

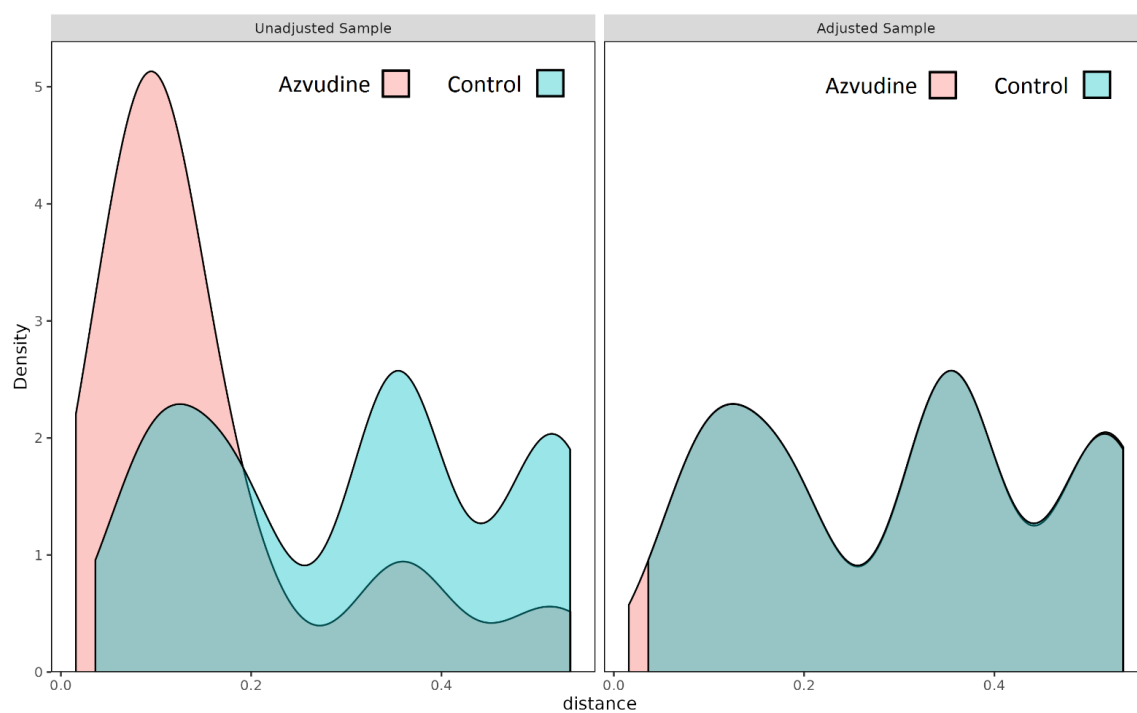


Figure S1 Probability density distribution chart of two groups before and after PSM.

