EXCLI Journal 2022;21:818-839 – ISSN 1611-2156
Received: April 21, 2022, accepted: June 14, 2022, published: June 20, 2022

Supplementary information to:

Review article:

THE ASSOCIATION OF *ACE1*, *ACE2*, *TMPRSS2*, *IFITM3* AND *VDR* POLYMORPHISMS WITH COVID-19 SEVERITY: A SYSTEMATIC REVIEW AND META-ANALYSIS

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https://dx.doi.org/10.17179/excli2022-4976

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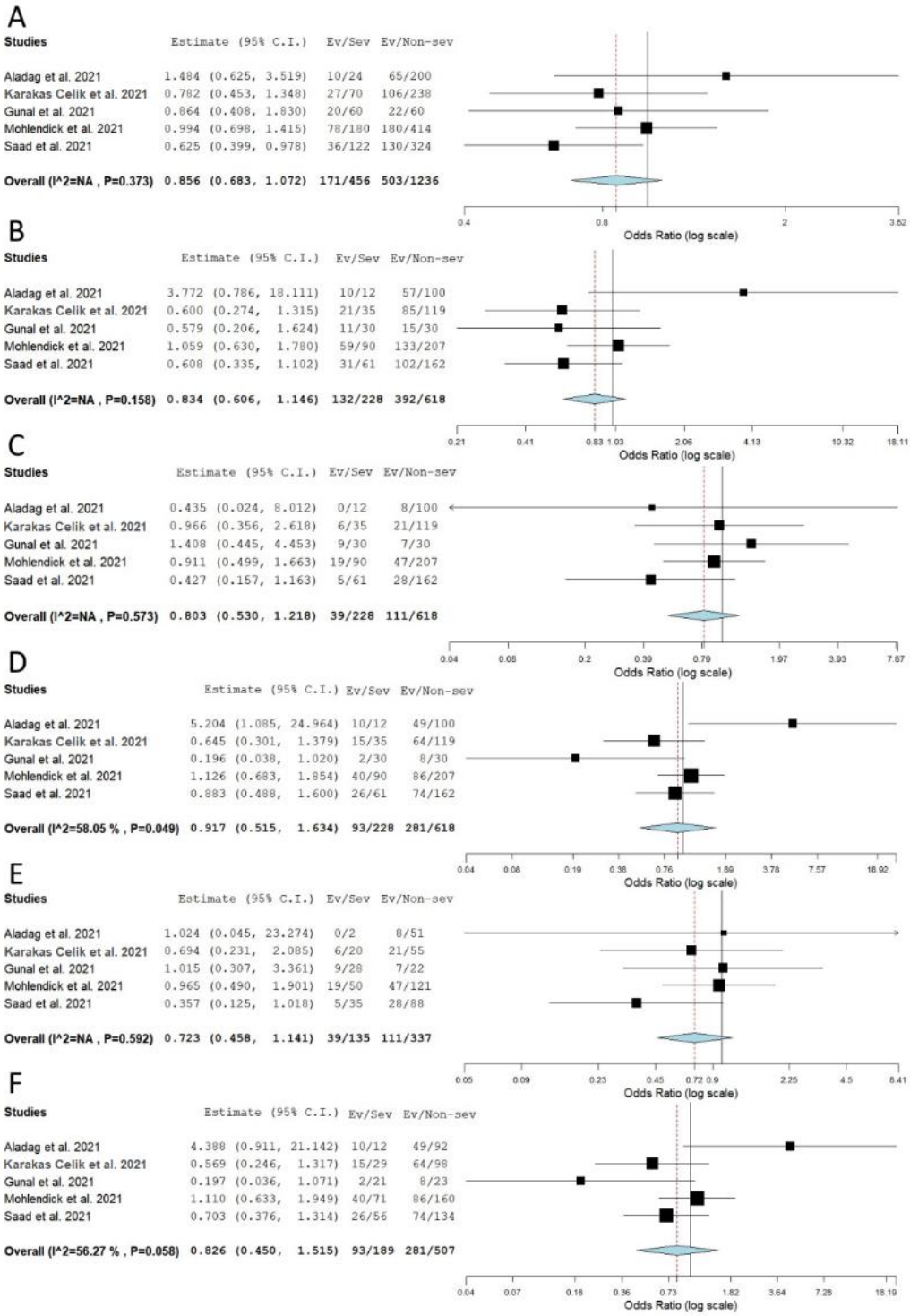

