

# Clinical remission of severe asthma on biological therapies: Comparison of different criteria sets

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# Remission on treatment

- An ambitious therapeutic goal for patients with severe asthma receiving biologics
- Criteria are not defined, but suggestions include a multimodal assessment:
  - No need for SCS
  - No exacerbations
  - Minimal symptoms
  - Optimized PFT
  - For a significant time

# Study objective

- To compare different criteria for remission in a real-world cohort of subjects receiving biologics for severe asthma

# Methods

- A cross-sectional study assessing severe asthma patients during 1.1.2023-30.4.2023.
- Inclusion:
  - Adults  $\geq 18$ -year-old
  - Severe asthma
  - Receiving a specific biological for  $\geq 6$ months
- Exclusion:
  - Missing data, EGPA

# Methods

- Asthma remission was assessed in 4 domains:
    1. No use of chronic OCS
    2. No exacerbations
    3. Lung function tests
    4. Questionnaires of symptoms control
- } For 6 or 12 months
- Several criteria were assessed in each domain
  - Each criterion was measured separately, and different combinations were assessed to define remission.

# Assessment tools and criteria

## No chronic SCS

- For 6 months
- For 12 months

## No exacerbations

- For 6 months
- For 12 months

## Symptoms control

- ACT  $\geq 20$
- ACQ6  $< 1.5$
- ACQ6  $\leq 0.75$

## Lung function

- FEV1  $\geq 80\%$ pred
- FEV1/FVC  $\geq 0.75$
- FEV1 improvement  $\geq 100\text{ml}$
- FEV1 improvement  $\geq 10\%$

