

SUPPLEMENTARY

GINA implementation Improves Asthma Symptoms Control and Lung Function: A Five-Year Real-World Follow-Up Study

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Table S1. Level of asthma control according to GINA 2006.

Characteristic	Controlled (All of the following)	Partly controlled (Any present in any week)	Uncontrolled
Daytime symptoms	Twice or less per week	More than twice per week	3 or more features of partly controlled asthma present in any week
Limitations of activities	None	Any	
Nocturnal symptoms / awakening	None	Any	
Need for rescue / "reliever" treatment	Twice or less per week	More than twice per week	
Lung function (PEF or FEV1)	Normal	< 80% predicted or personal best (if known) on any day	

Table S2. Level of asthma control according to GINA 2016.

Symptom control		Level of asthma symptom control		
In the past 4 weeks, has the patient had:		Well-controlled	Partly controlled	Uncontrolled
Daytime asthma symptoms more than twice a week?	Yes <input type="checkbox"/> No <input type="checkbox"/>	None of these	1-2 of these	3-4 of these
Any night waking due to asthma?	Yes <input type="checkbox"/> No <input type="checkbox"/>			
Reliever needed for symptoms more than twice a week?	Yes <input type="checkbox"/> No <input type="checkbox"/>			
Any activity limitation due to asthma?	Yes <input type="checkbox"/> No <input type="checkbox"/>			

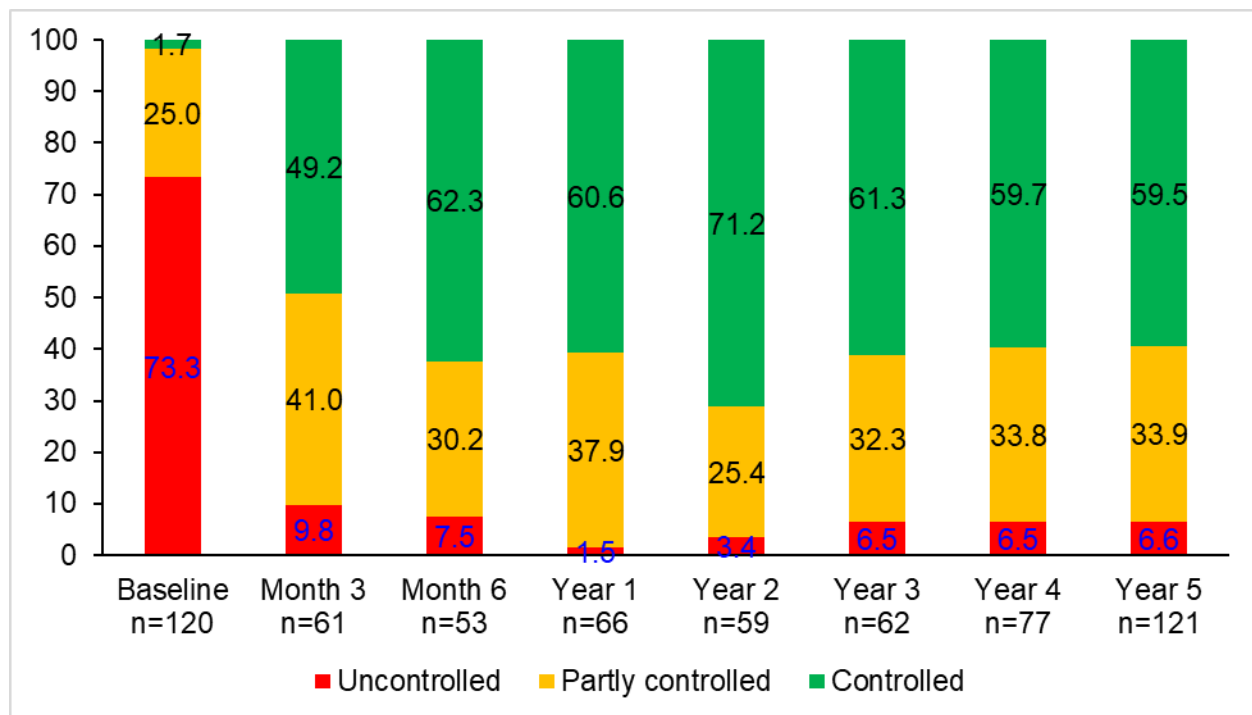


Figure S1. Proportions of different levels of asthma symptoms control during 5 years of asthma management among 121 patients who attended the follow-up visit at year 5.

Table S3. Relation between baseline characteristics and the proportion of well-controlled asthma at year 1.

