Tocilizumab in addition to standard of care in the management of COVID-19: a meta-analysis of RCTs

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[1]School of Medicine, University of Nairobi; [2]Cardiac Intensive Care Unit, The Heart Institute, Cincinnati Children's Hospital Medical Center, Cincinnati, OH, USA; [3]Starschema Inc., Office of Intramural Research, Arlington, VA, USA; [4]Department of Rheumatology, Stavanger University Hospital, Stavanger, Norway; [5]Section of Clinical Biochemistry, University of Verona, Verona, Italy. *Prof. Giuseppe Lippi is a senior author in this paper
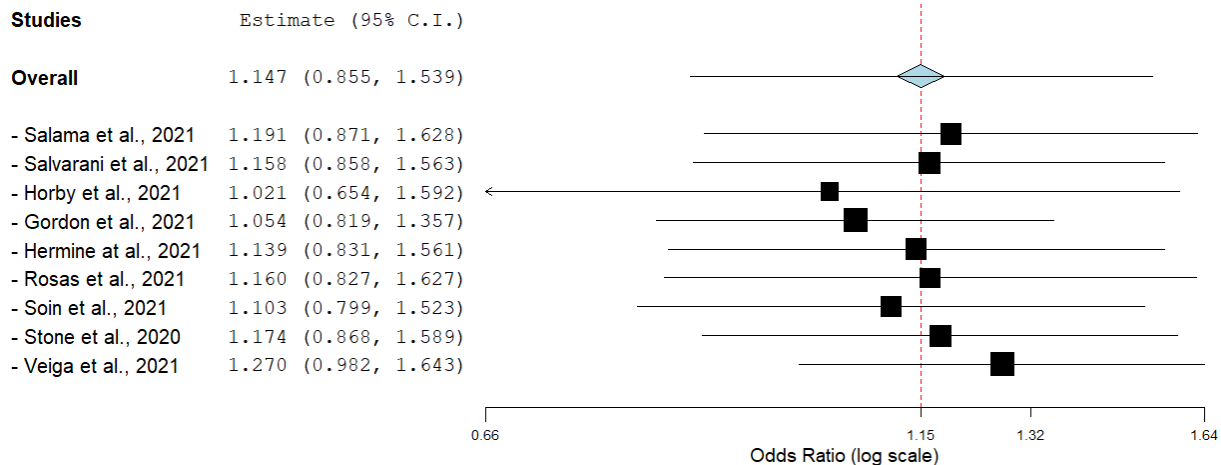
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SUPPLEMENTARY FILES

