

Chest computed tomography patterns associated with severity in adults with respiratory syncytial virus infection: a retrospective cohort study

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Figure S1 : Detailed Microbiological Findings

Legend:

A: Spectrum of Documented Bacterial Infections

B: Empirical Antibiotic Therapy at Admission

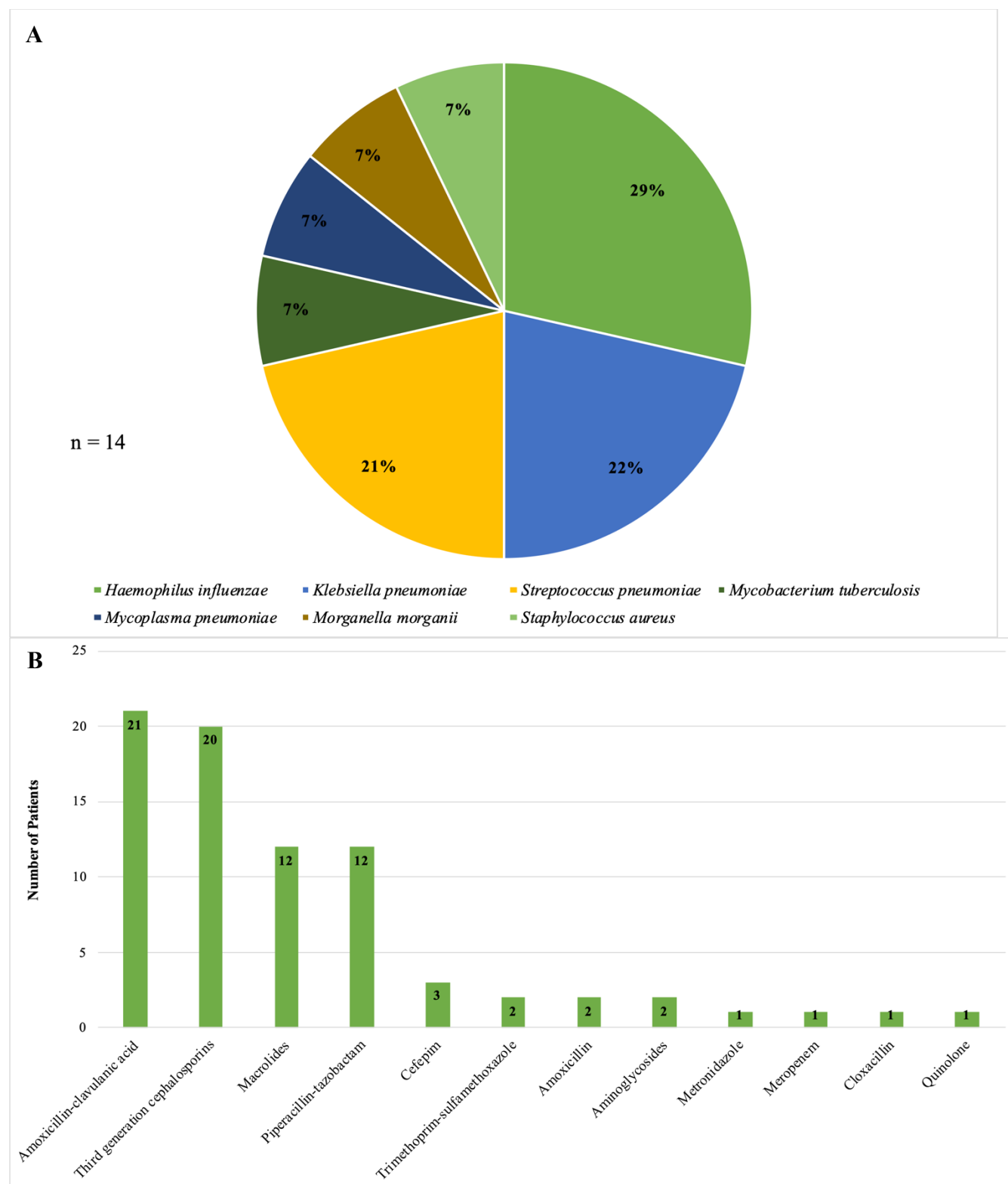


Figure S2 : Distribution of radiological patterns according to the delay from symptom onset to CT (days)

Legend: Percentages indicate the proportion of patients with the corresponding radiological pattern within each time interval. Colors represent the percentage of patients, from white (0%) to dark red (100%). Radiological patterns are grouped by category: blue = global distribution anomalies; yellow = interstitial anomalies; pink = alveolar anomalies; green = bronchial anomalies; black = other findings.

