



# BEYOND THE AIRWAYS: IDENTIFYING PREDICTORS OF CARDIOVASCULAR EVENTS IN SEVERE T2 ASTHMA

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## BACKGROUND AND IMPORTANCE

Asthma is frequently associated with cardiovascular comorbidities, but the specific risk factors predisposing patients with severe asthma to cardiovascular events (CVE) remain poorly defined, as patients with comorbidities are often excluded from clinical trials.

## AIM AND OBJECTIVE

To determine clinical risk factors and determinants associated with CVE in patients with severe asthma with a T2 inflammatory phenotype, and to assess whether asthma treatments act as protective or risk markers for these events.

## MATERIALS AND METHODS

Retrospective cohort study of adults with severe T2 asthma managed at a hospital severe asthma care unit. Patients with prior CVE before asthma diagnosis were excluded. Demographics, comorbidities, lung function, biomarkers (blood eosinophils, IgE), and treatments were collected from electronic medical records.

All patients were receiving:

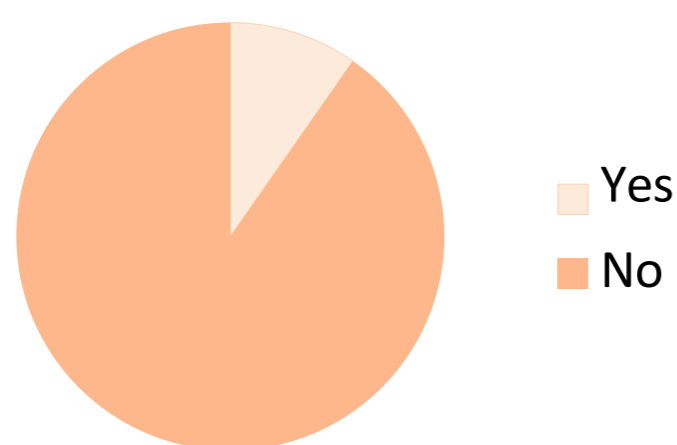
- ✓ Biologic therapy
- ✓ High-dose inhaled corticosteroids (ICS)
- ✓ Oral corticosteroids (OCS)
- ✓ Montelukast
- ✓ Long-acting  $\beta$ 2-agonists (LABA)

CVE considered were:

- Myocardial infarction
- Angina requiring revascularization
- Heart failure
- Supraventricular arrhythmia
- Stroke or pulmonary embolism

## RESULTS

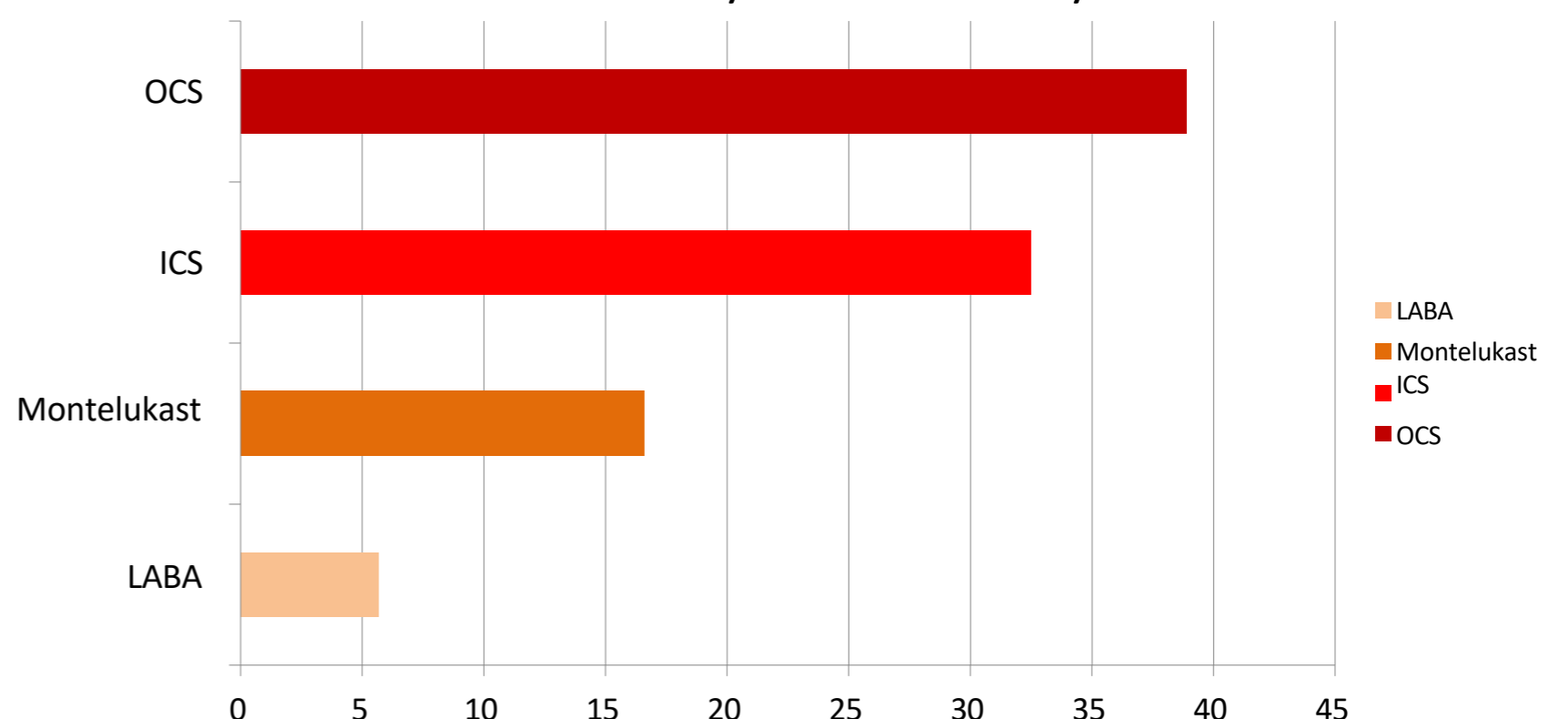
Patients who experienced CVE  
N = 164



- 135 women
- Mean age: 57±18 years
- Most frequent comorbidities: obesity and allergic asthma

Significant associations with CVE	OR	CI (p<0.001)
Frequent exacerbations	14.14	4.54-44.14
Eosinophilic asthma	8.25	3.45-19.74
Nasal polyposis	5.17	2.06-12.95

Association between treatment exposure and CVE risk is driven by disease severity



## CONCLUSIONS AND RELEVANCE

In severe T2 asthma, eosinophilic phenotype, nasal polyposis, and frequent exacerbations were strong clinical determinants of CVE. Cardiovascular risk assessment should account for asthma severity when interpreting treatment associations.