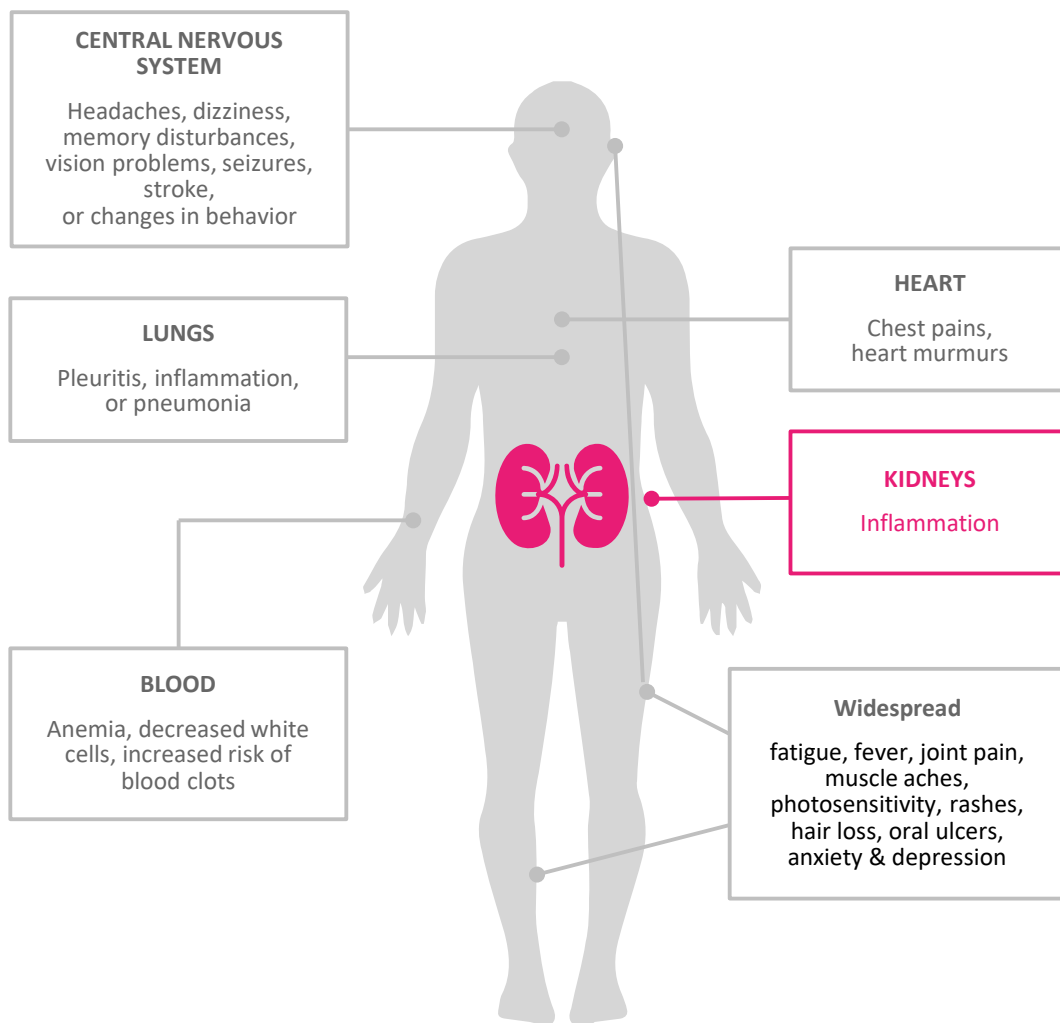




## **AURORA Phase 3 Study Demonstrates Voclosporin Statistical Superiority Over Standard of Care in Lupus Nephritis**

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# SLE & Lupus Nephritis (LN) Overview



**SLE is a chronic, complex and often disabling autoimmune disorder**

Affects over 500K people in the US (mostly women)<sup>1</sup>

Highly heterogeneous, affecting range of organ & tissue systems<sup>1</sup>

**LN is an inflammation of the kidneys caused by SLE & represents a serious progression of SLE**

Up to 50% of SLE patients develop LN<sup>2</sup>

Leakage of blood proteins into the urine (proteinuria) is clinical sign of LN<sup>4</sup>

Straightforward disease outcomes—early response correlates w/long term outcomes; measured by proteinuria<sup>2</sup>

Debilitating and costly, often leading to ESRD, dialysis, renal transplant, and death<sup>2</sup>

Severe LN progresses to ESRD within 15 years of diagnosis in 10% to 30% of patients<sup>3</sup>

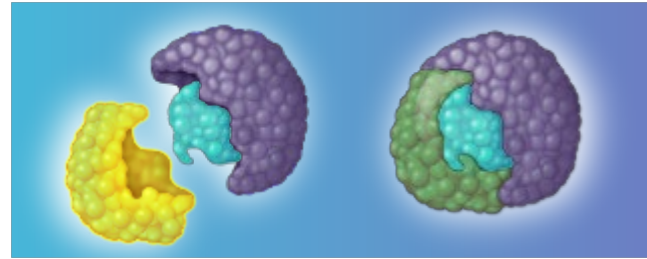
1. Lupus Foundation of America website: <http://www.lupus.org/about/statistics-on-lupus>
2. NIDDK, *Lupus Nephritis*. <https://www.niddk.nih.gov/health-information/health-topics/kidney-disease/lupus-nephritis/Pages/index.aspx>. Accessed July 26, 2016.
3. Maroz N, Segal MS. *Am J Med Sci*. 2013;346(4):319-23.
4. <https://www.lupus.org/resources/how-lupus-affects-the-renal-kidney-system>.

Abbreviations: SLE = systemic lupus erythematosus; ESRD = end stage renal disease