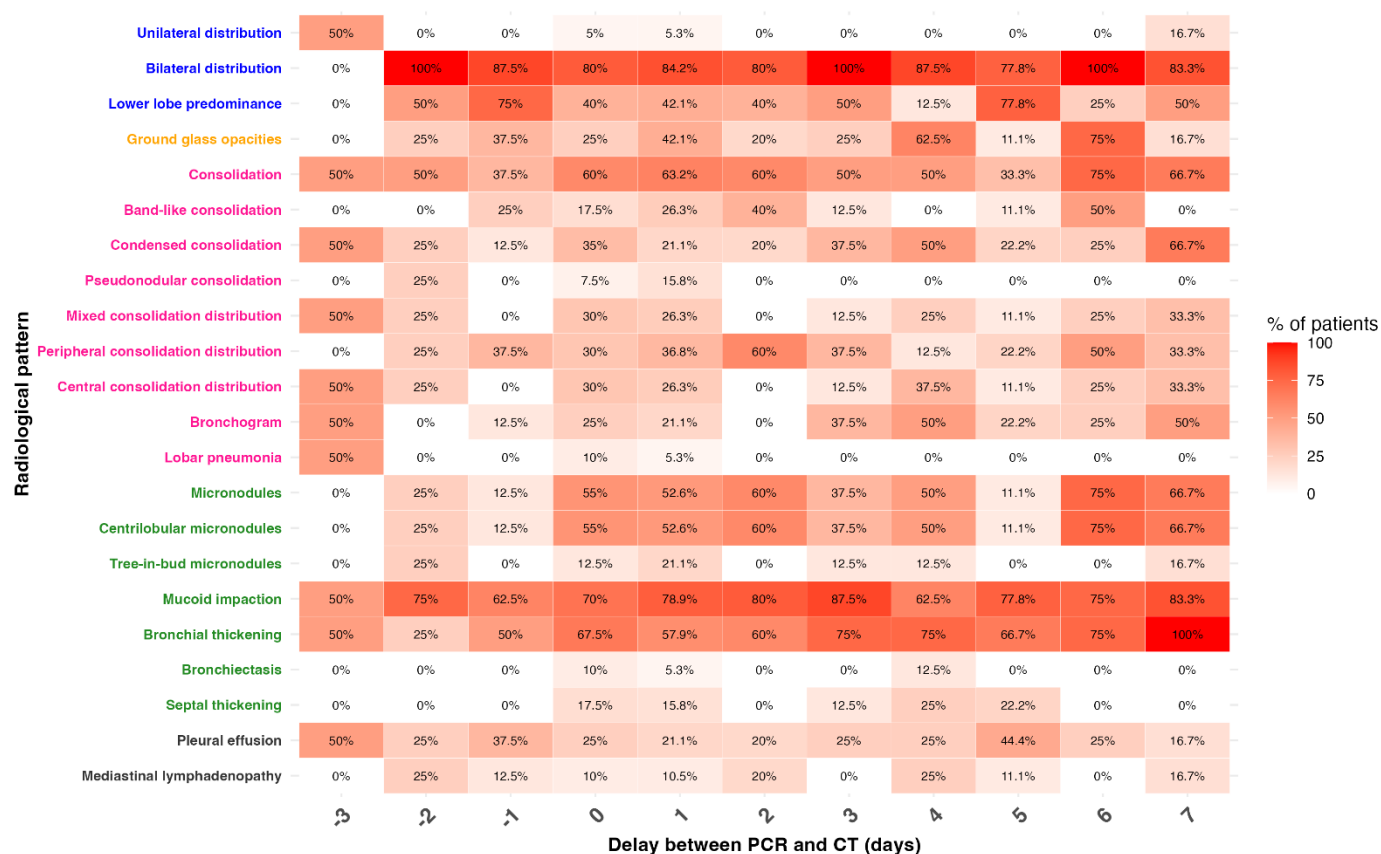


Table S1 : Computed tomography (CT) scan characteristics according to immunological status (immunocompetent vs. immunocompromised)

