

Supplementary Information

Title: Comparative Effectiveness of Monoclonal Antibody Prophylaxis for Preventing Severe Respiratory Syncytial Virus Infection in Infants: A Network Meta-Analysis

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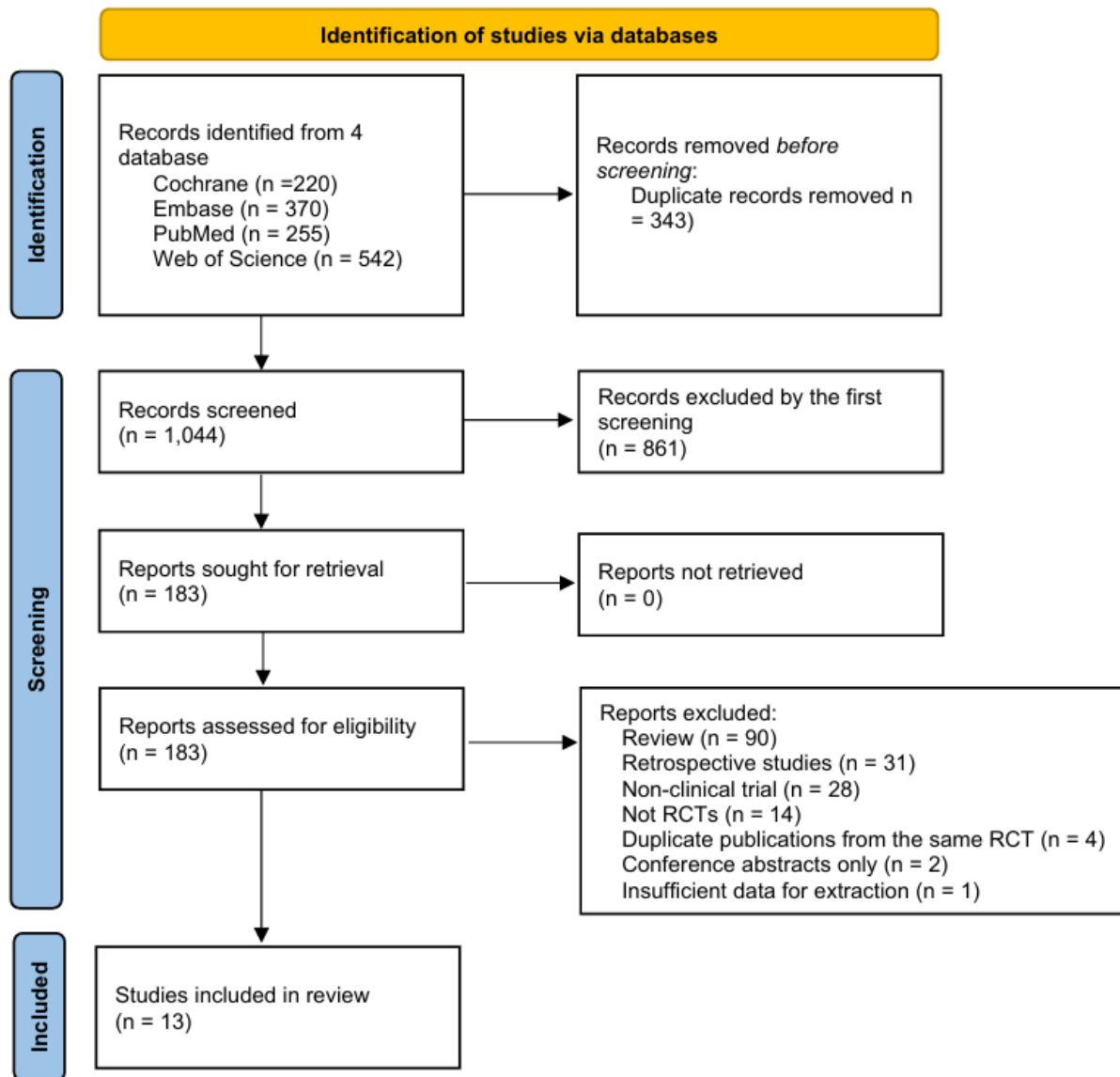


Figure S2. Ranking Probabilities of Monoclonal Antibodies for Preventing Respiratory Syncytial Virus-Associated Hospitalization

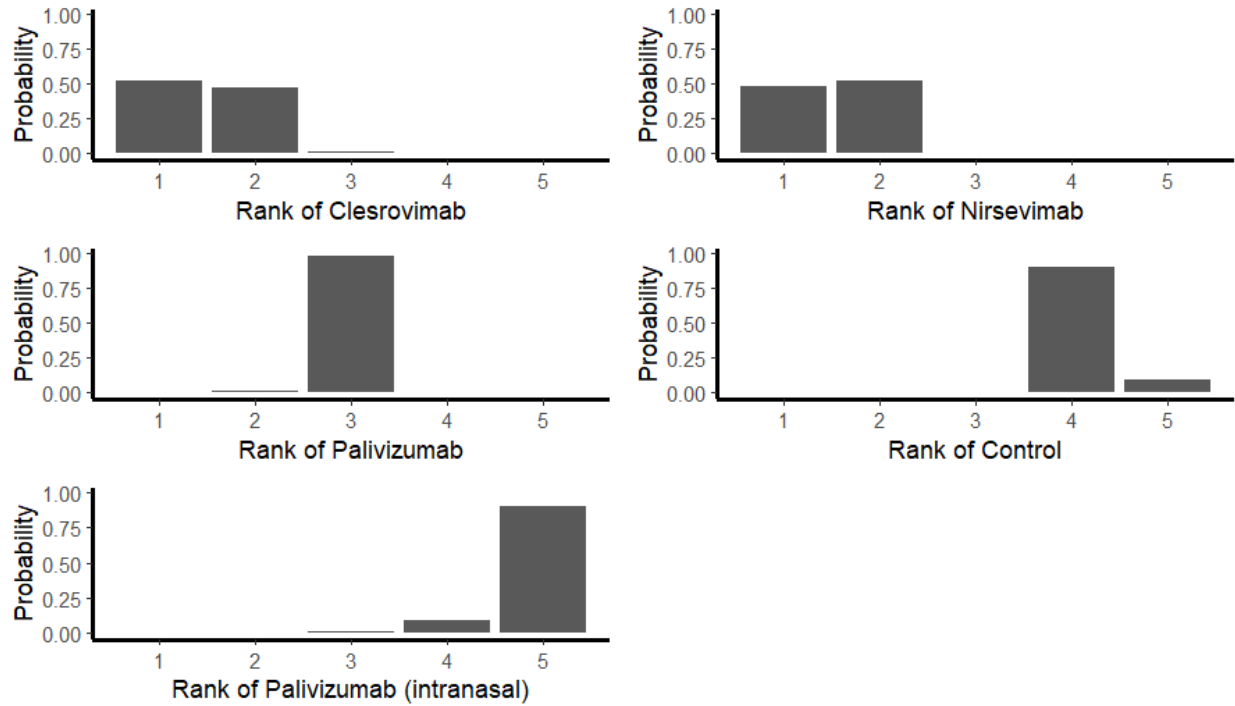


Figure S3. Ranking Probabilities of Monoclonal Antibodies for Preventing Medically Attended Respiratory Syncytial Virus-Associated Lower Respiratory Tract Infection

