

**Table S13: Diagnostic performance of bronchodilator reversibility testing and bronchial challenge to make a diagnosis of asthma**

	N		Population	ICS treated	Asthma Diagnosis (%)	Cut-off	Sensitivity (%)	Specificity (%)	NPV (%)	PPV (%)
<b>Bronchodilator reversibility testing</b>										
Goldstein Chest 2000	57	Referral from primary care to secondary care	Asthma symptoms	0%	48 (84%)	12% and 200 ml improvement	6	100	16	100
Hunter Chest 2002	89	Secondary care	Asthma symptoms	46%	69 (77%)	2,9%	41	70	29	85
Yurdakul J Asthma 2005	100	Secondary care	Asthma symptoms	48%		15%	32	71	48	90
Ulrik J Asthma 2005	609	Population survey	Self-reported asthma	?	74 (12%)	10%	9	93	88	16
Popordis J Asthma 2016	88	Secondary care	Asthma symptoms	0%	70 (79%)	12% and 200 ml improvement	100	100	100	100
Louis JACI pract 2020	194	Secondary care	Asthma symptoms	0%	148 (76%)	12% and 200 ml improvement	26	100	30%	100
<b>Bronchial challenge</b>										
Goldstein Chest 2000	57	Referral from primary care to secondary care	Asthma symptoms	0%	48 (84%)	PC20M < 8mg/ml	86	100	56	100
Hunter Chest 2002	89		Asthma symptoms	46%	69 (77%)	PC20M < 8 mg/ml	91	90	75	97
Yurdakul J Asthma 2005	100	Secondary care	Asthma symptoms	48%		PC20M < 8 mg/ml	97	78	93	87
Ulrik J Asthma 2005	609	Population survey	Self-reported asthma	?	74 (12%)	PC20H < 16 mg/ml	93	94	99	69
Popordis J Asthma 2016	88	Secondary care	Asthma symptoms	0%	67 (76%)	PC20M < 16 mg/ml	63	86	36	94
	88	Secondary care	Asthma symptoms	0%	67 (76%)	PD15 Mannitol <635mg	64	95	45	98
Louis JACI pract 2020	194	Secondary care	Asthma symptoms	0%	148 (76%)	PC20 M < 8mg/ml	95	100	87	100

In two studies (Goldstein, Louis) asthma was diagnosed either by a significant bronchodilation or by positive bronchial challenge testing so that specificity was 100% for both tests. In the Popordis study, asthma was diagnosed by symptoms + significant bronchodilator reversibility (12% and 200 ml improvement) so that bronchodilator reversibility has 100% sensitivity and specificity