SUPPLEMENTARY MATERIAL

Supplementary Table 1. Baseline clinical characteristics

Parameter		Total (N = 44)
Women: n (%)		31 (70.5)
Age (y): mean, median (range)		59, 60 (22-82)
BMI (kg/m^2): mean, median (Q1-Q3)		29, 29 (25.2-32.7)
BMI (kg/m^2) range	<18.5: n (%)	0 (0)
	18.5 - <25: n (%)	10 (22.7)
	25 – <30: n (%)	16 (36.4)
	30 – <35: n (%)	13 (29.5)
	>35: n (%)	5 (11.4)
Smoking	Never smoker: n (%)	27 (61.4)
	Ex-smoker: n (%)	16 (36.4)
	Smoker: n (%)	1 (2.3)
Age at onset of symptoms (years): mean, median (Q1-Q3)		37.6, 40.5 (28.5-50)
Age at onset of symptoms	0-18 y: n (%)	5 (12.5)
	>18 y: n (%)	35 (87.5)
Comorbidities	Depression / Anxiety: n (%)	22 (50)
	CRSwNP: n (%)	20 (45.5)
	Arterial hypertension: n (%)	15 (34.1)
	Allergic rhinitis: n (%)	14 (31.8)
	GERD: n (%)	8 (18.2)
	NERD: n (%)	7 (15.9)
	ACO: n (%)	6 (13.6)
	Bronchiectasis: n (%)	5 (11.4)
	Diabetes Mellitus: n (%)	4 (9.1)
	Heart disease: n (%)	2 (4.5)
	Atopic dermatitis: n (%)	2 (4.5)
	Food allergy: n (%)	1 (2.3)

Abbreviations: BMI, Body mass index; CRSwNP, chronic rhinosinusitis with nasal polyps; GERD, gastroesophageal reflux disease; NERD, nonsteroidal antiinflammatory drug (NSAID)-exacerbated respiratory disease; ACOS, asthma– chronic obstructive pulmonary disease (COPD) overlap syndrome.

doi: 10.18176/jiaci.0898

Supplementary Table 2. Response to treatment with mepolizumab

Parameters	Before mepolizumab	During mepolizumab	Change	P value
Efficacy parameters				
FEV_1 (L): mean, median	1.77, 1.67 (1.16 - 2.30)	1.91, 1.96 (1.26 - 2.49)	+0.14, +0.29	0.009*
FEV_1 (%): mean, median	64.16, 63.0 (49.25 - 77.75)	73, 72 (57 - 94)	+8.84, +9	0.001*
FEV_1 (Z-score): mean, median	-2.42, -2.27 (-3.21 - -1.47)	-1.75, -1.82 (-2.45 - -0.46)	+0.67, +0.45	<0.001*
FVC (L): mean, median	2.83, 2.68 (2.03 – 3-43)	2.87, 2.90 (2.23 – 3.54)	+0.04, 0.22	0.624
FVC (%): mean, median	81.70, 82 (71 – 96.75)	85.86, 87.5 (73.75 - 102)	+4.15, +5.5	0.054
FVC (Z-score): mean, median (Q1-Q3)	-1.29, -1.24 (-2.04 - -0.25)	-1.0, -0.93 (-1.82, 0.98)	+0.28, +0.32	0.082
FEF25-75 (L): mean, median (Q1-Q3)	1.19, 0.88 (0.5 – 1.55)	1.52, 1.06 (0.54 – 1.94)	+0.33, +0.18	0.063
FEF25-75 (%): mean, median (Q1-Q3)	44.57, 34 (22 – 56.75)	54.95, 45 (28 - 79)	+10.38, +11	0.011*
FEF25-75 (Z-score): mean, median (Q1-Q3)	-2.18, -2.43 (-2.98, - -1.65)	-1.63, -1,74 (-2.45, - -0.56)	+0.54, 0.69	0.002*
FEV_1/FVC (%): mean, median (Q1-Q3)	62.5, 61 (55 - 71)	66.53, 67 (59 - 76)	+4.03, +6.0	<0.001*
ACT score: mean, median (Q1-Q3)	13.9, 14 (11 - 17)	20.1, 23 (16.5 - 25)	+6.2, +9.0	<0.001*
Exacerbations: mean, median (Q1-Q3)	3.52, 3.0 (2.0 - 5.0)	1.05, 0.0 (0.0 - 1.0)	-2.48, -3.0	<0.001*
Exacerbations that required hospitalization: mean, median (Q1-Q3)	0.64, 0.0 (0.0 - 1.0)	0.18, 0.0 (0.0 - 0.0)	-0.46, -0.0	0.017*
Annual cumulative dose of OCS (mg): mean, median (Q1-Q3)	1822.7, 900 (555 - 2565.63)	825, 0.0 (0.0 - 1364.25)	-997.7, -900	<0.001*
FEOS Score: mean, median (Q1-Q3)	-	66.23, 72 (51.75 - 76)	-	-
T2 Biomarkers				
FE_{NO} (ppb): mean, median (Q1-Q3)	65.8, 46 (26 - 86)	31.4, 32 (21 - 38)	-34.4, -14.0	0.013*
Peripheral eosinophilia (cells/µL): mean, median (Q1-Q3)	656.82, 400 (200 - 775)	111.36, 100 (0 - 100)	-545.46, -300	0.002*
Total IgE (kU/L): mean, median (Q1-Q3)	228.67, 128.5 (40.4 - 327.5)	145.07, 94.85 (31.88 - 182.5)	-83.6, -33.65	0.029*

Abbreviations: FEV_1, forced expiratory volume in 1 s; FEF25-75, forced expiratory flow at 25-75%; FVC, forced vital capacity; FE_{NO}, fractional exhaled nitric oxide; ACT, asthma control test; OCS, oral corticosteroids.