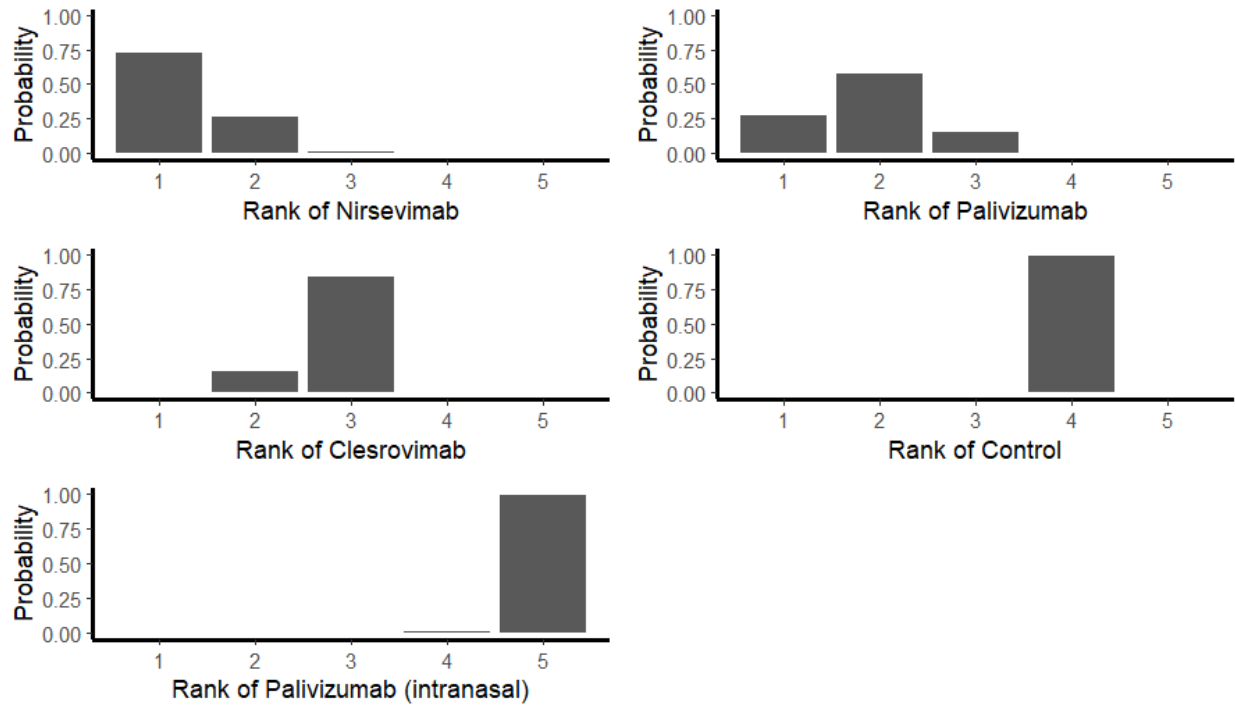


Figure S4. Ranking Probabilities of Monoclonal Antibodies for Preventing Severe Respiratory Syncytial Virus-Associated Lower Respiratory Tract Infection

