

# Real-life effectiveness of anti-IL-5 (receptor) antibody treatment in patients with severe eosinophilic asthma

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## Introduction and aim

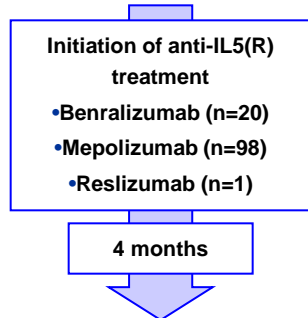
- Asthma is a heterogeneous disease that encompasses a range of phenotypes and biomarkers
- IL-5 plays a key role in differentiation, survival, migration, and activation of eosinophils → IL-5 and eosinophils are attractive therapeutic targets for patients with uncontrolled, severe eosinophilic asthma
- Results of clinical trials confirm very good effectiveness and safety profile of anti-IL-5 (receptor) antibodies
- As yet only limited data on real-life effectiveness due to just recent approval



- Aim: To evaluate the real-life effectiveness of the anti-IL5(R) antibodies mepolizumab, reslizumab and benralizumab in severe eosinophilic asthma after approval in Germany

## Patients

- 119 patients with severe, eosinophilic asthma exclusively treated in the Severe Asthma Center Mainz, Germany



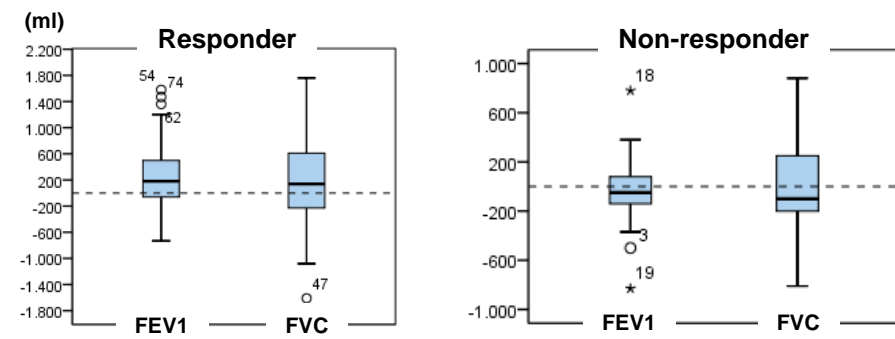
- Evaluation of treatment effects

## Patient characteristics

- n = 44 male
- mean age 54 ± 14 yrs.
- BMI 27.5 ± 6.2
- FEV1 1.9 ± 0.8L (64±21%)
- 5±3 exacerbations in the last 12 months
- ACQ-5 3.4 ± 1 .3
- BDP dose 1000 ± 800 µg/d
- median eosinophils: 410 / µl blood (interquartile range 170 – 688 / µl)
- n = 73 on oral corticosteroids
- n = 97 (82%) responders based on individual investigator judgement

## Results

### FEV1 and FVC (% pred.)



Parameter (vs. pre-treatment)	Responder (n=97)	Non-responder (n=22)	p-value
FEV1 (% pred.) (mean±SD)	8,2 ± 15,8	-2,3 ± 10,9	p=0.005
ACQ-5 (median, IQR)	-1,6 (-2,4 - -0,4)	-0,2 (-0,8 - 0)	p<0.001
AQLQ (median, IQR)	-1,2 (0,5 - 2-0)	0,1 (-0,3 - 0,9)	p=0.001
Blood eosinophils (/µl) (median, IQR)	-335 (-633 - -96)	-220 (-398 - -107)	p=0.190
Serum ECP (µg/l) (median, IQR)	-19,9 (-51,7 - -3,7)	-14,1 (-26,4 - -4,1)	p=0.258
FeNO (ppb) (median, IQR)	-3,5 (-15 - 10,5)	0 (-27,5 - 22,3)	p=0.309
Serum IgE (IU/ml) (median, IQR)	-5,6 (-69,5 - 16,2)	-2,3 (-52,7 - 42,3)	p=0.957
OCS (n, %)	39/82 (47,6)	15/21 (71,4)	p=0.090

## Conclusion

- Real-life evidence confirms the results of clinical trials and demonstrates clinical and functional improvements of various parameters defining severe asthma