# The Activity of Calcineurin Inhibitors (CNI) in Lupus Nephritis Involves Two Separate Mechanisms

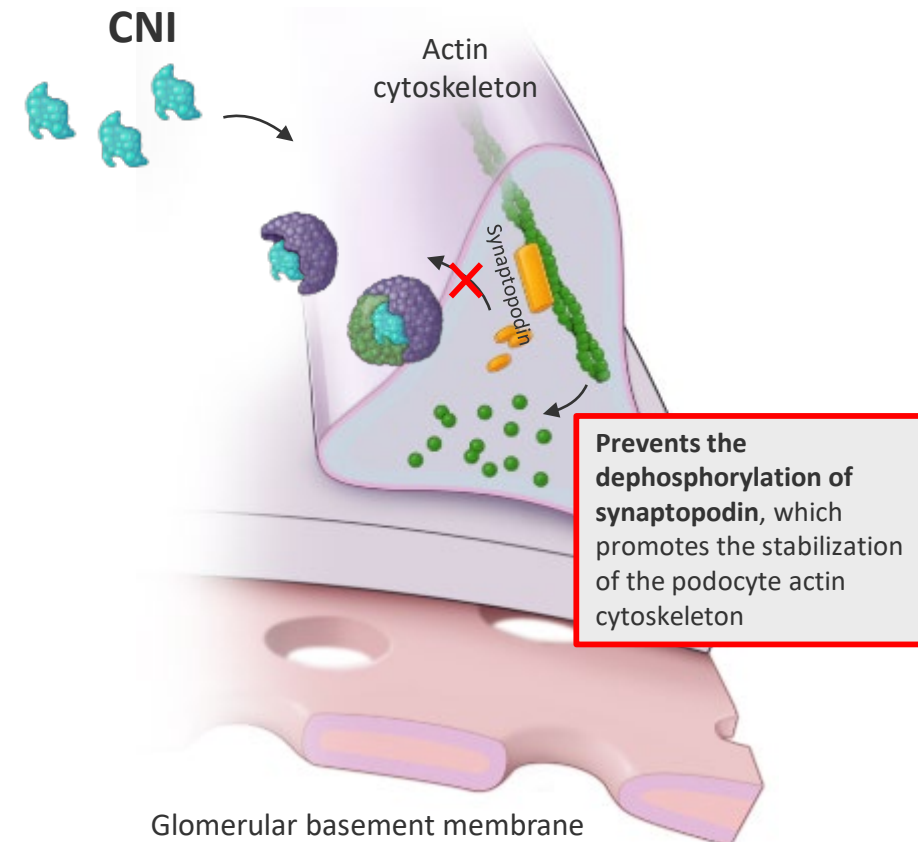
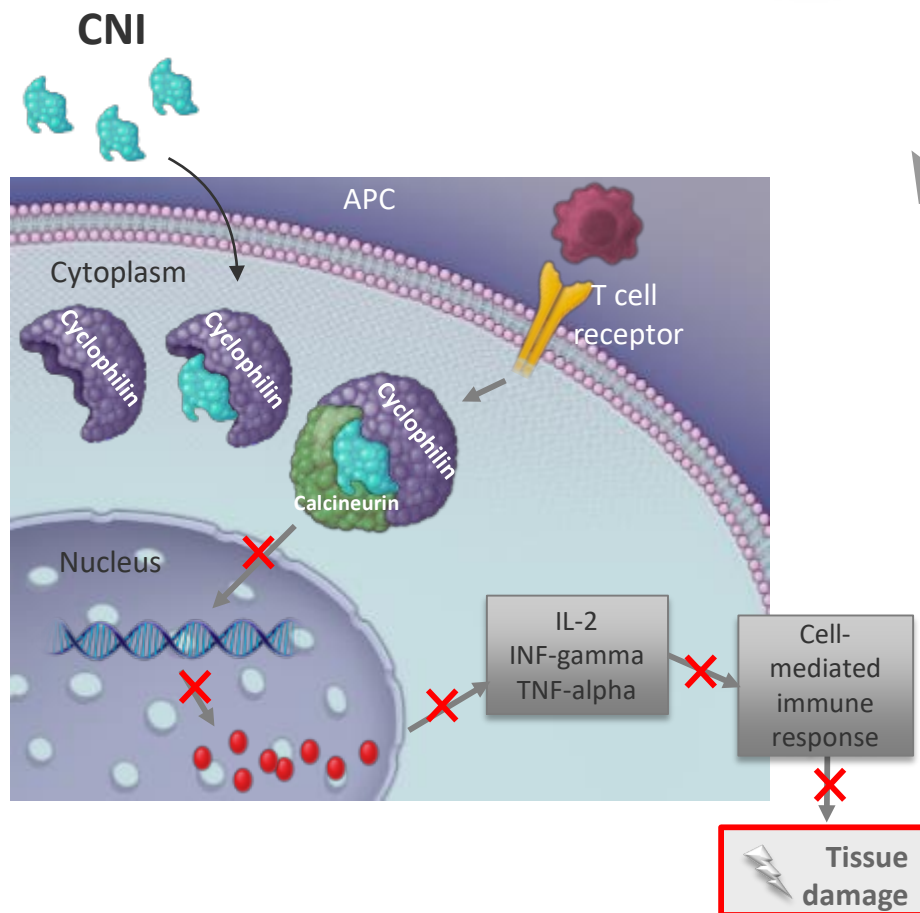
1

Inhibition of calcineurin reduced cytokine activation



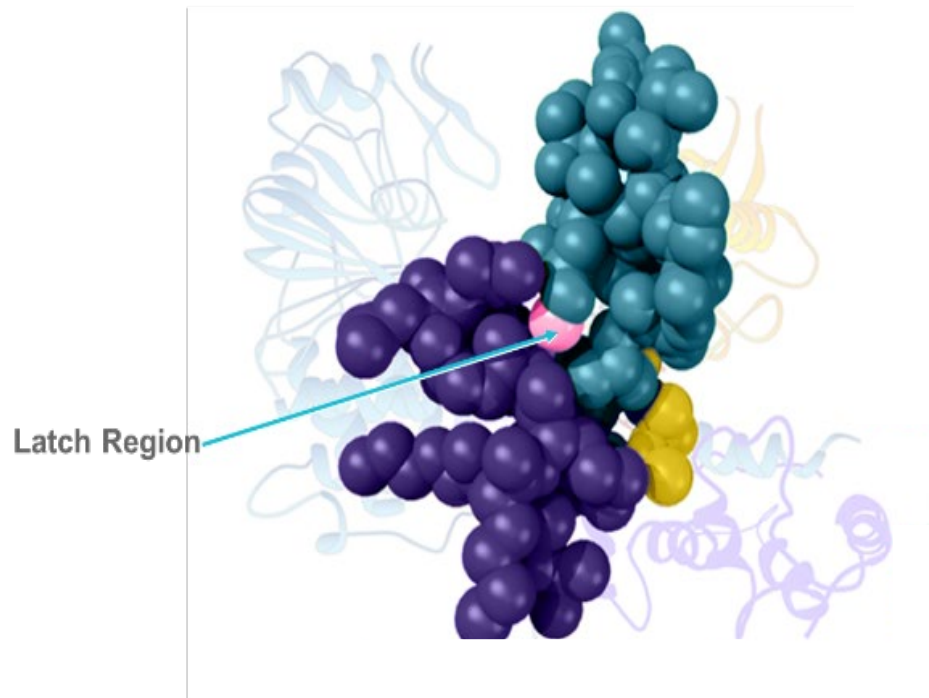
2

Potential disease-modifying podocyte stabilization, which protects against proteinuria



Abbreviations: LN, lupus nephritis; NFAT, nuclear factor of activated T cells; APC, antigen-presenting cell; IL, interleukin; INF, interferon; TNF, tumor necrosis factor.

# Voclosporin: A Novel CNI



- **Novel CNI developed as a structural change from cyclosporine A, incorporating a single carbon extension with a double-bond**
- **Voclosporin has a consistent dose response potentially eliminating the need for therapeutic drug monitoring**
- **4x potency over cyclosporin A**

Source: Aurinia. Data on file.

# Aurinia Studies Evaluating Voclosporin in Active Lupus Nephritis

## Completed Trials

### AURION (Proof of Concept)

- Single arm, twin center exploratory study
- Biomarkers at 8 weeks: 25% reduction in UPCR. C3/C4, anti-dsDNA normalization
- N = 7
- Primary analysis: # patients achieving biomarkers and # of these patients who go on to achieve Week 24 or Week 48 remission

### AURA-LV (Phase 2 RCT)

- Phase 2
- Double blind RCT
- N = 265
- Active control
- Primary endpoint: 24 week renal response

### AURORA (Phase 3 RCT)

- Phase 3
- Double blind RCT
- N = 357
- Active control
- Primary endpoint: 52 week renal response

Abbreviations: UPCR = urinary protein to creatinine ratio

# The AURA-LV Phase 2 Study and the AURORA Phase 3 Study Have Similar Inclusion Criteria and Primary Endpoints

- **Bold** = change from AURA-LV

## AURORA

### Select Inclusion Criteria

### Primary Endpoint

Diagnosis of SLE according to ACR criteria

+

Kidney biopsy within 6 months of study entry confirming histologic diagnosis of LN\*

+

Biopsy proven LN [Class III, IV or Class V (alone or in combination w/Class III or IV)]

+

Proteinuria of  $\geq 1.5$  mg/mg  
OR  $\geq 2$  mg/mg\*\*

Renal Response at **Week 52**

UPCR of  $\leq 0.5$  mg/mg

+

eGFR  $\geq 60$  mL/min/1.73m<sup>2</sup> or no confirmed decrease from baseline in eGFR of  $\geq 20\%$