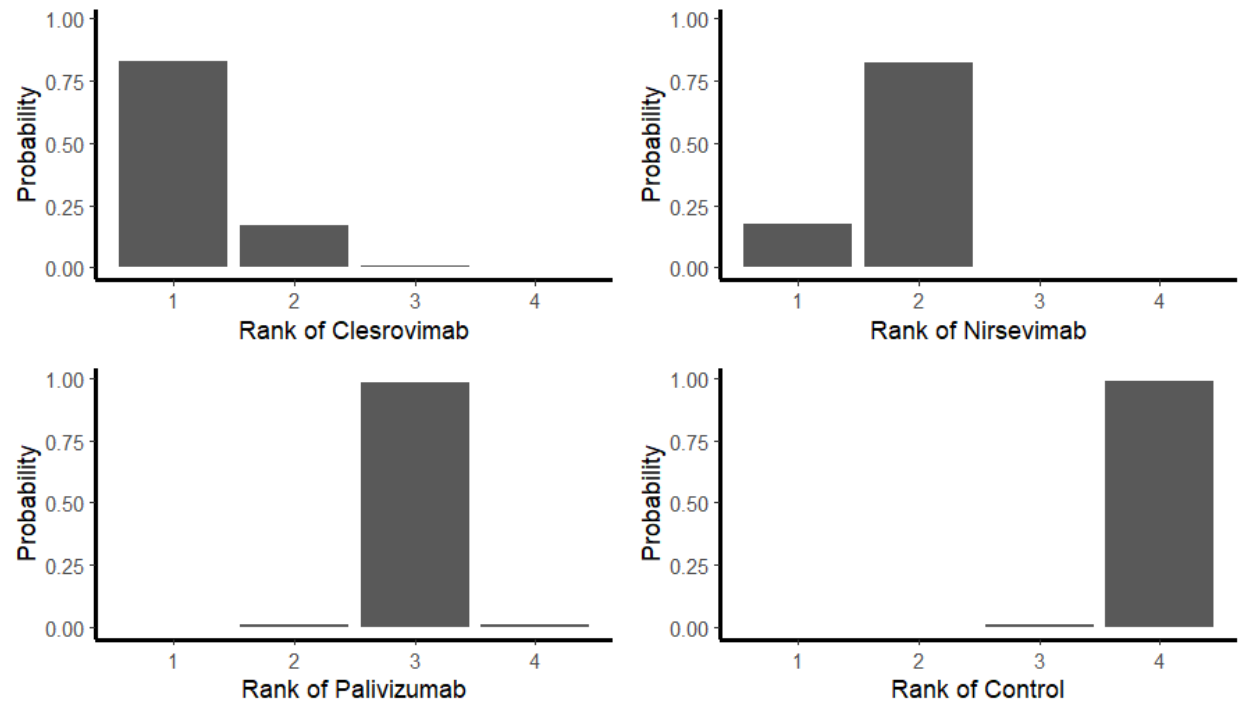
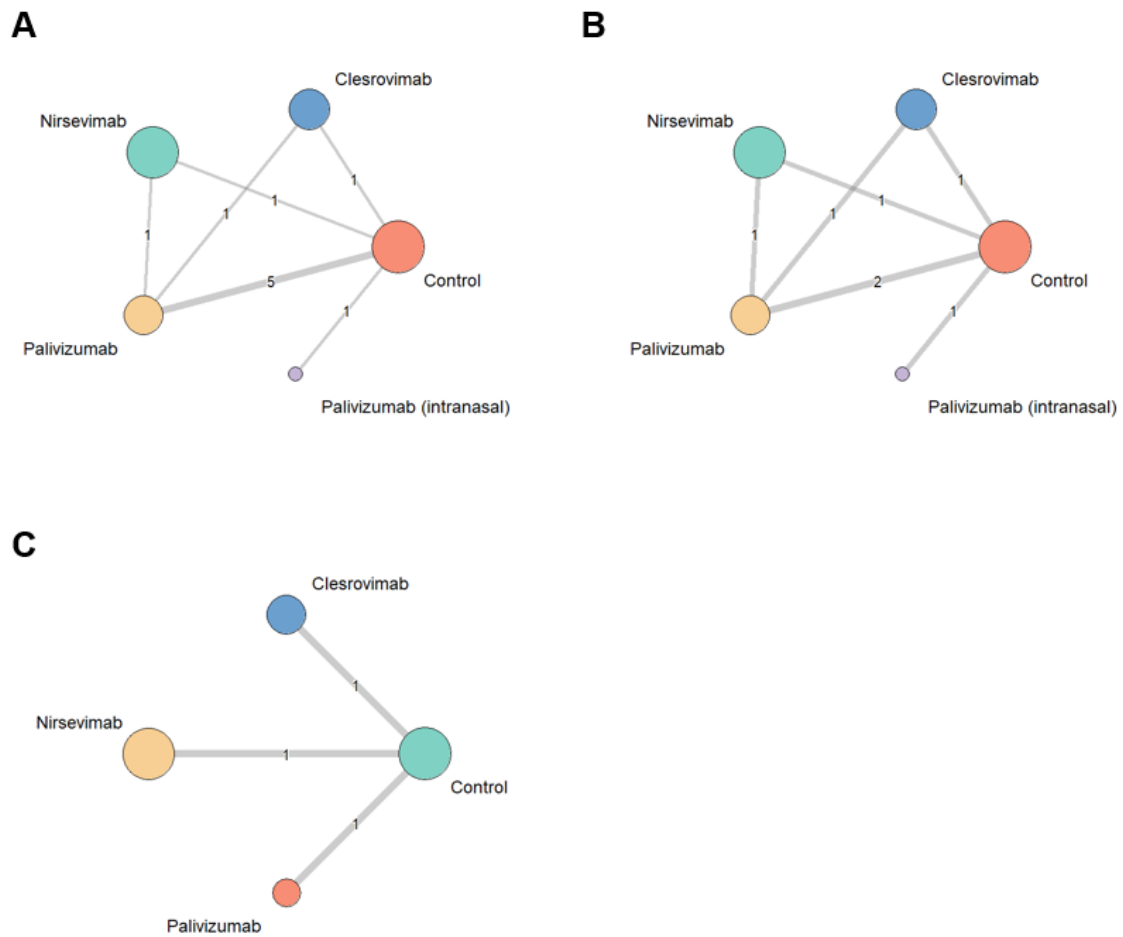


Figure S5. Network Plot of Included Studies in the Sensitivity Analysis



(A) Respiratory Syncytial Virus-Associated Hospitalization; (B) Medically Attended Respiratory Syncytial Virus-Associated Lower Respiratory Tract Infection; (C) Severe Respiratory Syncytial Virus-Associated Lower Respiratory Tract Infection

Figure S6. Direct Comparisons of Each Monoclonal Antibody versus Control for Preventing Respiratory Syncytial Virus-associated Hospitalization

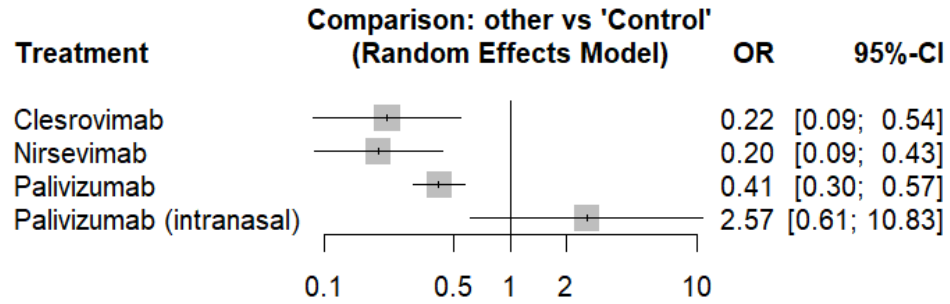


Figure S7. Direct Comparisons of Each Monoclonal Antibody versus Control for Preventing Medically Attended Respiratory Syncytial Virus-Associated Lower Respiratory Tract Infection

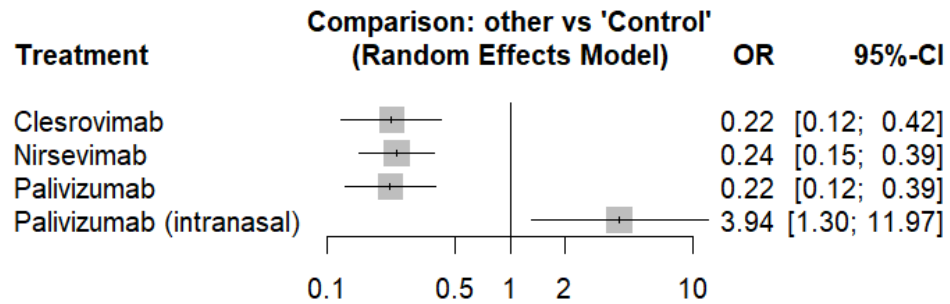


Figure S8. Direct Comparisons of Each Monoclonal Antibody versus Control for Preventing Severe Respiratory Syncytial Virus-Associated Lower Respiratory Tract Infection

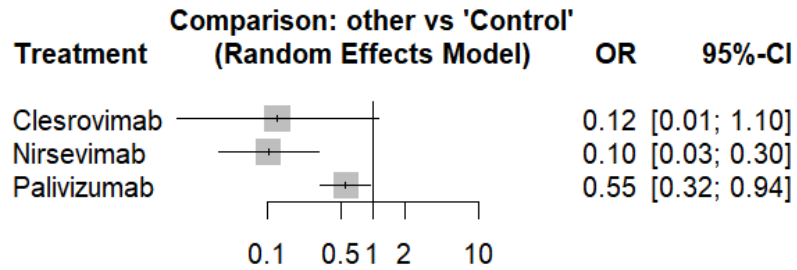


Figure S9. Ranking Probabilities of Monoclonal Antibodies for Preventing Respiratory Syncytial Virus-Associated Hospitalization in the Sensitivity Analysis

