

**Effect of regdanvimab on mortality in patients infected with SARS-CoV-2 delta variants:
A propensity score-matched cohort study**

¹Soyoon Hwang*, ²Nan Young Lee*, ¹Eunkyung Nam, ²Yu Kyung Kim, ³Shin-Woo Kim,
³Hyun-Ha Chang, ³Yoonjung Kim, ³Sohyun Bae, ⁴Juhwan Jeong, ⁵Jae-Ho Shin, ⁶Guehwan
Jang, ⁶Changhee Lee, ¹Ki Tae Kwon

* Soyoon Hwang and Nan Young Lee contributed equally to this manuscript as co-first authors.

¹Division of Infectious Diseases, Department of Internal Medicine, School of Medicine, Kyungpook National University, Kyungpook National University Chilgok Hospital, Daegu, Republic of Korea

²Department of Clinical Pathology, School of Medicine, Kyungpook National University, Daegu, Republic of Korea

³Division of Infectious Diseases, Department of Internal Medicine, School of Medicine, Kyungpook National University, Kyungpook National University Hospital, Daegu, Republic of Korea

⁴Division of Infectious Diseases, Department of Internal Medicine, Kyungpook National University Chilgok Hospital, Daegu, Republic of Korea

⁵KNU NGS core facility, Kyungpook National University, Daegu, Republic of Korea

⁶College of Veterinary Medicine and Virus Vaccine Research Center, Gyeongsang National University, Jinju, Republic of Korea

***Corresponding authors:**

Ki Tae Kwon, MD, PhD, <https://orcid.org/0000-0003-4666-0672>

Department of Internal Medicine, School of Medicine, Kyungpook National University,
Kyungpook National University Chilgok Hospital

807, Hoguk-ro, Buk-gu, Daegu, Republic of Korea

Tel: 82-53-200-2616

Fax: 82-53-200-2027

Email: ktkwon@knu.ac.kr

Changhee Lee, DVM, PhD, <https://orcid.org/0000-0002-5930-5461>

College of Veterinary Medicine and Virus Vaccine Research Center, Gyeongsang National University

501, Jinju-daero, Jinju, Gyeongsangnam-do, Republic of Korea

Email: changhee@gnu.ac.kr

Supplementary table 1. Clinical characteristics before propensity matching score

Variable	Total (N = 492)	Use of regdanvimab (N = 262)	No use of regdanvimab (N = 230)	P-value
Male	284(57.7%)	154(58.8%)	130(56.5%)	0.613
Age				
50 <	178(36.2%)	97(27.0%)	81(35.2%)	
50 ~ 59	90(18.3%)	54(20.6%)	36(15.7%)	
60 ~ 69	123(25.0%)	66(25.2%)	57(24.8%)	0.302
70 ~ 79	66(13.4%)	29(11.1%)	37(16.1%)	
80 ≥	35(7.1%)	16(6.1%)	19(8.3%)	
Body mass index ≥ 30 kg/m ²	52(10.6%)	35(13.4%)	17(7.4%)	0.032
Medical comorbidities				
Myocardial infarction	17(3.5%)	10(3.8%)	7(3.0%)	0.639
Heart failure	7(1.4%)	2(0.9%)	5(2.2%)	0.260
Cardiovascular disease	3(0.6%)	3(1.1%)	0(0.0%)	0.252
Neurovascular disease	28(5.7%)	15(5.7%)	13(5.7%)	0.972
Chronic obstructive pulmonary disease	5(1.0%)	5(1.9%)	0(0.0%)	0.064
Connective tissue disease	12(2.4%)	8(3.1%)	4(1.7%)	0.346
Chronic liver disease	15(3.0%)	11(4.2%)	4(1.7%)	0.113
Diabetes	90(18.3%)	58(22.1%)	32(13.9%)	0.019
Chronic kidney disease	17(3.5%)	10(3.8%)	7(3.0%)	0.639
Solid tumor				
Localized	48(9.8%)	24(9.2%)	24(10.4%)	0.683
Metastatic	9(1.8%)	6(2.3%)	3(1.3%)	
Vaccination status				
None	292(59.3%)	179(68.3%)	113(49.1%)	P<0.001
One dose	75(15.2%)	25(9.5%)	50(21.7%)	P<0.001
Two-dose	120(24.4%)	54(20.6%)	66(28.7%)	0.037
Three-dose	5(1.0%)	4(1.5%)	1(0.4%)	0.378
Severity on admission				
Mild	391(79.5%)	195(74.4%)	196(85.2%)	0.003
Moderate	101(20.5%)	67(25.6%)	34(14.8%)	
Fever (temperature ≥ 37.5°C)	227(46.1%)	127(48.5%)	100(43.5%)	0.267
Symptoms				
Dyspnea	80(16.3%)	46(17.6%)	34(14.8%)	0.405
Cough	239(48.6%)	130(49.6%)	109(47.4%)	0.622
Diarrhea	18(3.7%)	11(4.2%)	7(3.0%)	0.496
Sputum	98(19.9%)	50(19.1%)	48(20.9%)	0.621
Sore throat	112(22.8%)	52(19.8%)	60(26.1%)	0.100

Fatigue	10(2.0%)	7(2.7%)	3(1.3%)	0.349
Myalgia	108(22.0%)	56(21.4%)	52(22.6%)	0.741
Nausea	3(0.6%)	2(0.8%)	1(0.4%)	1
Pneumonia at admission	106(21.5%)	68(26.0%)	38(16.5%)	0.011

Supplementary table 2. Clinical outcomes before propensity matching score

Variable	Total (N = 492)	Use of regdanvimab (N = 262)	No use of regdanvimab (N = 230)	<i>P</i> -value
Use of oxygen therapies	64(13.0%)	28(10.7%)	36(15.7%)	0.102
Use of high flow nasal cannula	28(5.7%)	9(3.4%)	19(8.3%)	0.021
Use of mechanical ventilation	4(0.8%)	1(0.4%)	3(1.3%)	0.344
Use of intensive care units	23(4.7%)	8(3.1%)	15(6.5%)	0.250
Worst severity during hospitalization				<i>P</i> <0.001
Asymptomatic	2(0.4%)	2(0.8%)	0(0.0%)	
Mild	256(52.0%)	107(40.8%)	149(64.8%)	
Moderate	165(33.5%)	121(46.2%)	44(19.1%)	
Severe	58(11.8%)	31(11.8%)	27(11.7%)	
Critical	11(2.2%)	1(0.4%)	10(4.3%)	
Mortality	9(1.8%)	1(0.4%)	8(3.5%)	0.015
30days Mortality	8(1.6%)	0(0.0%)	8(3.5%)	0.002
Severe/Critical or mortality	69(14.0%)	32(12.2%)	37(16.1%)	0.217
Use of additional therapeutic agents				
Remdesivir	50(10.2%)	25(9.5%)	25(10.9%)	0.627
Dexamethasone	66(13.4%)	35(13.4%)	31(13.5%)	0.969

Supplementary table 3. Propensity score matching standard mean difference

Variable	Before PSM SMD	After PSM SMD
Distance	0.5531	0.0127
Age		
50 <	0.0374	0.0219
50 ~ 59	0.1226	0.0392
60 ~ 69	0.0094	-0.0853
70 ~ 79	-0.1599	0.0000
80 ≥	-0.0900	0.0442
Severity on admission	0.2469	0.0605
Vaccination one dose	-0.4152	0.0000
Vaccination two dose + three dose	-0.1684	0.0127