+

Presence of sustained, low dose steroids ( $\leq 10$ mg prednisone from Week 44-52)

+

No administration of rescue medications

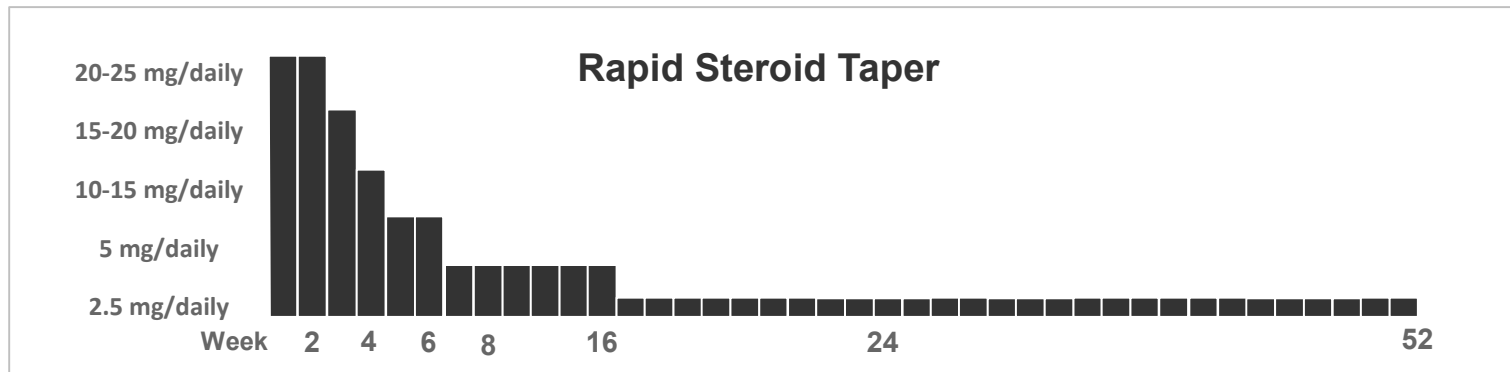
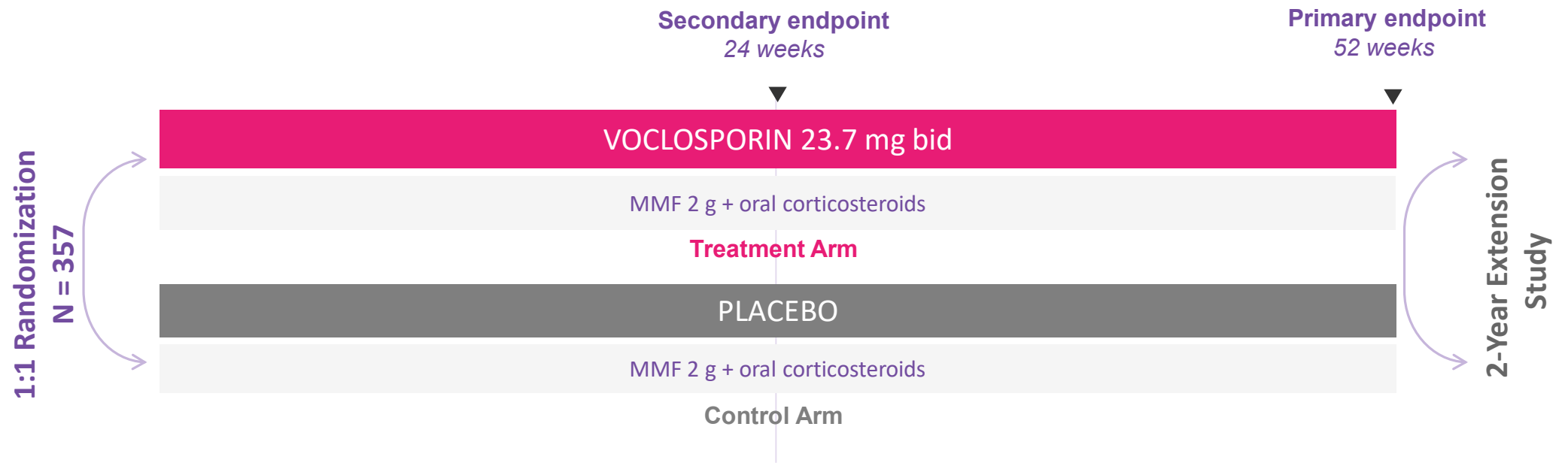
\* Up to 2 years if accompanied by laboratory evidence of recent LN flare