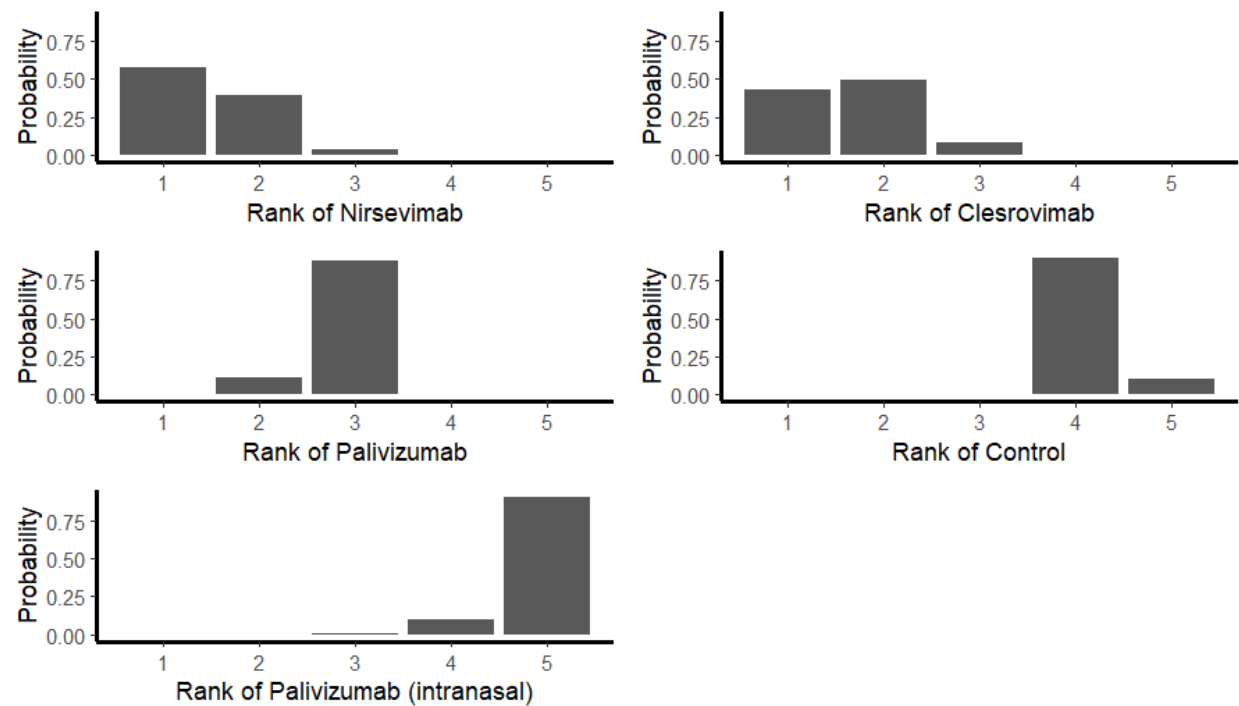


Figure S10. Ranking Probabilities of Monoclonal Antibodies for Preventing Respiratory Syncytial Virus-Associated Lower Respiratory Tract Infection in the Sensitivity Analysis

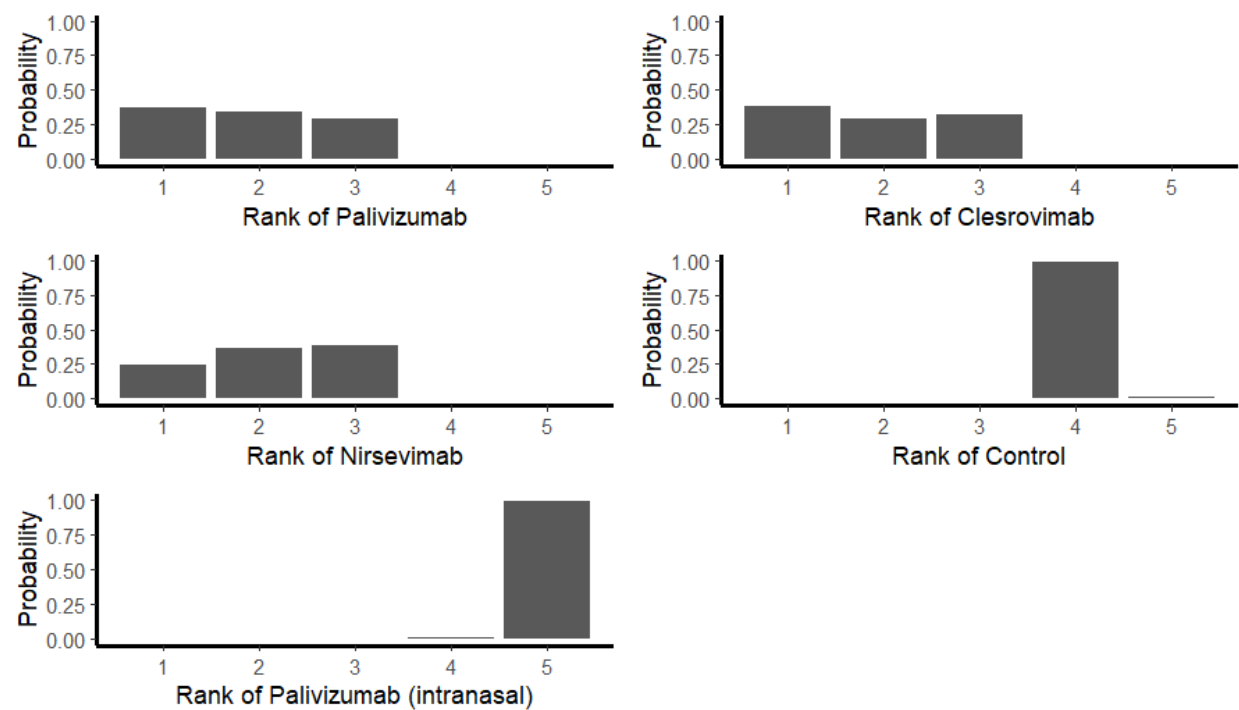


Figure S11. Ranking Probabilities of Monoclonal Antibodies for Preventing Severe Respiratory Syncytial Virus-Associated Lower Respiratory Tract Infection in the Sensitivity Analysis