Parameters	Immunocompetent n = 77 n (%) or Med. [IQR]	Immunocompromised n = 36 n (%) or Med. [IQR]	p
Time from diagnosis to CT scan, days	1 [0-3]	0 [0-3]	0.759
Chest CT Score (CCTS)	5 [2-9]	6 [4-11]	0.129
Chest X-ray	36 (46.8)	15 (41.7)	0.762
<i>Distribution of CT findings</i>			
Bilateral opacities	62 (80.5)	32 (88.9)	0.418
Unilateral opacities	4 (5.2)	1 (2.8)	1.000
Lower lobe predominant distribution	34 (44.2)	16 (44.4)	1.000
Ground glass opacities	24 (31.2)	11 (30.6)	1.000
Consolidation	43 (55.8)	43 (55.8)	1.000
<i>Distribution</i>			0.216
Central	1 (1.3)	0 (0.0)	
Mixed	14 (18.2)	12 (33.3)	
Peripheral	28 (36.4)	8 (22.2)	
<i>Aspect</i>			0.991
Band	14 (18.2)	6 (16.7)	
Condensed	6 (16.7)	12 (33.3)	
Pseudo-nodular	5 (6.5)	2 (5.6)	
Bronchogram	19 (24.7)	10 (27.8)	0.904
Lobar pneumonia	4 (5.2)	2 (5.6)	1.000
Micronodules	31 (40.3)	21 (58.3)	0.105
<i>Distribution</i>			
Centrilobular	31 (40.3)	21 (58.3)	0.105
<i>Of whom Tree-in-bud</i>	8 (10.4)	5 (13.9)	0.752
Mucoid impaction	55 (71.4)	28 (77.8)	0.629
Bronchial thickening	49 (63.6)	25 (69.4)	0.695
Bronchiectasis	4 (5.2)	3 (8.3)	0.678
Septal thickening	7 (9.1)	8 (22.2)	0.075
Pleural effusion	17 (22.1)	13 (36.1)	0.179
Emphysema	10 (13.0)	5 (13.9)	1.000
Preexisting interstitial pneumonia	3 (3.9)	3 (8.3)	0.596
Lymphadenopathy	20 (26.0)	9 (25.0)	1.000
Pulmonary embolism	3 (3.9)	0 (0.0)	0.008
Non-contrast CT	28 (36.4)	24 (66.7)	0.004
Cardiomegaly	37 (48.1)	17 (47.2)	1.000
Pericardial effusion	10 (13.0)	5 (13.9)	1.000

Legend: CT : Computed Tomography. Med: Median ; IQR: Interquartile range. Bold values indicate p < 0.05.

Table S2 : Computed tomography (CT) scan characteristics according to PCR cycle threshold (Ct)

Parameters	Ct < 25 n = 34 n (%) or Med. [IQR]	Ct ≥ 25 n = 34 n (%) or Med. [IQR]	p
Time from diagnosis to CT scan, days	1 [0-3]	0 [0-3]	0.510
Chest CT Score (CCTS)	6 [3-10]	5 [3-10]	0.882
Chest X-ray	20 (58.8)	12 (35.3)	0.089
<i>Distribution of CT findings</i>			
Bilateral opacities	30 (88.2)	26 (76.5)	0.340
Unilateral opacities	0 (0.0)	3 (8.8)	0.238
Lower lobe predominant distribution	10 (29.4)	17 (50.0)	0.137
Ground glass opacities	13 (38.2)	12 (35.3)	1.000
Consolidation	19 (55.9)	19 (55.9)	1.000
<i>Distribution</i>			NA
Central	0 (0.0)	0 (0.0)	
Mixed	8 (23.5)	8 (23.5)	
Peripheral	11 (32.4)	11 (32.4)	
<i>Aspect</i>			0.268
Band	9 (26.5)	5 (14.7)	
Condensed	7 (20.6)	13 (38.2)	
Pseudo-nodular	3 (8.8)	1 (2.9)	
Bronchogram	6 (17.6)	11 (32.4)	0.263
Lobar pneumonia	0 (0.0)	3 (8.8)	0.238
Micronodules	15 (44.1)	15 (44.1)	1.000
<i>Distribution</i>			0.726
Centrilobular	15 (44.1)	15 (44.1)	1.000
<i>Of whom Tree-in-bud</i>	4 (11.8)	5 (14.7)	1.000
Mucoid impaction	23 (67.6)	24 (70.6)	1.000
Bronchial thickening	20 (58.8)	22 (64.7)	0.803
Bronchiectasis	2 (5.9)	3 (8.8)	1.000
Septal thickening	6 (17.6)	6 (17.6)	1.000
Pleural effusion	8 (23.5)	7 (20.6)	1.000
Emphysema	4 (11.8)	6 (17.6)	0.734
Preexisting interstitial pneumonia	3 (8.8)	2 (5.9)	1.000
Lymphadenopathy	12 (35.3)	7 (20.6)	0.280
Pulmonary embolism	0 (0.0)	0 (0.0)	NA
Non-contrast CT	15 (44.1)	13 (38.2)	0.806
Cardiomegaly	16 (47.1)	15 (44.1)	1.000
Pericardial effusion	3 (8.8)	6 (17.6)	0.474