Supplementary Figure 1: Meta-analysis of the association between rs1799752 in *ACE1* and COVID-19 severity: comparison severe vs. non-severe. **A**) allelic model; **B**) dominant model; **C**) recessive model; **D**) overdominant model; **E**) II vs. DD; **F**) DI vs. DD. The results of the included studies presented as ORs, with 95 CI, and the overall effect with 95 % CI are shown in the forest plot. *P* values given are derived from heterogeneity tests.

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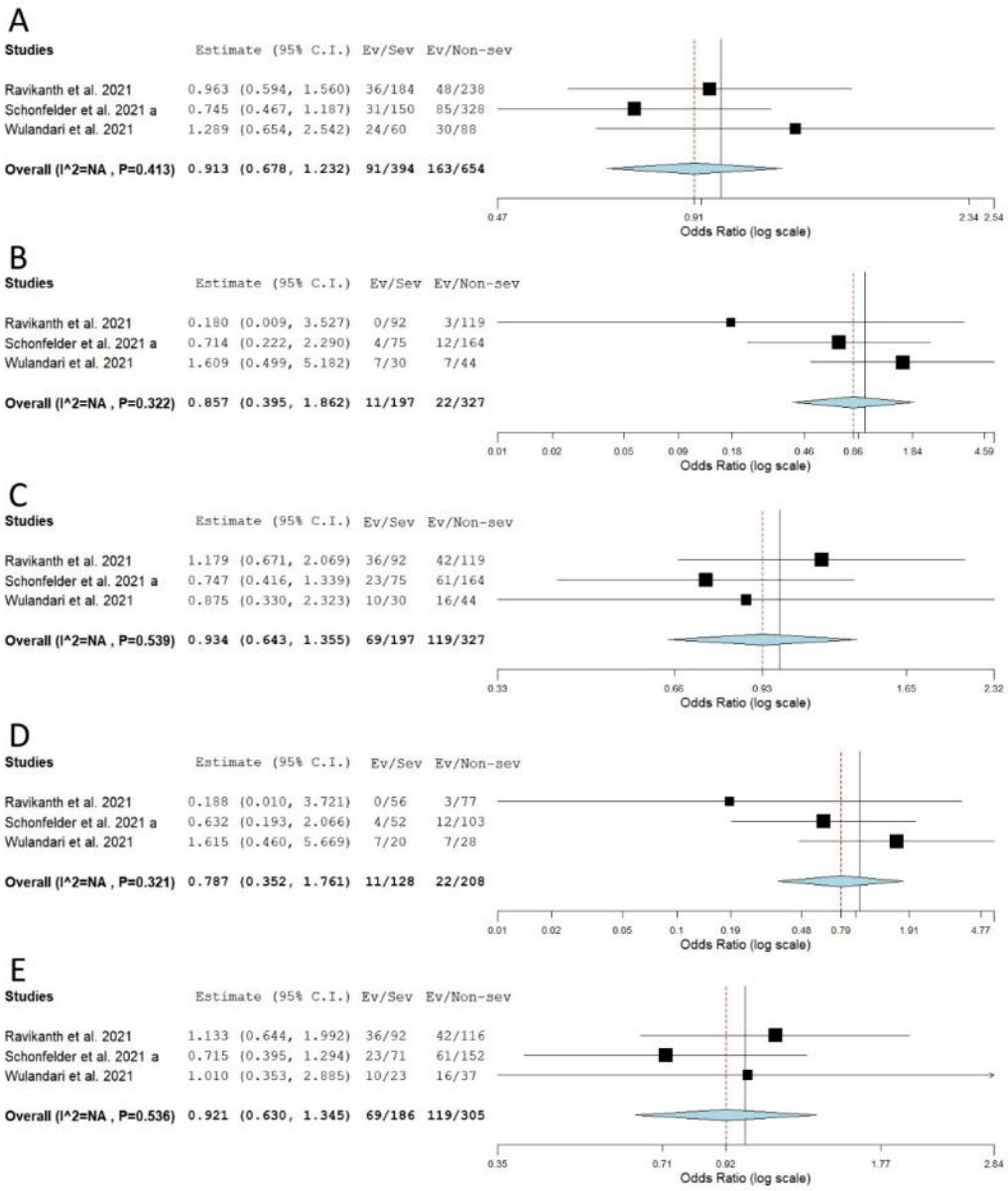

