

Supplemental digital content

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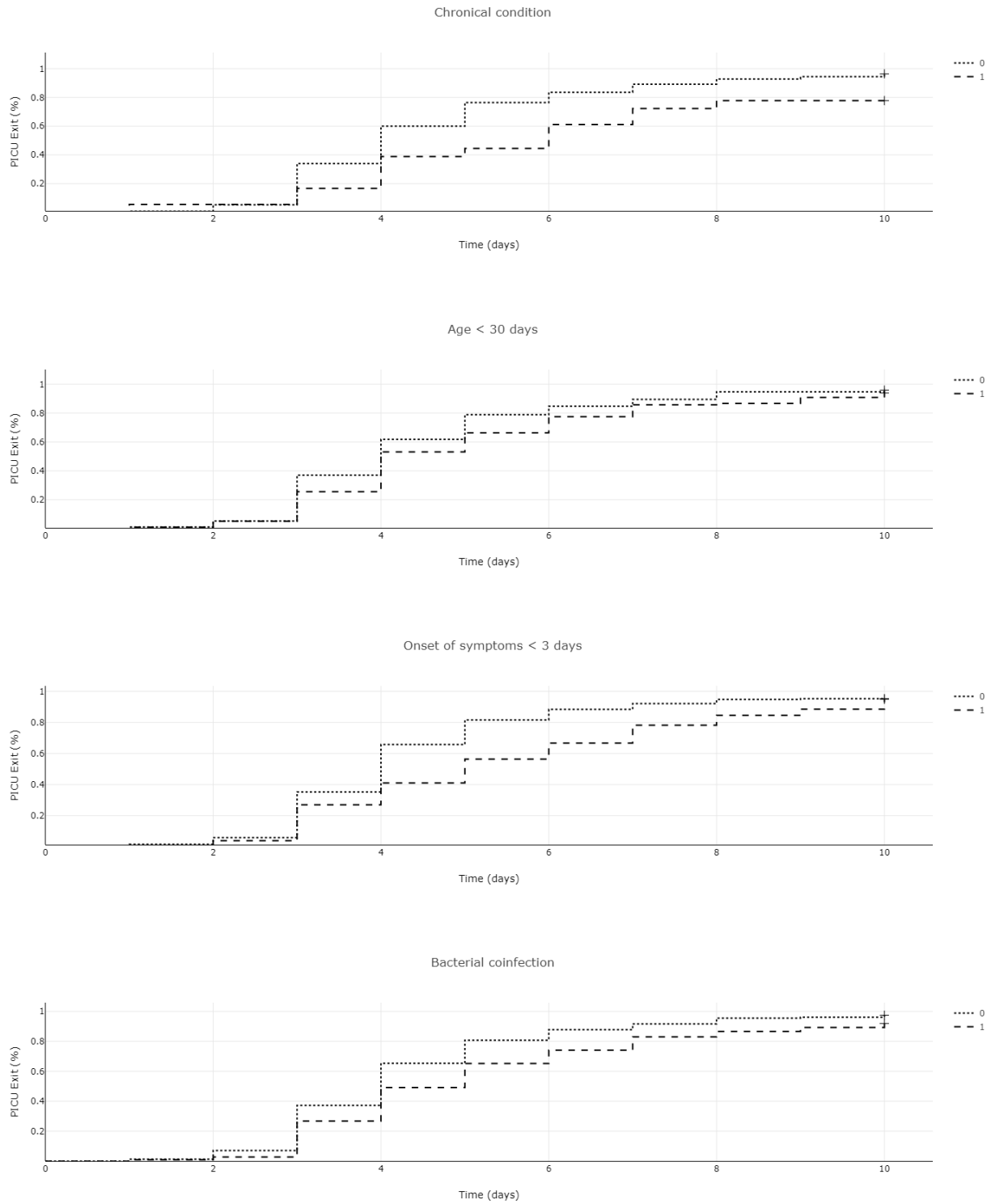
Appendix 1: Survey responses of 50 French pediatric intensivists on predictors of PICU length of stay for severe bronchiolitis.

They were asked to evaluate each variable from “Major Risk Factor for prolonged length of stay in PICU for bronchiolitis” to “Major Protective Factor for prolonged length of stay in PICU for bronchiolitis”.

