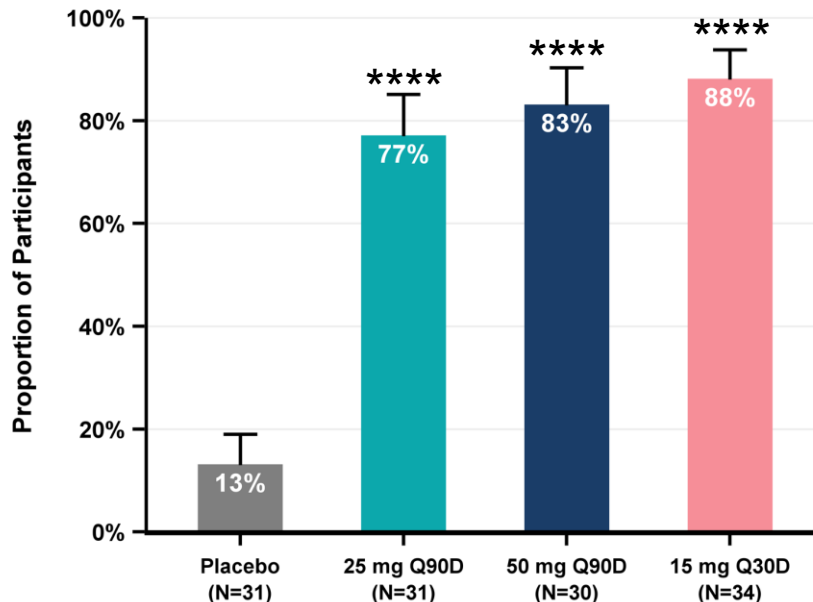
Primary Analysis Population: at least 1 post-baseline hs-CRP, baseline hs-CRP  $\geq 1.9$  mg/L, and all planned study drug doses during primary evaluation period. Error bars represent the 75<sup>th</sup> percentile for reduction in each dose group. Data presented herein, and our analyses thereof, are as of the data extract date of April 23, 2025, and therefore do not reflect the complete dataset from the trial, which is ongoing. Cumulative safety data are also presented based upon this same data extract date and are subject to data reflecting any additional safety events as participants complete their study visits and follow-up.

# A significant percentage of participants across all pacibekitug dosing arms achieved an hs-CRP of <2 mg/L

Percentage of participants with time-averaged hs-CRP <2 mg/L through Day 90



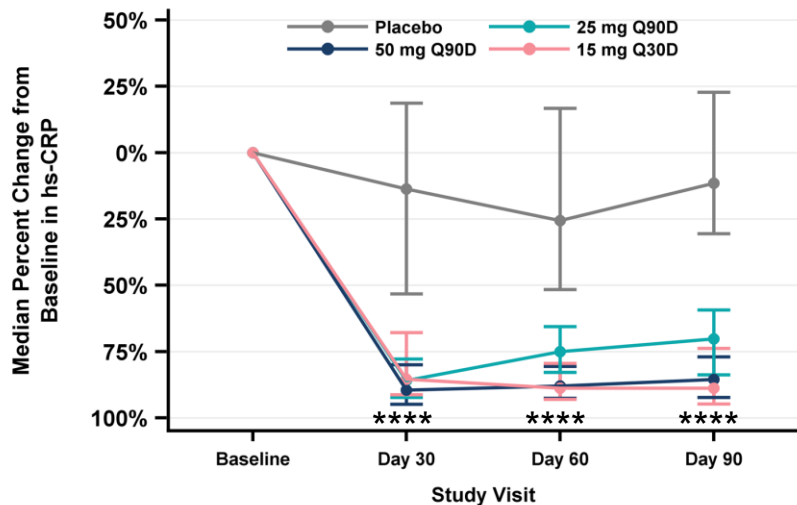
Percentage of participants with hs-CRP <2 mg/L at Day 90



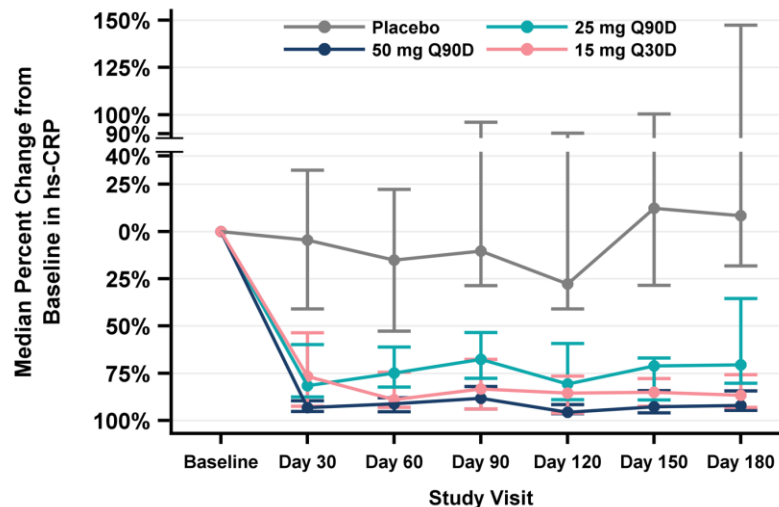
\*\*\*\*  $p < 0.0001$  for all comparisons to placebo

# Rapid and deep hs-CRP reductions sustained through Day 180 in participants who completed treatment period as of data extract

## Median (IQR) percent change in hs-CRP from baseline by visit through Day 90



## Median (IQR) percent change in hs-CRP from baseline by visit through Day 180



Number of Participants	Baseline	Day 30	Day 60	Day 90
Placebo	31	31	31	31
25 mg Q90D	31	31	31	31
50 mg Q90D	30	30	30	30
15 mg Q30D	34	34	34	34

Number of Participants	Baseline	Day 30	Day 60	Day 90	Day 120	Day 150	Day 180
Placebo	12	12	12	12	12	12	12
25 mg Q90D	12	12	12	12	12	12	12
50 mg Q90D	12	12	12	12	12	12	12
15 mg Q30D	11	11	11	11	11	11	11

