

IMPACT OF TEZEPelumab ON ORAL CORTICOSTEROID-TREATED EXACERBATIONS AND HOSPITALISATIONS IN SEVERE ASTHMA: REAL-WORLD SINGLE-CENTRE DATA.

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Background and importance

Tezepelumab blocks thymic stromal lymphopoietin (TSLP) and has been shown to reduce severe asthma exacerbations across various phenotypes. Real-world data are essential to quantify the drug's effectiveness in routine clinical practice

Aim and objectives

To assess changes in oral corticosteroid (OCS)-treated exacerbations and hospitalisations during the first year after initiating Tezepelumab.

Material and methods

- **Study Design:** Retrospective, single-centre cohort study.
- **Study Period:** Patients initiating tezepelumab from November 2023 to September 2025.
- **Population:** Adults with severe asthma tracked via electronic records.

- **Data Collection:**
 - Exacerbations: Identified by pharmacy prescription claim refills for OCS bursts.
 - Timeline: Comparison of data from the year prior to initiation vs. the first year after initiation.
- **Analysis:** Summarised overall and in a predefined subgroup with ≥ 12 months of follow-up.

Results

1. Patient Characteristics

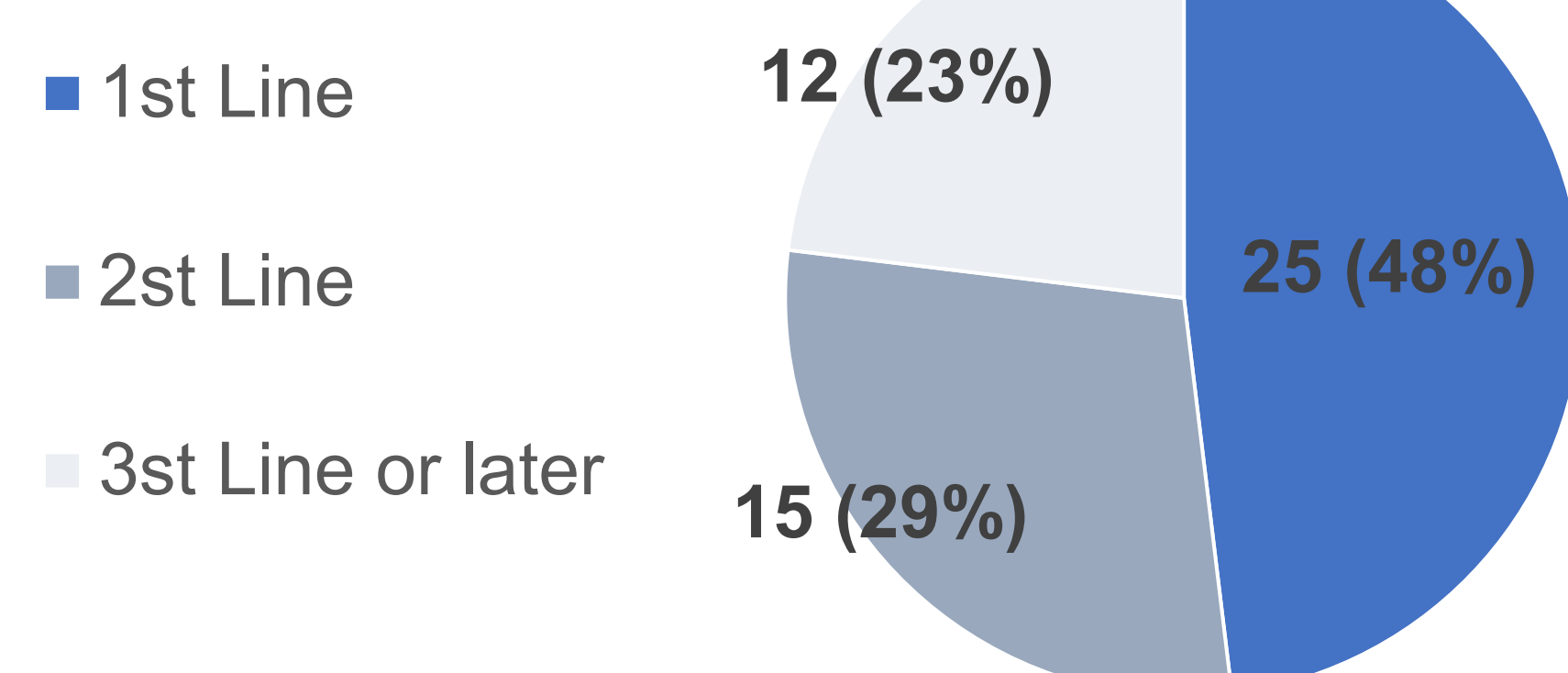
 N=51

 Mean Age: 58.5 \pm 13.2 years.