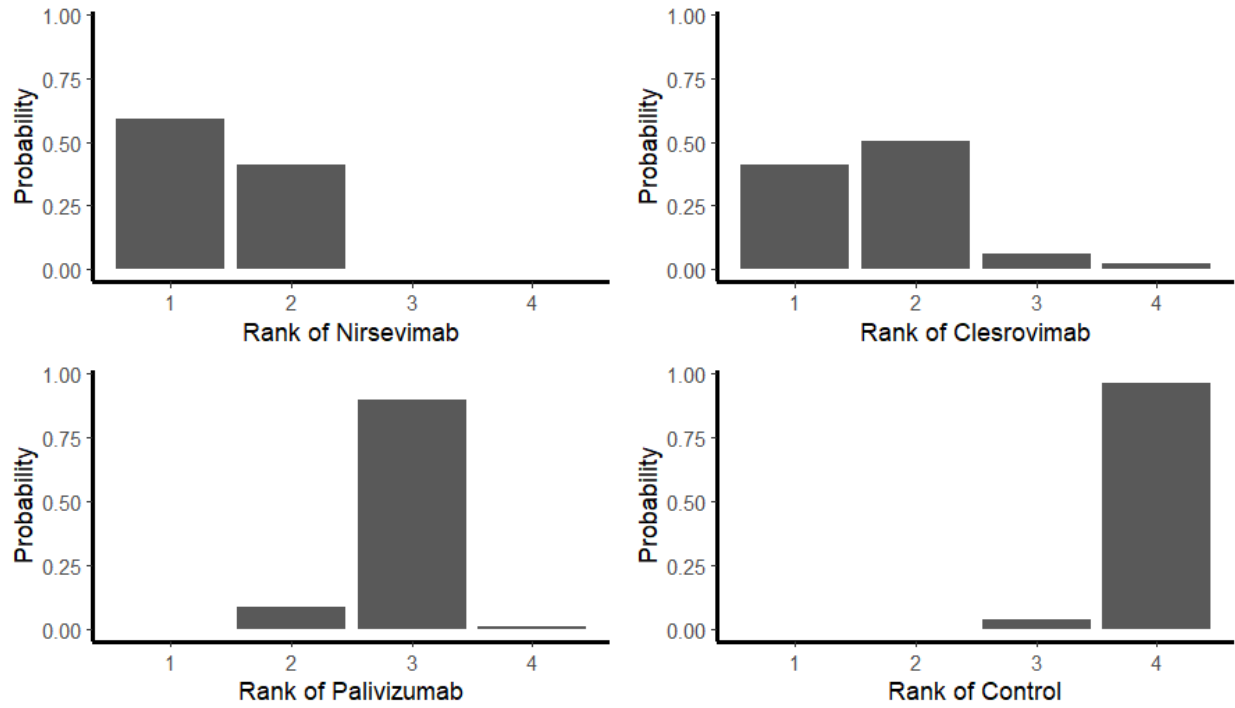


Figure S12. Ranking Probabilities for Treatment-associated Adverse Events

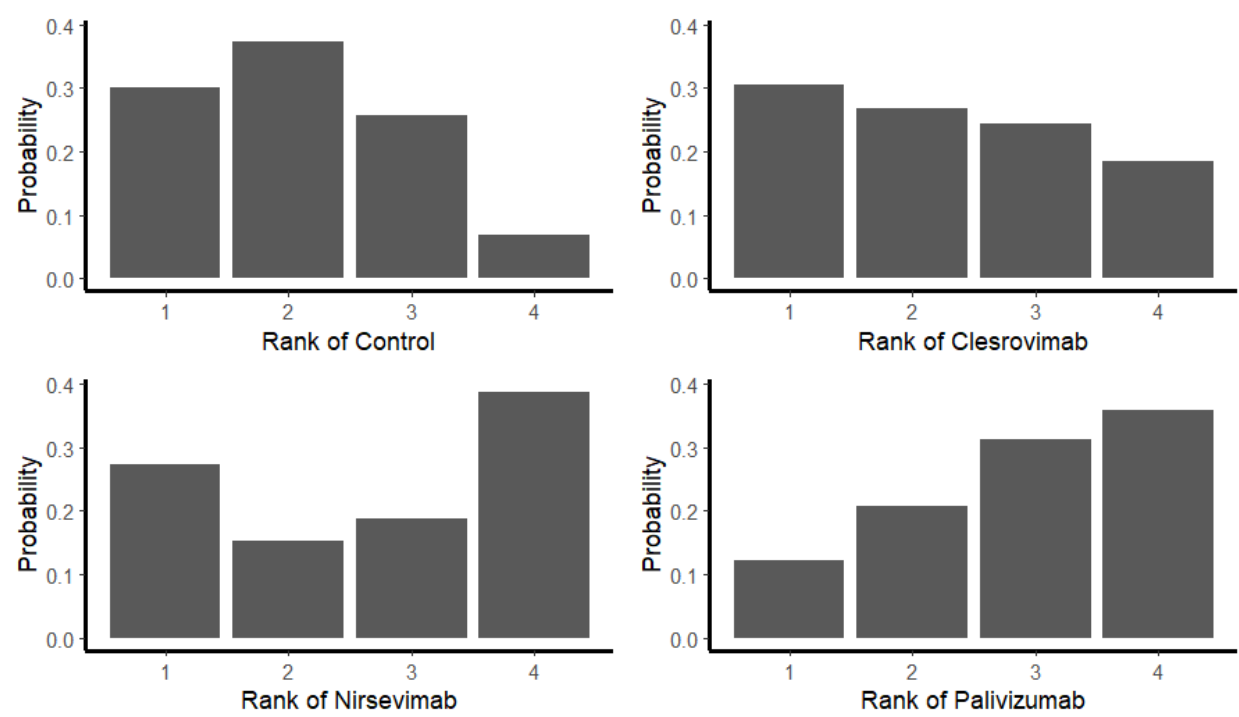


Figure S13. Assessment of Publication Bias for Respiratory Syncytial Virus-associated Hospitalization