Asthmatics on biologics  
**N=48**

Excluded

EGPA	N=3
Less than 6 months on Tx	N=5
Missing data	N=1
<b>Total N=9</b>	

Final study cohort  
**N=39**

■ mepolizumb    ■ dupilumab    ■ benralizumab  
■ omalizumab    ■ reslizumab

Females 28/39, 71.8%

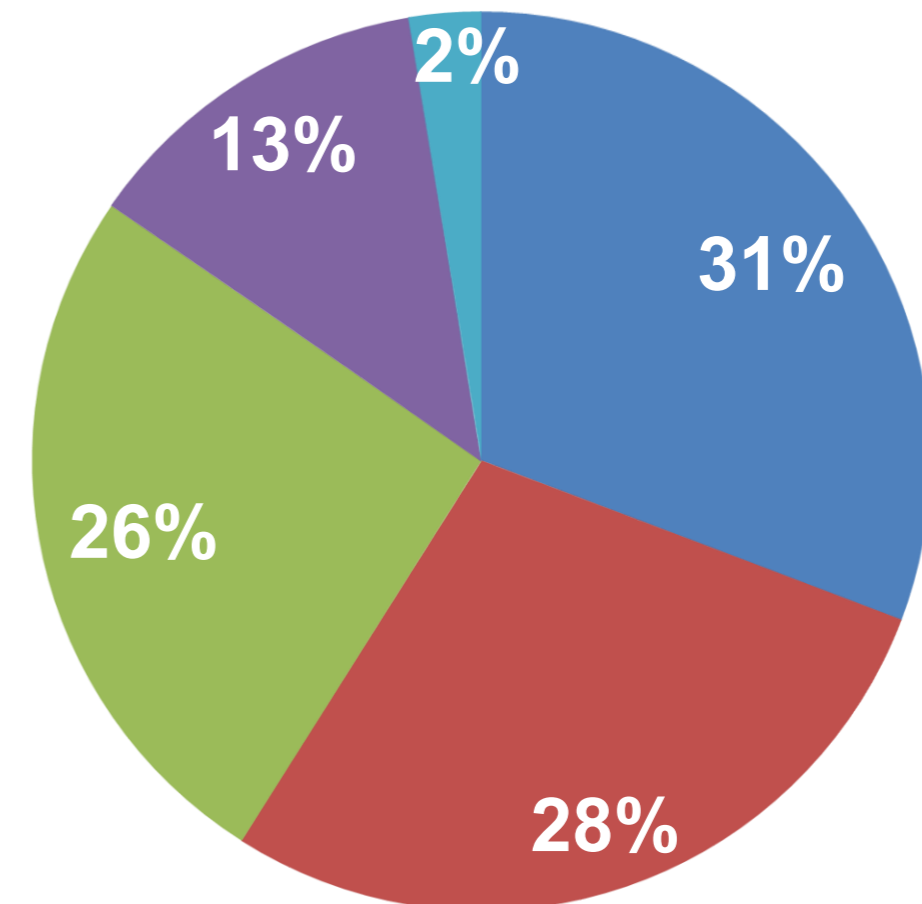
Mean age 60.4

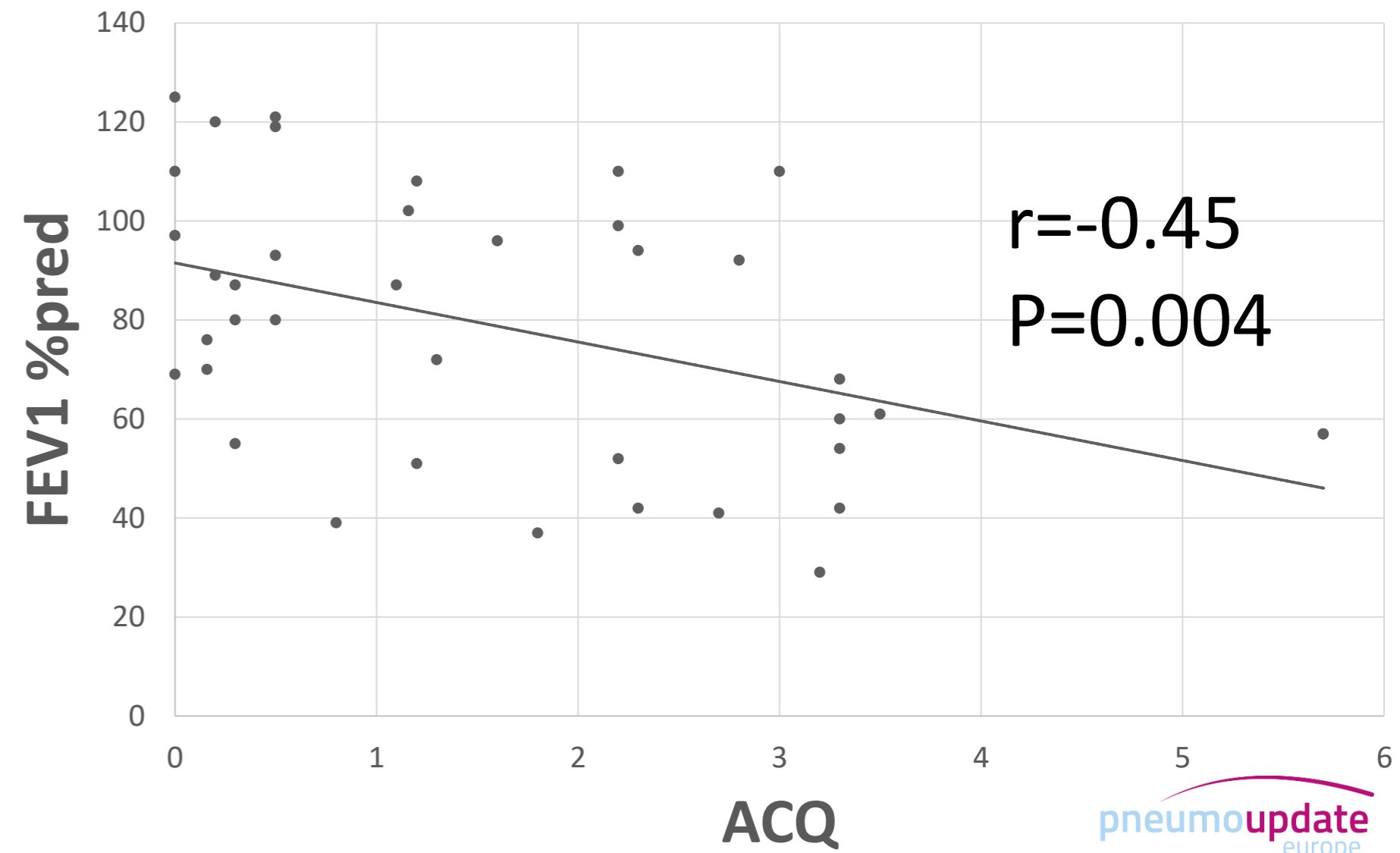
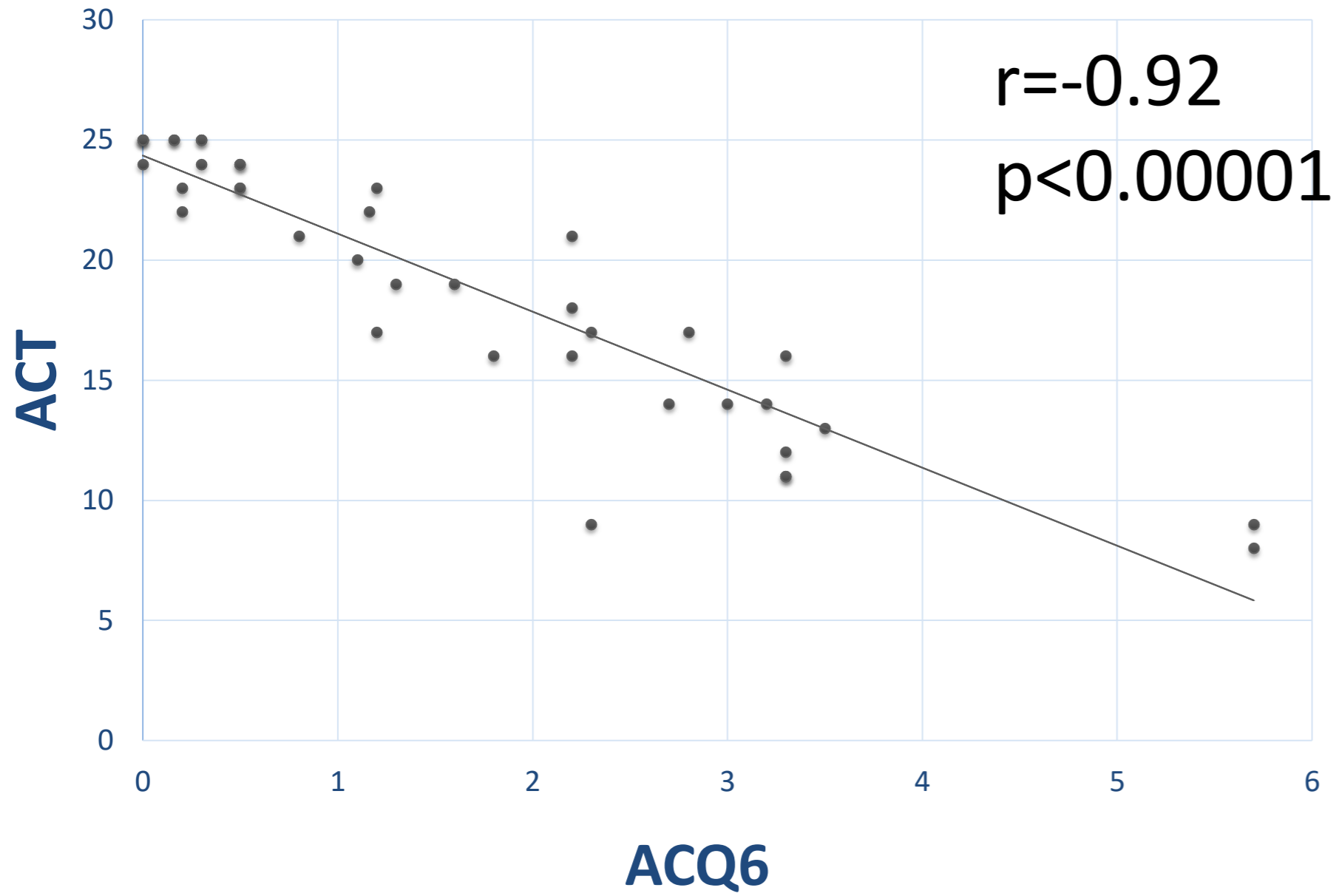
Smoking history 12/39, 30.8%