Table 1: Summary on use of steroids and mechanical ventilation
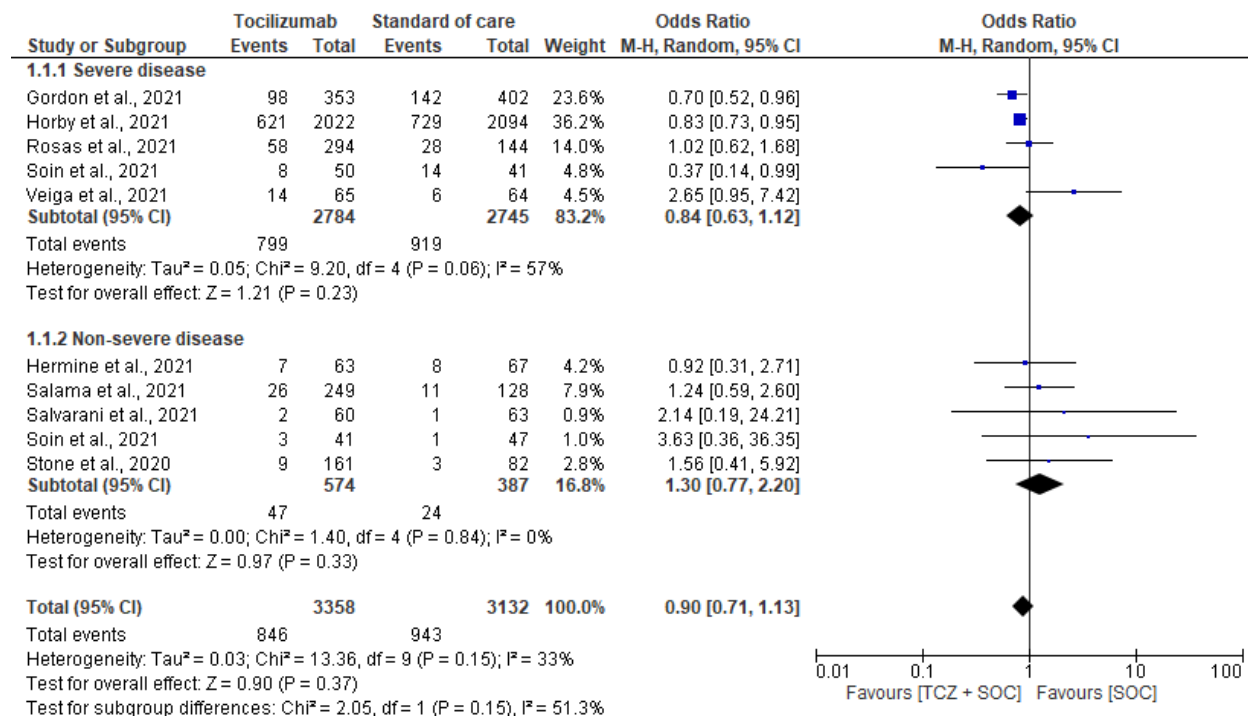
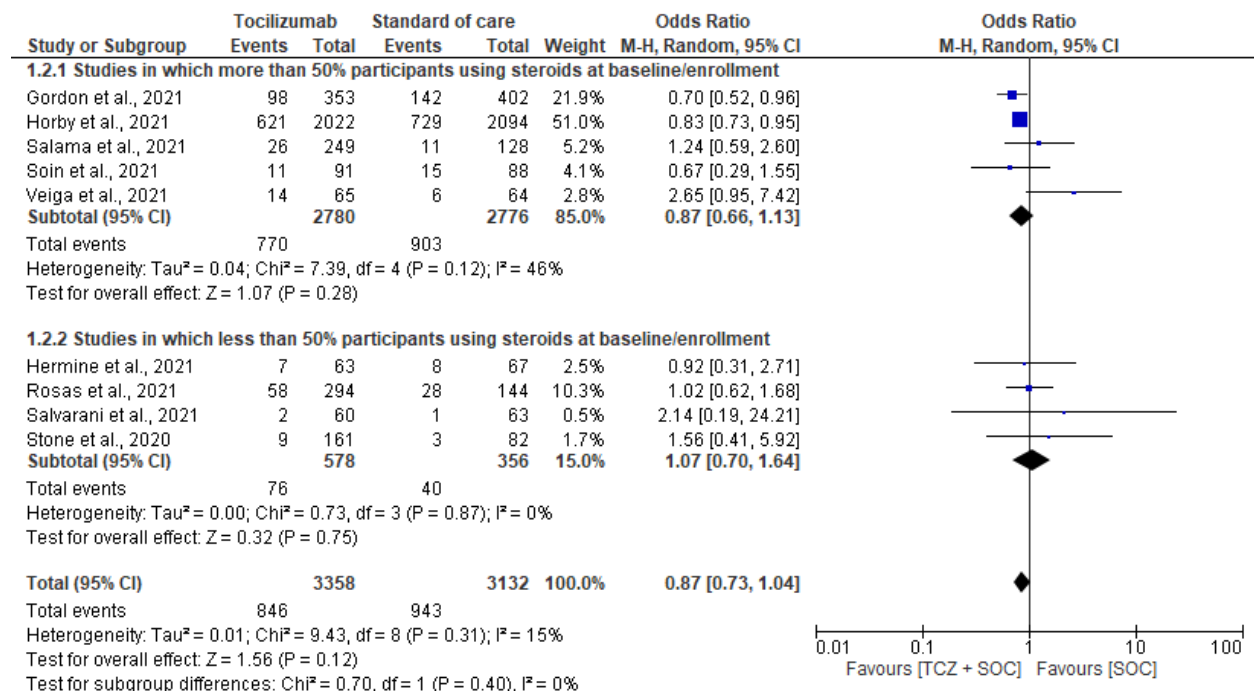| Study	Use of corticosteroids, n (%)		Use of Mechanical ventilation, n (%)	
	TCZ	SOC	TCZ	SOC
(Salvarani et al., 2021)	NA	NA	0	0
(Salama et al., 2021)	200 (80.3)	112 (87.5)	0	0
(Hermine et al., 2021)	21 (33)	41 (61)	0	0
(Rosas et al., 2021)	57 (19.4)	41 (28.5)	111 (37.8)	54 (37.5)
(Soin et al., 2021)	(85)	(89)	5 (10)	5 (10)
(Stone et al., 2020)	18 (11)	5 (6)	0	1 (1)
(Veiga et al., 2021)	45 (69)	47 (73)	11 (17)	10 (16)
(Gordon et al., 2021)	50 (14.2)	52 (12.9)	104 (29)	121 (30)
(Horby et al., 2021)	1664 (82)	1721 (82)	268 (13)	294 (14)