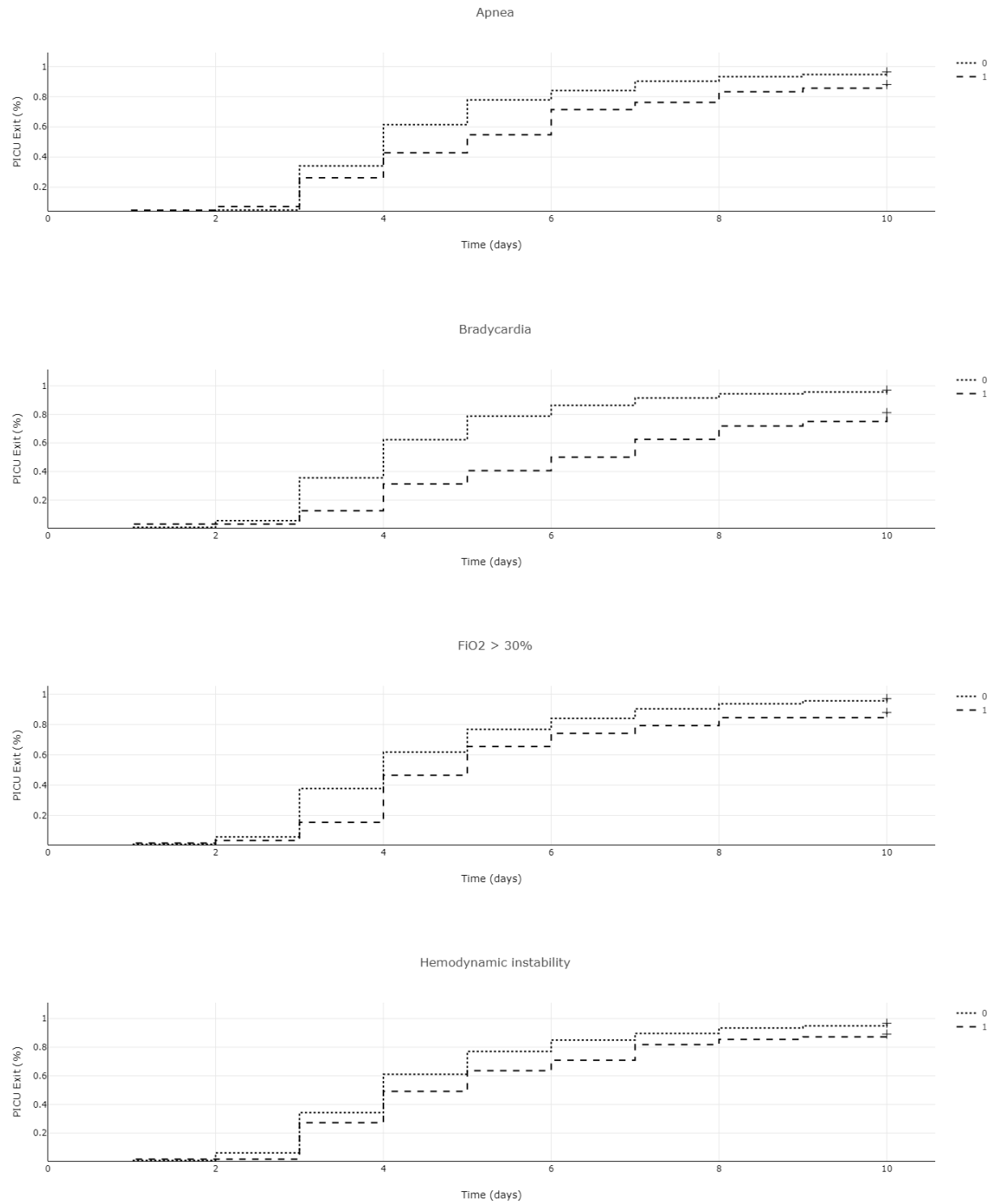
Variable	Major Risk Factor n (%)	Moderate Risk Factor n (%)	Neural Factor n (%)	Moderate Protective Factor n (%)	Major Protective Factor n (%)
Chronic pulmonary disease	41 (82%)	8 (16%)	1 (2%)	0	0
Preterm < 32 weeks of pregnancy	34 (68%)	14 (28%)	2 (4%)	0	0
Congenital heart disease	26 (52%)	20 (40%)	4 (8%)	0	0
Age < 30 days	20 (42%)	13 (27%)	13 (27%)	2 (4%)	0
Apnea	18 (36%)	18 (36%)	12 (24%)	1 (2%)	1 (2%)
Hemodynamic instability	18 (37%)	22 (45%)	8 (16%)	1 (2%)	0
Preterm 32 - 36 weeks of pregnancy	8 (16%)	27 (54%)	13 (26%)	2 (4%)	0
Previous bronchiolitis with PICU admission	8 (16%)	22 (44%)	20 (40%)	0	0
Bradycardia	17 (34%)	19 (38%)	14 (28%)	0	0
Bacterial coinfection	11 (23%)	17 (35%)	17 (35%)	3 (6%)	0
PCO ₂ > 70 Torr	3 (6%)	20 (41%)	24 (49%)	2 (4%)	0
Bicarbonate > 30 mmol/L	4 (8%)	15 (31%)	26 (53%)	4 (8%)	0
FiO ₂ > 30 %	5 (10%)	10 (20%)	33 (66%)	2 (4%)	0
Viral coinfection	4 (8%)	10 (20%)	32 (65%)	3 (6%)	0
pH < 7.30	1 (2%)	15 (31%)	31 (65%)	1 (2%)	0
RSV infection	0	2 (22%)	7 (78%)	0	0
Duration of symptoms < 3 days before PICU admission	4 (8%)	9 (18%)	30 (60%)	6 (12%)	1 (2%)
Respiratory rate > 60 per minute	1 (2%)	6 (12%)	36 (73%)	5 (10%)	1 (2%)
Previous bronchiolitis without PICU admission	1 (2%)	2 (4%)	35 (70%)	10 (20%)	4 (8%)
No HFNO before admission	1 (2%)	2 (4%)	29 (60%)	8 (17%)	8 (17%)