Supplementary Figure 2: Meta-analysis of the association between rs12329760 in *TMPRSS2* and COVID-19 severity, after the exclusion of asymptomatic SARS-CoV-2 infected participants: comparison severe vs. non-severe. **A**) allelic model; **B**) recessive model; **C**) overdominant model; **D**) AA vs. GG; **E**) GA vs. GG. The results of the included studies presented as ORs, with 95 % CI, and the overall effect with 95 % CI are shown in the forest plot. *P* values given are derived from heterogeneity tests.

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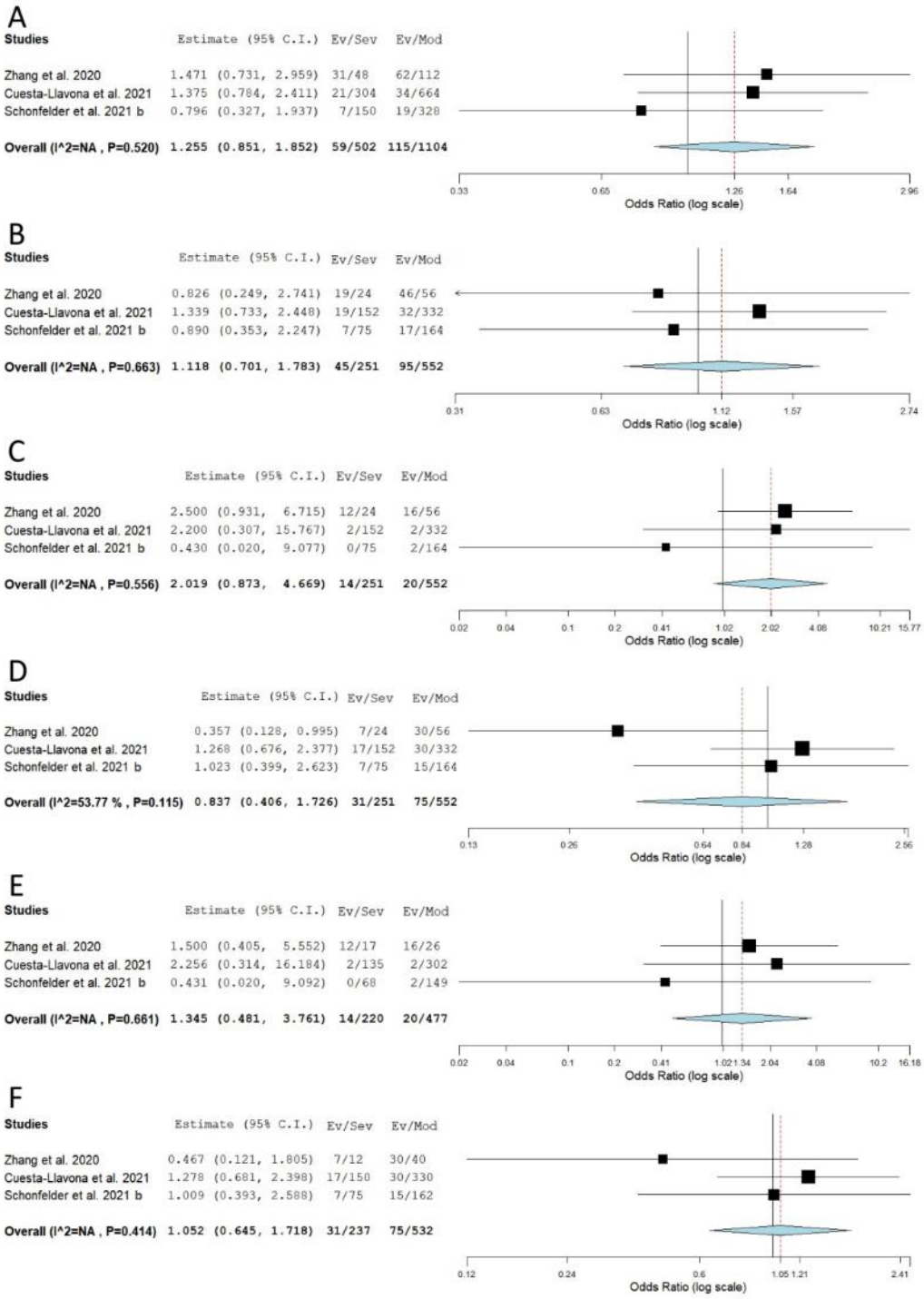