\*\* Class V patients



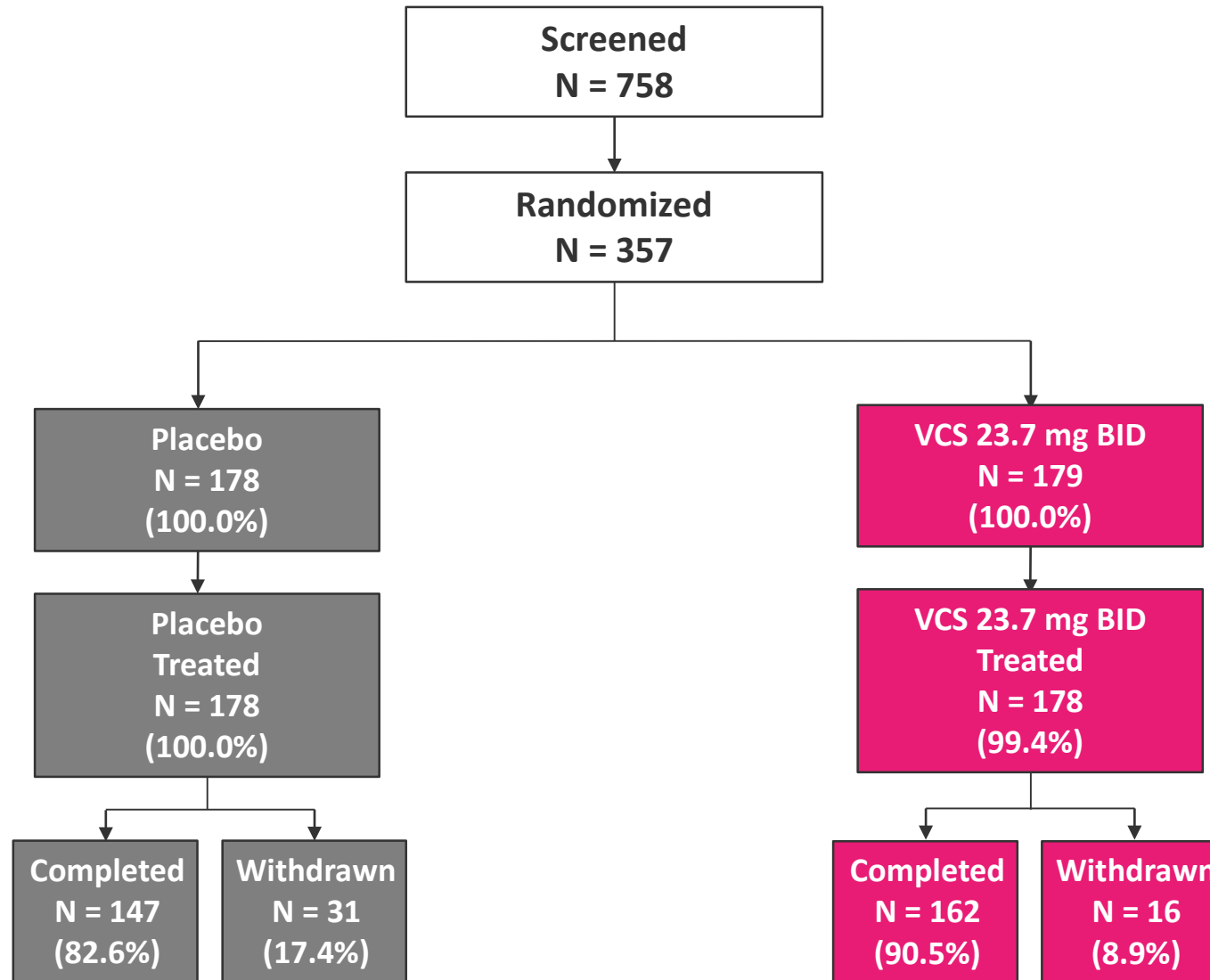
# AURORA Phase 3 Study Design

Primary endpoint: Renal Response at 52-Weeks



Abbreviations: BID = twice a day

# AURORA Subject Disposition



Abbreviations: VCS = voclosporin



# AURORA Select Demographics and Baseline Characteristics (ITT)

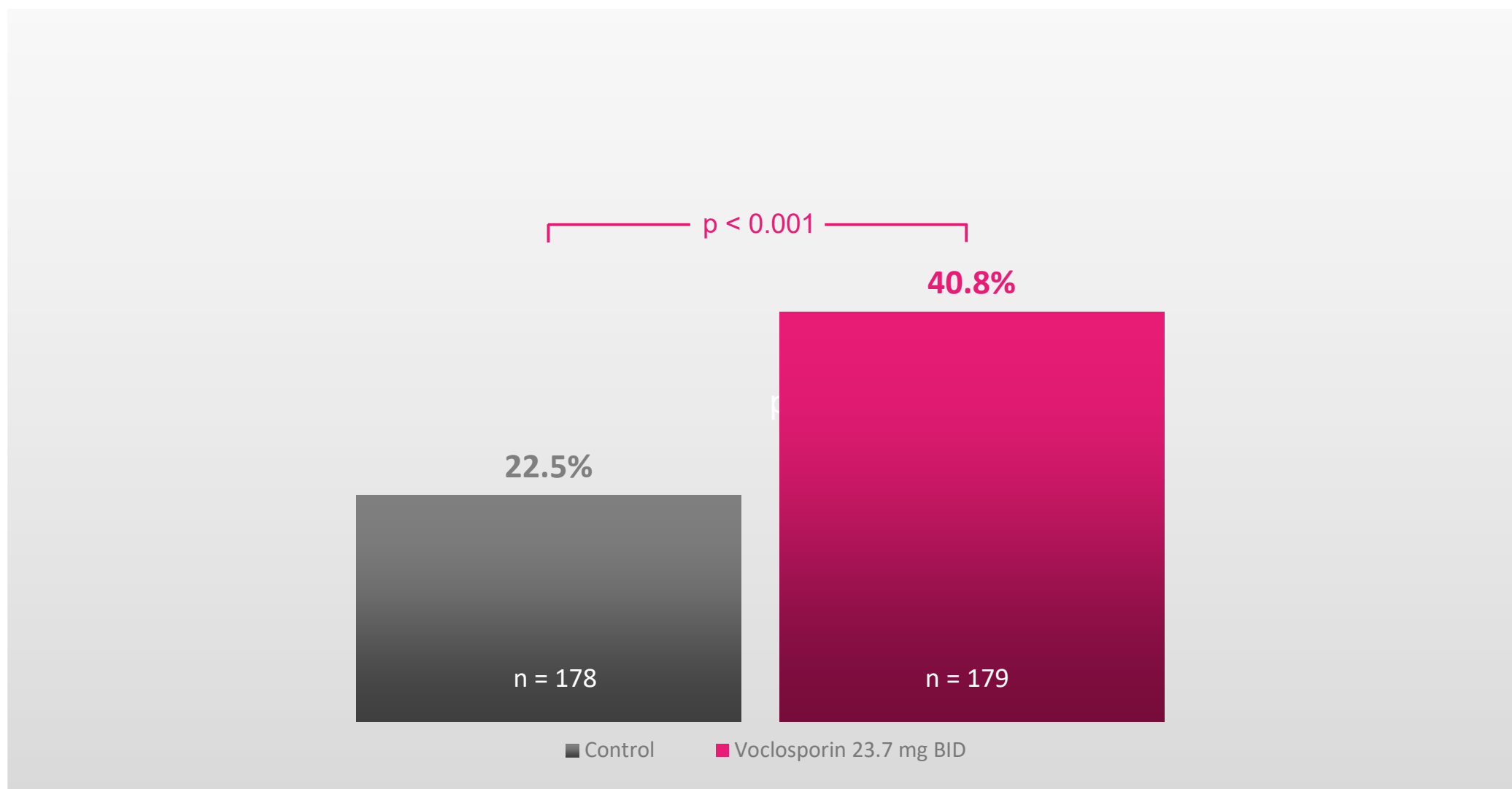
	Control (N = 178)	Voclosporin 23.7 mg BID (N = 179)	Total (N = 357)
<b>Age (years)</b>			
Mean (SD)	33.6 (11.0)	32.8 (10.93)	33.2 (10.96)
Median	31.5	31.0	31.0
<b>Sex n (%)</b>			
Male	26 (14.6)	18 (10.1)	44 (12.3)
Female	152 (85.4)	161 (89.9)	313 (87.7)
<b>Baseline weight (kg)</b>			
Mean (SD)	66.55 (16.113)	66.49 (17.074)	66.52 (16.578)
Median	63.50	64.60	64.10
<b>Baseline UPCR (mg/mg)</b>			
Mean (SD)	3.867 (2.3626)	4.138 (2.7109)	4.002 (2.5428)
Median	3.128	3.356	3.216
<b>Regional Distribution n (%)</b>			
Asia Pacific	52 (29.2)	52 (29.1)	104 (29.1)
Europe	51 (28.6)	46 (25.7)	97 (27.2)
North/Latin America	74 (41.6)	75 (41.9)	149 (41.7)