HFNO = High Flow Nasal Oxygen

Appendix 2: PICU discharge time, according to the admission characteristics of infants admitted in PICU for severe bronchiolitis. (Figure 2)

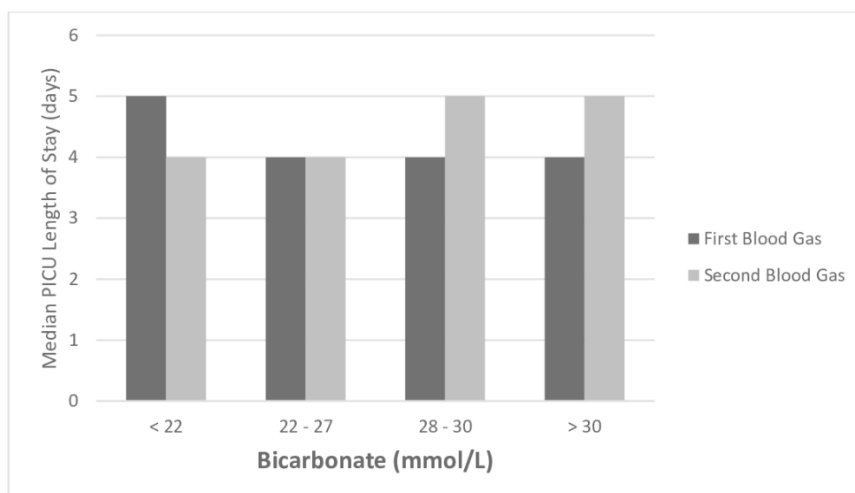
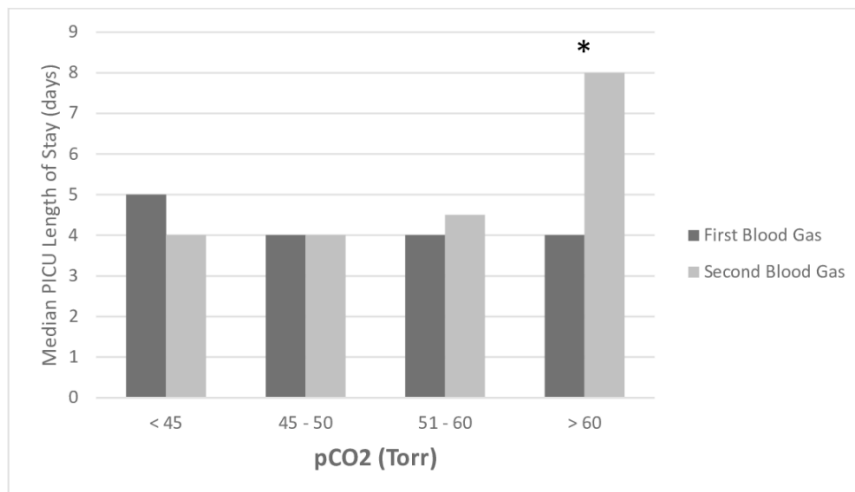
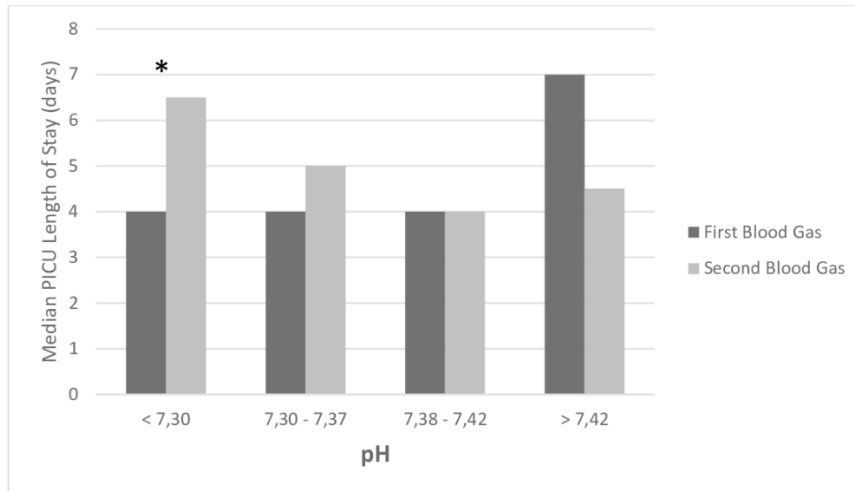