Past chronic SCS 13/39, 33.3%

Prior biological Tx 12/39, 30.8%

Prior 2 biologics 3/39, 7.7%







Domain	Criteria	N (%)
<b>1 No chronic OCS use</b>	1a For 6 months	31 (79.5%)
	1b For 12 months	29 (74.4%)
<b>2 No exacerbations</b>	2a For 6 months	25 (64.1%)
	2b For 12 months	26 (66.7%)
<b>3 Lung function</b>	3a FEV1 $\geq$ 80%pred	20 (51.3%)
	3b FEV1/FVC $\geq$ 0.75	19 (48.7%)
	3c FEV1 improvement $\geq$ 100ml	29 (76.3%)
	3d FEV1 improvement $\geq$ 10%	26 (70.3%)
<b>4 Symptom control</b>	4a ACT $\geq$ 20	20 (51.3%)
	4b ACQ6 $<$ 1.5	21 (53.8%)
	4c ACQ6 $\leq$ 0.75	15 (38.5%)

6 months w/o AE and SCS	n (%)		12 months w/o AE and SCS	n (%)
3a+4a	13 (33.3%)		3a+4a	12 (30.8%)
3a+4b	12 (30.8%)		3a+4b	11 (28.2%)
3a+4c	9 (23.1%)		3a+4c	9 (23.1%)
3b+4a	10 (25.6%)		3b+4a	9 (23.1%)
3b+4b	9 (23.1%)		3b+4b	8 (20.5%)
3b+4c	8 (20.5%)		3b+4c	8 (20.5%)
3c+4a	16 (41%)		3c+4a	16 (41%)
3c+4b	16 (41%)		3c+4b	16 (41%)
3c+4c	12 (30.8%)		3c+4c	12 (30.8%)
3d+4a	14 (35.9%)		3d+4a	14 (35.9%)
3d+4b	15 (38.5%)		3d+4b	15 (38.5%)
3d+4c	11 (28.2%)		3d+4c	11 (28.2%)

# Results

- Specific criteria within domains were achieved by 38.5-79.5%
- Remission was achieved by 20.5-41%, depending on definition
- Agreement between different sets of remission criteria varies widely: Cohen's Kappa 0.33-0.89

# Conclusions

- Clinical remission on treatment is achievable in severe asthmatics on biological therapies.
- The core criteria for remission should be better defined.