\*\*\*\*  $p < 0.0001$  for all comparisons to placebo

# Pacibekitug demonstrated overall incidence rates of adverse events and serious adverse events comparable to placebo

## Cumulative incidence through data extract date

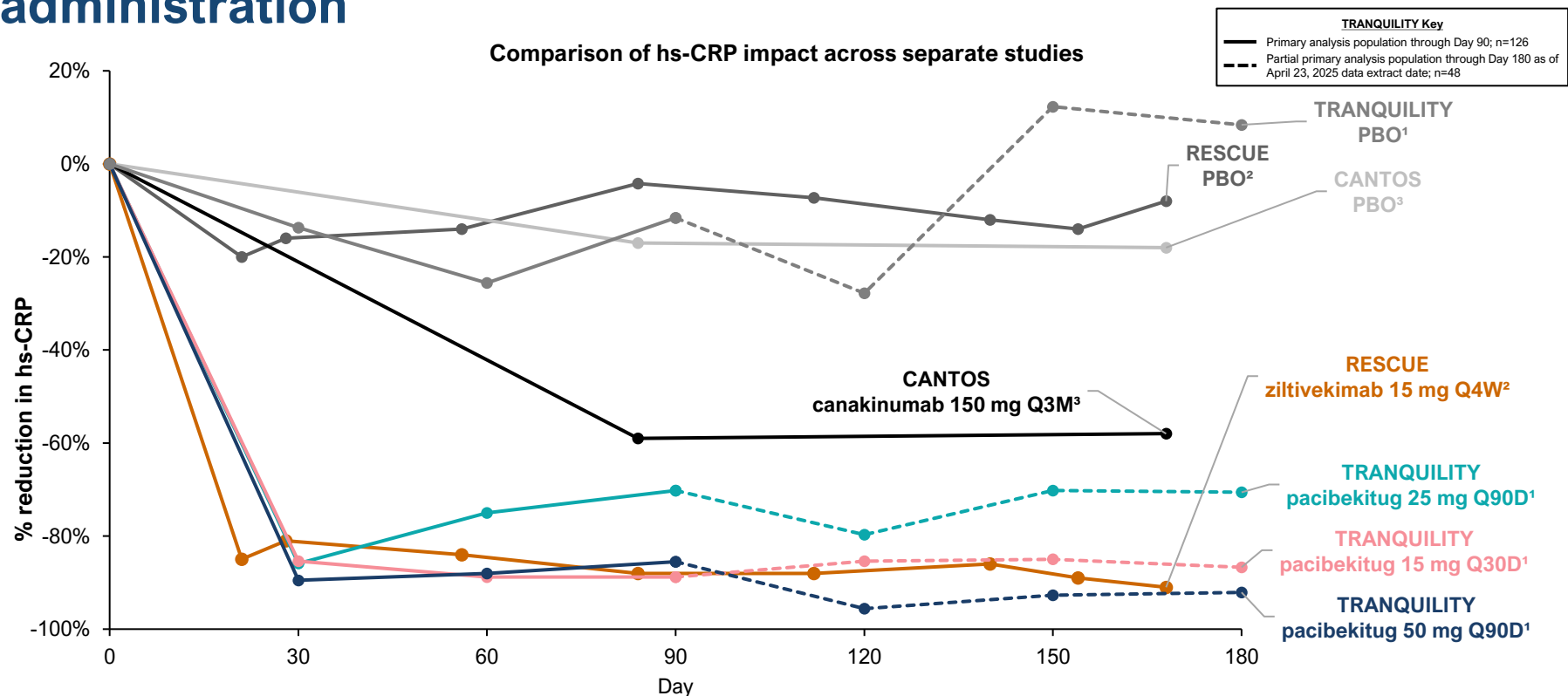
	Placebo N=36	Pacibekitug			
		Pooled N=105	25 mg quarterly N=35	50 mg quarterly N=35	15 mg monthly N=35
<b>Adverse events</b>	20 (56%)	57 (54%)	20 (57%)	18 (51%)	19 (54%)
<b>Serious adverse events</b>	4 (11%)	10 (10%)	6 (17%)	2 (6%)	2 (6%)
<b>AEs leading to discontinuation</b>	0	2 (2%)	0	1 (3%)	1 (3%)
<b>Infection</b>	8 (22%)	25 (24%)	10 (29%)	9 (26%)	6 (17%)
<b>Serious infection</b>	1 (3%)	4 (4%)	4 (11%)	0	0
<b>Death</b>	0	1 (1%)*	1 (3%)*	0	0
<b>Injection site reaction Grade 2+</b>	0	0	0	0	0
<b>Neutropenia Grade 2 [1]</b>	1 (3%)	2 (2%)	1 (3%)	0	1 (3%)
<b>Neutropenia Grade 3+ [1]</b>	0	0	0	0	0
<b>Thrombocytopenia Grade 2+ [1]</b>	0	0	0	0	0

Safety population n=141

\*Fatal case of COVID-19

Safety Population: at least 1 dose of study drug. [1] Laboratory abnormalities defined as confirmed low values on 2 consecutive assessments. Neutropenia CTCAE Grade 2: ANC  $\geq$  1,000/mm<sup>3</sup> and  $<$ 1,500/mm<sup>3</sup>. Grade 3+: ANC  $<$ 1,000/mm<sup>3</sup>. Thrombocytopenia CTCAE Grade 2+: PLT  $<$  75,000/mm<sup>3</sup>. Data presented herein, and our analyses thereof, are as of the data extract date of April 23, 2025, and therefore do not reflect the complete dataset from the trial, which is ongoing. Cumulative safety data are also presented based upon this same data extract date and are subject to data reflecting any additional safety events as participants complete their study visits and follow-up.

# Pacibekitug achieved deep reductions in hs-CRP with quarterly administration



These data are from separate, non-head-to-head studies involving different disease states and patient populations. Cross-trial comparisons are inherently limited, and the above data should be considered with caution. These data do not support conclusions about the comparative efficacy and safety of the above drugs.

# Pacibekitug designed to offer best-in-class potential profile in cardiovascular diseases

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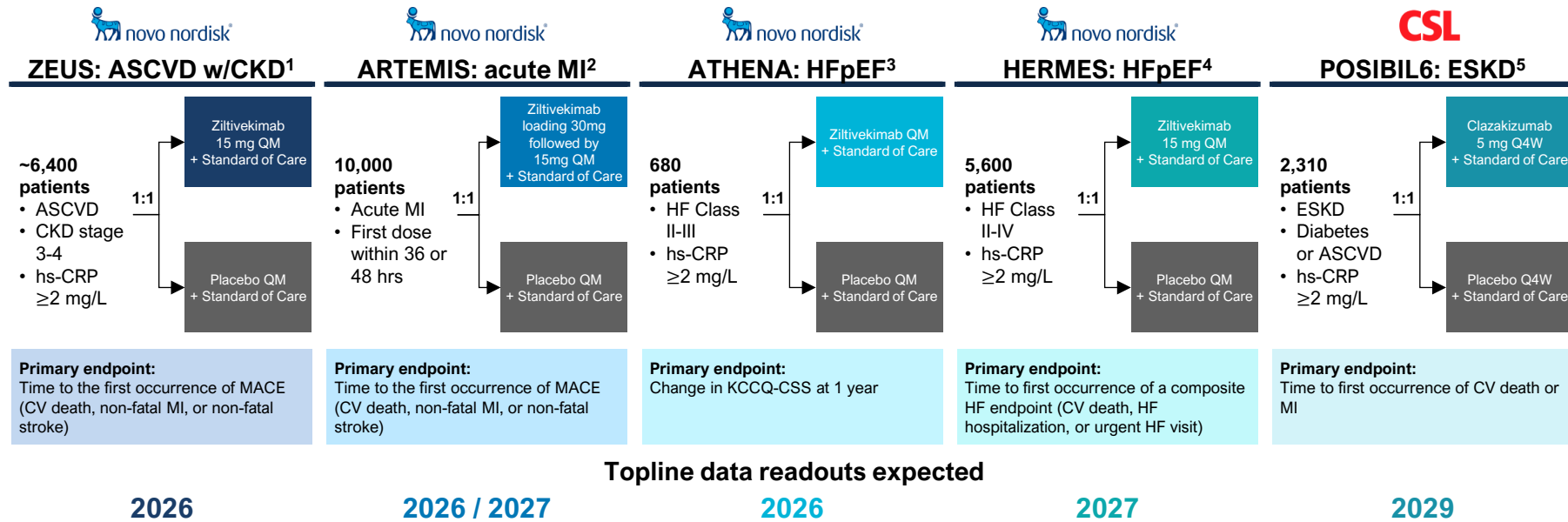
CSL

