Table E1: Baseline Demographics of overall study population

Characteristic	Overall (n= 388)	Pediatric (n= 151)	Adult (n= 237)	P-Value*
Age	27 (12, 44)	11 (9, 14)	41 (29, 52)	<.001
Male	177 (46%)	98 (65%)	79 (33%)	<.001
Race or ethnic group (%)				
White	153 (40%)	46 (30%)	107 (45%)	0.009
Black	154 (40%)	64 (42%)	90 (38%)	
Hispanic	65 (17%)	35 (23%)	30 (13%)	
Other	15 (4%)	6 (4%)	9 (4%)	
Currently Using Controller Medications, N (%)	278 (72%)	118 (78%)	160 (68%)	0.023
Spirometry, median (Q1, Q3)				
% predicted FEV_1	85 (74, 96)	89 (80, 97)	83 (70, 93)	<.001
% predicted FVC	95 (86, 106)	100 (91, 111)	93 (83, 103)	<.001
FEV_1/FVC	0.75 (0.69, 0.81)	0.78 (0.72, 0.83)	0.73 (0.67, 0.78)	<.001
Patient reported outcomes, median (Q1, Q3)				
ACT (range 5-25) ↑[†]	17 (14, 19)	17 (15, 19)	16 (14, 19)	0.033
cACT (range 0-27) ↑[†]	17 (15, 19)	17 (15, 19)	n/a	n/a
ASUI↑	0.78 (0.69, 0.88)	0.79 (0.7, 0.89)	0.77 (0.68, 0.88)	0.29
Sinus Symptom score (range, 1-60)↓	25 (17, 33)	24 (14, 30)	26 (18, 36)	0.008
SNOT22 (range 0-120)↓ [‡]	n/a	n/a	37 (21, 53)	n/a
SN-5 (range 1-7)↓ [‡]	n/a	3.6 (2.8, 4.6)		n/a
Skin Test Allergy to weed or ragweed, N(%)[††]	137 (40%)	46 (25%)	91 (44%)	0.10

* Categorical P-Values are based upon Chi-Square test and continuous P-Values from are based upon Kruskal-Wallis tests

[†]ACT for participants ≥ 12 years (n = 301, 65 of whom are children), cACT for 6-11 years (n = 86).

[‡]SNOT 22 for participants ≥ 18 years (n = 229), SN-5 for 6-17 years (n = 150).

**1 subject missing spirometry; 2 subjects missing ASUI; 2 subjects missing Sinus Symptom Score; Twenty-four individuals were missing the skin test in each group.

[††] Skin test allergy is defined as a positive wheel ≥ 3mm than the control wheel.

Q1 = 1st quartile; Q3 = 3rd quartile;FEV_1= Forced Expiratory Volume in 1 second in Liters; FVC = Forced Vital Capacity; total amount of air exhaled during FEV test; ACT = Asthma Control Test; cACT = Child Asthma Control Test, ASUI =Asthma Symptom Utility Index, SNOT-22 = Sinonasal Outcome Test 22, SN-5 = Sinonasal Survey 5. ↑high score indicative of better control; ↓low score indicative of better control

Table E2: Baseline characteristics based on skin test allergic reaction to weeds (>3 mm positive-control) on 340 individuals with test information available*.

Characteristic	Not Allergic* (N = 203)	Allergic* (N = 137)	P-Value[†]
Age, median (Q1, Q3)	25 (11, 45)	28 (15, 43)	0.26
Male, N(%)	82 (40%)	74 (54%)	0.013
Race or ethnic group, N (%)			
White	67 (33%)	62 (46%)	0.06
Black	86 (42%)	54 (40%)	
Hispanic	41 (20%)	17 (13%)	
Other	9 (4%)	3 (2%)	
Currently Using Controller Medications, N (%)	147 (72%)	90 (66%)	0.19
Spirometry, median (Q1, Q3)			
% predicted FEV_1	84 (73, 95)	87 (74, 94)	0.75
% predicted FVC	95 (84, 106)	96 (86, 105)	0.64
FEV_1/FVC	0.75 (0.68, 0.80)	0.74 (0.69, 0.81)	0.74
Patient reported outcomes, median (Q1, Q3)			
ACT (range 5-25) ↑[‡]	17 (15, 18)	16 (14, 18)	0.20
cACT (range 0-27) ↑[‡]	17 (14, 18)	17 (16, 19)	0.94
ASUI	0.76 (0.69, 0.88)	0.78 (0.69, 0.86)	0.97
Sinus Symptom score (range, 1-60) ↓	27 (19, 34)	23 (16, 31)	0.020
SNOT22 (range 0-120) ↓[**]	44 (24, 59)	34 (21, 50)	0.050
SN-5 (range 1-7) ↓[**]	3.6 (3, 4.6)	3.5 (2.8, 4.0)	0.22

