Association between *ACE2* and *TMPRSS2* Nasopharyngeal Expression and COVID-19 respiratory distress

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Supplementary Table 1: Association between chronic use of angiotensin receptor blockers and COVID-19 respiratory distress.

	Cases (%)	Controls (%)	OR (95%CI)	*p-value*
Total Cohort (N = 213)				
Chronic Angiotensin Receptor Blockers Use	38 (17.84)	175 (82.16)	6.94 (2.61 – 18.46)	**2.07×10^{-4}**
Subset of Systemic Arterial Hypertension Individuals (N = 41)				
Chronic Angiotensin Receptor Blockers Use	19 (46.34)	22 (53.66)	3.24 (0.65 – 19.09)	0.1672

Supplementary Table 2: Stepwise regression analysis for selection of covariates associated to COVID-19 respiratory distress.

Explanatory Variables	Deviance	AIC
Age + Systemic Arterial Hypertension + Diabetes + Obesity	**122.52**	**130.51**
- Systemic Arterial Hypertension	121.57	131.57
- Diabetes	125.80	131.80
+ Any Comorbidity	122.03	132.03
+ Sex	122.25	132.25
- Obesity	141.76	147.76
- Age	145.47	151.47

AIC = Akaike Information Criteria. Plus and minus symbols indicates whether the variable was removed (-) or included (+) in the model.

Supplementary Table 3: Stepwise regression analysis for variables associated with COVID-19 respiratory distress including *ACE2* and *TMPRSS2* expression levels.

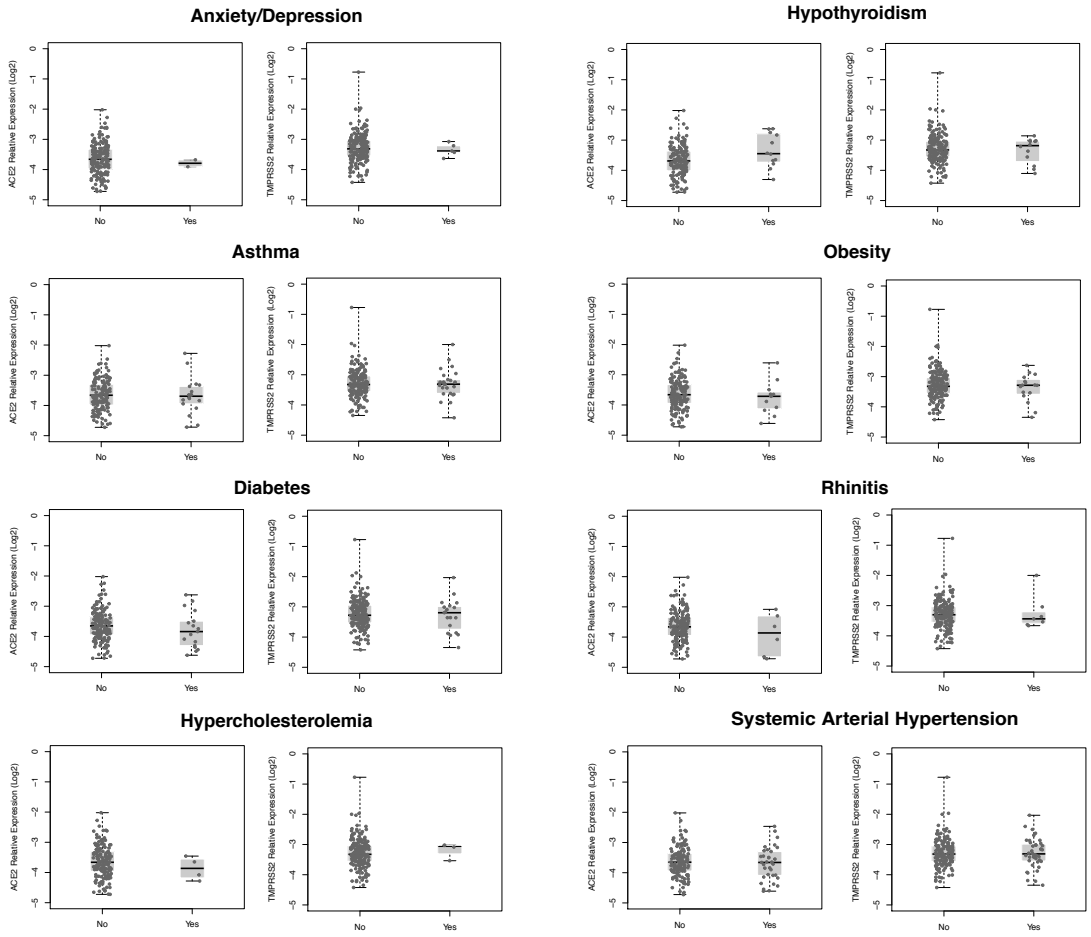
Explanatory Variables	Deviance	AIC
Age + Systemic Arterial Hypertension + Diabetes + Obesity + TMPRSS2/ACE2	**85.11**	**97.11**
- Systemic Arterial Hypertension	87.21	97.21
+ ACE2	84.17	98.17
+ Any Comorbidity	84.83	98.83
+ Sex	84.99	98.99
- Diabetes	89.19	99.19
- TMPRSS2/ACE2	91.85	101.85
- Age	96.84	106.84
- Obesity	99.07	109.07

AIC = Akaike Information Criteria. Plus and minus symbols indicates whether the variable was removed (-) or included (+) in the model.

