Understanding asthma phenotypes:
the World Asthma Phenotypes (WASP) international collaboration

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Table S1: Selected studies identifying phenotypes based on clinical factors and on markers of airways inflammation

Clinical factors			
Study	**Participants**	**Location**	**Phenotypes**
Henderson et al (2008) [25]	Avon Longitudinal Study of Parents and Children (ALSPAC) participants assessed from birth to 7 years (n=6,265)	United Kingdom	1. Never/infrequent wheeze (59%) 2. Transient early wheeze (16%) 3. Prolonged early wheeze (9%) 4. Intermediate onset wheeze (3%) 5. Late onset wheeze (6%) 6. Persistent wheeze (7%)
Moore et al (2010) [26]	Severe Asthma Research Program cohort aged 6-80 years (n=726)	United States	1. Early onset atopic asthma with normal lung function treated with two or fewer controller medications and minimal health care utilization (15%) 2. Early-onset atopic asthma and preserved lung function but increased medication requirements and health care utilization (44%) 3. Obese women with late-onset non-atopic asthma, moderate reductions in FEV(1), and frequent oral corticosteroid use (8%) 4. Severe airflow obstruction with bronchodilator responsiveness, childhood onset, atopy (17%) 5. Severe airflow obstruction with bronchodilator responsiveness, female, later-onset, less atopy (16%)
Fitzpatrick et al (2011) [27]	Children in Severe Asthma Research Program aged 6-17 years (n=161)	United States	1. Normal lung function, less atopy (26%) 2. Lower lung function, more atopy, increased symptoms and medication use (32%) 3. Greater comorbidity, increased bronchial responsiveness, lower lung function (20%) 4. Lowest lung function, most symptoms and medication use (18%)
Siroux et al (2011) [28]	Adults in the European Community Respiratory Health Survey (n=1,895)	Europe	1. Active treated allergic childhood-onset asthma (36%) 2. Active treated adult-onset asthma (19%) 3. Inactive/mild treated allergic asthma (29%) 4. Inactive/mild untreated nonallergic asthma (16%)
Siroux et al (2011) [28]	Adults in the Epidemiological Study on the Genetics and Environment of Asthma	Europe	1. Active treated allergic childhood-onset asthma (35%) 2. Active treated adult-onset asthma (15%)

	(EGEA2) (n=641)		3. Inactive/mild untreated allergic childhood onset asthma (25%) 4. Inactive/mild untreated adult onset asthma (26%)
Savenije et al (2011) [29]	Children in Prevention and Incidence or Asthma and Mite Allergy (PIAMA) (n=2,810)	The Netherlands	1. Never/infrequent wheeze (75%) 2. Transient early wheeze (17%) 3. Intermediate onset wheeze (3%) 4. Late onset wheeze (2%) 5. Persistent wheeze 4%)
Weinmayr et al (2013) [30]	Children aged 8-12 years in cross-sectional studies in four centres (n>4,000); Spain	Spain	1. Cough during colds (22%) 2. Chronic cough and phlegm (5%) 3. Nocturnal breathlessness (6%) 4. Wheeze only with colds (5%) 5. Wheeze without colds, with cough (4%) 6. Wheeze without colds, without cough (2%)
Markers of airways inflammation			
Study	**Participants**	**Location**	**Phenotypes**
Simpson et al (2006)[32]	93 adult non-smokers with asthma	Australia	1. Eosinophilic asthma (41%) 2. Neutrophilic asthma (20%) 3. Mixed granulocytic asthma (8%) 4. Paucigranulocytic asthma (31%)
Drews et al (2009)[22]	57 asthmatic children	Brazil	1. Atopic asthma (49%); 81% with sputum eosinophilia 2. Non-atopic asthma (51%); 24% with sputum eosinophilia
Wang et al (2011)[63]	51 adults with asthma (29 stable, 22 acute); 77 children with asthma (49 stable, 28 acute)	Australia	1. Eosinophilic asthma (17% adult stable, 0% adult acute, 29% children stable, 50% children acute) 2. Neutrophilic asthma (28% adult stable, 82% adult acute, 20% children stable, 7% children acute) 3. Mixed granulocytic asthma (4% adult stable, 18% adult acute, 2% children stable, 36% children acute) 4. Paucigranulocytic asthma (52% adult stable, 0% adult acute, 49% children stable, 7% children acute)
Brooks et al (2016)[14]	Asthmatic and non-asthmatic children aged 12-17 years	New Zealand	1. Eosinophilic asthma (46%) 2. Non-eosinophilic asthma (54%) (8% neutrophilic, 46% other)

Table S2 Skin prick test allergens to be used in each study centre

	Allergens to be tested:	Uganda	Wellington, NZ	Bristol, UK	Ecuador	Brazil
Standard panel	Dermatophagoides pteronyssinus (house dust mite)	✓ pteronyssinus & farinae mix	✓	✓	✓ pteronyssinus & farinae mix	✓
	tree pollen mix	✓	✓	✓		
	grass pollen mix	✓ weeds	✓	✓	✓	
	cat dander	✓	✓	✓	✓	✓
	dog dander	✓	✓	✓	✓	✓
	Alternaria tenuis (=Alternaria alternata)		✓	✓	✓	
	Penicillium mix		✓			
Other locally relevant allergens	Blomia tropicalis (dust mite)	✓				✓
	Dermatophagoides farinae (house dust mite)	✓				✓
	Mould mix	✓				
	Mixed fungi				✓	
	Aspergillus fumigatus			✓		✓
	Cladosporium		✓			✓
	Blatela germanica (German cockroach)	✓		✓		✓
	Periplaneta Americana (American cockroach)				✓	✓
	peanut	✓				
	Anisakis simplex (parasitic worm)	✓				

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