Abbreviations: ITT = intent to treat; SD = standard deviation

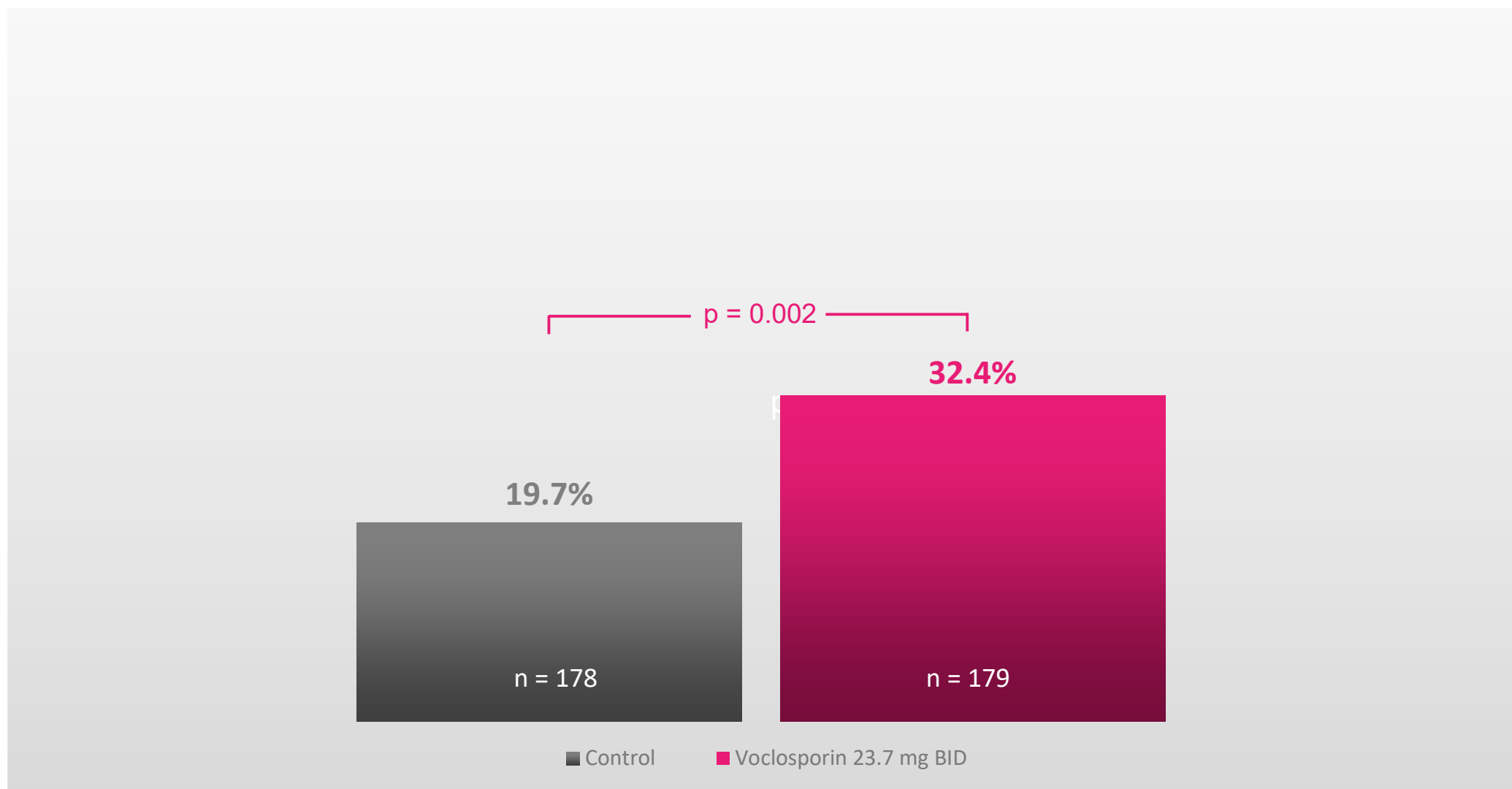
# AURORA Baseline Renal Characteristics

	<b>Control</b> <b>N = 178</b>	<b>Voclosporin</b> <b>23.7 mg BID</b> <b>N = 179</b>	<b>Total</b> <b>N = 357</b>
<b>Baseline eGFR (mL/min/1.73m<sup>2</sup>)</b>			
<b>n</b>	<b>178</b>	<b>178</b>	<b>356</b>
<b>Mean (SD)</b>	<b>90 ± 29</b>	<b>92 ± 31</b>	<b>91 ± 30</b>
<b>Median</b>	<b>97</b>	<b>91</b>	<b>94</b>
<b>Baseline UPCR (mg/mg)</b>			
<b>n</b>	<b>178</b>	<b>178</b>	<b>356</b>
<b>Mean (SD)</b>	<b>3.9 ± 2.4</b>	<b>4.1 ± 2.7</b>	<b>4.0 ± 2.5</b>
<b>Median</b>	<b>3.1</b>	<b>3.4</b>	<b>3.2</b>
<b>Biopsy Class n (%)</b>	<b>178</b>	<b>179</b>	<b>357</b>
<b>Class III or IV (+/- V)</b>	<b>153 (86%)</b>	<b>154 (86%)</b>	<b>307 (86%)</b>
<b>Class V</b>	<b>25 (14%)</b>	<b>25 (14%)</b>	<b>50 (14%)</b>

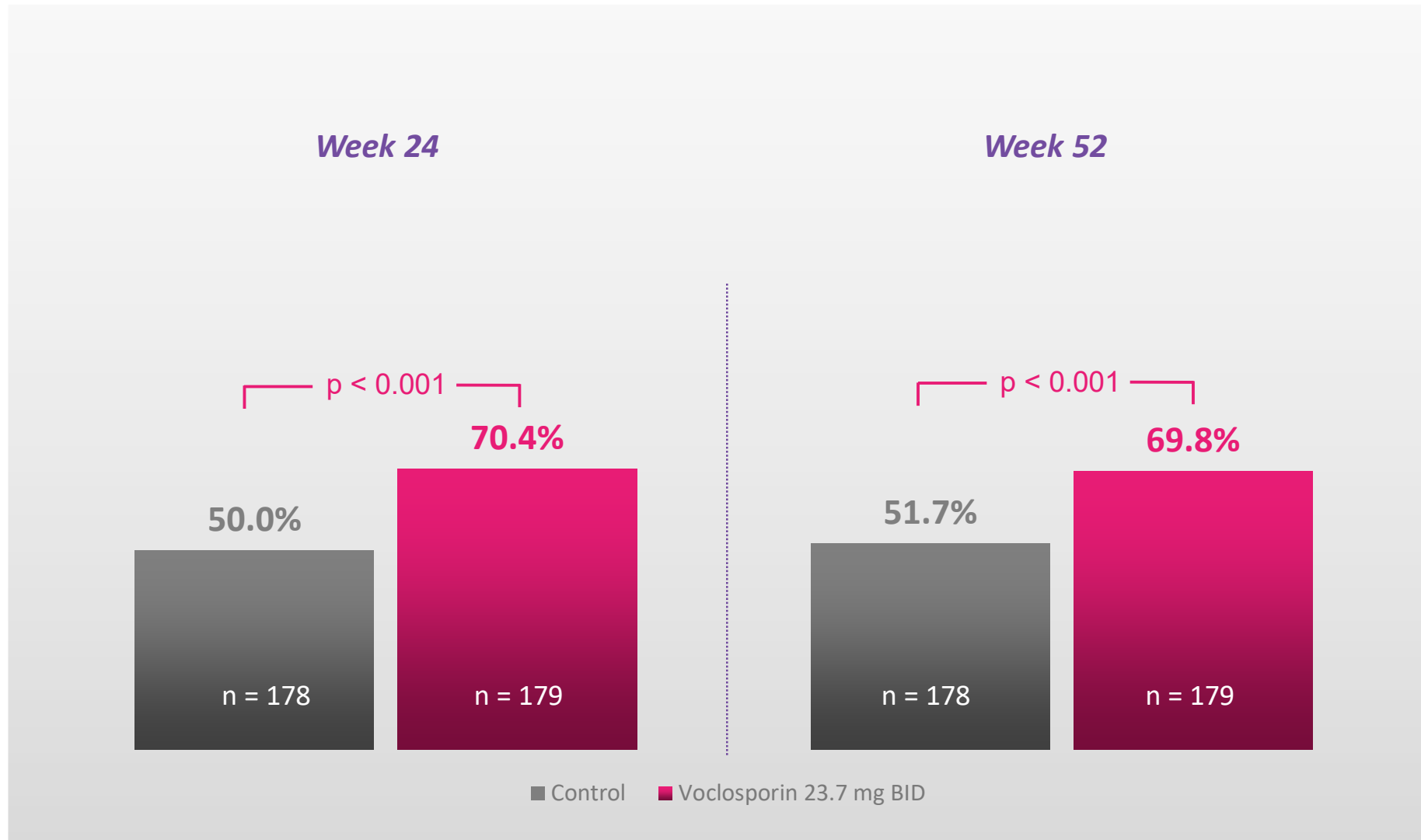
# AURORA Primary Efficacy Endpoint: Week 52 Renal Response (ITT)