Legend: CT : Computed Tomography. Med: Median ; IQR: Interquartile range.

Figure S3 : Correlation between the PCR cycle threshold (Ct) and the CCTS score.

Legend: Each dot represents one patient. The black line represents a trend line with the shaded area indicating the 95% confidence interval. Spearman's rank correlation coefficient was $R = 0.0073$ ($p = 0.95$).

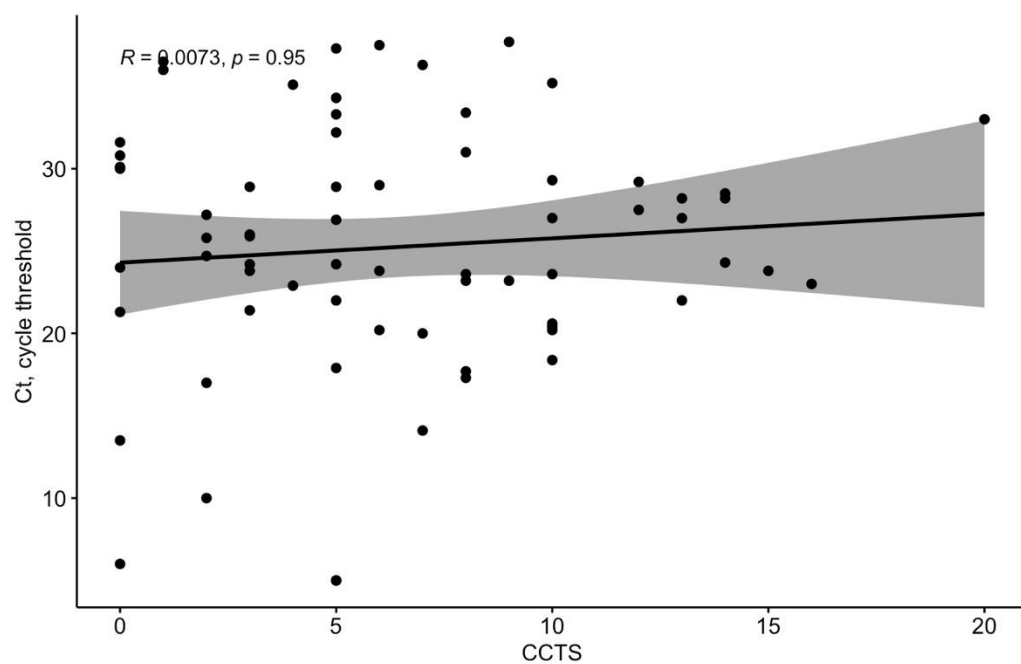


Table S3 : Computed tomography (CT) scan characteristics according to documented infection

