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Supplementary Tables

Table S1. Changes in SpO2 for 34 COVID-19 patients treated with IVM, doxycycline and zinc, as reported by Stone et al. (2022) [1]. For the elapsed times of x=12, 24, and 48 hours after first IVM dose, the SpO2 value shown for a given patient is that at the latest post-treatment time ≤ x. All pre-treatment SpO2 values are from within one hour before treatment. All patients were on room air (without oxygen supplementation) and all had pretreatment SpO2 ≤ 93%.

Age	Sex	SpO2 (%)		
		Pre-treatment	at +12 hours	at +24 hours	at +48 hours
25	M	79	92	93	93
32	F	88	95	95	95
35	M	87	95	95	95
37	M	92	99	99	98
38	F	76	88	89	91
40	F	93	-	99	99
42	M	90	90	90	93
44	F	89	93	93	93
44	M	87	93	93	94
45	M	83	96	95	95
49	F	66	90	90	90
50	F	89	93	93	93
50	M	92	-	95	95
52	F	90	93	93	93
55	F	82	-	-	91
55	M	81	-	88	92
56	F	87	93	94	94
57	F	84	-	89	88
58	M	85	94	94	94
58	M	89	95	95	95
59	M	79	82	85	85
59	M	92	93	93	93
61	F	87	-	98	99
61	F	92	-	96	96
62	M	88	89	93	91
62	M	91	94	94	94
66	M	85	84	84	84
66	M	88	94	94	94
68	M	89	95	95	95
68	M	90	-	96	96
71	F	89	-	94	95
75	M	80	92	90	90
80	F	85	91	91	91
≥90	M	88	95	98	98

Table S2. Changes in SpO2 for 19 COVID-19 patients treated with IVM, doxycycline and zinc as reported by Hazan et al. (2021) [2]. The data shown are for the 19 of 24 patients who had SpO2 values recorded within 24 hours after first IVM dose, and whose pre-treatment SpO2 was ≤ 93%; this excludes one patient with a pre-treatment SpO2 value of 97%; the rest actually all have pretreatment SpO2 values ≤ 90%). All patients were on room air (without oxygen supplementation).

Age	Sex	SpO2 (%)	
		Pre-treatment	within +24 hours
66	M	90.0	94.0
62	M	77.0	87.0
75	M	88.0	96.0
66	F	89.0	95.0
43	F	88.0	94.0
62	M	86.5	91.0
57	M	88.0	96.0
94	F	88.0	94.0
63	F	90.0	96.0
47	M	84.0	91.0
69	F	88.0	91.0
69	M	88.0	91.0
46	F	87.0	94.0
86	M	88.0	95.0
59	F	90.0	95.0
92	M	85.0	91.0
63	M	90.0	96.0
57	M	73.0	90.0
87	M	90.0	95.0

Table S3. Changes in SpO2 for 19 COVID-19 patients treated with IVM, zinc and vitamin C, with some also given azithromycin and hydroxychloroquine, as reported by Babalola et al. (2021) [3,4]. The data shown are for the 19 patients with pre-treatment SpO2 values ≤ 93% and who were on room air (without oxygen supplementation).

Age	Sex	SpO2 (%)		
		Pre-treatment	at +1 day	at +2 days
29	M	93	92	93
34	M	92	94	94
60	F	92	94	97
34	m	90	90	90
33	F	78	90	97
43	M	92	94	96
32	M	92	90	94
23	M	90	94	94
19	F	90	92	92
21	F	90	90	92
48	M	89	99	88
33	F	92	92	92
24	M	92	92	94
32	F	92	92	92
32	M	90	90	94
89	M	91	92	94
56	M	92	96	97
41	F	92	93	94
32	M	76	89	89

Table S4. Changes in SpO2 for 26 COVID-19 patients treated without IVM, using different combinations of lopinavir/ritonavir, remdesivir, azithromycin, enoxaparin, zinc sulfate and vitamin C, as reported by Thairu et al. (2022) [4,5]. The data shown are for the 26 patients with pre-treatment SpO2 values ≤ 93%. Those (7 patients) who had oxygen supplementation are highlighted in yellow, and one on ventilation is highlighted in pink. The other 18 were on room air.

| Age | Sex | SpO2 (%) | | |
		Pre-treatment	at +1 day	at +2 days
45	F	88	88	88
35	F	88	88	87
63	F	81	81	82
47	M	91	88	85
52	M	91	91	91
41	F	88	88	84
45	F	87	87	87
54	M	88	88	88
36	F	88	87	88
54	F	84	84	83
54	M	88	88	88
38	F	87	88	88
55	M	84	84	84
32	M	82	83	82
58	M	88	88	87
58	M	88	88	88
44	M	88	88	88
32	M	88	88	88
25	M	88	88	88
49	M	86	88	88
26	M	88	85	88
59	M	88	87	87
45	F	88	88	89
39	M	84	84	84
45	M	88	85	85
35	M	88	84	84

Table S5. Means and standard errors of spo2 changes from day 0 to day 1 and from day 0 to day 2 for the full set of 26 patients from Thairu et al. (2022) and for the subset of 18 patients who were on room air (without oxygen supplementation or ventilation).

| | | Change in SpO2 (%) | |
		Day 0 to Day 1	Day 0 to Day 2
All 26 patients	Mean	-0.423	-0.615
	Standard Error	0.267	0.347
The 18 patients on room air	Mean	-0.500	-0.556
	Standard Error	0.381	0.459

References

1. Stone, J.C.; Ndarukwa, P.; Scheim, D.E.; Dancis, B.M.; Dancis, J.; Gill, M.G.; Aldous, C. Changes in SpO2 on Room Air for 34 Severe COVID-19 Patients after Ivermectin-Based Combination Treatment: 62% Normalization within 24 Hours. *Biologics* **2022**, *2*, 196-210.
2. Hazan, S.; Dave, S.; Gunaratne, A.W.; Dolai, S.; Clancy, R.L.; McCullough, P.A.; Borody, T.J. Effectiveness of ivermectin-based multidrug therapy in severely hypoxic, ambulatory COVID-19 patients. *Future Microbiology* **2022**, *17*, 339-350.
3. Babalola, O.E.; Ndanusa, Y.; Adesuyi, A.; Ogedengbe, O.J.; Thairu, Y.; Ogu, O. A Randomized Controlled Trial of Ivermectin Monotherapy Versus HCQ, IVM, and AZ Combination Therapy in Covid-19 Patients in Nigeria. *J Infect Dis Epidemiol* **2021**, *7*, 233.
4. Babalola, O.E.; (Bingham University, New Karu, Nigeria). Personal communications, 28 February 2022, 26 January, 2024.
5. Thairu, Y.; Babalola, O.E.; Ajayi, A.A.; Ndanusa, Y.; Ogedengbe, J.O.; Omede, O. A comparison of Ivermectin and Non Ivermectin based regimen for covid 19 in Abuja: effects on virus clearance, Days-to-Discharge and Mortality. *Journal of Pharmaceutical Research International* **2022**, *34*, 1-19.