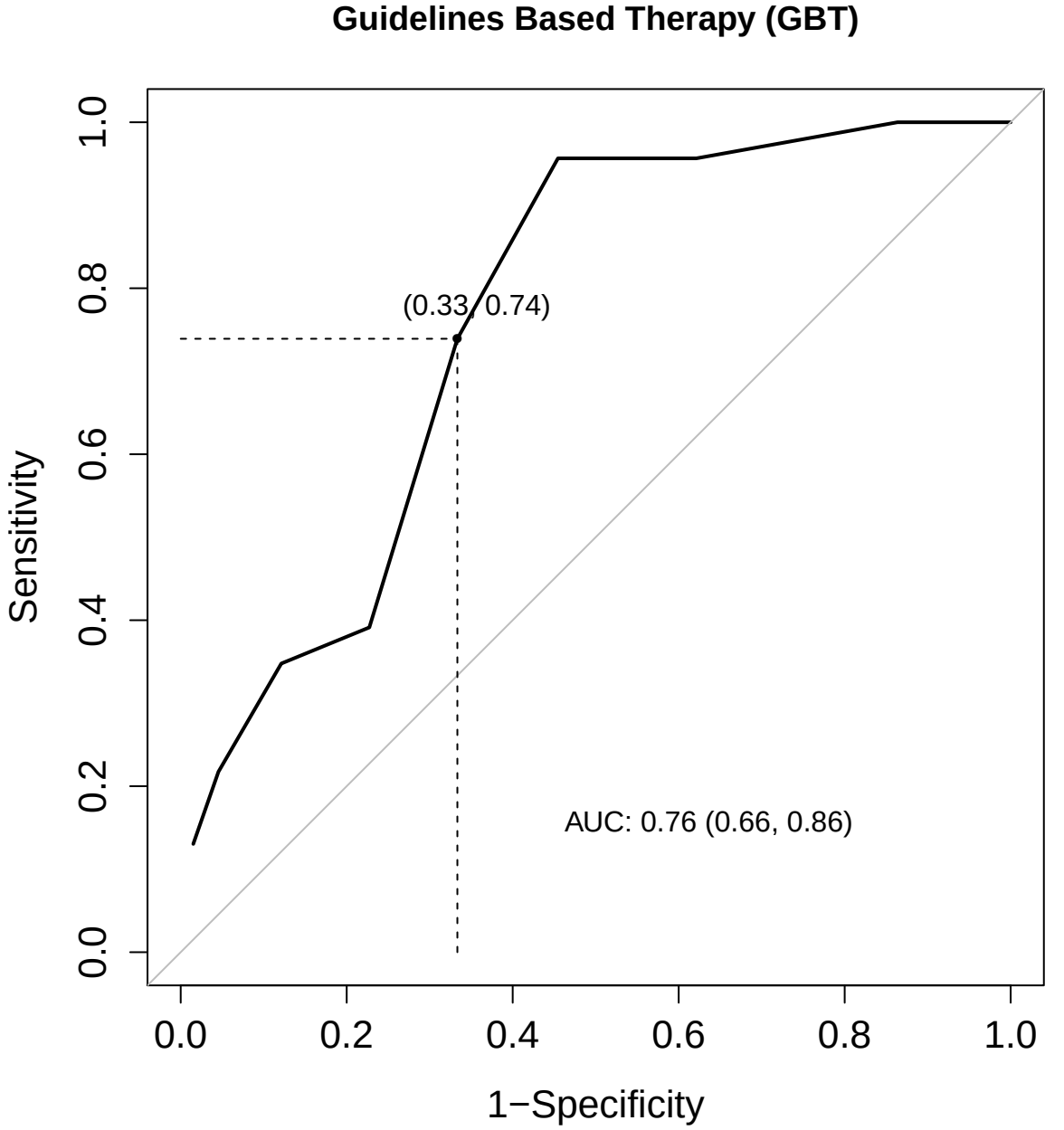
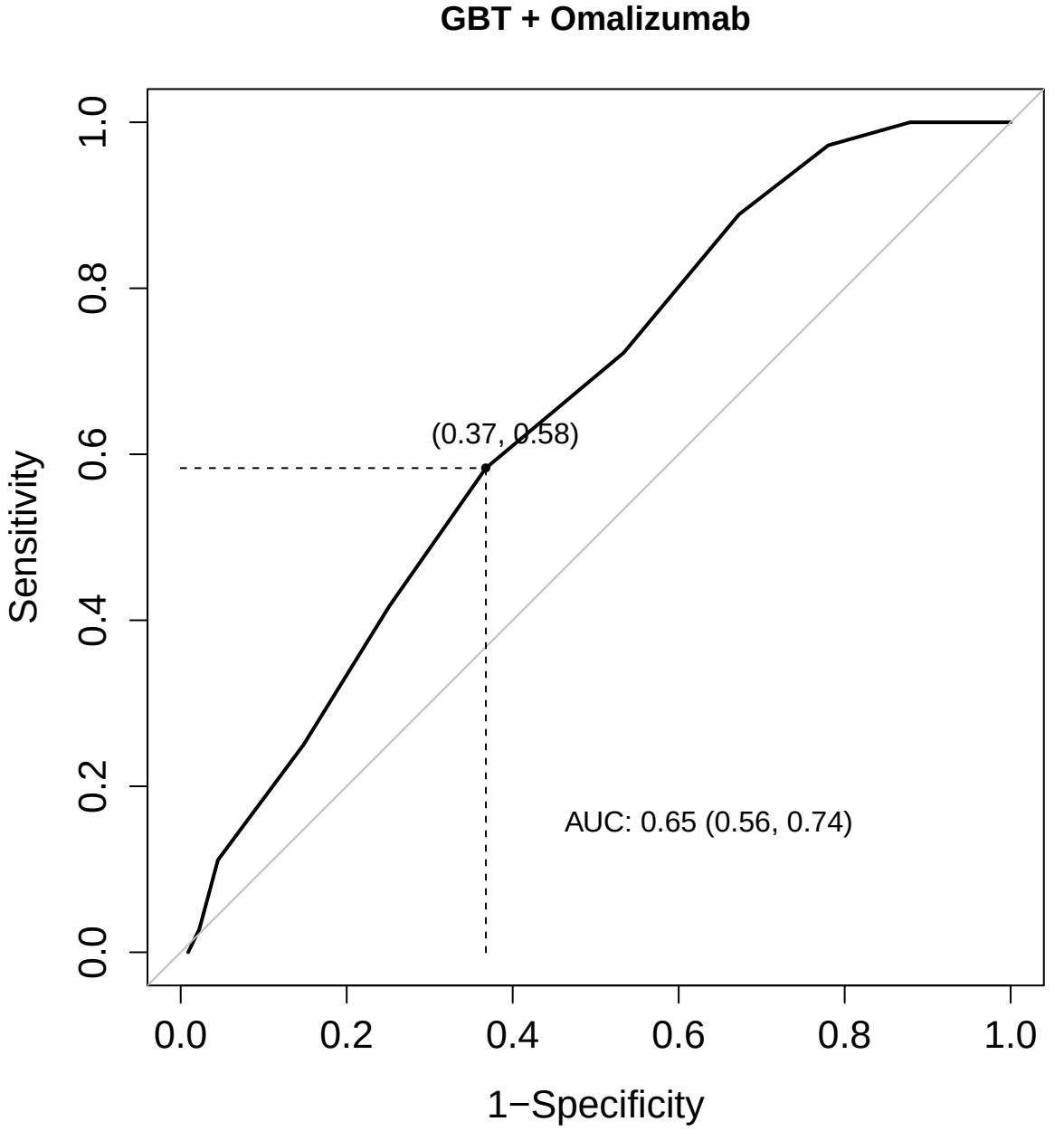
Figure 1: Supplementary material. Receiver operating curve (ROC) for each treatment arm. The point of optimal criterion, threshold that yields the optimal combination using the equality criteria of sensitivity and specificity for each curve is annotated. Area Under the Curve (AUC) and it's 95% Confidence Interval is also annotated at the bottom of each figure.