Parameters	No documented infection n = 101 n (%) or Med. [IQR]	Documented infection n = 12 n (%) or Med. [IQR]	p
Time from diagnosis to CT scan, days	1 [0-3]	0.5 [0-3]	0.909
Chest CT Score (CCTS)	5 [2-9]	9 [5-11]	0.037
Chest X-ray	44 (43.6)	7 (58.3)	0.506
<i>Distribution of CT findings</i>			
Bilateral opacities	82 (81.2)	12 (100.0)	0.213
Unilateral opacities	5 (5.0)	0 (0.0)	1.000
Lower lobe predominant distribution	42 (41.6)	8 (66.7)	0.178
Ground glass opacities	32 (31.7)	3 (25.0)	0.886
Consolidation	53 (52.5)	10 (83.3)	0.084
<i>Distribution</i>			0.218
Central	1 (1.0)	0 (0.0)	
Mixed	22 (21.8)	4 (33.3)	
Peripheral	30 (29.7)	6 (50.0)	
<i>Aspect</i>			0.090
Band	17 (16.8)	3 (25.0)	
Condensed	29 (28.7)	7 (58.3)	
Pseudo-nodular	7 (6.9)	0 (0.0)	
Bronchogram	24 (23.8)	5 (41.7)	0.321
Lobar pneumonia	4 (4.0)	2 (16.7)	0.240
Micronodules	43 (42.6)	8 (66.7)	0.134
<i>Distribution</i>			
Centrilobular	43 (42.6)	8 (66.7)	0.134
<i>Of whom</i> Tree-in-bud	10 (9.9)	3 (25.0)	0.142
Mucoid impaction	74 (73.3)	9 (75.0)	1.000
Bronchial thickening	65 (64.4)	9 (75.0)	0.680
Bronchiectasis	6 (5.9)	1 (8.3)	1.000
Septal thickening	14 (13.9)	1 (8.3)	1.000
Pleural effusion	27 (26.7)	3 (25.0)	1.000
Emphysema	14 (13.9)	1 (8.3)	1.000
Preexisting interstitial pneumonia	5 (5.0)	1 (8.3)	0.498
Lymphadenopathy	27 (26.7)	2 (16.7)	0.728
Pulmonary embolism	3 (3.0)	0 (0.0)	0.763
Non-contrast CT	47 (46.5)	5 (41.7)	1.000
Cardiomegaly	50 (49.5)	4 (33.3)	0.450
Pericardial effusion	15 (14.9)	0 (0.0)	0.325

Legend: CT : Computed Tomography. Med: Median ; IQR: Interquartile range. Bold values indicate p < 0.05.

Table S4 : Sensitivity analyses for multivariable models

Model	Subgroup / Sensitivity condition	Variable	Adjusted OR	95% CI	P value
Model 1 (CCTS > 6, Age ≥ 65, Immunosuppression)	Early CT (≤ 1 day after or ≤ 3 days before diagnosis, n = 73)	Immunosuppression	1.43	0.44-4.84	0.55
		CCTS > 6	3.02	1.15-8.48	0.029
		Age ≥ 65	1.32	0.43-4.08	0.63
	Late CT (2-7 days after diagnosis, n = 40)	Immunosuppression	4.06	0.74-33.53	0.13
		CCTS > 6	4.60	1.04-25.34	0.055
		Age ≥ 65	3.03	0.53-24.71	0.24
Model 2 (Age ≥ 65, Immunosuppression, GGO, Consolidation, Muroid impaction, Emphysema)	Early CT (≤ 1 day after or ≤ 3 days before diagnosis, n = 73)	Age ≥ 65	0.77	0.18-3.07	0.71
		Immunosuppression	1.09	0.28-4.28	0.90
		GGO	2.80	0.83-10.70	0.11
		Consolidation	2.00	0.67-6.03	0.21
		Muroid impaction	2.25	0.61-9.17	0.23
		Emphysema	4.51	0.96-33.70	0.084
	Late CT (2-7 days after diagnosis, n = 40)	Age ≥ 65	3.08	0.45-27.88	0.27
		Immunosuppression	11.05	1.53-154.8	0.036
		GGO	0.55	0.10-2.83	0.48
		Consolidation	6.06	1.03-55.45	0.066
		Muroid impaction	0.49	0.05-3.65	0.50
		Emphysema	8.82 × 10 ⁷	NA	0.99
Model 2 - Sensitivity excluding documented bacterial infections	All patients excluding infection (n = 101)	Age ≥ 65	1.38	0.44-4.42	0.58
		Immunosuppression	2.02	0.71-6.17	0.20
		GGO	1.93	0.74-5.19	0.18
		Consolidation	2.55	1.04-6.42	0.043
		Muroid impaction	1.24	0.41-3.73	0.70
		Emphysema	6.07	1.44-42.31	0.029

Legend : CCTS: Chest CT Score; CT: Computed Tomography ; GGO: Ground Glass Opacity; Bold values indicate p < 0.05.