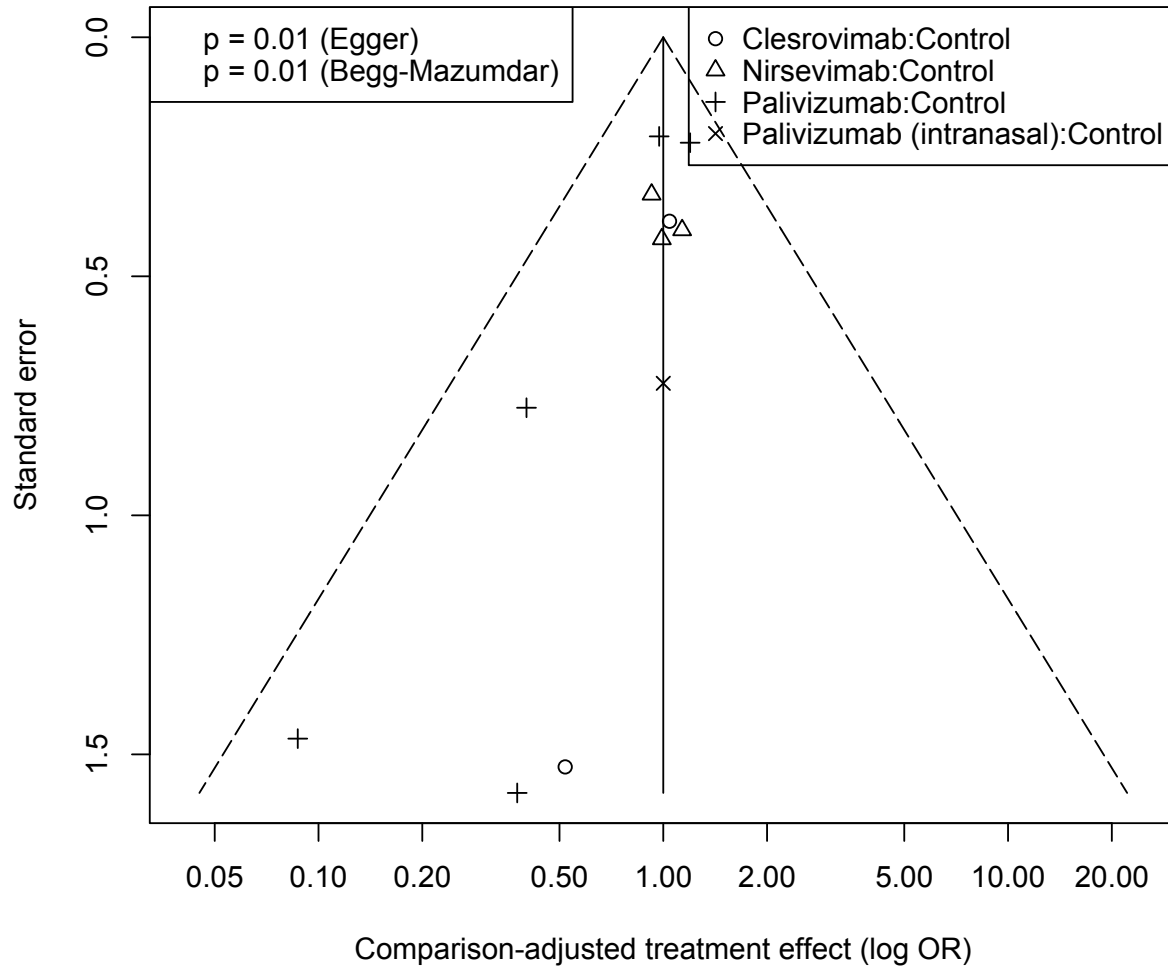


Figure S14. Assessment of Publication Bias for Medically Attended Respiratory Syncytial Virus-Associated Lower Respiratory Tract Infection

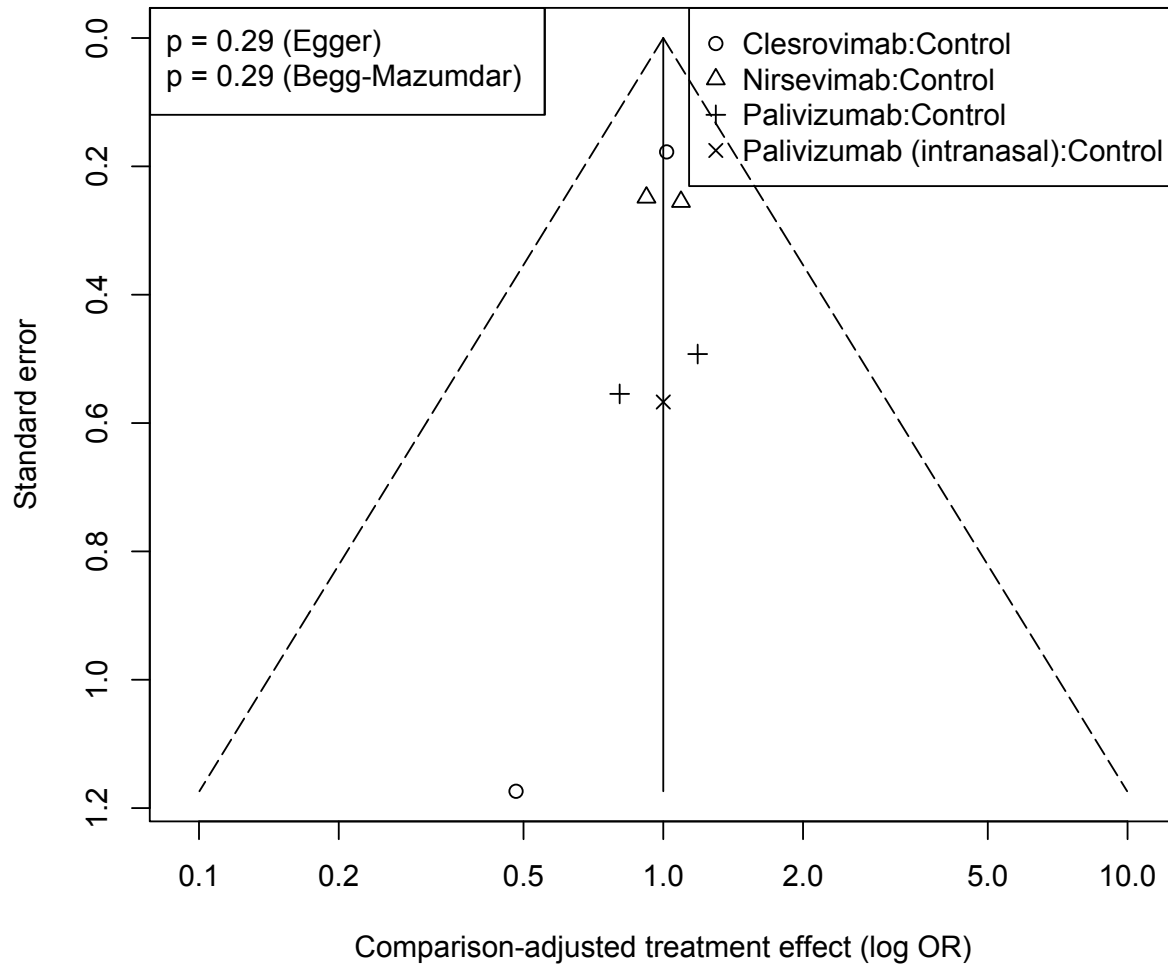


Figure S15. Assessment of Publication Bias for Severe Respiratory Syncytial Virus-Associated Lower Respiratory Tract Infection