 Sex: 62.7% male


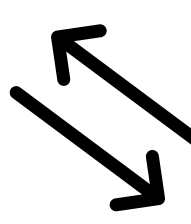

Median Treatment Duration: 
12.6 months (IQR 4–17.2).

Line of biologic therapy



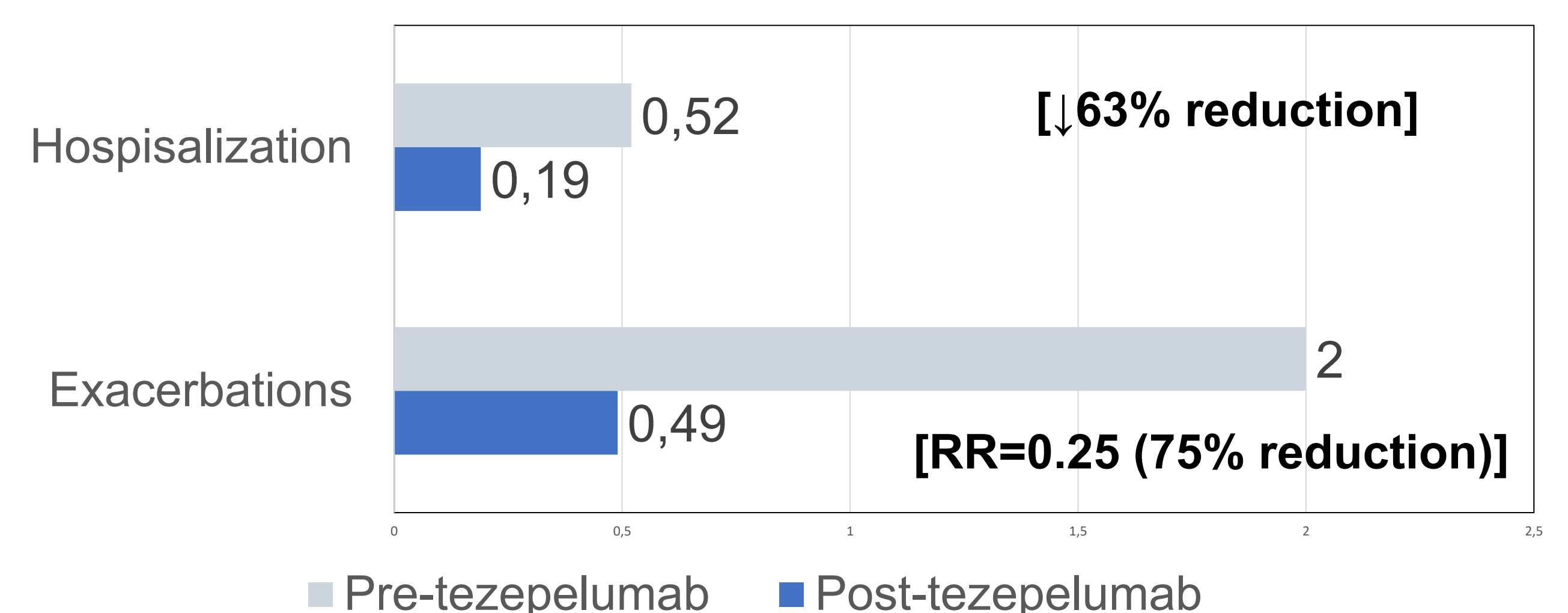
 Patients with ≥ 12 Months Follow-up: n=22

3. Treatment Persistence & Safety

- **Discontinuation rate:** 25.0% (n=13). 
- **Switched to other biologics:** 13.5% (Omalizumab, Dupilumab, Mepolizumab, Benralizumab). 
- **Safety:** One death occurred (deemed unrelated to the drug). 

2. Impact on OCS-Treated Exacerbations and Hospitalisation


Annualised OCS-Treated Exacerbation and Hospitalisation Rate: Pre vs. Post-Tezepelumab



2.1. OCS-Treatment Exacerbations

Subgroup with ≥ 12 Months Follow-up: Rate \downarrow from 1.5 to 0.41 (RR: 0.27).

• Responder Rates (at 1 year):

- 68.6% zero OCS-treated exacerbations.
- 84.1% achieved $\geq 50\%$ reduction in exacerbations 

2.2. Hospitalizations

Subgroup (≥ 12 Months): Reduced from 0.23 (pre) to 0.05 (post)

Conclusion and relevance

- In this real-world single-centre cohort, tezepelumab was associated with substantial reductions in OCS-treated exacerbations during the first year of treatment.
- Concurrent decreases were observed in asthma-related hospitalisations.
- These positive effects were evident among patients followed for ≥ 12 months, though larger multicentre studies with longer follow-up are warranted.