	Pacibekitug	Ziltivekimab	Clazakizumab
Monoclonal antibody	fully human (IgG2)	fully human (IgG1k, YTE mutation)	humanized rabbit (IgG1k)
Anti-drug antibodies <sup>1</sup>	0-1%	6-13% <sup>3,4</sup>	0-10% <sup>7-9</sup>
Route of administration <sup>2</sup>	SC 0.6 mL	SC <sup>5,6</sup> 1.0 mL	IV <sup>10</sup>
Longest dosing intervals tested	Q90D (NDD-CKD)	Q4W (NDD-CKD) <sup>5,6</sup>	Q4W <sup>10</sup> (HD-CKD)
Targeted dosing intervals	Quarterly	Monthly	Monthly

TOURMALINE

CKD: chronic kidney disease, HD: hemodialysis, NDD: non-dialysis dependent, <sup>1</sup>Incidence of ADAs in repeat-dose studies calculated as reported per dosing arm. <sup>2</sup>Route of administration in planned or ongoing studies in patients with or at high-risk of ASCVD. <sup>3</sup>Clinicaltrials.gov NCT03926117. <sup>4</sup>Pergola et al., JASN (2021). <sup>5</sup>Ridker et al., Lancet (2021). <sup>6</sup>Wada et al., J Cardiol (2023). <sup>7</sup>Clinicaltrials.gov NCT01490450. <sup>8</sup>Clinicaltrials.gov NCT01545050. <sup>9</sup>Weinblatt et al., Arthritis Rheum (2015). <sup>10</sup>Clinicaltrials.gov NCT05485961.  
Data reported in publications or on clinicaltrials.gov as detailed above. No head-to-head studies have been conducted between the mabs shown here, which have each been evaluated in different populations.

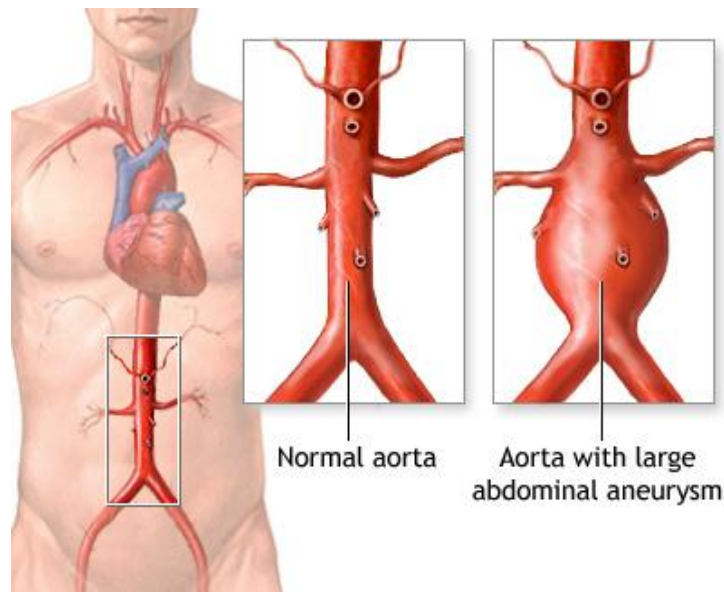
# Five Phase 3 CVOTs enrolling >24,000 patients



**External readouts have the potential to further validate the IL-6 mechanism in cardiovascular disease and provide critical insights to augment pacibekitug Phase 3 development strategy**

# Abdominal aortic aneurysm: a high-mortality, first-in-disease opportunity for pacibekitug

- High-risk vascular disease with **significant unmet need in approximately 2M people in US<sup>1</sup>**
- **Strong strategic fit** with ASCVD due to overlapping prescribers
- Progressive disease with increasing risk of **rupture, usually a fatal event<sup>2</sup>**
- **In less than 5 years**, majority of medium-sized AAA grow to threshold for surgical repair<sup>3,4</sup>
- Surgical repair, recommended for large AAA to prevent rupture, is **associated with complications<sup>5-9</sup>**

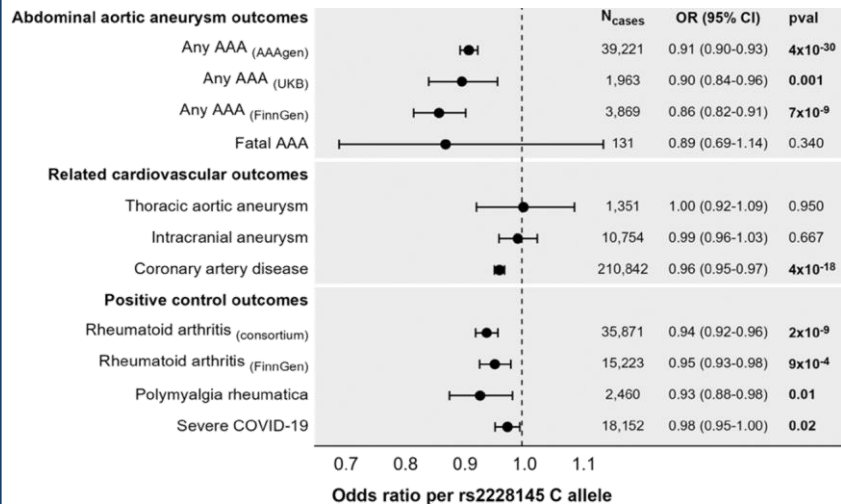


**No FDA approved treatment**

# Compelling evidence supports IL-6 inhibition to slow AAA growth

## Human genetic evidence

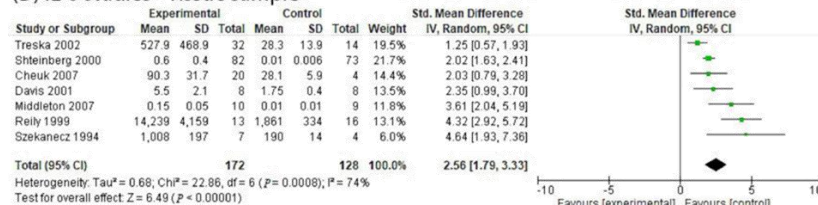
### Genetic variant associated with reduction in risk of AAA<sup>1</sup>