*Statistically significance difference.

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Supplementary Table 3. Classification for the assessment of response to monoclonal antibodies proposed by the Spanish Society of Pneumology and Thoracic Surgery (SEPAR) (Adapted from [6])

Classification	Exacerbations	ACT	FEV_1	OCS
No response	Equal or increase	Increase <3 points	Increase <10% and 100 mL	Decrease <50%
Partial response	- Reduction <50% - ≥2 severe exacerbations in 12 months	- Increase <3 points - Total score < 20	- Increase >10% and 100mL - FEV1 <80%	- Decrease >50% - Continue with maintenance OCS
Control	≤1 severe exacerbation in 12 months	Total score ≥20	FEV 1 <80%	Discontinue OCS
Complete response	No exacerbations in 12 months	Total score ≥20	FEV 1 ≥80%	Discontinue OCS

Abbreviations: ACT, asthma control test; FEV_1, forced expiratory volume in 1 s; OCS, oral corticosteroids.

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Supplementary Table 4. Assessment of efficacy: FEOS Score by gender and main comorbidities

		FEOS Score: mean (SD)	**FEOS Score: median (range)**	**P Value**
Gender	Male (n= 13)	72.77 (23.5)	76 (30 - 100)	0.182
	Female (n= 31)	63.48 (19.5)	70 (23 - 100)	
Depression / anxiety	Absence (n=22)	67.73 (21.9)	74 (23 - 100)	0.640
	Presence (n=22)	64.73 (20.3)	70 (24 - 100)	
CRSwNP	Absence (n= 24)	59.83 (23.8)	61.5 (23 - 100)	0.024*
	Presence (n= 20)	73.9 (13.7)	75 (46 – 100)	
Allergic rhinitis	Absence (n= 30)	69.83 (21.4)	74 (23 - 100)	0.094
	Presence (n= 14)	58.5 (18.2)	66 (24 - 76)	
NERD	Absence (n= 37)	65.65 (21.6)	70 (23 - 100)	0.678
	Presence (n= 7)	69.23 (20.9)	74 (46 - 89)	

Abbreviations: The FEV1, Exacerbations, Oral corticosteroids, and Symptoms Score (FEOS Score); CRSwNP, chronic rhinosinusitis with nasal polyps; NERD, nonsteroidal antiinflammatory drug (NSAID)-exacerbated respiratory disease. *Statistically significance difference.

doi: 10.18176/jiaci.0898

Supplementary Table 5. Assessment of efficacy in chronic rhinosinusitis with nasal polyps:

Parameters	Before mepolizumab	During mepolizumab	Change	P value
Efficacy parameters				
Anosmia: n (%)	18 (90%)	10 (50%)	-40%	0.008*
Anosmia (VAS): mean, median (Q1 – Q3)	8.55, 10 (10 - 10)	6.97, 9.5 (2.75 – 9.5)	-1.8275, -0.5	0.475
Nasal Polyps Score (NPS): mean, median (Q1 – Q3)	4.10, 4 (2 - 6)	2.28, 2 (0.75 - 4)	-1.83, -2	0.012*
Nº Corticosteroids cycles: mean, median (Q1 – Q3)	1.55, 1 (1 - 2)	0.26, 0 (0 - 0)	-1.29, -1	0.004*
Nº Nasal polyps surgery: mean, median (Q1 – Q3)	0.95, 1 (0 - 1)	0, 0 (0 - 0)	-0.95, -1	0.002*

Abbreviations: VAS, Visual analogue scale. *Statistically significance difference.

doi: 10.18176/jiaci.0898

Supplementary Table 6. Comparison of results of real-life studies with mepolizumab.

Parameter change	REALITI-A	REDES	OUR SERIES
Increase of FEV_1 (%): mean	NA	+10.4%	+8.84 +9*
Increase of FEV_1 (L): mean	NA	+0.2	+0.14 +0.29*
Increase of ACT: mean	NA	+6.7	+6.2 +9.0*
Reduction of exacerbations: mean (%)	-3.2 (-69.1%)	-3.48 (-77.5%)	-2.48 (-70.2%) -3.0 (-100%)*
Reduction of exacerbations that required hospitalization: mean (%)	-0.43 (-71.6%)	-0.26 (-78.8%)	-0.46 (-71.9%)
Reduction of OCS: median (%)	-5mg/d (-52%)	-7.7mg/d (-77%)	-969mg/y** (-54.7%)

Abbreviations: FEV_1, forced expiratory volume in 1 s; NA, not available; ACT, asthma control test; OCS, oral corticosteroids.

*: Median; **: Annual cumulative dose of oral corticosteroids.