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Richmond Hospital (part of Vancouver Coastal Health)	Jennifer Grant
Royal Alexandra Hospital	Ameeta Singh
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	Elizabeth Parfitt
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Royal Victoria Regional Health Centre	Giulio Diodato
Scarborough Health Network (Birchmount Hospital)	Susan John
	Jessica Keen
	Vishal Joshi
Scarborough Health Network (Centenary Hospital)	Susan John
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Scarborough Health Network (General Hospital)	Susan John
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St. Paul's Hospital (Vancouver)	Natasha Press
	William Connors
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St. Joseph's Health Centre (Toronto)	Kevin Schwartz
	Peter Mitoff
St. Michael's Hospital	Darrell Tan
	John Marshall
Sunnybrook Hospital	Rob Fowler
	Nick Daneman
The Ottawa Hospital – Civic Campus	Shane English
The Ottawa Hospital – General Campus	Shane English
Thunder Bay Regional Health Sciences Centre	Greg Gamble
Trillium Health Partners – Credit Valley Site	Christopher Graham
	Tiffany Chan

Trillium Health Partners – Mississauga Site	Christopher Graham
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Toronto Western Hospital	Bryan Coburn
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	Erika MacIntyre
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	Terry Wuerz
Vancouver General Hospital	Allison Mah
William Osler Health – Brampton Civic Hospital	Alexandra Binnie
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Table S1: Site Investigators

Other Collaborators:

Barbara Antuna-Puente, Eneko Arhanchiague, Pascale Arlotto, Zeeshan Aslam, Fiona Auld, Mahin Baqi, David Bellemare, Alexandra Binnie, Isaac Bogoch, Vikas Chaubey, William Connors, Olivier Costerousse, Giulio DiDiodato, Charlene Fell, Greg Gamble, Stephen Gilck, Galo Ginocchio, Stephanie Go, Christopher Graham, Kaveri Gupta, Brent Guy, Amila Heendeniya, Holly Hoang, Susan John, Christopher Kandel, Anthony Ladelfa, Francois Lellouche, Allison Mah, Keren Mandelzweig, Sanjay Manocha, Caitlyn Marek, Rosa Myrna Marticonrena, Stephanie Matte, Marc Messier-Peet, Patrick Mitchell, Elliott Owen, Elizabeth Parfitt, Lisa Patterson, Shaqil Peermohamed, Germain Poirier, Susan Poutanen, Jeff Powis, Natasha Press, Valerie Sales, Maureen Taylor

	Remdesivir (n=634)	Standard of care (n=647)	RR (95% CI) Or Difference in means/medians (95% CI)	Risk Difference (95% CI)	p-value
Need for new mechanical ventilation for Survivors, n (%)	23 (4.9)	49 (10.5)	0.47 (0.29 – 0.75)	-5.6% (-9% - -2.2%)	0.0013
Need for new mechanical ventilation, Non- Survivors, n (%)	22 (22.4)	39 (31.4)	0.71 (0.45 – 1.12)	-9% (-20% - 2.6%)	0.14
New hepatic dysfunction, Survivors, n (%)	74 (14.6)	67 (13.5)	1.08 (0.8 – 1.47)		0.60
New hepatic dysfunction, Non- Survivors, n(%)	8 (6.8)	21 (14.7)	0.47 (0.21 – 1.01)		0.04
New dialysis, Survivors, n (%)	5 (0.99)	2 (0.41)	2.44 (0.48 – 12.52)		0.27
New dialysis, Non-Survivors, n (%)	11 (9.6)	13 (9.1)	1.06 (0.49 – 2.280)		0.87

Table S2: Data for key secondary outcomes, presented across survivors and non-survivors.