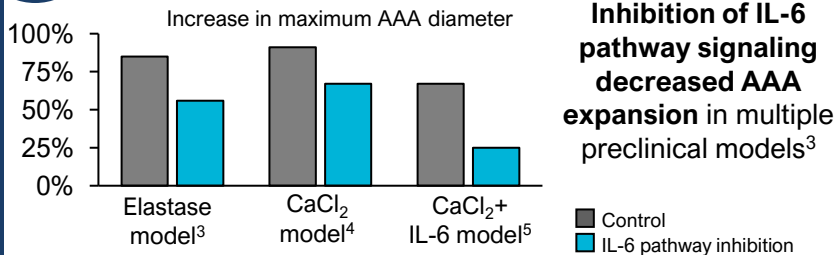
## Epidemiological evidence

### Higher IL-6 levels associated with AAA<sup>2</sup>

#### (D) IL-6 studies - Tissue sample



## Experimental evidence

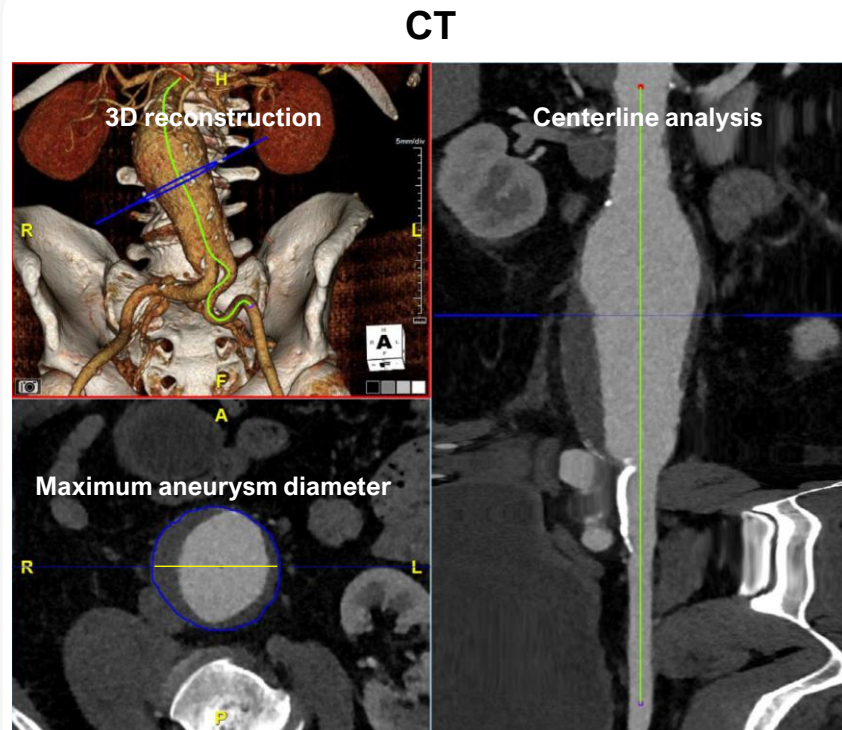


# Phase 2 PoC study expected to use imaging to evaluate the ability of pacibekitug to inhibit AAA growth

- Serial imaging is the foundation of clinical care<sup>1</sup>
- Phase 2 PoC expected to use multimodality imaging to efficiently characterize pacibekitug
- Alignment reached with FDA on Phase 2 PoC design

## Next steps:

- Confirm dose to be evaluated based on TRANQUILITY analysis
- Details expected to be shared prior to study start



<sup>1</sup>Chaikof et al., J Vasc Surg (2018). Isselbacher et al., Circulation (2022). Figure adapted from Perry et al., Ann Vasc Surg (2022). AAA: abdominal aortic aneurysm. PoC: proof of concept.

# With TRANQUILITY results now in hand, Tourmaline is well-positioned to execute on its cardiovascular inflammation strategy

## TRANQUILITY data unlocks pacibekitug's potential in CVD

- ✓ Demonstrated rapid, deep, and durable hs-CRP reductions
- ✓ Confirmed quarterly dosing viability
- ✓ Expanded safety database

## Key next steps

- In consultation with CV SAB, confirm optimal dose for Phase 3 CVOT in ASCVD and finalize clinical development strategy
- Conduct EOP2 meeting with FDA by end of year
- Initiate Phase 2 proof-of-concept trial in AAA in H2 2025

# Thyroid Eye Disease

# TED: an indication designed to validate pacibekitug's potential in autoantibody-driven diseases

## 1 High unmet medical need with significant market opportunity

- TED patients experience significant disease burden driven by inflammation, proptosis, double-vision, and pain
- ~30k new patients each year in the U.S. (average age at diagnosis is ~45)<sup>1,2</sup>
- ~80%<sup>3</sup> of moderate-to-severe TED patients not receiving an FDA-approved treatment, which we believe may be related to significant limitations such as risk of permanent hearing impairment / loss:
  - Vast majority of US treaters report unmet need across all aspects of treatment (efficacy, safety, administration)<sup>4</sup>

## 2 Extensive third-party clinical support that IL-6 inhibition may address key unmet needs

- 50+ publications with 400+ patients demonstrate the therapeutic potential of IL-6 pathway inhibition in TED
- IL-6 may play a more central and upstream role in TED pathogenesis than IGF-1R or FcRn
- Many TED treaters already routinely utilize IL-6 inhibition in their practice<sup>4</sup>

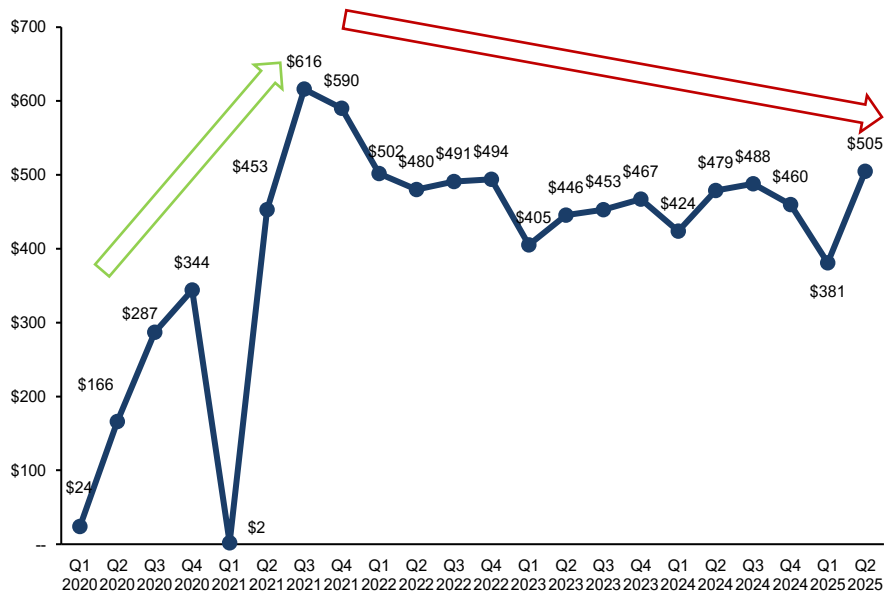
## 3 Pacibekitug has best-in-disease potential in TED