Supplementary Figure 3: Meta-analysis of the association between rs12252 in *IFITM3* and COVID-19 severity: comparison severe vs. moderate. **A**) allelic model; **B**) dominant model; **C**) recessive model; **D**) overdominant model; **E**) CC vs. TT; **F**) TC vs. TT. The results of the included studies presented as ORs, with 95 % CI, and the overall effect with 95 % CI are shown in the forest plot. *P* values given are derived from heterogeneity tests.

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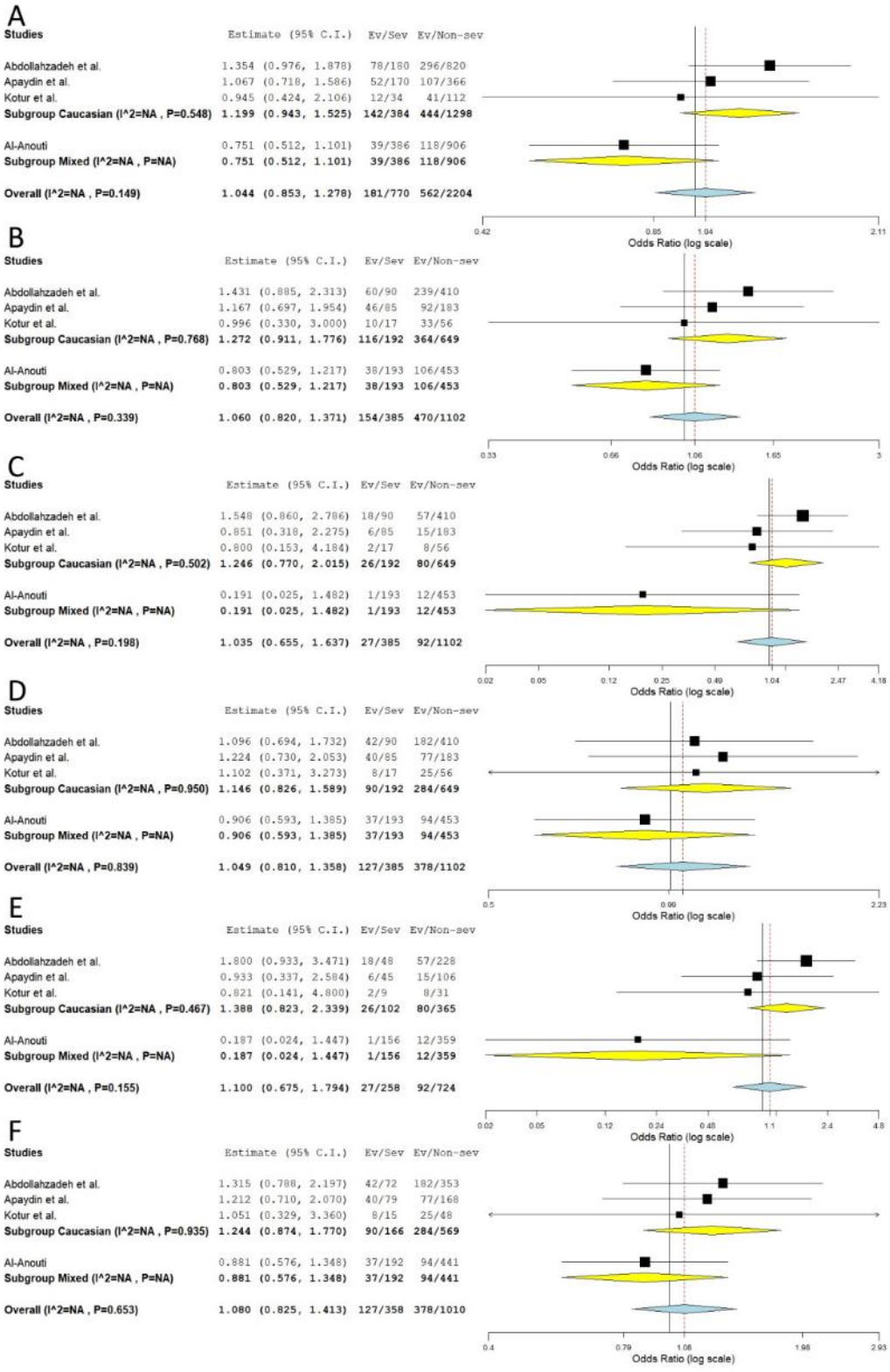