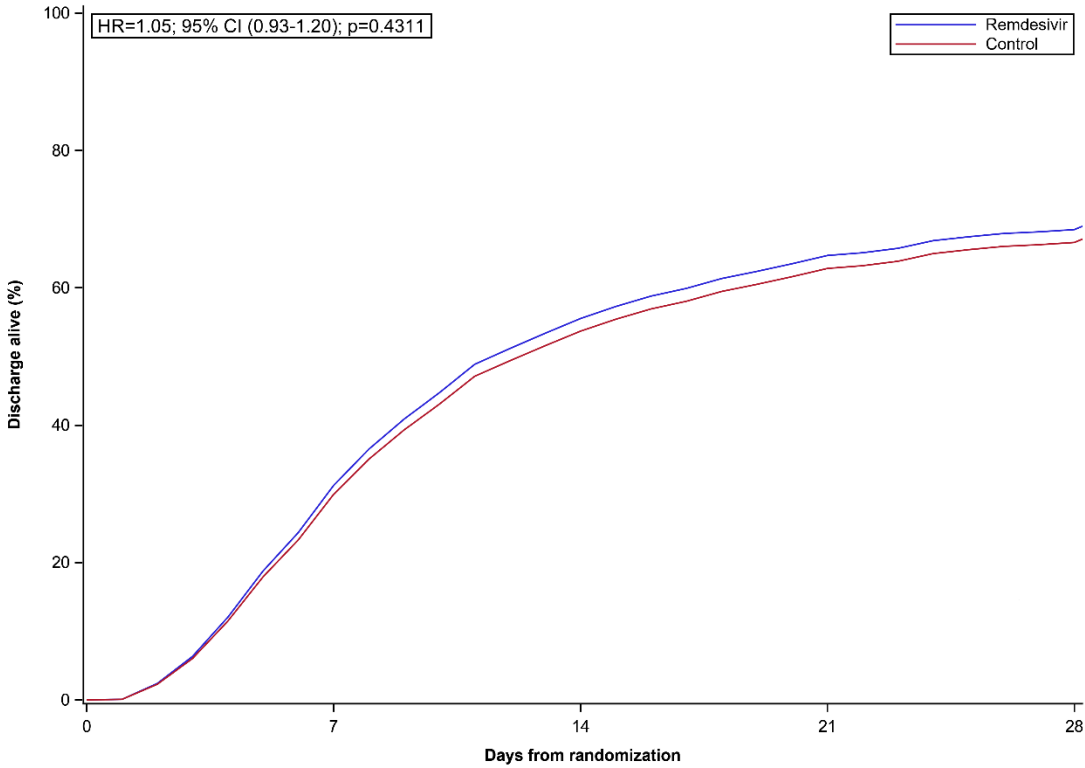


Figure S1: Cumulative Incidence function for days from randomization with competing risk for mortality and censored at 28 days for those still in the hospital.

		CATCO Patients Included in the WHO Solidarity Trial		CATCO Patients Enrolled Separate from (after) the WHO Solidarity Trial	
In-hospital Mortality	Respiratory support day 1	Remdesivir (n=455)	Standard of care (n=488)	Remdesivir (n=170)	Standard of Care (n=153)
	No Oxygen therapy	4/57 (7.02%)	7/44 (15.91%)	3/11 (27.27%)	1/10 (10%)
	Oxygen therapy	26/234 (11.11%)	47/271 (17.34%)	10/96 (10.42%)	11/89 (12.36%)
	HFNC	34/105 (32.38%)	41/110 (37.27%)	11/44 (25%)	11/43 (25.58%)

		CATCO Patients Included in the WHO Solidarity Trial		CATCO Patients Enrolled Separate from (after) the WHO Solidarity Trial	
In-hospital Mortality	Respiratory support day 1	Remdesivir (n=455)	Standard of care (n=488)	Remdesivir (n=170)	Standard of Care (n=153)
	Non-invasive	7/17 (41.18%)	4/19 (21.05%)	3/5 (60%)	2/4 (50%)
	Invasive	15/42 (35.71%)	19/45 (42.22%)	4/14 (28.57%)	2/7 (28.57%)
Need for Invasive Ventilation not ventilated at baseline	Respiratory support day 1	Remdesivir (n=413)	Standard of care (n=443)	Remdesivir (n=157)	Standard of Care (n=148)
	No Oxygen therapy	1/57 (1.75%)	3/44 (6.82%)	1/12 (8.33%)	1/10 (10%)
	Oxygen therapy	11/235 (4.68%)	29/271 (10.7%)	3/96 (3.13%)	12/91 (13.19%)
	HFNC	12/105 (11.43%)	30/109 (27.52%)	13/44 (29.55%)	8/43 (18.6%)
	Non-invasive	3/16 (18.75%)	4/19 (21.05%)	2/5 (40%)	2/4 (50%)
Composite of need for invasive ventilation or in-hospital death in those not ventilated at baseline	Respiratory support day 1	Remdesivir (n=412)	Standard of care (n=444)	Remdesivir (n=157)	Standard of care (n=147)
	No Oxygen therapy	5/56 (8.93%)	9/44 (20.45%)	4/12 (33.33%)	2/10 (20%)
	Oxygen therapy	31/234 (13.25%)	66/271 (24.35%)	11/96 (11.46%)	19/90 (21.11%)
	HFNC	42/105 (40%)	53/110 (48.18%)	19/44 (43.18%)	15/43 (34.88%)
	Non-invasive	7/17 (41.18%)	8/19 (42.11%)	3/5 (60%)	2/4 (50%)

Table S3: Results for SOLIDARITY and CATCO randomized patients, by baseline level of respiratory support