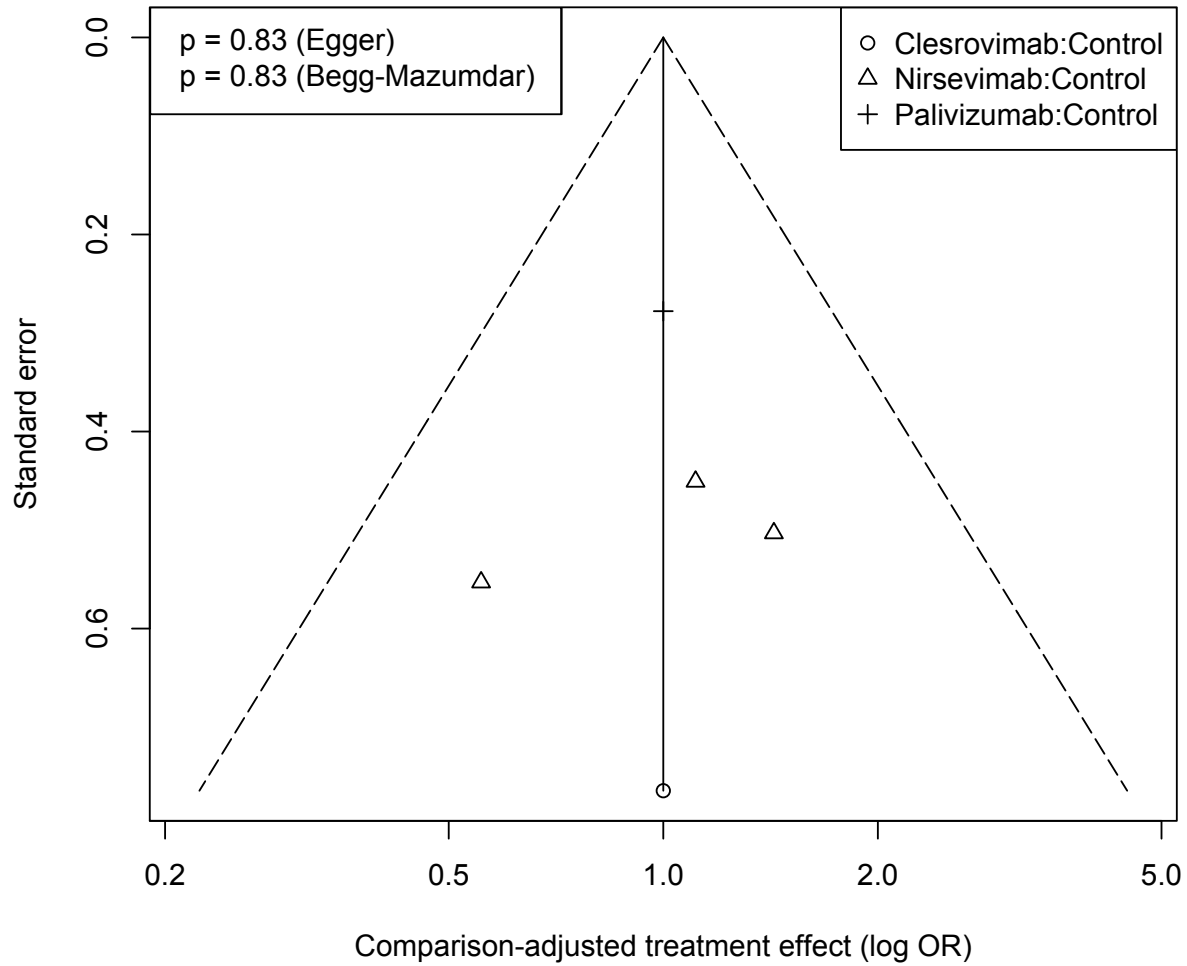


Figure S16. Assessment of Publication Bias for Treatment-associated Adverse Events