Supplementary Figure 4: Meta-analysis of the association between rs2228570 in *VDR* and COVID-19 severity: comparison severe vs. non-severe. **A**) allelic model; **B**) dominant model; **C**) recessive model; **D**) overdominant model; **E**) AA vs. GG; **F**) GA vs. GG. The results of the included studies presented as ORs, with 95 % CI, and the overall effect with 95 % CI are shown in the forest plot. *P* values given are derived from heterogeneity tests.

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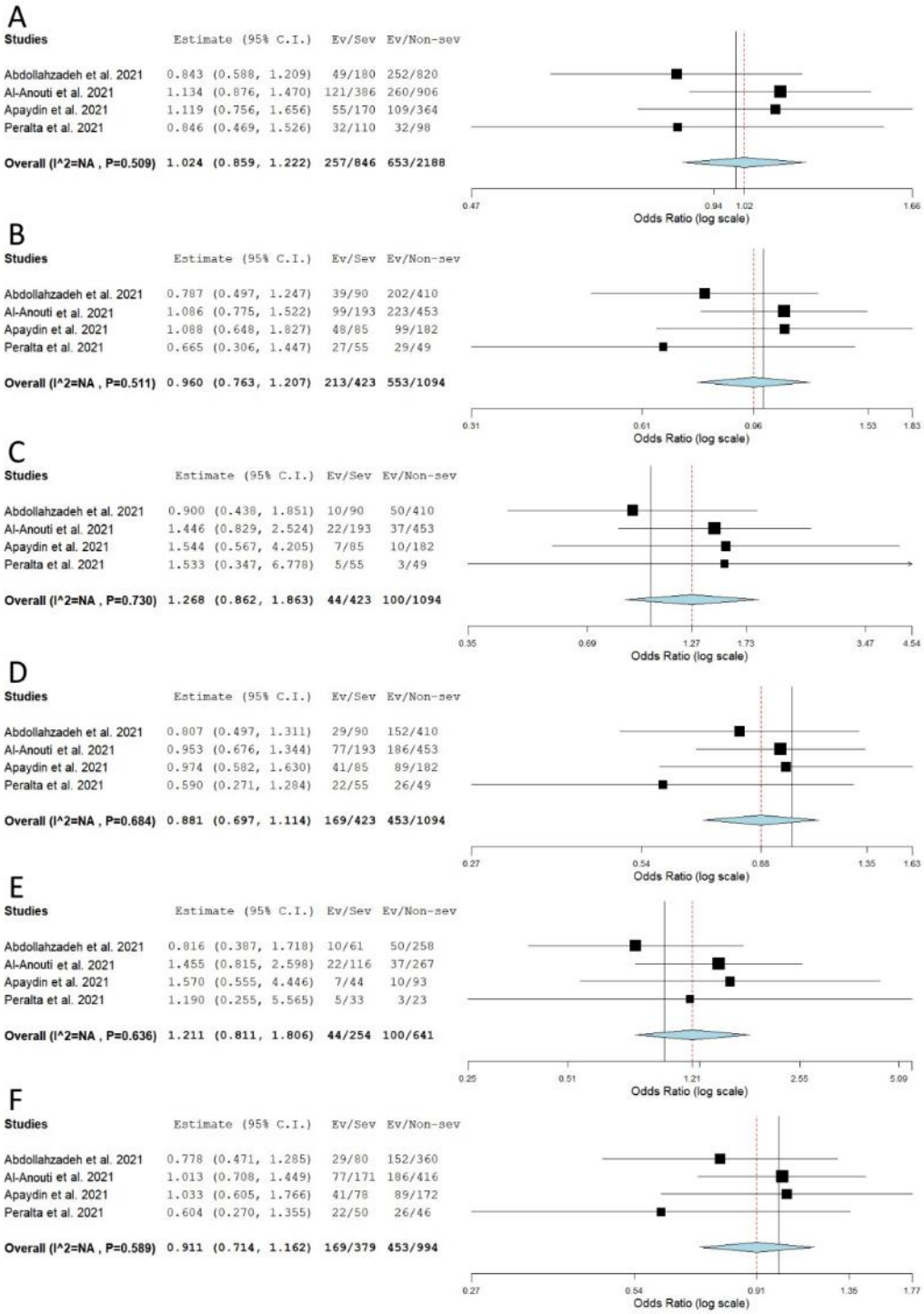
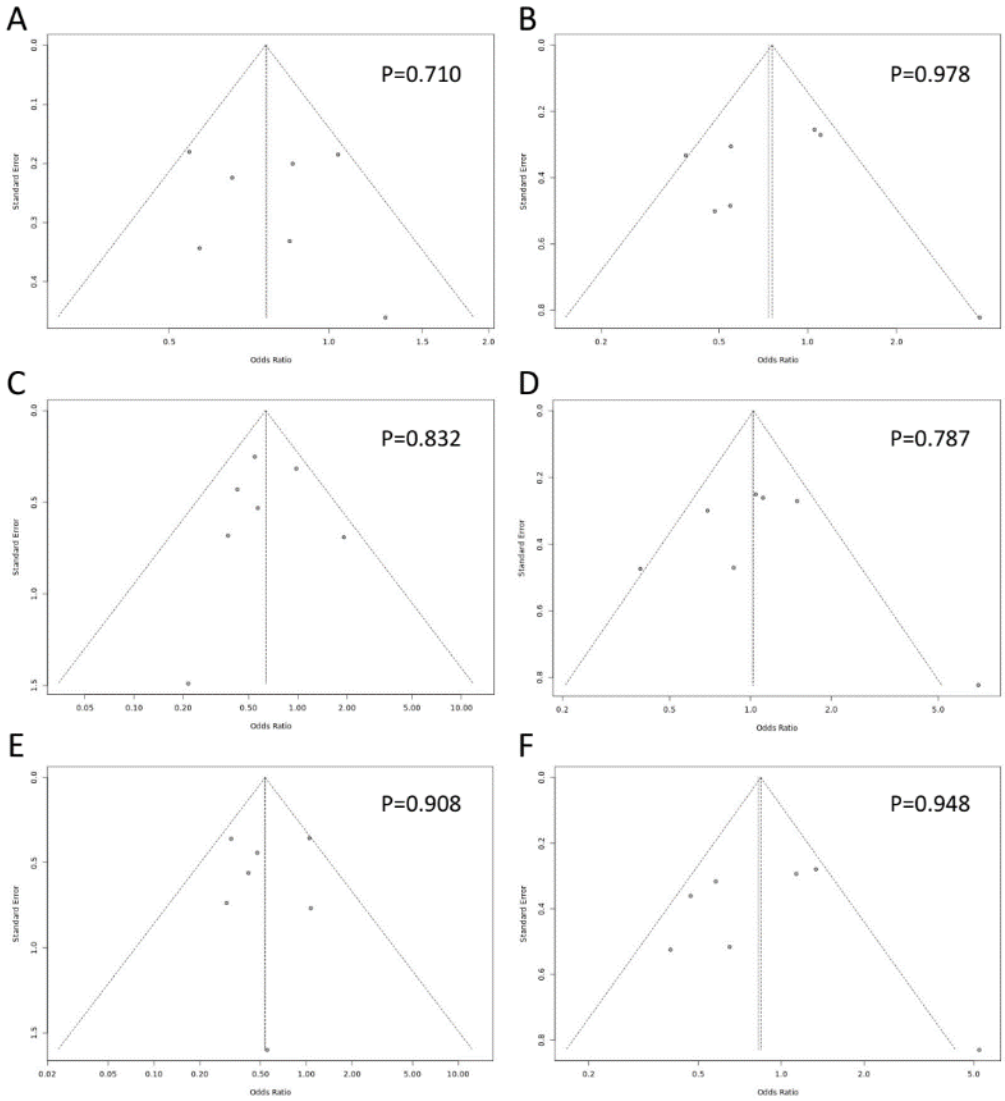


