

Table 1a. Unadjusted predictors for the new-onset of asthma in German adults during a 20 year follow-up stratified by centre (Hamburg and Erfurt)

	New-onset asthma			
	Subjects without asthma at ECRHS I		Subjects without asthma at ECRHS I	
	Hamburg N = 357	Erfurt N = 517	Hamburg N = 357	Erfurt N = 517
	RR	CI (95%)	RR	CI (95%)
Sex				
Female	1.97	0.86-4.48	1.64	0.76-3.55
Male	1		1	
Asthma at baseline	-		-	
No asthma at baseline				
Nasal allergy at baseline	3.18	1.49-6.81	1.72	0.67-4.39
No nasal allergy at baseline	1		1	
Eczema at baseline	1.67	0.76-3.65	1.45	0.66-3.19
No eczema at baseline	1		1	
BHR at baseline	5.99	2.53-14.20	2.92	1.25-6.79
No BHR at baseline	1		1	
Family history [§]				
negative	1		1	
positive	1.45	0.66-3.21	1.14	0.49-2.66
Social status ^{§§}				
Age≤16	1		1	
16<Age≤23	0.26	0.07-0.94	0.50	0.08-3.34
23<Age	0.19	0.04-0.89	0.19	0.02-1.87
Pet ownership at baseline	0.88	0.38-2.06	0.93	0.40-2.16
No pet ownership at baseline	1		1	
Mould exposure ever	0.99	0.43-2.26	0.25	0.04-1.83
No mould exposure ever	1		1	
Job exposure [§] ever	0.93	0.43-2.04	1.16	0.55-2.46
No job exposure ever	1		1	
Current smoking at baseline	0.69	0.29-1.61	0.73	0.32-1.64
No current smoking at baseline	1		1	
Any positive SPT	4.23	1.97-9.06	1.50	0.67-3.37
No positive of the SPT	1		1	
Any positive RAST	2.44	1.07-5.54	1.54	0.71-3.38
No positive RASTs	1		1	
Contact to older children in early life	1.37	0.59-3.23	0.57	0.24-1.36
No contact to older children in early life	1		1	

RR: relative risk; CI: confidence interval; BHR: bronchial hyperresponsiveness; [§]Family history: parental history of asthma, nasal or skin allergy, or eczema; ^{§§}Social status: age in years at the end of full time education; Job exposure: in job exposed to vapours, gas, dust or fumes; ^{§§}Current smoking at baseline; SPT: skin prick test; RAST: radioallergosorbent test;

Any positive SPT: at least one positive skin prick test; Any positive RAST: at least one positive radioallergosorbent test

Table 2b. Unadjusted predictors for the new-onset of nasal allergy in German adults during a 20 year follow-up stratified by centre (Hamburg and Erfurt)

	New-onset nasal allergy			
	Subjects without nasal allergy at ECRHS I		Subjects without nasal allergy at ECRHS I	
	Hamburg N = 289	Erfurt N = 465	Hamburg N = 289	Erfurt N = 465
	RR	CI (95%)	RR	CI (95%)
Sex				
Female	1.13	0.55-2.32	1.77	0.89-3.85
Male	1		1	
Asthma at baseline	3.49	1.26-9.68	-	
No asthma at baseline	1		-	
Nasal allergy at baseline	-		-	
No nasal allergy at baseline			-	
Eczema at baseline	1.81	0.88-3.73	1.63	0.82-3.20
No eczema at baseline	1		1	
BHR at baseline	1.89	0.84-4.24	1.52	0.68-3.40
No BHR at baseline	1		1	
Family history [§]				
negative	1		1	
positive	0.95	0.40-2.25	1.63	0.81-3.27
Social status ^{§§}				
Age≤16	1		1	
16<Age≤23	0.47	0.07-3.03	-	
23<Age	0.79	0.12-5.26	-	
Pet ownership at baseline	0.75	0.33-1.71	0.93	0.44-1.94
No pet ownership at baseline	1		1	
Mould exposure ever	1.88	0.92-3.84	0.86	0.31-2.38
No mould exposure ever	1		1	
Job exposure [§] ever	0.38	0.16-0.90	1.63	0.84-3.15
No job exposure ever	1		1	
Current smoking at baseline ^{§§}	0.65	0.29-1.43	0.62	0.30-1.27
No current smoking at baseline	1		1	
Any positive SPT	3.89	1.92-7.85	3.29	1.72-6.30
No positive SPT	1		1	
Any positive RAST	1.26	0.62-2.60	4.71	2.45-9.07
No positive RAST	1		1	
Contact to older children in early life	0.70	0.34	0.88	0.35-2.19
No contact to older children in early life	1		1	

RR: relative risk; CI: confidence interval; BHR: bronchial hyperresponsiveness; [§]Family history: parental history of asthma, nasal or skin allergy, or eczema; ^{§§}Social status: age in years at the end of full time education; Job exposure: in job exposed to vapours, gas, dust or fumes; ^{§§}Current smoking at baseline; SPT: skin prick test; RAST: radioallergosorbent test;