- Deep inhibition of IL-6 pathway observed to date offers potential for durable efficacy across many endpoints
- Existing clinical database supports the potential for a well-tolerated profile at selected doses
- Q8W dosing would allow for a patient-friendly, low burden treatment course

# IGF-1R class limitations present a significant opportunity for novel therapeutic approaches in TED

## TEPEZZA U.S. revenues have been stagnating since 2021...

Sales (\$M)<sup>1</sup>



## ...believed to be due to real-world experience

### 1. Safety issues: Risk of potentially permanent hearing loss<sup>2</sup>

#### -----WARNINGS AND PRECAUTIONS-----

- Hearing Impairment Including Hearing Loss: TEPEZZA may cause severe hearing impairment including hearing loss, which in some cases may be permanent. Assess patients' hearing before, during, and after treatment with TEPEZZA and consider the benefit-risk of treatment with patients

### 2. Limited durability: Growing real-world effectiveness data reveals larger than anticipated number of non-responders / high relapse rate<sup>3,4</sup>

### 3. High level of inconvenience & complexity:

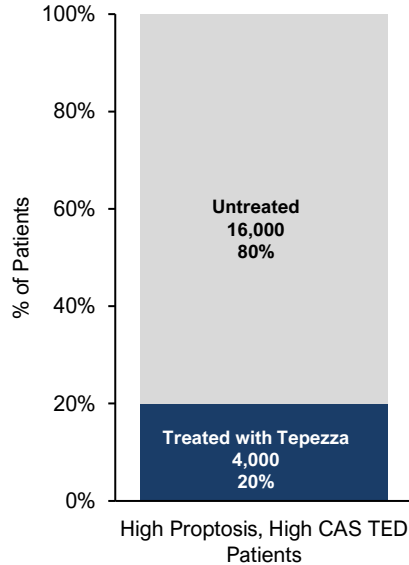
- IV Q3W (n=8)<sup>2</sup> but limited access to infusion centers<sup>5</sup>
- Numerous visits and high time commitment (HCPs and patients)<sup>5</sup>
- Need for serial audiograms, as per label<sup>2,6</sup>
- Burdensome reimbursement approval process<sup>7</sup>

# Despite an FDA-approved medicine, the vast majority of moderate-to-severe TED patients remain untreated

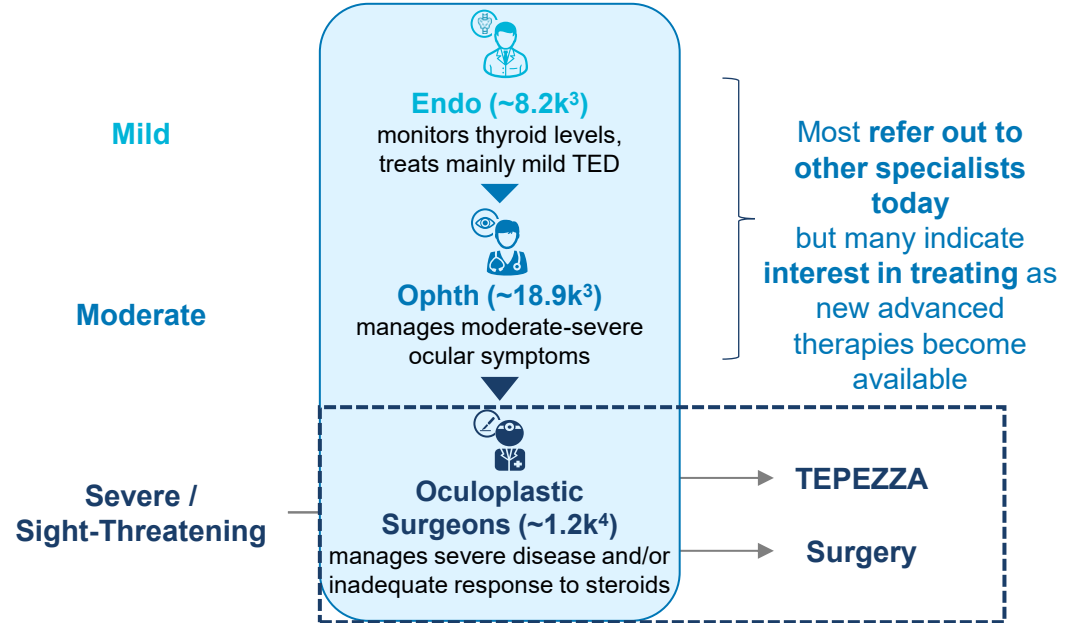
Most TED patients are not receiving TEPEZZA...