Supplementary Figure 5: Meta-analysis of the association between rs731236 in *VDR* and COVID-19 severity: comparison severe vs. non-severe. **A**) allelic model; **B**) dominant model; **C**) recessive model; **D**) overdominant model; **E**) GG vs. AA; **F**) AG vs. AA. The results of the included studies presented as ORs, with 95 % CI, and the overall effect with 95 % CI are shown in the forest plot. *P* values given are derived from heterogeneity tests.



Supplementary Figure 6: Funnel plots for meta-analyses of the association between rs1799752 in *ACE1* and COVID-19 severity: comparison severe vs. moderate. **A**) allelic model; **B**) dominant model; **C**) recessive model; **D**) overdominant model; **E**) II vs. DD; **F**) DI vs. DD. *P* values presented are derived from Egger's tests.

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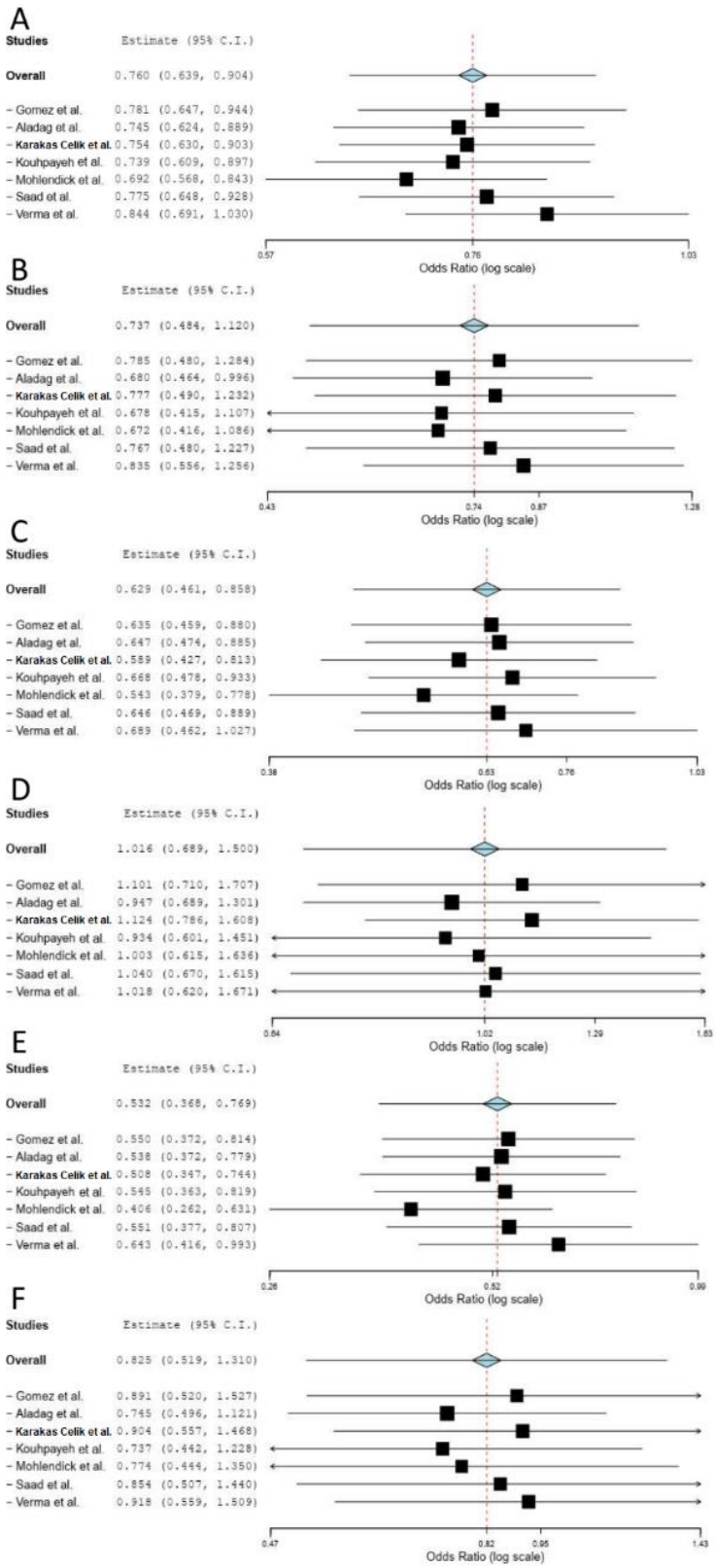

