

# *Renin-Angiotensin System Inhibitors Following TAVR: An Updated Meta-Analysis of 34,987 Patients*

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# Disclosure of Relevant Financial Relationships

I, [Paulo Tartuce](#), DO NOT have any financial relationships to disclose.

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# Background

- Aortic stenosis leads to chronic pressure overloads, resulting in LV remodeling, hypertrophy, and fibrosis
- These changes increase heart failure risk
- Although TAVR improves outcomes, late complications, particularly mortality and readmissions remain significantly relevant

# Background


















**Can RAS inhibitors reduce these adverse outcomes?**

# Background

## ORIGINAL RESEARCH

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### Ramipril After Transcatheter Aortic Valve Implantation in Patients Without Reduced Ejection Fraction: The RASTAVI Randomized Clinical Trial

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Amat-Santos et al., 2024

# Background

- Long term outcomes after TAVR can be better
- Post-TAVR medical therapy evidence is limited/conflicting
- *RAS* inhibitors benefit other cardiac conditions

# Methods

## *Literature search*



## *Statistical analysis*



*Studies comparing RASi vs no-RASi  
use following TAVR*

# Results

- 11 studies comprising 34,987 patients
- 16,593 (47.7%) received RASi therapy

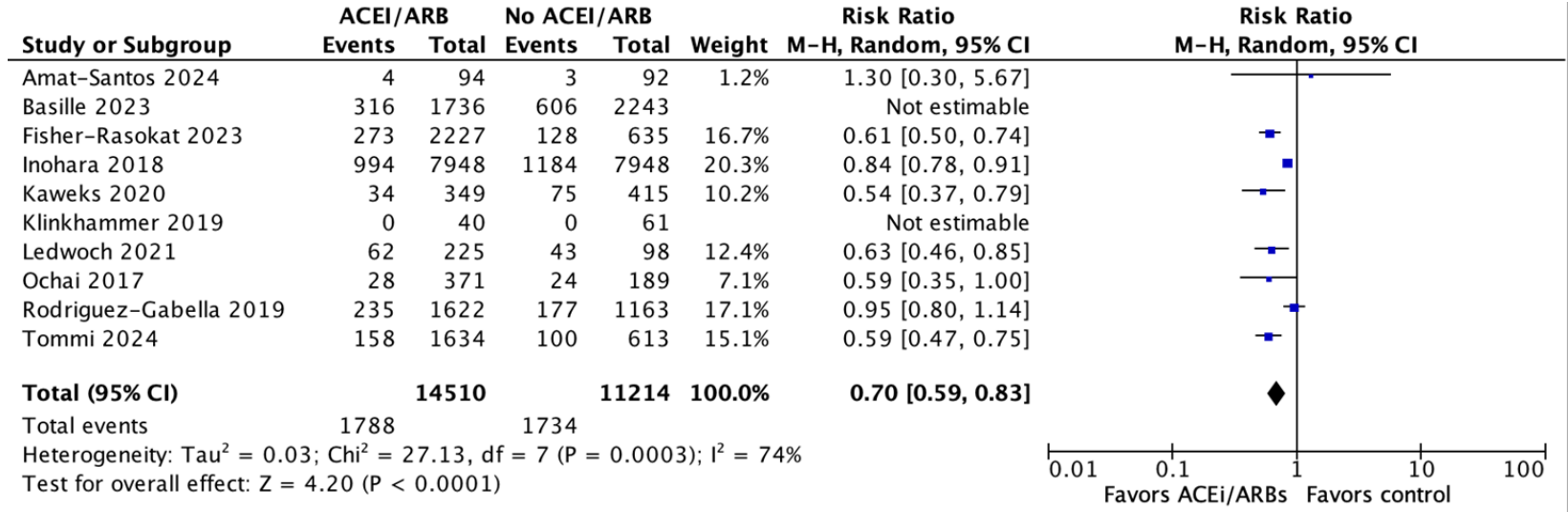
Endpoints:

- All-cause death
- Cardiovascular death
- Heart failure rehospitalization
- Myocardial infarction