Table S1 Baseline characteristics of hospitalized COVID-19 patients

Characteristics	Total (n=697)	Azvudine (n=567)	Control (n=130)	Statistic	P
Age (years), median (IQR)	70.00 (60.00, 81.00)	70.00 (60.50, 81.00)	69.00 (56.25, 77.75)	Z=-2.060	0.039*
BMI (kg/m ²), median (IQR)	22.49 (20.60, 24.34)	22.60 (20.55, 24.45)	22.41 (20.77, 24.19)	Z=-0.601	0.548
Gender, n (%)					
Male	407 (58.39)	335 (59.08)	72 (55.38)	$\chi^2=0.595$	0.440
Female	290 (41.61)	232 (40.92)	58 (44.62)		
Severity at admission, n (%)					
Non-severe	602 (86.37)	478 (84.30)	124 (95.38)	$\chi^2=11.031$	<0.001*
Severe	95 (13.63)	89 (15.70)	6 (4.62)		
Time of COVID-19 symptoms onset to hospital admission, n (%)					
0–5 days	381 (54.66)	302 (53.26)	79 (60.77)	$\chi^2=2.404$	0.121
>5 days	316 (45.34)	265 (46.74)	51 (39.23)		
COVID-19 vaccination status, n (%)					
Unvaccinated	202 (28.98)	174 (30.69)	28 (21.54)	$\chi^2=4.301$	0.038*
Vaccinated	495 (71.02)	393 (69.31)	102 (78.46)		
Smoking, n (%)					
No	580 (83.21)	475 (83.77)	105 (80.77)	$\chi^2=0.684$	0.408
Yes	117 (16.79)	92 (16.23)	25 (19.23)		
Comorbidities, n (%)					
Diabetes	174 (24.96)	149 (26.28)	25 (19.23)	$\chi^2=2.804$	0.094
Hypertension	138 (19.8)	114 (20.11)	24 (18.46)	$\chi^2=0.180$	0.671
Chronic lung disease	67 (9.61)	59 (10.41)	8 (6.15)	$\chi^2=2.200$	0.138
Chronic liver disease	33 (4.73)	28 (4.94)	5 (3.85)	$\chi^2=0.280$	0.597
Chronic kidney disease	87 (12.48)	73 (12.87)	14 (10.77)	$\chi^2=0.429$	0.512
Cancer	185 (26.54)	153 (26.98)	32 (24.62)	$\chi^2=0.304$	0.581
Concomitant drug treatment status, n (%)					
Systemic steroid	509 (73.03)	457 (80.60)	52 (40.00)	$\chi^2=88.497$	<0.001*
Immunomodulators	54 (7.75)	52 (9.17)	2 (1.54)	$\chi^2=8.620$	0.003*
Antibiotics	513 (73.6)	439 (77.43)	74 (56.92)	$\chi^2=22.878$	<0.001*

*, P<0.05.

Table S2 Subgroup analysis of clinical effectiveness for the composite outcome of disease progression among azvudine versus SOC recipients

Covariates	N	HR (95% CI)	P value	P for interaction
Overall	260	0.08 (0.01 to 0.62)	0.015	
Gender				0.998
Male	144	0.12 (0.01 to 0.95)	0.045	
Female	116	0 (0 to Inf)	0.999	
Age >65				0.998
Yes	150	0.1 (0.01 to 0.78)	0.028	
No	110	0 (0 to Inf)	0.999	
Severity at admission				0.998
Non-severe	246	0.1 (0.01 to 0.77)	0.027	
Severe	14	0 (0 to Inf)	0.999	
Time of COVID-19 symptoms onset to hospital admission				0.997
0–5 days	158	0 (0 to Inf)	0.998	
>5 days	102	0.33 (0.03 to 3.16)	0.335	
COVID-19 vaccination status				0.998
Unvaccinated	54	0 (0 to Inf)	0.999	
Vaccinated	206	0.12 (0.01 to 0.94)	0.044	
Smoking				0.998
No	215	0.12 (0.01 to 0.93)	0.042	
Yes	45	0 (0 to Inf)	0.999	
BMI				0.998
No overweight	170	0.17 (0.02 to 1.4)	0.100	
Overweight	90	0 (0 to Inf)	0.999	
Systemic steroid				0.997
No	156	0 (0 to Inf)	0.998	
Yes	104	0.16 (0.02 to 1.32)	0.088	
Immunomodulators				>0.999
No	256	0.08 (0.01 to 0.61)	0.015	
Yes	4	NA		
Antibiotics				>0.999
No	114	NA		
Yes	146	0.08 (0.01 to 0.61)	0.015	
Diabetes				0.998
No	202	0.10 (0.01 to 0.81)	0.031	
Yes	58	0 (0 to Inf)	0.999	

Table S2 (continued)

Table S2 (*continued*)

Covariates	N	HR (95% CI)	P value	P for interaction
Hypertension				0.998
No	207	0.17 (0.02 to 1.42)	0.102	
Yes	53	0 (0 to Inf)	0.998	
Chronic lung disease				>0.999
No	244	0.08 (0.01 to 0.61)	0.015	
Yes	16	NA		
Chronic liver disease				0.998
No	247	0.09 (0.01 to 0.69)	0.021	
Yes	13	0 (0 to Inf)	1	
Chronic kidney disease				>0.999
No	230	0.08 (0.01 to 0.62)	0.016	
Yes	30	NA		
Cancer				0.998
No	195	0.09 (0.01 to 0.68)	0.020	
Yes	65	0 (0 to Inf)	0.999	