Supplementary Figure 7: Forest plots representing the results of sensitivity testing by leave-one-out meta-analysis of the association between rs1799752 in *ACE1* and COVID-19 severity: comparison severe vs. moderate. **A**) allelic model; **B**) dominant model; **C**) recessive model; **D**) overdominant model; **E**) II vs. DD; **F**) DI vs. DD. ORs with their 95 % CIs were used as risk estimates.

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Supplementary Table 1: Newcastle-Ottawa scale quality assessment of the studies included in the qualitative synthesis

Authors*	Year	Selection				Comparability	Outcome			Score
		Item 1	Item 2	Item 3	Item 4	Item 5	Item 6	Item 7	Item 8	
Gómez et al.	2020	*	*	*	*	*	*	*	*	8
Zhang et al.	2020	*	*	*	*	*	*	*	*	8
Abdollahzadeh et al.	2021	*	*	*			*	*	*	6
Akin et al.	2022	*	*	*	*	*	*	*	*	8
Aladag et al.	2021	*	*	*	*	*	*	*	*	8
Al-Anouti et al.	2021	*	*	*	*	**	*	*	*	9
Alghamdi et al.	2021	*	*	*	*	**	*	*	*	9
Apaydin et al.	2021	*	*	*	*	*	*	*	*	8
Cafiero et al.	2021	*	*	*	*	*	*	*	*	8
Cuesta-Llavona et al.	2021	*	*	*	*		*	*	*	7
Gómez et al.	2021	*	*	*	*	**	*	*	*	9
Gunal et al.	2021	*	*	*	*		*	*	*	7
Hubacek et al.	2021	*	*	*	*		*	*	*	7
Íñiguez et al.	2021	*	*	*	*	**	*	*	*	9
Karakaş Çelik et al.	2021	*	*	*	*		*	*	*	7
Kotur et al. (adults)	2021	*	*	*	*	**	*	*	*	9
Kouhpayeh et al.	2021	*	*	*	*	**	*	*	*	9
Mir et al.	2021	*	*	*	*		*	*	*	7
Möhlendick et al.	2021	*	*	*	*		*	*	*	7
Monticelli et al.	2021	*	*	*			*	*	*	6
Peralta et al.	2021	*	*	*	*		*	*	*	7
Ravikanth et al.	2021	*	*	*	*	**	*	*	*	9
Saad et al.	2021	*	*	*	*	**	*	*	*	9
Schönfelder et al.	2021a	*	*	*	*		*	*	*	7
Schönfelder et al.	2021b	*	*	*	*		*	*	*	7
Verma et al.	2021	*	*	*	*	**	*	*	*	9
Wulandari et al.	2021	*	*	*	*		*	*	*	7
Akbari et al.	2022	*	*	*	*	**	*	*	*	9
Akin et al.	2022	*	*	*	*	*	*	*	*	8
Wang et al.	2022	*	*	*	*		*	*	*	7

* References see main document