Baseline characteristics		Well- controlled asthma	P value
Childhood asthma	No (n=536)	343 (64.0%)	0.4515
	Yes (n=232)	155 (66.8%)	
Allergic rhinitis	No (n=549)	360 (65.6%)	0.4563
	Yes (n=220)	138 (62.7%)	
GERD	No (n=670)	437 (65.2%)	0.4854
	Yes (n=99)	61 (61.6%)	
BMI \geq 25 kg/m ²	No (n=670)	438 (65.4%)	0.3574
	Yes (n=99)	60 (60.6%)	
Co-paid by health insurance	No (n=561)	353 (62.9%)	0.1550
	Yes (n=197)	135 (68.5%)	
ICS molecule	Budesonide (n=224)	151 (67.4%)	0.3480
	Fluticasone (n=534)	341 (63.9%)	

Data are presented as n (%). GERD, gastroesophageal reflux; ICS, inhaled corticosteroid.

Table S4. Relation between baseline characteristics and the proportion of well-controlled asthma at year 5.

Baseline characteristics		Well-controlled asthma	P value
Childhood asthma	No (n=82)	49 (59.8%)	0.9348
	Yes (n=39)	23 (59.0%)	
Allergic rhinitis	No (n=78)	46 (59.0%)	0.8729
	Yes (n=43)	26 (60.5%)	
GERD	No (n=101)	63 (62.4%)	0.1517
	Yes (n=20)	9 (45.0%)	
BMI \geq 25 kg/m ²	No (n=104)	65 (62.5%)	0.1002
	Yes (n=17)	7 (41.2%)	
Co-paid by health insurance	No (n=92)	56 (60.9%)	0.4932
	Yes (n=28)	15 (53.6%)	
ICS molecule	Budesonide (n=40)	25 (62.5%)	0.7107
	Fluticasone (n=78)	46 (59.0%)	

Data are presented as n (%). GERD, gastroesophageal reflux; ICS, inhaled corticosteroid.

Table S5. Relation between baseline characteristics and proportion of patients who attended the follow-up visit at year 1.

Baseline characteristics		Follow-up visit at year 1	P value	OR (95% CI)
Gender	Male (n=491)	274 (55.8%)	0.8240	1.03 (0.82-1.28)
	Female (n=897)	495 (55.2%)		
Place of residence	Other provinces (n=932)	537 (57.6%)	0.0178	1.31 (1.05-1.64)
	Ho Chi Minh City (n=456)	232 (50.9%)		
Childhood asthma	Yes (n=408)	232 (56.9%)	0.4704	1.09 (0.86-1.38)
	No (n=979)	536 (54.8%)		
Allergic rhinitis	Yes (n=357)	220 (61.6%)	0.0059	1.41 (1.10-1.80)
	No (n=1031)	549 (53.3%)		
GERD	Yes (n=178)	99 (55.6%)	0.9691	1.01 (0.73-1.38)
	No (n=1208)	670 (55.5%)		
BMI \geq 25 kg/m ²	No (n=1182)	670 (56.7%)	0.0219	1.41 (1.05-1.90)
	Yes (n=206)	99 (48.1%)		
Bronchodilator reversibility	Yes (n=773)	441 (57.1%)	0.1856	1.16 (0.93-1.43)
	No (n=604)	323 (53.5%)		
Co-paid by health insurance	Yes (n=324)	197 (60.8%)	0.0462	1.29 (1.00-1.67)
	No (n=1029)	561 (54.5%)		
ICS molecule	Fluticasone (n=919)	534 (58.1%)	0.0111	1.34 (1.07-1.69)
	Budesonide (n=441)	224 (50.8%)		
High-dose ICS	Yes (n=1050)	606 (57.7%)	0.0558	1.30 (0.99-1.69)
	No (n=275)	141 (51.3%)		

GERD, gastroesophageal reflux; ICS, inhaled corticosteroid.

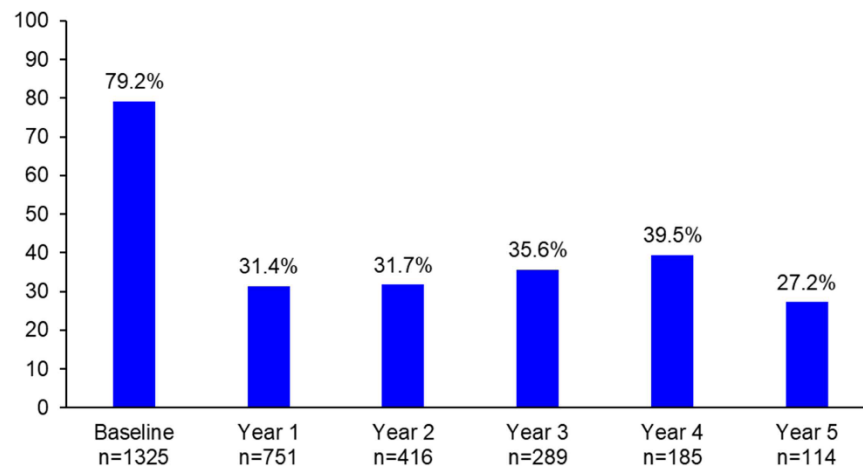


Figure S2. The proportion of patients with high-dose ICS decreased over 5 years of asthma management. High-dose ICS was defined as equivalent fluticasone propionate > 500 µg/day.