Table S3 Subgroup analysis of clinical effectiveness for the all-cause death among azvudine versus SOC recipients

Covariates	N	HR (95% CI)	P value	P for interaction
Overall	260	0.14 (0.02 to 1.13)	0.065	
Gender				0.998
Male	144	0.24 (0.03 to 2.19)	0.208	
Female	116	0 (0 to Inf)	0.999	
Age >65				>0.999
Yes	150	0.14 (0.02 to 1.18)	0.071	
No	110	NA		
Severity at admission				0.998
Non-severe	246	0.20 (0.02 to 1.71)	0.142	
Severe	14	0 (0 to Inf)	0.999	
Time of COVID-19 symptoms onset to hospital admission				0.999
0–5 days	158	0 (0 to Inf)	0.999	
>5 days	102	0.32 (0.03 to 3.11)	0.328	
COVID-19 vaccination status				0.998
Unvaccinated	54	0 (0 to Inf)	0.999	
Vaccinated	206	0.32 (0.03 to 3.1)	0.327	

Table S3 (*continued*)

Table S3 (continued)

Covariates	N	HR (95% CI)	P value	P for interaction
Smoking				0.998
No	215	0.19 (0.02 to 1.61)	0.127	
Yes	45	0 (0 to Inf)	0.999	
BMI				0.998
No overweight	170	0.31 (0.03 to 2.73)	0.289	
Overweight	90	0 (0 to Inf)	0.999	
Systemic steroid				0.998
No	156	0 (0 to Inf)	0.999	
Yes	104	0.24 (0.03 to 2.17)	0.205	
Immunomodulators				>0.999
No	256	0.14 (0.02 to 1.13)	0.065	
Yes	4	NA		
Antibiotics				>0.999
No	114	NA		
Yes	146	0.14 (0.02 to 1.14)	0.067	
Diabetes				0.999
No	202	0.21 (0.02 to 1.81)	0.157	
Yes	58	0 (0 to Inf)	0.999	
Hypertension				0.998
No	207	0.26 (0.03 to 2.3)	0.225	
Yes	53	0 (0 to Inf)	0.999	
Chronic lung disease				>0.999
No	244	0.14 (0.02 to 1.13)	0.065	
Yes	16	NA		
Chronic liver disease				>0.999
No	247	0.14 (0.02 to 1.16)	0.069	
Yes	13	NA		
Chronic kidney disease				>0.999
No	230	0.14 (0.02 to 1.15)	0.067	
Yes	30	NA		
Cancer				>0.999
No	195	0.14 (0.02 to 1.14)	0.066	
Yes	65	NA		

Table S4 Subgroup analysis of clinical effectiveness for the ICU admission among azvudine versus SOC recipients

Covariates	N	HR (95% CI)	P value	P for interaction
Overall	260	0.14 (0.02 to 1.13)	0.065	
Gender				0.998
Male	144	0.19 (0.02 to 1.66)	0.134	
Female	116	0 (0 to Inf)	0.999	
Age >65				0.998
Yes	150	0.20 (0.02 to 1.75)	0.147	
No	110	0 (0 to Inf)	0.999	
Severity at admission				0.998
Non-severe	246	0.20 (0.02 to 1.71)	0.141	
Severe	14	0 (0 to Inf)	0.999	
Time of COVID-19 symptoms onset to hospital admission				0.998
0–5 days	158	0 (0 to Inf)	0.998	
>5 days	102	0.99 (0.06 to 15.83)	0.994	
COVID-19 vaccination status				>0.999
Unvaccinated	54	NA		
Vaccinated	206	0.14 (0.02 to 1.1)	0.062	
Smoking				0.998
No	215	0.23 (0.03 to 2.1)	0.195	
Yes	45	0 (0 to Inf)	0.999	
BMI				0.998
No overweight	170	0.30 (0.03 to 2.72)	0.287	
Overweight	90	0 (0 to Inf)	0.999	
Systemic steroid				0.998
No	156	0 (0 to Inf)	0.999	
Yes	104	0.24 (0.03 to 2.15)	0.202	
Immunomodulators				>0.999
No	256	0.14 (0.02 to 1.13)	0.065	
Yes	4	NA	NA	
Antibiotics				>0.999
No	114	NA		
Yes	146	0.14 (0.02 to 1.14)	0.066	
Diabetes				0.999
No	202	0.18 (0.02 to 1.46)	0.107	
Yes	58	0 (0 to Inf)	0.999	