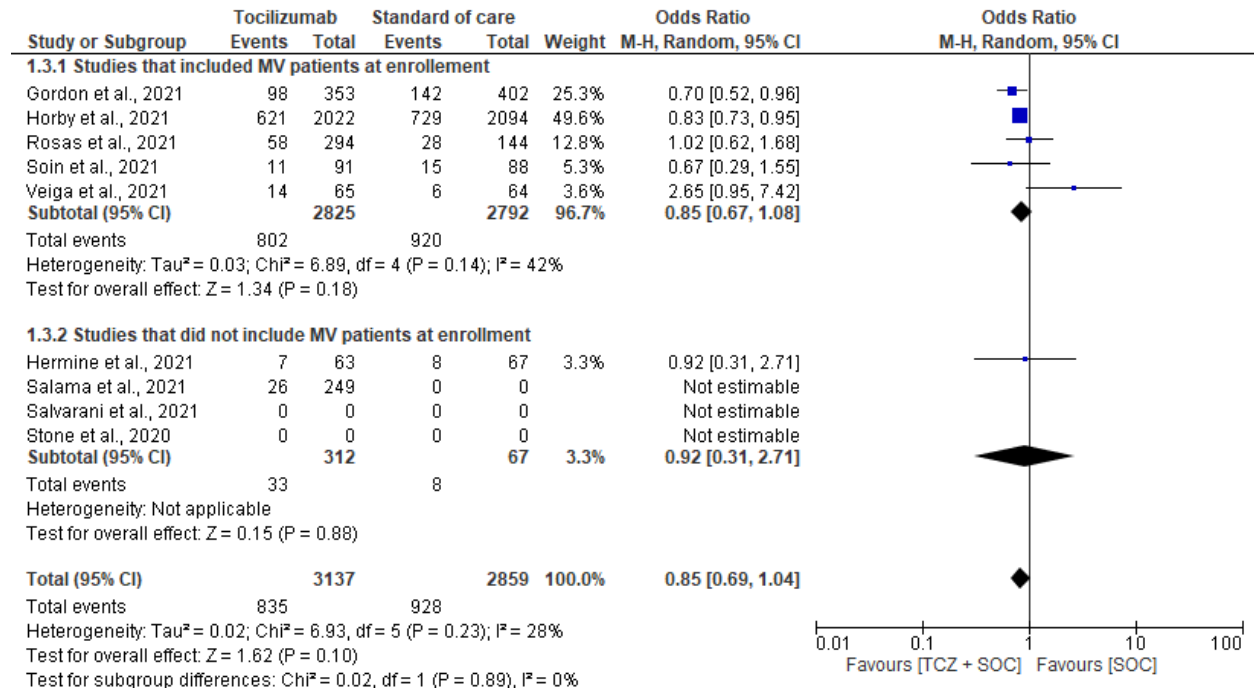**Figure 1:** Risk of bias summary

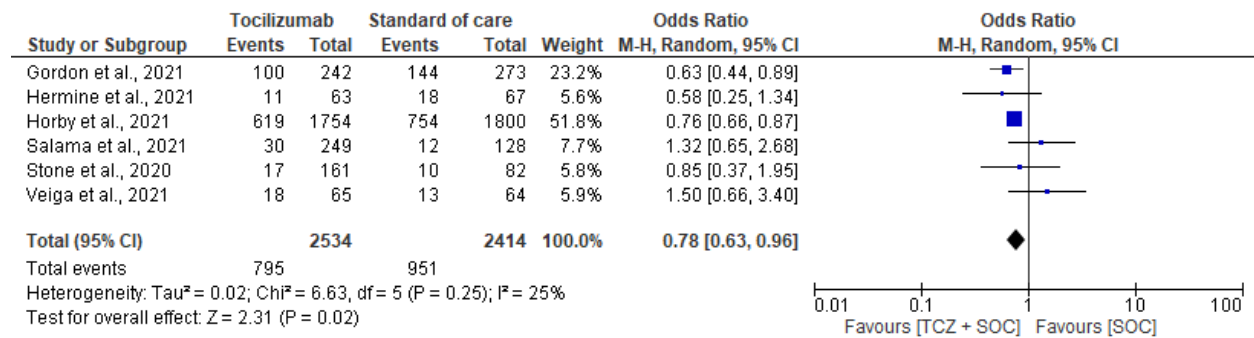**Figure 2:** Leave-one-out forest plot

Figure 3: Subgroup analysis for mortality based on severity of disease

Figure 4: Subgroup analysis for mortality based on percentage of participants on steroid use at enrollment

Figure 5: Subgroup analysis for mortality based on use of Mechanical ventilation (MV) at enrollment.

Study or Subgroup	Tocilizumab Events	Total	Standard of care Events	Total	Weight	Odds Ratio M-H, Random, 95% CI
Gordon et al., 2021	100	242	144	273	23.2%	0.63 [0.44, 0.89]
Hermine et al., 2021	11	63	18	67	5.6%	0.58 [0.25, 1.34]
Horby et al., 2021	619	1754	754	1800	51.8%	0.76 [0.66, 0.87]
Salama et al., 2021	30	249	12	128	7.7%	1.32 [0.65, 2.68]
Stone et al., 2020	17	161	10	82	5.8%	0.85 [0.37, 1.95]
Veiga et al., 2021	18	65	13	64	5.9%	1.50 [0.66, 3.40]
Total (95% CI)		**2534**		**2414**	**100.0%**	**0.78 [0.63, 0.96]**
Total events	795		951			

Heterogeneity: Tau² = 0.02; Chi² = 6.63, df = 5 (P = 0.25); I² = 25%
Test for overall effect: Z = 2.31 (P = 0.02)

Favours [TCZ + SOC]   Favours [SOC]

Figure 6: Forest plot for progression to mechanical ventilation or death