## AURORA Secondary Endpoint: Week 24 Renal Response (ITT)

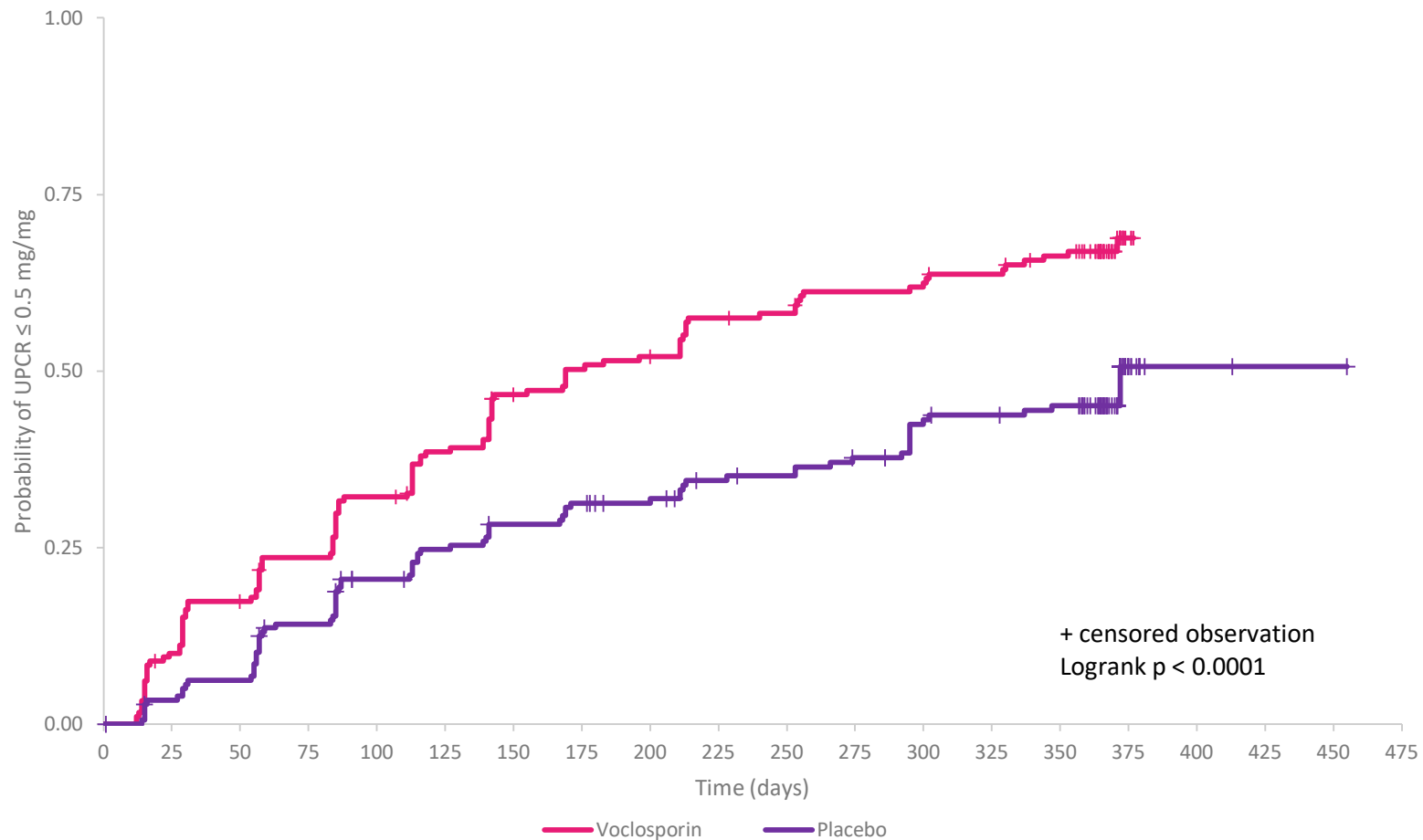


# AURORA Secondary Endpoint: Partial Renal Response (ITT)



**Partial renal response = UPCR reduction ≥ 50% from baseline**

# AURORA Secondary Endpoint: Time to UPCR $\leq$ 0.5 mg/mg



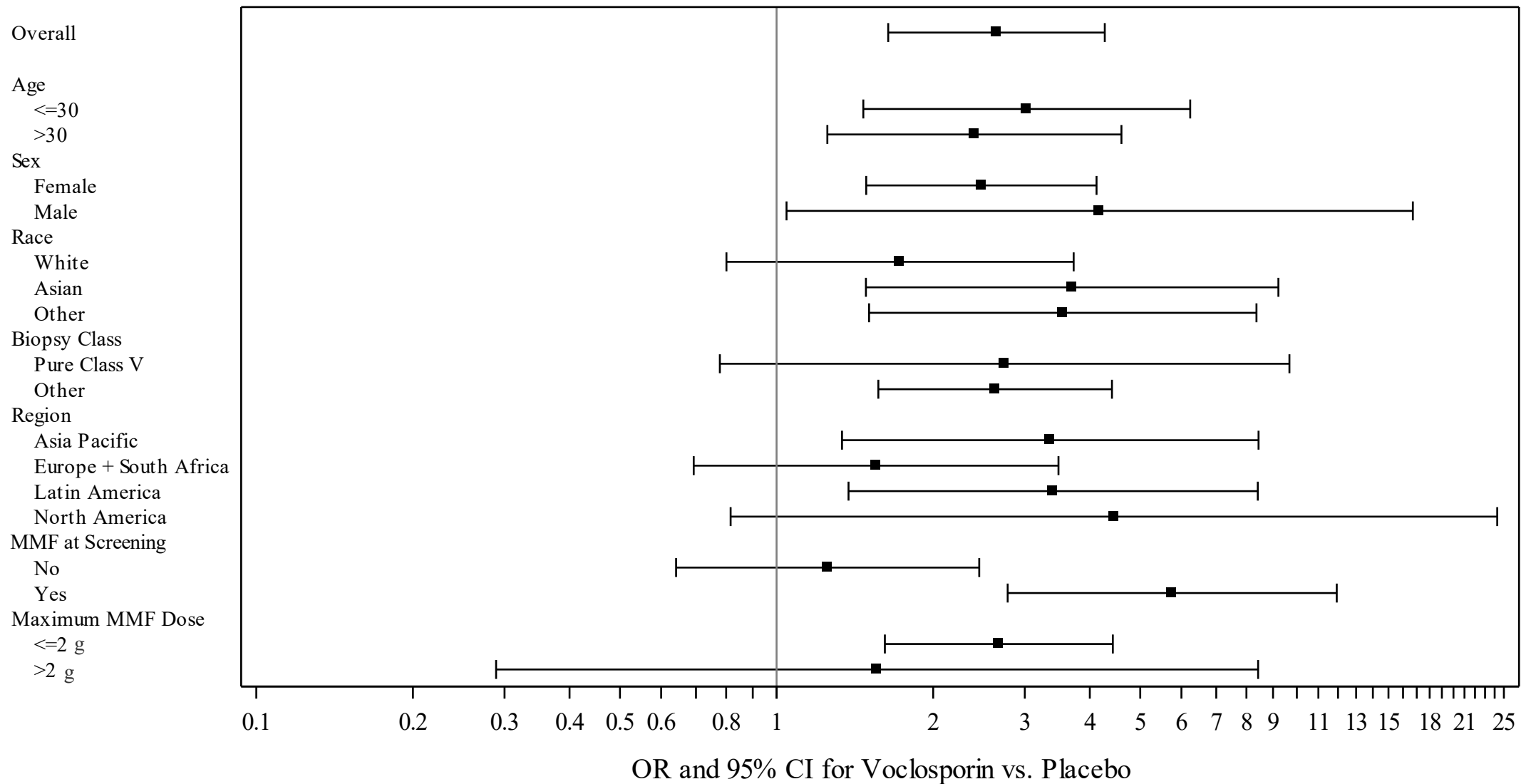
Measure	Result (Days)	p-value
Median Time (50%) to UPCR $\leq$ 0.5 mg/mg	Voclosporin: 169 Control: 372	< 0.001
Median Time (25%) to UPCR $\leq$ 0.5 mg/mg	Voclosporin: 84 Control: 127	< 0.001