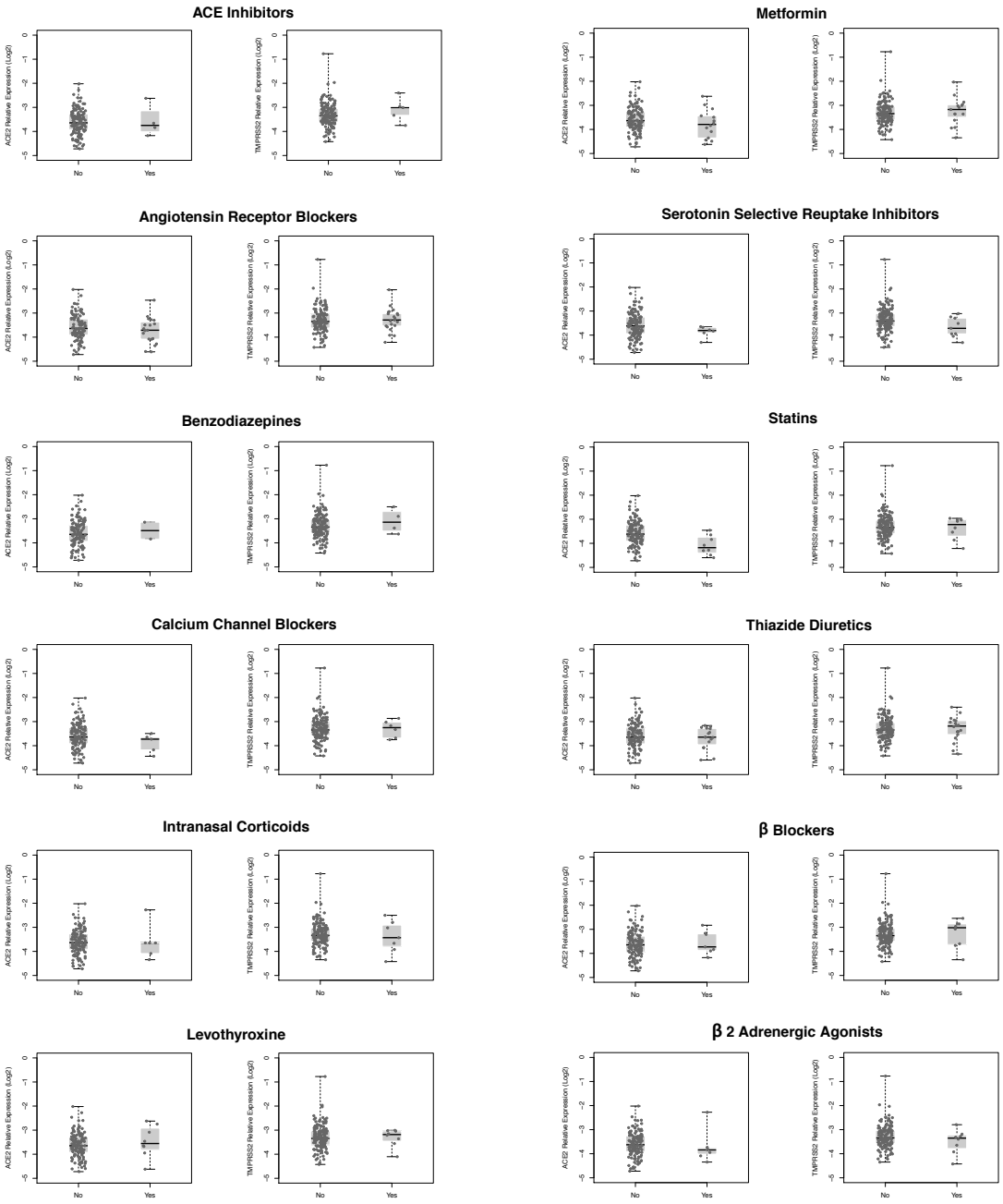
Supplementary Table 4: Characteristics of patients included in comparisons between nasopharyngeal swab and bronchoalveolar lavage samples.

	Group	
	BAL (N=11)	SWAB (N=34)
Age*	62 (±7)	57 (±14)
Sex		
Male	6 (54·5%)	19 (55·9%)
Female	5 (45·5%)	15 (44·1%)
Comorbidity		
Systemic Arterial	5 (55·5%)	20 (58·8%)
Hypertension		
Obesity	3 (27·3%)	11 (32·3%)
Diabetes	5 (55·5%)	9 (26·5%)

*data represented as mean ± standard deviation. BAL = bronchoalveolar lavage fluid; swab = nasopharyngeal swab samples.



Supplementary Figure 1: Nasopharyngeal expression of *ACE2* and *TMPRSS2* in individuals with mild COVID-19 according to different chronic diseases. Expression levels were assessed by RT-qPCR and are shown in log-scale (base 2) taking *B2M* expression as reference. Boxes represent mean and interquartile range, and whiskers stand for upper and lower limits. Comparisons between groups were made by linear regression models.



Supplementary Figure 2: Nasopharyngeal expression of *ACE2* and *TMPRSS2* in individuals with mild COVID-19 according to chronic therapy use. Expression levels were assessed by RT-qPCR plotted in log-scale (base 2) relative to *B2M* expression. Boxes represent mean and interquartile range, and whiskers stand for upper and lower limits. Comparisons between groups were made by linear regression models.