

REAL-WORLD OUTCOMES WITH TEZPELUMAB: EFFECTIVENESS AND SAFETY IN UNCONTROLLED SEVERE ASTHMA

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BACKGROUND AND IMPORTANCE

Tezepelumab has demonstrated reduced exacerbations and improved lung function in clinical trials, but real-world evidence remains limited and further evaluation in routine practice is needed to guide treatment decisions.

AIM AND OBJECTIVE

To assess the real-world effectiveness and safety of tezepelumab in patients with uncontrolled severe asthma (USA) after 12 months of treatment.

MATERIALS AND METHODS



STUDY DESIGN

- Retrospective, observational study (Nov 2023–Sept 2024)
- **Demographic variables:** age, sex, BMI, asthma phenotype, prior biologic therapy



ASSESSED PARAMETERS

- **Effectiveness:** FEV₁, FVC, FEV₁/FVC, FeNO, blood eosinophils, ACT, exacerbation rate, oral corticosteroid use
- **Safety:** adverse events recorded



STATISTICAL ANALYSES

STATA V18

- **Parametric** data: mean ± SD; paired t-test
- **Non-parametric** data: median [IQR]; Wilcoxon test
- Significance: **p < 0.05**

RESULTS

	PRE-TREATMENT	POST-TREATMENT	p-value
FEV₁	72.56±20.89	76.56±20.89	>0.05
ACT	12.67±4.72	17.18±4.72	<0.05
Corticosteroid cycles	2(1-2.75)	0(0-1)	<0.05
FVC	85(71.25–94)	91(75–99.75)	<0.05
FEV₁/FVC ratio	66.63(62–73.5)	72(61.63–79)	<0.05
FeNO	15.5(8.93–22)	9(5.75–15)	<0.05
Eosinophils	200(0–350)	0(0–0)	<0.05
Exacerbations	1(0–2)	0(0–1)	<0.05
Exacerbations requiring hospitalization	0(0–1)	0(0–0)	<0.05

- 34 patients were included 85.3% women, age 60.15±16.9, BMI 31.5±6.9, 85.3% presented type 2 asthma. 44.12% had received biologic therapy.
- Regarding **safety**, a single case of lower limb pain was reported.
- Five **interruptions** were recorded: four due to lack of efficacy, and one due to patient decision.

CONCLUSION AND RELEVANCE

In real-world practice, tezepelumab was **effective and tolerated**, improving asthma control, reducing exacerbations and corticosteroid use, and decreasing inflammation biomarkers. Lung function showed a trend towards improvement without reaching statistical significance. Safety profile was favorable, although larger, controlled real-world studies are warranted to confirm these findings.