## AURORA Hierarchical Secondary Endpoints (ITT)

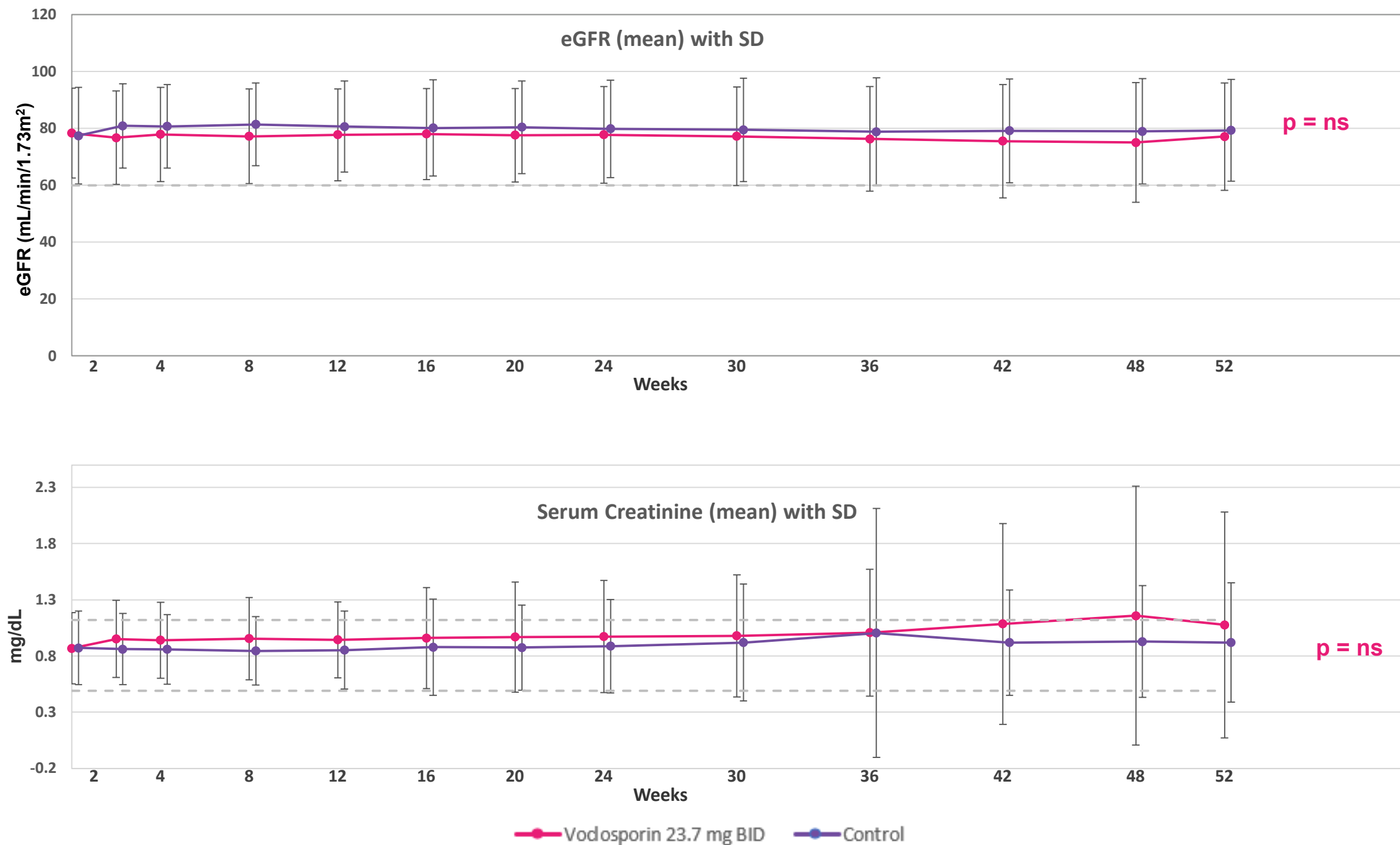
Measure	Result	Odds Ratio [95% CI]	p-value
Renal Response at 24 weeks	Voclosporin 32.4% Control 19.7%	2.23 [1.34, 3.72]	0.002
Partial Renal Response at 24 weeks	Voclosporin 70.4% Control 50.0%	2.43 [1.56, 3.79]	< 0.001
Partial Renal Response at 52 weeks	Voclosporin 69.8% Control 51.7%	2.26 [1.45, 3.51]	< 0.001
Time to UPCR $\leq$ 0.5 mg/mg	Voclosporin faster than Control	2.02 [1.51, 2.70] Hazard Ratio	< 0.001
Time to 50% reduction in UPCR	Voclosporin faster than Control	2.05 [1.62, 2.60] Hazard Ratio	< 0.001



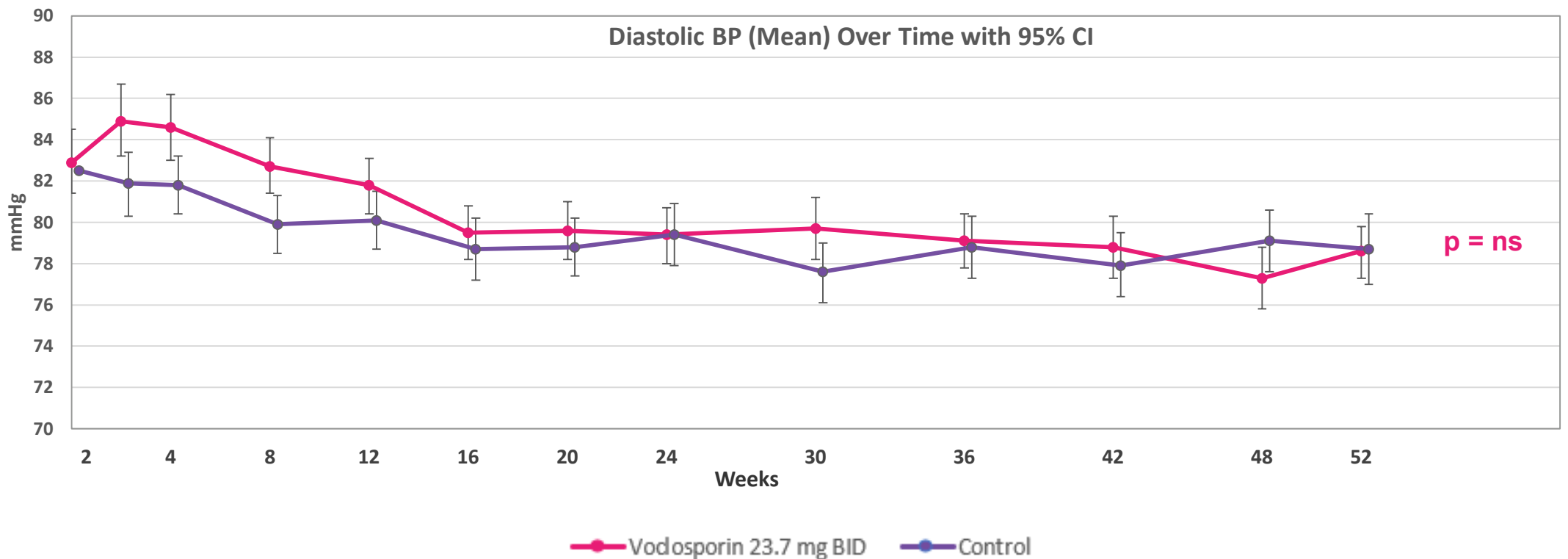
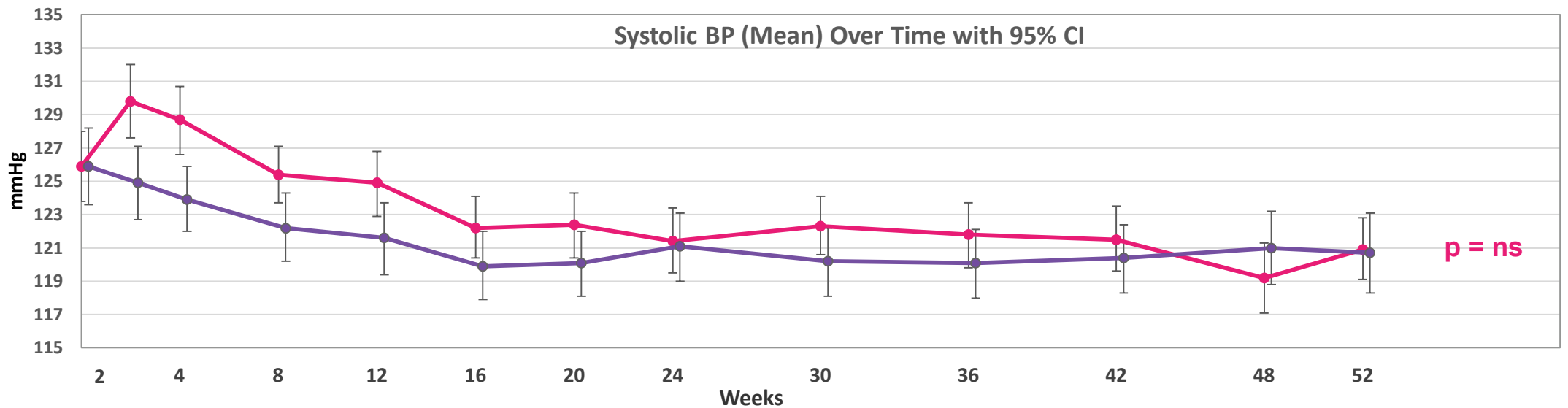
# AURORA Efficacy Benefit Seen Across Prespecified Subgroups