*48 patients were missing skin test results and therefore could not be assigned to allergic or non-allergic
†P-values for categorical variables are based upon Chi-Square tests and p-values for continuous variables are based upon Kruskal-Wallis tests
‡ACT for participants ≥ 12 years, cACT for 6-11 years. The table lists all of the child results in child column (n=86) and all of the adult results in adult column (n=301)
**SNOT 22 for participants ≥ 18 years, SN-5 for 6-17 years
Q1 = 1st quartile; Q3 = 3rd quartile;FEV_1= Forced Expiratory Volume in 1 second in Liters; FVC = Forced Vital Capacity; total amount of air exhaled during FEV test; ACT = Asthma Control Test; cACT = Child Asthma Control Test, ASUI =Asthma Symptom Utility Index, SNOT-22 = Sinonasal Outcome Test 22, SN-5 = Sinonasal Survey 5. ↑high score indicative of better control; ↓low score indicative of better control

Table E3: Baseline Demographics Pollen Study Clinics' Participants Who Have Positive Skin Test to Weeds residing in a location *with a defined weed season*

Characteristic	Placebo (N = 48)	Mometasone (N = 34)	P-value*
Mean age (Yrs)	32 (17, 44)	26 (14, 37)	0.44
Age < 18 (%)	13 (27%)	13 (38%)	0.29
Male (%)	22 (46%)	17 (50%)	0.71
Race or ethnic group (%)			
White	26 (54%)	15 (44%)	0.84
Black	20 (42%)	17 (50%)	
Hispanic	1 (2%)	1 (3%)	
Other	1 (2%)	1 (3%)	
Second-hand smoke (%)	11 (23%)	7 (21%)	0.80
Using Controller Medication	37 (77%)	24 (71%)	0.51
Spirometry, median (Q1, Q3)			
% predicted FEV$_1$	83 (75, 92)	88 (78, 99)	0.15
% predicted FVC	94 (86, 104)	97 (89, 104)	0.41
FEV$_1$/FVC	0.74 (0.67, 0.81)	0.78 (0.71, 0.81)	0.28
Patient reported outcomes, median (Q1, Q3)			
ACT (range 5-25)↑ †	16 (13, 19)	16 (14, 19)	0.82
cACT (range 0-27) ↑†	17 (16, 19)	18 (17, 19)	0.80
ASUI (range: 0-1)	0.79 (0.69, 0.88)	0.82 (0.7, 0.88)	0.87
Sinus symptom score(range, 1-60)↓	22 (14, 34)	24 (17, 30)	0.92
SNOT22 (range 0-120) ↓‡	25 (20, 56)	29 (21, 44)	0.76
SN-5 (range 1-7) ↓‡	3.6 (2.6, 4.4)	3.4 (2.4, 3.8)	0.37

*P-values for categorical variables are based upon Chi-Square tests and p-values for continuous variables are based upon Kruskal-Wallis tests

†ACT for participants ≥ 12 years, cACT for 6-11 years

‡SNOT 22 for participants ≥ 18 years, SN-5 for 6-17 years

Q1 = 1st quartile; Q3 = 3rd quartile; FEV$_1$= Forced Expiratory Volume in 1 second in Liters; FVC = Forced Vital Capacity; total amount of air exhaled during FEV test; ACT = Asthma Control Test; cACT = Child Asthma Control Test, ASUI =Asthma Symptom Utility Index, SNOT-22 = Sinonasal Outcome Test 22, SN-5 = Sinonasal Survey 5. ↑high score indicative of better control; ↓low score indicative of better control

Table E4: Rates of Episodes of Poorly Controlled Asthma, and Daily Asthma and Rhinitis Symptoms for participants allergic to weeds "Out" of Season compared to "In" Season

Asthma Event type		
Rates*	Relative Risk In season to out of season Mean (95% CI)*	P-Value*
EPACS overall	1.27 (0.60, 2.66)	0.53
↓ Peak Flow exacerbation	1.63 (0.49,5.43)	0.43
↑ Rescue Medications	1.02 (0.37, 2.83)	0.96
Oral Steroids	†	†
% Characteristics	Coefficient Estimate‡ For being in season Mean (95% CI)	P-Value‡ Between seasons
Asthma Symptoms		
% Asthma Symptom free days	-4.03 (-9.79, 01.73)	0.17
% Nights with awakenings from asthma	4.90 (-0.19, 10.00)	0.06
Rhinitis Symptoms		
% Rhinitis Symptom Free days	-1.46 (-5.56, 2.65)	.49
% Rhinitis Medication Rescue use days	†	†

*Rate ratios and p-values are calculated from a negative binominal model with repeated subjects.
† There were no oral steroid exacerbations or sinus medication use in season for individuals who were in season
‡ Values based upon linear regression with repeated subject

The coefficient estimate is like interpreting a linear regression. If someone is in season you would expect a 4% decrease in percent symptom free days. However all of the 95% confidence intervals for the coefficients contain 0 (Not significant).