

**Table nr. 3. Logistic regression analysis**

Dependent Y	Asthma symptoms score = 3 or more
Method	Backward
Enter variable if P<	0.05
Remove variable if P>	0.25
Sample size	150
Positive cases (symptoms score $\geq 3$ )	53 (35.33%)
Negative cases (symptoms score <3)	97 (64.67%)

**Overall Model Fit**

Null model - 2 Log Likelihood	194.846
Full model -2 Log Likelihood	167.112
Chi-squared	27.733
DF	6
Significance level	P = 0.0001
Cox & Snell R <sup>2</sup>	0.1688
Nagelkerke R <sup>2</sup>	0.2321

**Coefficients and Standard Errors**

Variable	Coefficient	Std. Error	Wald	P
IgE sensitization to Amb a 10	0.60315	0.50962	1.4007	0.2366
IgE sensitization to Amb a 11	1.57292	0.49899	9.9363	0.0016
IgE sensitization to Amb a 6	-0.67496	0.43405	2.4181	0.1199
Positive dog SPT	2.01305	0.60417	11.1016	0.0009
Positive fungi SPT	-1.03032	0.59917	2.9570	0.0855
Domestic exposure to cat	1.20677	0.48511	6.1883	0.0129
Constant	-2.06244	0.50600	16.6139	<0.0001

Variables not included in the model
Age (>40 years)
Allergy history (>6 years)
Positive HDM SPT
Positive family allergic disease history
Polysensitization status
IgE sensitization to Amb a 4
IgE sensitization to Amb a 5
IgE sensitization to Amb a 8
IgE sensitization to Amb a 9
IgE sensitization to Amb a 12
Patients sex
Professional exposure (dust, smoke, solvents)
Current or passive smoker status
Positive cat SPT
Positive gramineae SPT

Domestic exposure to dog
Domestic exposure to rodents

#### Odds Ratios and 95% Confidence Intervals

Variable	Odds ratio	95% CI
IgE sensitization to Amb a 10	1.8279	0.6732 to 4.9630
IgE sensitization to Amb a 11	4.8207	1.8128 to 12.8193
IgE sensitization to Amb a 6	0.5092	0.2175 to 1.1922
Positive dog SPT	7.4861	2.2907 to 24.4646
Positive fungi SPT	0.3569	0.1103 to 1.1549
Domestic exposure to cat	3.3427	1.2917 to 8.6502

#### Hosmer & Lemeshow test

Chi-squared	3.0063
DF	6
Significance level	P = 0.8081

Group	Y=0		Y=1		Total
	Observed	Expected	Observed	Expected	
1	15	14.092	0	0.908	15
2	12	13.220	3	1.780	15
3	17	17.931	6	5.069	23
4	11	9.558	3	4.442	14
5	27	26.660	16	16.340	43
6	8	8.514	9	8.486	17
7	5	5.346	10	9.654	15
8	2	1.680	6	6.320	8

#### Classification table (cut-off value p=0.5)

Actual group	Predicted group		Percent correct
	0	1	
Y = 0	86	11	88.66%
Y = 1	30	23	43.40%
Percent of cases correctly classified			72.67%

#### ROC curve analysis

Area under the ROC curve (AUC)	0.743
Standard Error	0.0410
95% Confidence interval	0.665 to 0.810