...or only get it relatively late in the treatment journey<sup>2</sup>

TEPEZZA US LTM penetration<sup>1</sup>

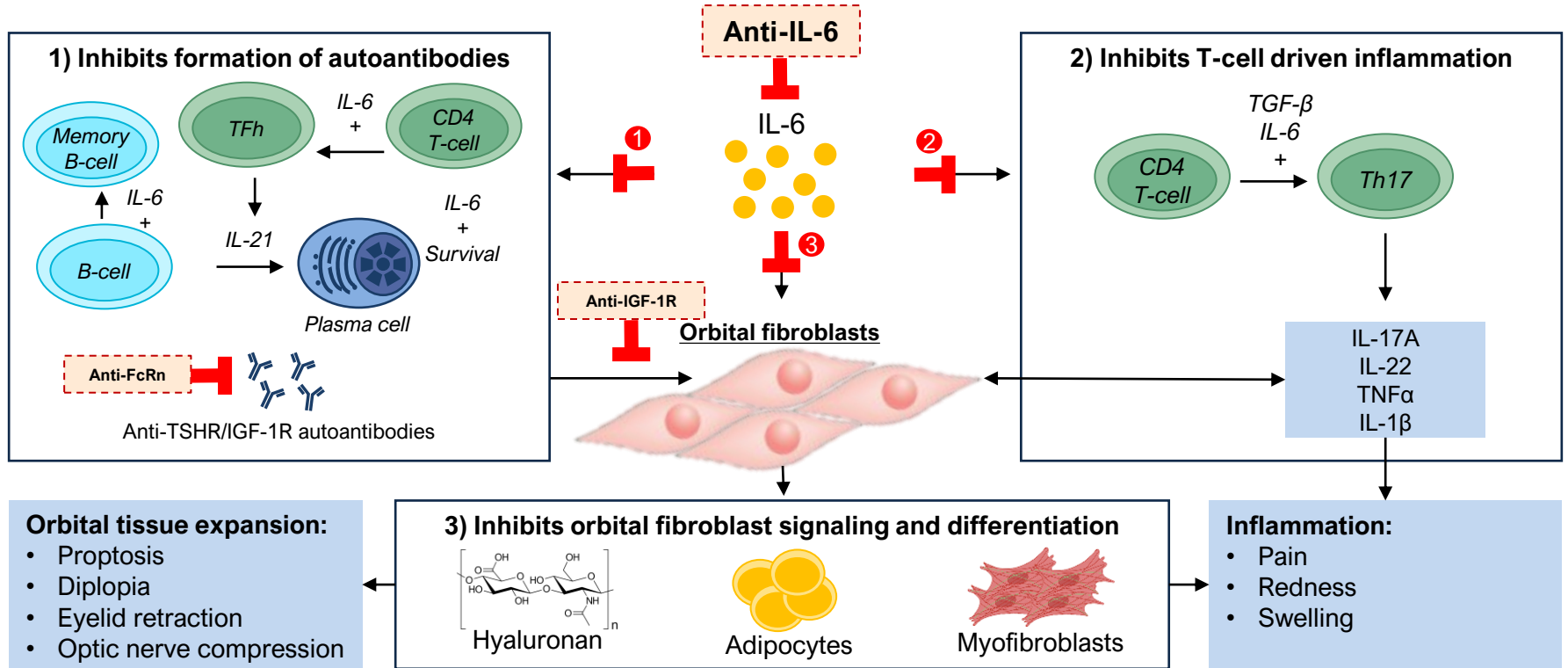


Simplified Treatment Journey<sup>2</sup>



<sup>1</sup>Horizon Q3 2022 earnings call; LTM = last twelve months. <sup>2</sup>Tourmaline market research; endo = endocrinologist; ophth = ophthalmologist. <sup>3</sup>AAMC 2022 Physician Specialty Data Report. <sup>4</sup>Hussey and Tao, Orbit (2022).

# IL-6 inhibition has the potential to address a central and upstream driver of TED



Adapted from Huang et al., Eye (2018); Hodgson and Rajaii, Ophthalmol Ther (2020); Fang et al, Front Endocrinol (2021); Smith et al., Eye (2019); and Cabezas et al., Front. Immunol. (2022)

# Over 50 publications support the therapeutic potential of IL-6 pathway inhibition in TED

Study Details				Key Endpoints		
First author	Year	Study type	N treated	Proptosis response rate	CAS response rate	% autoantibody reduction
Pérez-Moreiras	2021	Retro	54	78	89	75
Sánchez-Bilbao	2020	Obs	48	NR	NR	NR
Atienza-Mateo	2018	Retro	29	NR	NR	NR
Farde	2024	Retro	23	64	NR	75
Lee	2024	Prosp	19	11	47	56
Pérez-Moreiras	2014	Prosp	18	72	100	76
Pérez-Moreiras	2018	RCT	15	93	60	NS
de la Fuente Bursón	2020	Retro	15	NR	NR	NR
Pereira	2023	Retro	14	NR	NR	NR
Habroosh	2024	Prosp	13	100	31	68
Boutzios	2023	Obs	12	NR	NR	84
Pampín-Sánchez	2022	Retro	11	75	73	NR
Moi	2022	Retro	10	CI	80	75
Cortez	2022	Prosp	10	10	100	81
Guo	2024	Retro	10	NR	NR	NR
Silkiss	2020	CS	9	CI	56	74
Smith	2021	Retro	9	78	100	54
Bielefeld	2019	Obs	8	NR	NR	NR
Ceballos-Marcias Jose	2020	CS	8	NR	75	41
Bennedjai	2020	Retro	7	NR	NR	73
Moás	2022	Obs	7	NR	NR	92
Toro-Tobon	2023	Retro	6	50	NR	NR
de Pablo Gomez	2018	CS	5	NR	60	NR
Navarrete	2022	Retro	5	NR	NR	NR
Ribi	2017	CS	3	33	67	NR
Maldiney	2020	CS	3	67	NR	NR
Stevens	2022	Retro	3	100	67	NR
Russell	2017	CS	2	NR	0	NR
Sy	2017	CS	2	CI	50	69

Study Details				Key Endpoints		
First author	Year	Study type	N treated	Proptosis response rate	CAS response rate	% autoantibody reduction
Copperman	2019	CS	2	100	0	NR
Coy	2019	CS	2	NR	50	NR
Sierra Osorio	2020	CS	2	100	100	NR
Park	2021	CS	2	100	100	NR
Abeillon-du Payrat	2022	CS	2	100	50	NR
Butnaru	2013	CR	1	NR	100	NR
Gómez Rodriguez	2014	CR	1	NR	100	NR
Bielefeld	2017	CR	1	CI	NR	NR
Canas	2018	CR	1	100	NR	NR
Pascual-Camps	2018	CR	1	NR	NR	NR
Garreta Fontelles	2019	CR	1	NR	NR	93
Mehmet	2020	CR	1	0	NR	NR
Kaplan	2020	CR	1	NR	0	85
Cayon-Blanco	2020	CR	1	NR	100	NR
Tran	2020	CS	1	NR	NR	NR
Ruiz	2021	CR	1	NR	NR	NR
Albrashdi	2022	CR	1	100	NR	NR
Cezara	2022	CR	1	NR	0	NR
Mohamed	2022	CS	1	0	0	NR
Moleiro	2022	CR	1	100	NR	86
Almazrouei	2023	CR	1	NR	NR	NR
Cuculescu	2023	CR	1	CI	0	NR
Nirmalan	2023	CS	1	NR	NR	NR
Pramono	2023	CR	1	NR	NR	NR
Rymuza	2024	CR	1	100	0	8

				Weighted Mean	68%	72%	72%
Smith 2017 (tepro Phase 2)					71%	69%	N/A
Douglas 2020 (tepro Phase 3)					83%	59%	N/A

We believe many of these reports may underestimate the true efficacy of IL-6 inhibition

- 400+ mostly steroid-refractory patients
- Late IL-6 inhibition (>9 months post symptom onset) when disease may have exited active phase
- Exposure to IL-6 inhibition may have been suboptimal (<6 months)
- Tourmaline market research with over 100 TED treaters suggests many HCPs already routinely utilize IL-6 inhibition in their practice