# Results

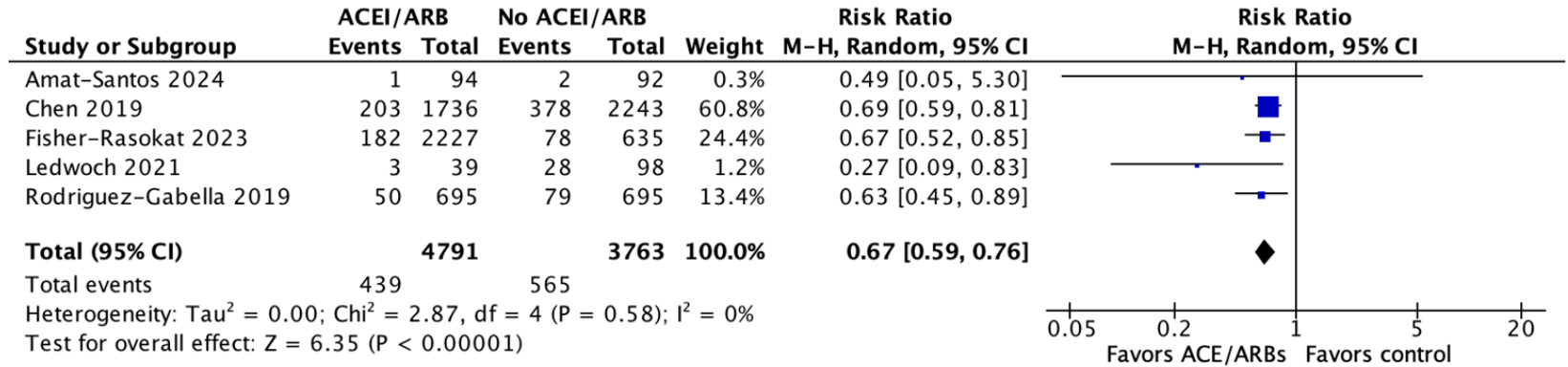
## All-cause death



RAS inhibitor therapy was associated with a 30 percent risk reduction in all-cause mortality

