Figure S1. Decision flow chart for including a patient in the study population. eCRF in the CCC (Rows = 2783) No first visit date (n=9) Rows = 2774 → • Multiple/ subsequent visits to the CCC (n=69) Selection of one visit per patient (N = 2705)• Double index date, i.e. first visit indefinable (n=6) • First visit outside the study period (n=289) First visit to the CCC in the study period: January 6 2010 to April 26 2019 (N = 2410)• Age at index date < 17.5 years (n=9) • X-thorax showing lung cancer (n=4) Included in this study (N = 2397)

eCRF, electronic case record form; CCC, Chronic cough clinic.

Table S1. Patient characteristics by presence of phenotype and treatment response.

	Effective treatment					Ineffective treatment				
	Group 1 (n= 308) Phenotype		Group 2 (n= 65) No phenotype		Group 3 (n= 264) Phenotype / RCC		Group 4 (n= 67) No phenotype / UCC			
	n	Summary statistics	n	Summary statistics	n	Summary statistics	n	Summary statistics		
Demographic										
Age	308	59.9 (±13.0)	65	63.9 (±11.9)	264	60.0 (±13.1)	67	64.5 (±11.6)		
Sex (woman)	308	182 (59.1%)	65	35 (53.8%)	264	176 (66.7%)	67	40 (59.7%)		
Smoking status - Non-smoker - Former	284	167 (58.8%) 110 (38.7%) 7 (2.5%)	59	30 (50.8%) 26 (44.1%) 3 (5.1%)	233	135 (57.9%) 86 (36.9%) 12 (5.2%)	56	28 (50.0%) 27 (48.2%) 1 (1.8%)		
- Current		(,		- (,		(/		(,		
Diagnostics	200	02.40/		700/	262	05.30/	<u></u>	70.70/		
X-thorax, % normal	308	83.1%	62	79%	263	85.2%	61	78.7%		
UACS										
X-sinus, % normal	302	78.5%	60	100%	261	83.1%	56	100%		
BHR/AL										
Methacholine test, % normal	298	42.6%	18	100%	255	34.9%	17	100%		
FEV ₁ (L)	298	3.0 (±0.8)	62	2.7 (±1.1)	255	2.8 (±0.8)	60	2.7 (±0.9)		
FEV ₁ (%)	295	98.2 (±15.3)	62	85.7 (±25.2)	255	94.9 (±15.8)	60	92.1 (±23.0)		
VC (L)	295	4.0 (±1.0)	61	3.7 (±1.4)	251	3.7 (±1.0)	59	3.6 (±1.1)		
VC (%)	295	102.1 (±14.6)	61	92.0 (±21.0)	252	98.4 (±14.1)	57	95.8 (±18.6)		
FEV ₁ (L)/ VC (L)	290	75.5 (±7.9)	61	72.1 (±12.0)	243	75.1 (±7.5)	58	73.9 (±10.1)		
FEV ₁ (L)/ VC (L) < 70	290	60 (20.7%)	61	20 (32.8%)	243	56 (23.0%)	58	13 (22.4%)		
Airway reflux										
HARQ-total	285	32.0 (±11.3)	50	29.4 (±15.5)	250	35.5 (±14.2)	60	30.9 (±16.1)		
HARQ-total ≥ 14	285	271 (95.1%)	50	37 (74.0%)	250	234 (93.6%)	60	45 (75.0%)		
Other										
FeNO-measurement result	277	21.0 (14.0 – 35.5)	51	21 (13.0 – 37.0)	228	15.0 (10.0 – 23.8)	49	20 (11.5 – 24.5)		
Allergy testing	296	77 (26.0%)	61	18 (29.5%)	255	63 (24.7%)	62	12 (19.4%)		
IgE >120	284	59 (20.8%)	61	14 (23.0%)	249	40 (16.1%)	62	8 (12.9%)		
EO's >0.4	296	18 (6.1%)	62	6 (9.7%)	261	17 (6.5%)	62	3 (4.8%)		
Diagnosis groups	204	107/62 60/		0 (0 00)	2.40	470 /74 00/	4 F	0 (0 00()		
BHR/AL	294	187 (63.6%)	17	0 (0.0%)	249	179 (71.9%)	15	0 (0.0%)		
UACS	302	65 (21.5%)	60	0 (0.0%)	261	44 (16.9%)	56	0 (0.0%)		
Airway Reflux	270	97 (35.9%)	8	0 (0.0%)	238	70 (29.4%)	7	0 (0.0%)		

	Effective treatment				Ineffective treatment				
	Group 1 (n= 308) Phenotype		Group 2 (n= 65) No phenotype		Group 3 (n= 264) Phenotype / RCC		Group 4 (n= 67) No phenotype / UCC		
	n	Summary statistics	n	Summary statistics	n	Summary statistics	n	Summary statistics	
Diagnosis number - 0 - 1 - 2	308	0 (0%) 267 (86.7%) 41 (13.3%)	65	65 (100%) 0 (0%) 0 (0%)	264	0 (0%) 235 (89.0%) 29 (11.0%)	67	67 (100%) 0 (0%) 0 (0%)	

AL, airway limitation; BHR, bronchial hyperresponsiveness; HARQ, Hull airways reflux cough questionnaire; IgE, immunoglobulin E; FEV₁, forced expiratory volume in 1 second; VC, vital capacity; FeNO, fractional exhaled nitric oxide; UACS, upper airway cough syndrome.