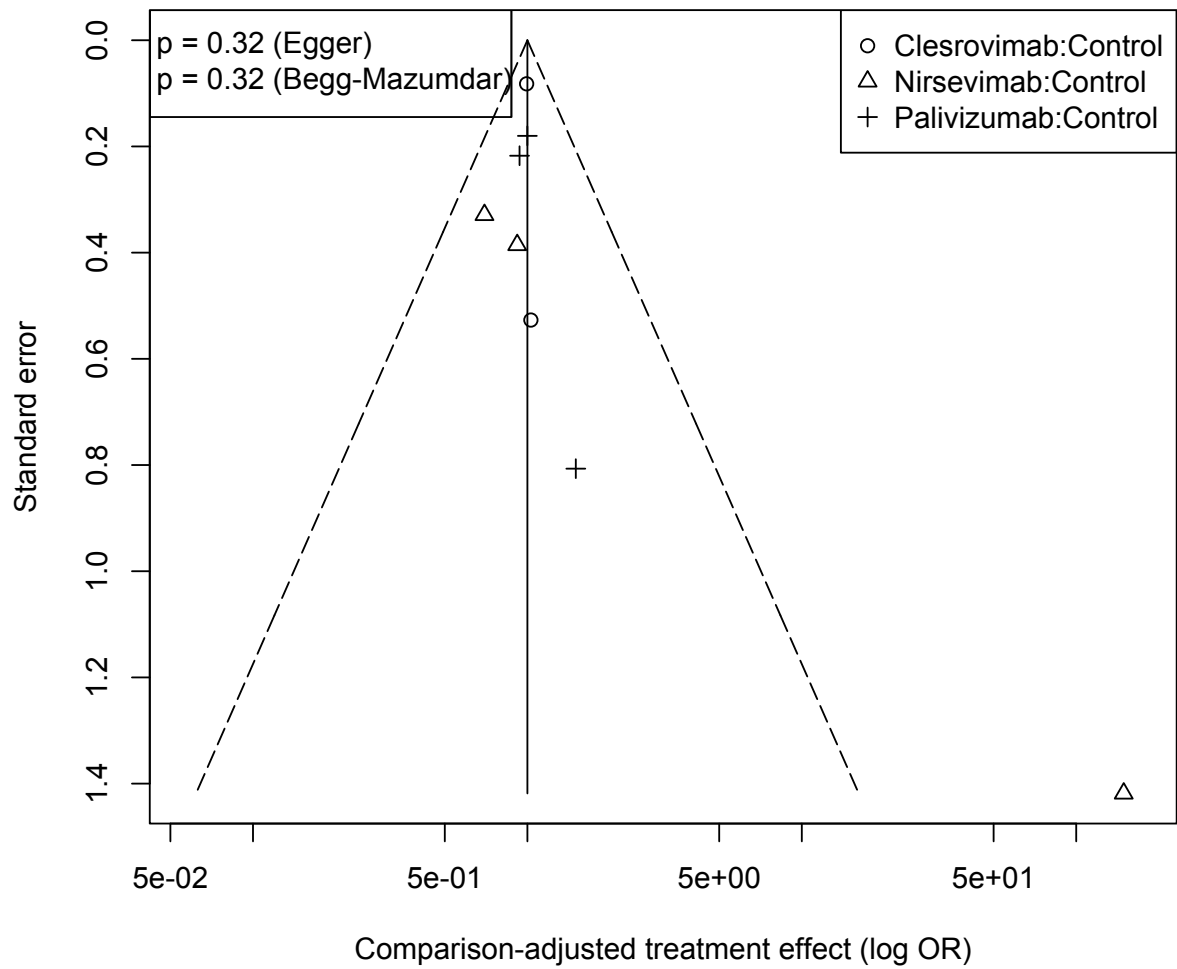


Figure S17. Risk of Bias for Respiratory Syncytial Virus-associated Hospitalization

	Risk of bias domains					
	D1	D2	D3	D4	D5	Overall
Blanken et al. 2013	+	+	+	+	+	+
Domachowske et al. 2022	+	+	+	+	+	+
Drysdale et al. 2023	+	X	+	+	+	-
Feltes et al.2003	+	+	+	+	+	+
Griffin et al. 2020	+	+	+	+	+	+
Impact-RSV Study Group 1998	+	+	+	+	+	+
Madhi et al. 2025	+	+	+	+	+	+
Mazur et al. 2023	+	+	+	+	+	+
Muller et al. 2023	+	+	+	+	+	+
Subramanian et al.1998	+	+	+	+	+	+
Tavsu et al. 2014	+	X	-	+	+	-
Zar et al. 2025 (a)	+	-	+	+	+	-
Zar et al. 2025 (b)	+	+	+	+	+	+

Domains:
D1: Bias arising from the randomization process.
D2: Bias due to deviations from intended intervention.
D3: Bias due to missing outcome data.
D4: Bias in measurement of the outcome.
D5: Bias in selection of the reported result.

Judgement
X High
- Some concerns
+ Low

Figure S18. Risk of Bias for Medically Attended Respiratory Syncytial Virus-Associated Lower Respiratory Tract Infection

		Risk of bias domains					
		D1	D2	D3	D4	D5	Overall
Study	Blanken et al. 2013						
	Domachowske et al. 2022						
	Griffin et al. 2020						
	Madhi et al. 2025						
	Mazur et al. 2023						
	Muller et al. 2023						
	Tavsu et al. 2014						
	Zar et al. 2025 (a)						
Zar et al. 2025 (b)							
Domains:		D1: Bias arising from the randomization process. D2: Bias due to deviations from intended intervention. D3: Bias due to missing outcome data. D4: Bias in measurement of the outcome. D5: Bias in selection of the reported result.					Judgement High Some concerns Low

Figure S19. Risk of Bias for Severe Respiratory Syncytial Virus-Associated Lower Respiratory Tract Infection

		Risk of bias domains					
		D1	D2	D3	D4	D5	Overall
Study	Drysdale et al. 2023						
	Feltes et al.2003						
	Griffin et al. 2020						
	Muller et al. 2023						
	Zar et al. 2025 (a)						
Domains:		D1: Bias arising from the randomization process. D2: Bias due to deviations from intended intervention. D3: Bias due to missing outcome data. D4: Bias in measurement of the outcome. D5: Bias in selection of the reported result.					Judgement
							High
							Some concerns
							Low

Figure S20. Risk of Bias for Treatment-associated Adverse Events

	Risk of bias domains					
	D1	D2	D3	D4	D5	Overall
Study	Domachowske et al. 2022					
	Drysdale et al. 2023					
	Feltes et al.2003					
	Griffin et al. 2020					
	IMpact-RSV Study Group 1998					
	Madhi et al. 2025					
	Mazur et al. 2023					
	Muller et al. 2023					
	Subramanian et al.1998					
	Zar et al. 2025 (a)					
	Zar et al. 2025 (b)					
Domains:						Judgement
D1: Bias arising from the randomization process.						High
D2: Bias due to deviations from intended intervention.						Some concerns
D3: Bias due to missing outcome data.						Low
D4: Bias in measurement of the outcome.						
D5: Bias in selection of the reported result.						

Table S1. High risk as an effect modifier by comparison node

Intervention	No. of trials	Total participants	High risk profile
IM palivizumab vs placebo	4	3260	100%
IM palivizumab vs standard care	1	80	100%
Nirsevimab vs placebo	2	4465	32.5%
Nirsevimab vs standard care	1	8058	- *
Nirsevimab vs palivizumab	1	925	0%
Clesrovimab vs placebo	2	3716	- **
Clesrovimab vs palivizumab	1	901	100%
IN palivizumab vs placebo	1	100	100%

IM: intramuscular; IN: intranasal.

* The study did not report the number of participants born at <35 weeks' gestation.

** In one study, the placebo group did not report the number of participants born at <35 weeks' gestation.

Table S2. Sensitivity Network Meta-Analysis Restricted to High-risk infants

RSV-associated LRTI				
Palivizumab				
0.98 [0.53; 1.83]	Clesrovimab			
0.92 [0.46; 1.85]	0.94 [0.43; 2.02]	Nirsevimab		
0.22 [0.12; 0.39]	0.22 [0.12; 0.42]	0.24 [0.15; 0.39]	Control	
0.06 [0.02; 0.19]	0.06 [0.02; 0.20]	0.06 [0.02; 0.20]	0.25 [0.08; 0.77]	Palivizumab intranasal
RSV-associated hospitalization				
Nirsevimab				
0.90 [0.27; 2.98]	Clesrovimab			
0.47 [0.20; 1.09]	0.53 [0.21; 1.30]	Palivizumab		
0.20 [0.09; 0.43]	0.22 [0.09; 0.54]	0.41 [0.30; 0.57]	Control	
0.08 [0.01; 0.39]	0.08 [0.02; 0.46]	0.16 [0.04; 0.70]	0.39 [0.09; 1.64]	Palivizumab intranasal

RSV: respiratory syncytial virus, LRTI: lower respiratory tract infection

Table S3. Network Meta-Analysis of Treatment-associated Adverse Events for Monoclonal Antibodies against Respiratory Syncytial Virus

Control			
0.98 [0.65; 1.48]	Clesrovimab		
0.89 [0.52; 1.52]	0.90 [0.47; 1.75]	Nirsevimab	
0.89 [0.62; 1.29]	0.91 [0.58; 1.41]	1.00 [0.55; 1.84]	Palivizumab