Table S4 (continued)

Table S4 (*continued*)

Covariates	N	HR (95% CI)	P value	P for interaction
Hypertension				0.998
No	207	0.26 (0.03 to 2.31)	0.226	
Yes	53	0 (0 to Inf)	0.999	
Chronic lung disease				>0.999
No	244	0.14 (0.02 to 1.13)	0.065	
Yes	16	NA		
Chronic liver disease				0.999
No	247	0.17 (0.02 to 1.39)	0.098	
Yes	13	0 (0 to Inf)	1	
Chronic kidney disease				>0.999
No	230	0.14 (0.02 to 1.15)	0.067	
Yes	30	NA		
Cancer				0.999
No	195	0.16 (0.02 to 1.36)	0.094	
Yes	65	0 (0 to Inf)	0.999	

Table S5 Subgroup analysis of clinical effectiveness for the need for ventilator-assisted ventilation among azvudine versus SOC recipients

Covariates	N	HR (95% CI)	P value	P for interaction
Overall	260	0.12 (0.02 to 0.97)	0.047	
Gender				0.998
Male	144	0.16 (0.02 to 1.33)	0.090	
Female	116	0 (0 to Inf)	0.999	
Age >65				0.998
Yes	150	0.17 (0.02 to 1.41)	0.100	
No	110	0 (0 to Inf)	0.999	
Severity at admission				0.998
Non-severe	246	0.17 (0.02 to 1.38)	0.096	
Severe	14	0 (0 to Inf)	0.999	
Time of COVID-19 symptoms onset to hospital admission				0.998
0–5 days	158	0 (0 to Inf)	0.998	
>5 days	102	0.49 (0.04 to 5.44)	0.564	
COVID-19 vaccination status				>0.999
Unvaccinated	54	NA		
Vaccinated	206	0.12 (0.01 to 0.94)	0.044	

Table S5 (*continued*)

Table S5 (continued)

Covariates	N	HR (95% CI)	P value	P for interaction
Smoking				0.999
No	215	0.19 (0.02 to 1.6)	0.126	
Yes	45	0 (0 to Inf)	0.999	
Systemic steroid				0.999
No	156	0 (0 to Inf)	0.999	
Yes	104	0.24 (0.03 to 2.15)	0.202	
Immunomodulators				>0.999
No	256	0.12 (0.02 to 0.97)	0.047	
Yes	4	NA		
Antibiotics				>0.999
No	114	NA		
Yes	146	0.12 (0.02 to 0.98)	0.047	
BMI				0.998
No overweight	170	0.30 (0.03 to 2.72)	0.287	
Overweight	90	0 (0 to Inf)	0.999	
Diabetes				0.999
No	202	0.15 (0.02 to 1.22)	0.076	
Yes	58	0 (0 to Inf)	0.999	
Hypertension				0.998
No	207	0.21 (0.02 to 1.76)	0.149	
Yes	53	0 (0 to Inf)	0.999	
Chronic lung disease				>0.999
No	244	0.12 (0.02 to 0.97)	0.047	
Yes	16	NA		
Chronic liver disease				0.998
No	247	0.14 (0.02 to 1.16)	0.069	
Yes	13	0 (0 to Inf)	1.000	
Chronic kidney disease				>0.999
No	230	0.12 (0.02 to 0.98)	0.048	
Yes	30	NA		
Cancer				0.999
No	195	0.14 (0.02 to 1.14)	0.066	
Yes	65	0 (0 to Inf)	0.999	