# Pacibekitug's target product profile is expected to be well-differentiated in TED...

## Target product profile in TED\*

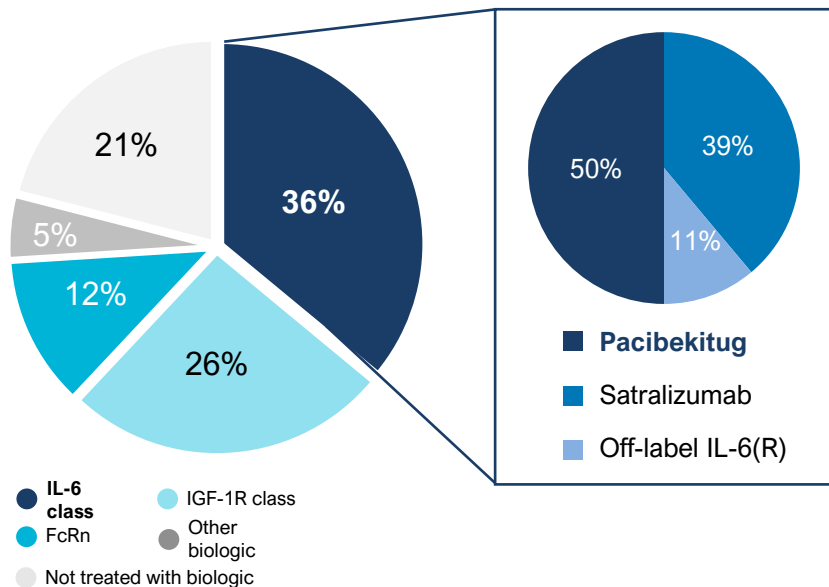
Study population		• Moderate-to-severe active TED patients
MOA		• <b>IL-6 inhibition</b>
Efficacy	Primary endpoint	• <b>Proptosis</b>
	Secondary endpoints	• <b>Diplopia, clinical activity score (CAS), inflammation, and lid retraction</b>
	Additional measures	• Lower <b>rate of relapse</b> and retreatment • <b>Rapid time to response</b> • Lower rate of <b>surgical intervention</b>
Safety	Warnings & precautions	• <b>No anticipated risk of permanent hearing loss</b> or warnings beyond typical IL-6 safety considerations
Dosing & administration		• <b>Every 8-week, low volume subcutaneous injection</b> through pre-filled syringe • Finite dosing

## Targeted points of differentiation

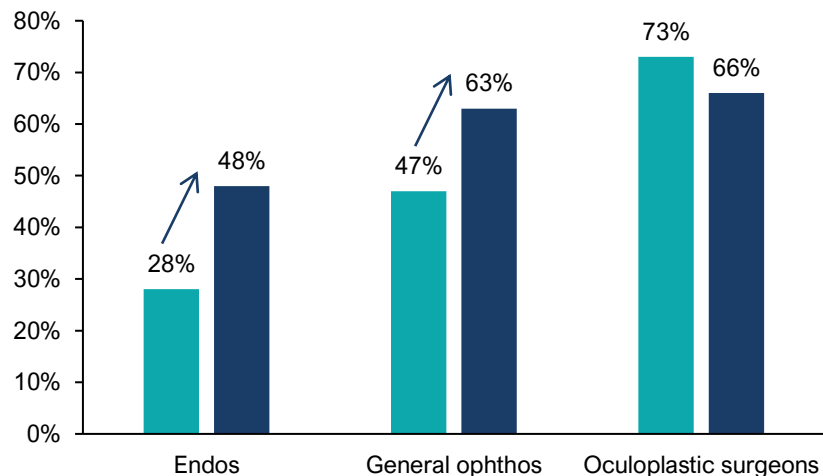
- **Targeting inflammation** which is at core of disease
- **Holistic impact** on many QoL-impacting symptoms
- Emphasis on **response durability**
- **Well-tolerated** without the risk of hearing loss
- Least frequent and **most patient-friendly SC dosing**

# ...resulting in leading market share, capitalizing on increasing Rx from endocrinologists and ophthalmologists

## Pacibekitug ranked highest in future market share among 140 TED treaters in US<sup>1</sup>



## Impact on Rx if SC therapies are available<sup>1</sup>

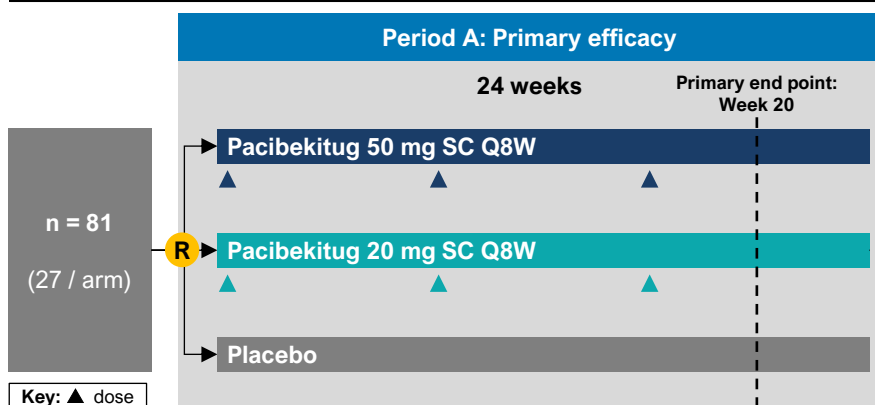


- I treat and manage moderate to severe active TED patients rather than referring out to another physician today
- As additional treatments become available for TED, including SC therapies, I will treat and manage moderate to severe active TED patients rather than referring out to another physician



# spiriTED pivotal trial in first-line TED

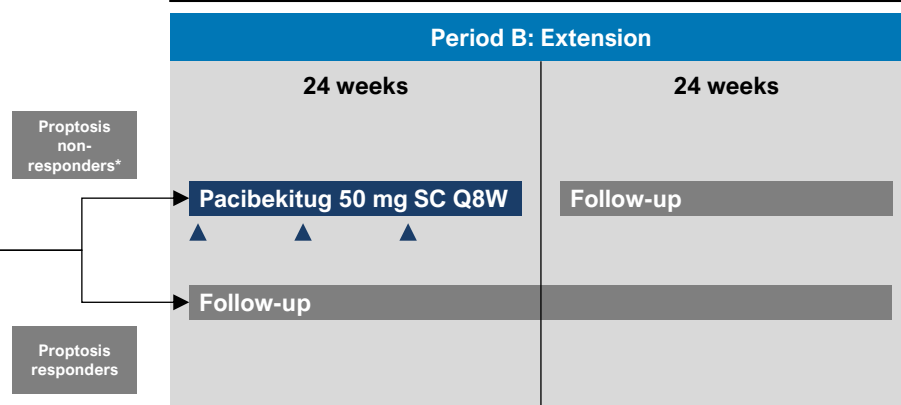
Double-masked, placebo-controlled Phase 2b trial (NCT06088979)



### Study population:

- Moderate-to-severe TED, with proptosis  $\geq 3$ mm above normal (based on race and gender)
- Active phase, with symptom onset  $\leq 15$  months, CAS  $\geq 4$  and positive TSI
- First-line setting, with cap on prior corticosteroid use ( $< 1$ g methylprednisolone or equivalent)