Any positive SPT: at least one positive skin prick test; Any positive RAST: at least one positive radioallergosorbent test

Table 3a. Adjusted associations between SPT and RAST and the new-onset of asthma during a 20 year follow-up stratified by centre (Hamburg and Erfurt)

	New-onset asthma			
	Subjects without asthma at ECRHS I		Subjects without asthma at ECRHS I	
	Hamburg N = 357	Erfurt N = 517	Hamburg N = 357	Erfurt N = 517
SPT cat	8.87	3.38-23.33	3.08	0.89-10.71
RAST cat	5.02	1.09-23.21	2.15	0.73-6.29
SPT D. Pteronyssinus	1.82	0.53-6.28	2.23	0.81-6.09
RAST D. Pteronyssinus	0.72	0.09-5.66	2.06	0.81-5.22
SPT Cladosporium	-		4.94	1.12-21.75
RAST Cladosporium	1.24	0.16-9.68	0.83	0.11-6.22
SPT birch	2.75	1.04-7.25	1.67	0.57-4.90
RAST birch	3.70	0.74-18.53	0.71	0.17-3.03
Any positive SPT	3.66	1.52-8.84	1.75	0.77-3.97
Any positive RAST	2.50	0.99-6.26	1.68	0.72-3.93

HR: hazard ratio; CI: confidence intervals; SPT: skin prick test; RAST: radioallergosorbent test; Any positive SPT: at least one positive skin prick test; Any positive RAST: at least one positive radioallergosorbent test

*Hazard ratio adjusted for gender, centre, social status, family history and smoking

Table 1b. Adjusted associations between SPT and RAST and the new-onset of nasal allergy during a 20 year follow-up stratified by centre (Hamburg and Erfurt)

	New-onset nasal allergy			
	Subjects without nasal allergy at ECRHS I		Subjects without nasal allergy at ECRHS I	
	Hamburg N = 289	Erfurt N = 465	Hamburg N = 289	Erfurt N = 465
SPT cat	11.84	3.54-39.55	3.84	1.14-12.97
RAST cat	1.51	0.20-11.60	2.08	0.73-5.97
SPT D. Pteronyssinus	1.86	0.55-6.30	1.82	0.69-4.83
RAST D. Pteronyssinus	0.92	0.21-4.03	1.64	0.67-4.01
SPT Cladosporium	-		1.64	0.22-12.27
RAST Cladosporium	1.18	0.15-9.08	1.35	0.32-5.78
SPT birch	6.61	2.35-18.59	7.67	3.52-16.71
RAST birch	2.33	0.30-18.24	6.50	3.06-13.84
Any positive SPT	5.27	2.24-12.38	4.04	1.99-8.19
Any positive RAST	1.40	0.63-3.13	5.69	2.85-11.37

HR: hazard ratio; CI: confidence intervals; SPT: skin prick test; RAST: radioallergosorbent test; Any positive SPT: at least one positive skin prick test; Any positive RAST: at least one positive radioallergosorbent test

*Hazard ratio adjusted for gender, centre, social status, family history and smoking

Table 5a. Measures of diagnostic accuracy regarding SPT and RAST as predictors of new-onset asthma stratified by centre (Hamburg and Erfurt)

<i>Asthma</i>			
	<i>Hamburg</i> <i>N</i> = 357		<i>Erfurt</i> <i>N</i> = 517
	SPT	RAST	SPT
LH+	2.84	1.56	1.41
LH-	0.57	0.58	0.89
PPV	0.17 (0.09-0.27)*	0.10 (0.06-0.16)*	0.07 (0.03-0.13)*
NPV	0.96 (0.93-0.98)*	0.96 (0.92-0.98)*	0.96 (0.93-0.97)*

SPT: skin prick test; RAST: radioallergosorbent test; LH+: positive likelihood ratio; LH-: negative likelihood ratio; *: confidence interval

Table 6b. Measures of diagnostic accuracy regarding SPT and RAST as predictors of new-onset nasal allergy stratified by centre (Hamburg and Erfurt)

<i>Nasal Allergy</i>			
	<i>Hamburg</i> <i>N</i> = 282		<i>Erfurt</i> <i>N</i> = 465
	SPT	RAST	SPT
LH+	3.36	1.16	2.63
LH-	0.71	0.90	0.69
PPV	0.26 (0.13-0.43)*	0.11 (0.06-0.18)*	0.17 (0.09-0.26)*
NPV	0.96 (0.93-0.98)*	0.91 (0.86-0.95)*	0.95 (0.92-0.97)*

SPT: skin prick test; RAST: radioallergosorbent test; LH+: positive likelihood ratio; LH-: negative likelihood ratio; *: confidence interval