# AURORA Corrected eGFR and Serum Creatinine Over Time

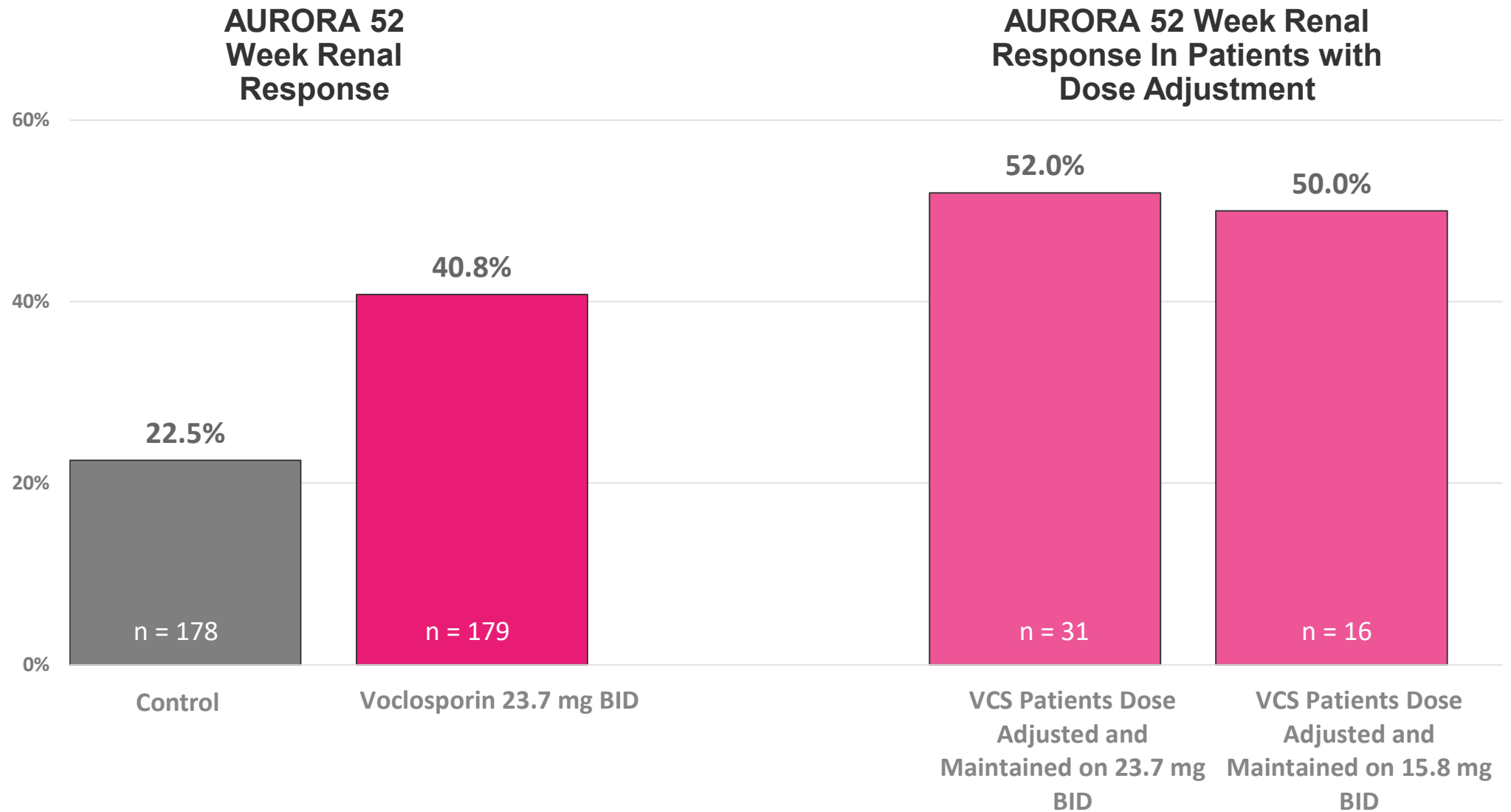


# AURORA: No Statistical Difference in Systolic BP or Diastolic BP



# AURORA Subjects Requiring Dose Adjustments

Dose adjustments (interruption, reduction and re-escalation) were implemented according to eGFR reduction protocol after excluding potential contributing factors.



# AURORA Overall Summary of Adverse Events

	Control (N = 178) N (%)	Voclosporin 23.7 mg BID (N = 178) N (%)
Any Adverse Event (AE)	158 (88.8)	162 (91.0)
Any Serious Adverse Event (SAE)	38 (21.3)	37 (20.8)
- Serious infection	20 (11.2)	18 (10.1)
Any treatment-related SAE	8 (4.5)	8 (4.5)
Any AE leading to voclosporin/placebo discontinuation	26 (14.6)	20 (11.2)
Death*	5 (2.8)	1 (0.6)
Treatment-related AE leading to death	0	0
Disease-related AE	87 (48.9)	96 (53.9)
Disease-related SAE	16 (9.0)	18 (10.1)

\* 2 deaths in control group and 1 death in voclosporin group occurred as a result of AEs starting >30 days after discontinuation of study drug.

## AURORA Study Conclusions

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- The positive benefit-risk profile observed in AURORA (n=357) confirms the treatment effect seen in AURA-LV (n=265) when comparing voclosporin 23.7mg BID in combination with background standard of care versus standard of care alone.
- The odds of achieving Renal Response on voclosporin therapy were 2.65x greater than control, while maintaining a comparable safety profile.