

Supplement table 1. Clinical characteristics between non-improvement (or worsen)  
and improvement groups in patients with pre-ESS otologic symptoms

Patient characteristics	Non-improvement or worsen (n=8)	Improvement (n=54)	
	N (%)	N (%)	P
Age (years)	49.4	45.1	0.443
Sex			
Male (n = 20)	0 (0%)	20 (100%)	0.046*
Female (n = 42)	8 (19.0%)	34 (81.0%)	
Type of rhinosinusitis			
CRSsNP (n = 35)	6 (17.1%)	29 (82.9%)	0.447
CRSwNP (n = 27)	2 (7.4%)	25 (92.6%)	
Allergic rhinitis			
Yes (n = 20)	1 (5.0%)	19 (95.0%)	0.258
No (n = 42)	7 (16.7%)	35 (83.3%)	
Asthma			
Yes (n = 5)	1 (20.0%)	4 (80.0%)	0.511
No (n = 57)	7 (12.3%)	50 (87.7%)	
Tobacco use			
Yes (n = 9)	0 (0%)	9 (100%)	0.590
No (n = 53)	8 (15.1%)	45 (84.9%)	
Prior sinus surgery			
Primary surgery (n = 54)	5 (9.3%)	49 (90.7%)	0.059

Revision surgery (n = 8)	3 (37.5%)	5 (62.5%)
--------------------------	-----------	-----------

\* Statistical significance; CRSsNP: Chronic rhinosinusitis without nasal polyps; CRSwNP: Chronic rhinosinusitis with nasal polyps.

Supplement Table 2. The difference in ETDQ-7 and SNOT-22 scores between primary and revision patients for pre-ESS and follow-up intervals.

		Pre-ESS	3-month	6-month	9-month	1-Year
		Mean (95% CI)	Mean (95% CI)	Mean (95% CI)	Mean (95% CI)	Mean (95% CI)
		Median (IQR)	Median (IQR)	Median (IQR)	Median (IQR)	Median (IQR)
ETDQ-7	Primary	13.0 (11.2–14.8)	7.9 (7.4–8.3)	7.7 (7.3–8.2)	8.0 (7.4–8.7)	8.0 (7.3–8.7)
	surgery	10.0 (7.0–14.0)	7.0 (7.0–7.0)	7.0 (7.0–7.0)	7.0 (7.0–7.0)	7.0 (7.0–7.0)
	Revision	14.8 (8.6–21.0)	12.9 (6.0–19.9)	9.4 (6.5–12.3)	9.8 (7.2–12.3)	9.8 (7.6–12.1)
	surgery	10.0 (7.0–26.3)	8.0 (7.0–13.3)	7.0 (7.0–9.0)	8.5 (7.0–10.0)	9.5 (7.0–11.5)
	P	0.859	0.016*	0.042*	0.009*	0.004*
SNOT-22	Primary	39.7 (35.3–44.4)	17.4 (14.6–20.2)	16.7 (13.8–19.5)	20.1 (16.4–23.8)	16.7 (13.5–19.9)
	surgery	36.5 (22.0–54.0)	13.5 (7.3–26.8)	13.5 (8.0–24.5)	16.0 (6.0–33.0)	14.0 (5.3–24.8)
	Revision	42.0 (28.7–55.3)	31.8 (21.5–42.2)	29.6 (18.0–41.2)	23.8 (15.8–31.9)	19.6 (6.1–33.0)
	surgery	46.5 (26.0–59.8)	33.0 (22.3–41.8)	27.5 (16.0–47.8)	24.5 (15.3–33.5)	14.5 (8.5–18.8)
	P	0.719	0.004*	0.014*	0.258	0.723

\* Statistical significance; ESS: Endoscopic sinus surgery; IQR: Interquartile range (Q25–Q75); ETDQ-7: 7-Item Eustachian Tube Dysfunction Questionnaire; SNOT-22: 22-Item Sino-Nasal Outcome Test.