Open label



### Primary endpoint:

- Proptosis response rate at week 20

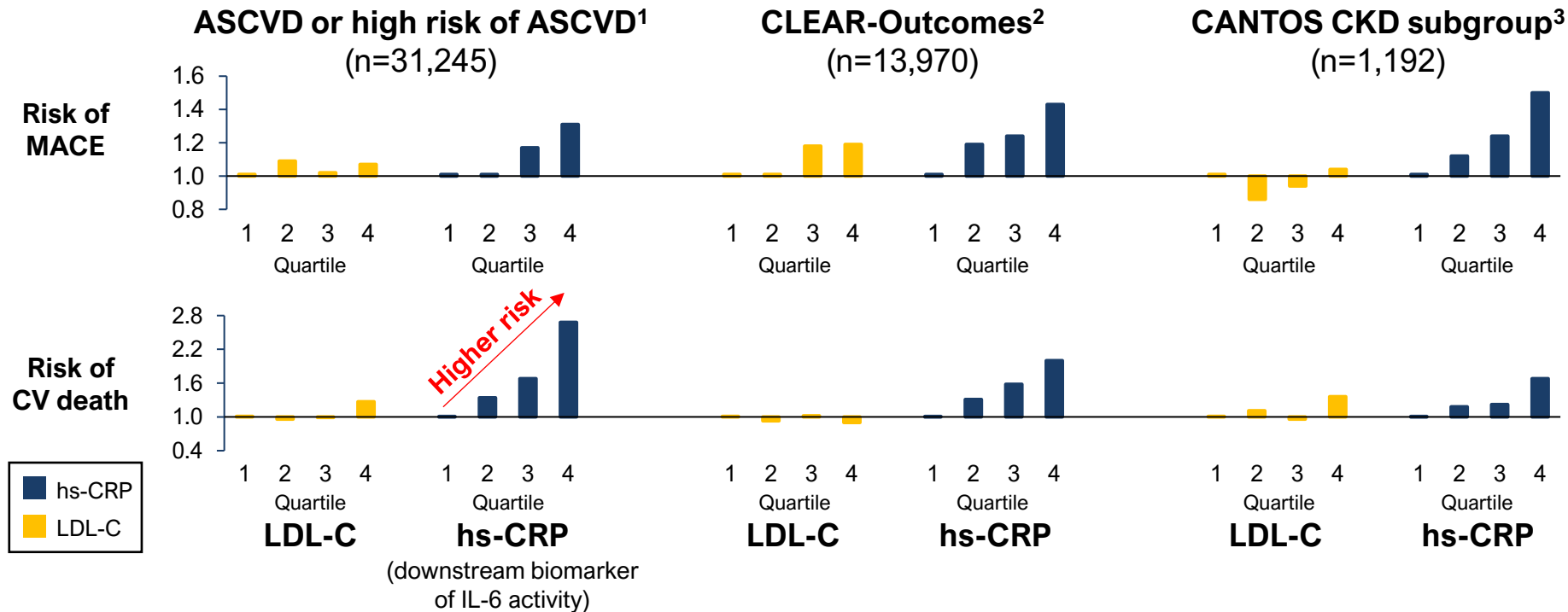
### Additional endpoints:

- CAS
- Diplopia
- QoL, safety, PK/PD/ADA

\*Any patient who receives rescue therapy/intervention in Period A will not receive pacibekitug in Period B and will instead undergo follow-up only

# Appendix

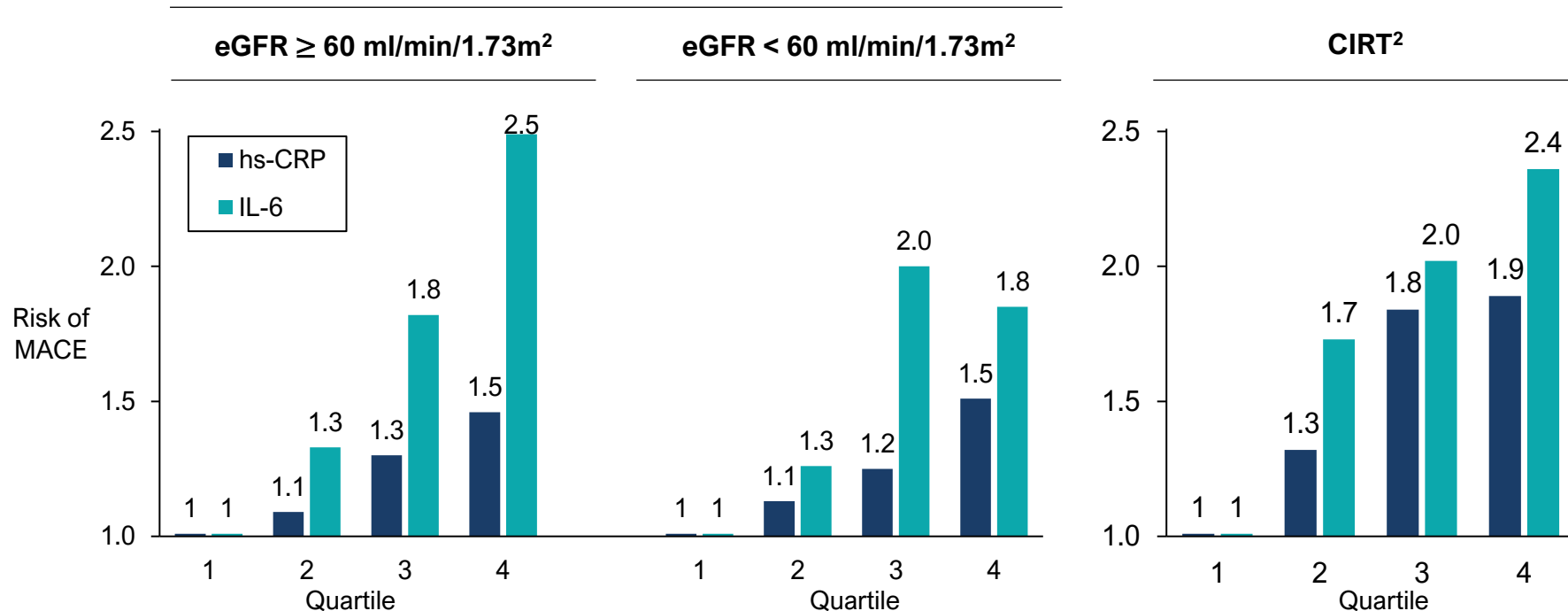
# Multiple observational studies show hs-CRP levels predict future MACE even better than cholesterol in high-risk populations



# Higher levels of IL-6, like hs-CRP, strongly and independently predicted MACE in large prospective studies



## CANTOS<sup>1</sup>



TOURMALINE