# Results

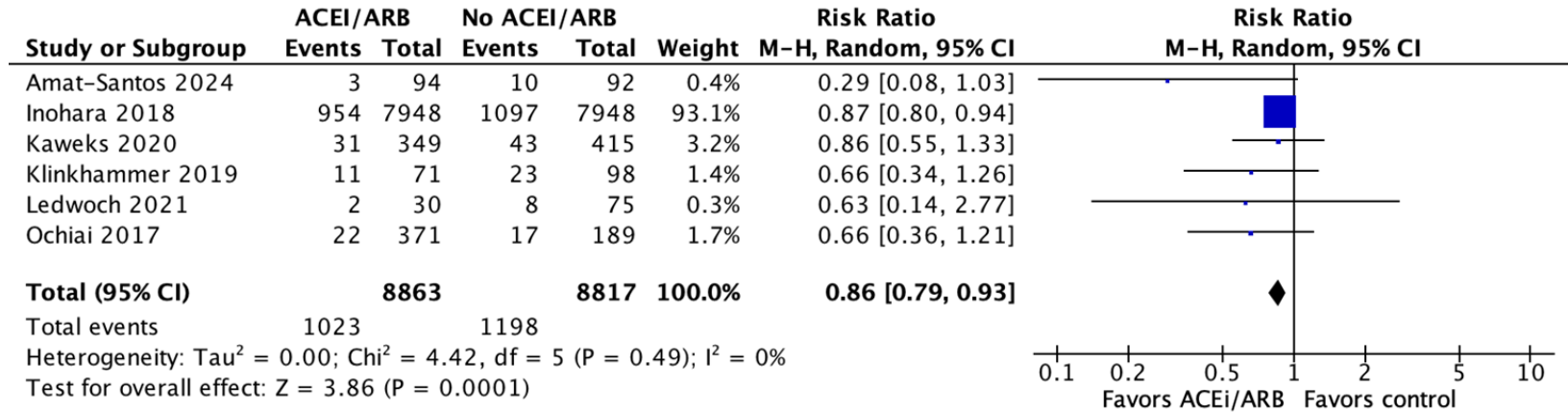
## Cardiovascular death



Cardiovascular death was reduced by 33 percent with RAS inhibitor use

# Results

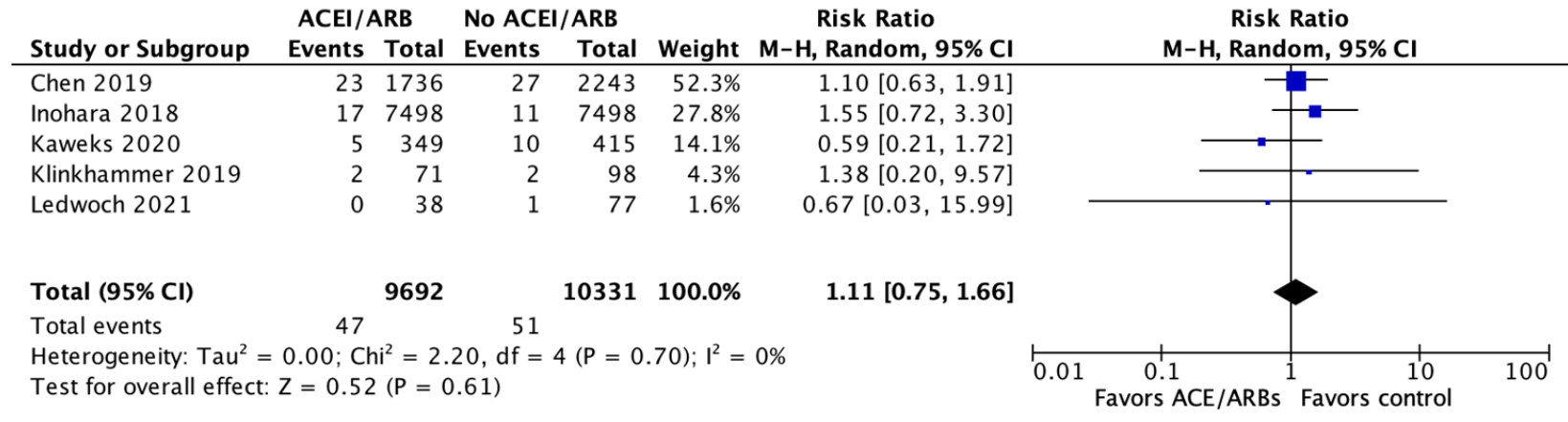
## *Heart failure rehospitalization*



RASi therapy reduced in 14% the risk of heart failure readmission

# Results

## *Myocardial infarction*



No significant differences between groups

# Large Registries

- PARTNER 2
- EffectTAVI

# Future Perspectives

## ORIGINAL ARTICLE

### Dapagliflozin in Patients Undergoing Transcatheter Aortic-Valve Implantation

S. Raposeiras-Roubin,<sup>1,3</sup> I.J. Amat-Santos,<sup>4,5</sup> X. Rossello,<sup>1,4,6,7</sup> R. González Ferreiro,<sup>2</sup> I. González Bermúdez,<sup>2</sup> D. Lopez Otero,<sup>4,8</sup> L. Nombela-Franco,<sup>9</sup> L. Gheorghe,<sup>10</sup> J.L. Díez,<sup>11</sup> C. Baladrón Zorita,<sup>4,5</sup> J.A. Baz,<sup>2,4</sup> A.J. Muñoz García,<sup>12</sup> V. Vilalta,<sup>13</sup> S. Ojeda-Pineda,<sup>4,14</sup> J.M. de la Torre Hernández,<sup>15</sup> J.G. Cordoba Soriano,<sup>16</sup> A. Regueiro,<sup>17</sup> P. Bordes Siscar,<sup>18</sup> J. Salgado Fernández,<sup>19</sup> B. Garcia del Blanco,<sup>4,20</sup> R. Martín-Reyes,<sup>21</sup> R. Romaguera,<sup>22</sup> C. Moris,<sup>23</sup> S. García Blas,<sup>4,24</sup> J.A. Franco-Peláez,<sup>25</sup> I. Cruz-González,<sup>4,26</sup> D. Arzamendi,<sup>27</sup> N. Romero Rodríguez,<sup>28</sup> F. Díez-del Hoyo,<sup>29</sup> S. Camacho Freire,<sup>30</sup> F. Bosa Ojeda,<sup>31</sup> J.C. Astorga Burgo,<sup>32</sup> E. Molina Navarro,<sup>33</sup> J. Caballero Borrego,<sup>34</sup> V. Ruiz Quevedo,<sup>35</sup> Á. Sánchez-Recalde,<sup>36</sup> V. Peral Disdier,<sup>6</sup> E. Alegría-Barrero,<sup>37</sup> J. Torres-Llengo,<sup>38</sup> G. Feltes,<sup>39,40</sup> J.A. Fernández Díaz,<sup>41</sup> C. Cuellas,<sup>42</sup> G. Jiménez Britez,<sup>43</sup> J. Sánchez-Rubio Lezcano,<sup>44</sup> C. Barreiro-Pardal,<sup>45</sup> I. Núñez-Gil,<sup>9,40,46</sup> E. Abu-Assi,<sup>47</sup> A. Iñiguez-Romo,<sup>2,4</sup> V. Fuster,<sup>1,48</sup> and B. Ibáñez,<sup>1,4,25</sup> for the DapaTAVI Investigators\*

Raposeiras-Roubin et al., 2025

# Limitations

- The observational design of all included studies constrains the evaluation of endpoints without the influence of confounding factors
- Variability in follow-up durations across the studies
- The lack of individual patient data restricts a more granular assessment of key variables, such as use of beta-blockers history, which could influence directly in cardiac reverse remodeling.

# Conclusions

- RAS inhibitors for the management of patients following TAVR is associated with reduced risk of both all-cause and cardiovascular mortality, and heart failure readmission.
- The risk of myocardial infarction was comparable across groups
- These findings support the integration of RAS inhibition into post-TAVR medical therapy