RECOVERY Collaborative Group 2021					
Aspirin in patients admitted to hospital with 4 COVID-19 (RECOVERY): a randomised, controlled, 5 open-label, platform trial (NCT04381936, MedRxiv, 08.06.2021)					
Methodology	**Population**		**Intervention**	**Control**	**Limitations**
Investigator-initiated, multicenter, randomised, controlled, open-label, platform trial Randomization 1:1 Duration of the study: 01/11/2020 – 21/03/2021	N=14892 Hospitalized patients with COVID-19. <u>Inclusion criteria:</u> clinically suspected or laboratory confirmed SARS-CoV-2 infection and no medical history that might, in the opinion of the attending clinician, put the patient at significant risk if they were to participate in the trial <u>Exclusion criteria:</u> <18 years, patients with known hypersensitivity to aspirin, a recent history of major bleeding, or currently receiving aspirin or another antiplatelet treatment		Ni=7351 aspirin (150 mg 1xd, until discharge)	Nc=7541 Usual care	– Detailed information on radiological or physiological outcomes was not collected – it cannot be excluded that reporting of thromboembolic and bleeding events might have been influenced by knowledge of treatment allocation. – Unstratified randomization; – No blinding; – Pre-print
	Mean age (SD) – yr		59.2 (14.1)	59.3 (14.3)	
	<70, (%)		77	77	
	≥70 to <80, (%)		16	1165 (15%)	
	≥80 (%)		7	8	
	Male sex, %		62	61	
	Number of days since symptom onset		9 (7-12)	9 (6-12)	
	Number of days since hospitalisation		1 (1-3)	2 (1-3)	
	Respiratory support received (%)	None/simle oxygen	67	67	
		Non-invasive ventilation	28	28	
		Invasive mechanical ventilation	5	5	
	Previous diseases (%)	Diabetes	22	22	
		Heart disease	11	10	
		Chronic lung disease	19	19	
		Severe liver disease	1	1	
		Severe kidney impairment	3	3	
	C-reactive protein, mg/L		88 (47-146)	91 (47-150)	
	Ferritin, ng/mL		76 (63-93)	76 (62-92)	
	Creatinine, umol/L		475 (205-1088)	489 (210-1083)	
	Main other treatment received (%)	Systemic corticosteroids	94	94	
		Dexamethasone	87	89	
		Azithromycin or other macrolide	27	27	
		Remdesivir	26	26	
		Colchicine	23	24	

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Results						
Outcome				**Intervention**	**Control**	**Statistical significance of differences**
event			**follow-up period**			**Relative parameter – rate ratio (95%CI)** / **Absolute parameter (95%CI)**
Mortality, n/N (%)			28 days	1222/7351 (17)	1299/7541 (17)	0.96 (0.90; 1.03) / -
Median time to being discharged alive, days			-	8 (5 to >28)	9 (5 to >28)	/ -
Discharged from hospital within 28 days, n/N (%)			28 days	5496/7351 (75%)	5548/7541 (74%)	**1.06 (1.02; 1.10)** / ND
						^1.02 (0.997; 1.036) / -
Receipt of invasive mechanical ventilation or death*, n/N (%)		Overall		1473/6993 (21%)	1569/7169 (22%)	0.96 (0.90; 1.03) / -
		Invasive mechanical ventilation		772/6993 (11%)	829/7169 (12%)	0.95 (0.87;1.05) / -
		Death		1076/6993 (15%)	1141/7169 (16%)	0.97 (0.90;1.04) / -
Successful cessation of invasive mechanical ventilation, n/N (%)				135/358 (38%)	135/372 (36%)	1.08 (0.85-1.37) / -
Renal replacement therapy, n/N (%)				273/7291 (4%)	282/7480 (4%)	0.99 (0.84-1.17) / -
Any thrombotic events				339 (4.6%)	396 (5.3%)	0.88 (0.76-1.01) / -
Any major bleeding				115 (1.6%)	76 (1.0%)	**1.55 (1.16-2.07)** / **NNH=180 (109; 513)**
Supgroup analysis**						
Mortality, n/N (%)	Age	<70	28 days	578/5658 (10.2%)	619/5786 (10.7%)	0.95 (0.85−1.07) / -
		≥70 to <80		376/1163 (32.3%)	401/1165 (34.4%)	0.94 (0.81−1.08) / -
		≥80		268/530 (50.6%)	279/590 (47.3%)	1.13 (0.95−1.34) / -
	Respiratory support at randomization	No ventilator support		537/4936 (10.9%)	549/5036 (10.9%)	1.00 (0.89−1.13) / -
		Non-invasive ventilation		539/2057 (26.2%)	592/2133 (27.8%)	0.93 (0.83−1.05) / -
		Invasive mechanical ventilation		146/358 (40.8%)	158/372 (42.5%)	0.97 (0.77−1.22) / -
	Use of corticosteroids	Yes		1141/6906 (16.5%)	1227/7109 (17.3%)	0.95 (0.88−1.03) / -
		No		79/441 (17.9%)	71/425 (16.7%)	1.09 (0.79−1.51) / -
	Days since symptom onset	≤7		493/2424 (20.3%)	563/2581 (21.8%)	0.93 (0.82−1.05) / -
		>7		729/4923 (14.8%)	735/4954 (14.8%)	1.00 (0.90−1.11) / -
Authors' conclusion: In patients hospitalised with COVID-19, aspirin was not associated with reductions in 28-day mortality or in the risk of progressing to invasive mechanical ventilation or death but was associated with a small increase in the rate of being discharged alive within 28 days.						

*Analyses exclude those on invasive mechanical ventilation at randomization; ** also no statistically significant difference in terms of sex and ethnicity; ^Relative risk; Agency's own calculatios