Guidelines Based Therapy (GBT)
Sensitivity
1−Specificity
0.0
0.2
0.4
0.6
0.8
1.0
(0.33, 0.74)
AUC: 0.76 (0.66, 0.86)


GBT + Omalizumab
Sensitivity
1−Specificity
0.0
0.2
0.4
0.6
0.8
1.0
(0.37, 0.58)
AUC: 0.65 (0.56, 0.74)

Supplementary material

Table E1: saEPI scoring schema[7]

Variable	Baseline/Seasonal	Low (0 points)	Medium (1 point)	High (2 points)
Age at recruitment (y)	Baseline Characteristic	13-20		6-12
Total IgE (kU/l)	Baseline Characteristic	0-100	100-300	>300
Allergen skin tests (positive tests of 14)	Baseline Characteristic	0-4	5-7	8-14
Blood eosinophils (%)	Baseline Characteristic	0-2	2-6	6-22
Exacerbation in previous season	Previous season	No		Yes
ICS (treatment steps)	Previous season	Step 0-3	Step 4-5	Step 6
FEV_1/FVC ratio (x100)	Previous season	>85	75-85	<75
FeNO (ppb)	Previous season	0-15	15-40	>40

Table E2 Comparison of models for predictors of fall exacerbations containing questionnaire, laboratory and specialist testing

			Guidelines Based Therapy (N=89)		Guidelines Based Therapy + Omalizumab (N=295)	
Models	Variables	Comparison	Area under the ROC curve 95% CI	p-value	Area under the ROC curve 95% CI	p-value
M0	Null model	--		--		--
M1	Questionnaire: - Age - Previous exacerbations - Treatment Step	vs. M0	0.73 (0.61, 0.85)	P < 0.01	0.69 (0.60, 0.77)	P < 0.01
M2	Laboratory: - Total IgE - Blood Eosinophils	vs. M1	0.81 (0.71, 0.90)	P < 0.01	0.69 (0.61, 0.78)	P = 0.74
M3	Specialist: - Skin Test - FEV1FVC - FeNO	vs. M2	0.82 (0.73, 0.91)	P = 0.83	0.71 (0.63, 0.79)	P = 0.27

Multivariate modeling using previously described predictors.
Likelihood-ratio chi-square tests were used to compare the fit of nested models and to provide a test of significance for the added variables to the model.