Appendix 2: PICU discharge time, according to the admission characteristics of infants admitted in PICU for severe bronchiolitis.



Appendix 3: Median PICU length of stay for bronchiolitis according to blood gas parameters.

First blood gas = leading to PICU admission, Second blood gas = in PICU ; * Student p value < 0.05



Appendix 4: Characteristics of infants requiring invasive ventilation vs. infants requiring other respiratory support (Noninvasive ventilation, High flow nasal oxygen or Standard nasal oxygen) in PICU for bronchiolitis. (Table 3)

	No invasive ventilation (Mean or %)	Invasive ventilation (Mean or %)	p-value
Age (days)	59,5	93,8	0,1203
Weight (kg)	4,6	4,8	0,4794
Female sex	44%	31%	0,6159
Birth term (weeks of pregnancy)	38,5	36,4	0,0215
Personal history of bronchiolitis without PICU admission	7%	0%	0,6104
Personal history of bronchiolitis with PICU admission	2%	13%	0,0483
Congenital heart disease	2%	6%	0,2794
Chronic pulmonary disease	2%	19%	0,0138
Chronic neurologic disease	1%	6%	0,1692
Genetic syndrome	1%	6%	0,1778
Any chronical condition	6%	31%	0,0027
Onset of symptoms (days)	3,9	4,2	0,6709
Heart rate (/min)	161	151	0,0936
Respiratory rate (/min)	55	46	0,0446
SpO2 (%)	96,6	96,3	0,8670
FiO2 (%)	28,7	49,0	<0,001
SpO2/FiO2	3,51	2,95	0,1882
ROX (SpO2/FiO2/Respiratory Rate)	7,50	6,60	0,3348
Fever >38°C	21%	25%	0,5489
Hemodynamic instability	18%	56%	0,0021
Apnea	13%	50%	0,0015
Bradycardia	9%	50%	<0,001
pH- 1	7,31	7,28	0,2328
PCO2 - 1 (Torr)	56,2	72,5	0,0591
Bicarbonate - 1 (mmol/L)	27,8	30,3	0,0735
pH- 2	7,36	7,28	0,1246
PCO2 - 2 (Torr)	49,8	69,4	0,0029
Bicarbonate - 2 (mmol/L)	27,9	31,9	0,0733
RSV positive	92%	75%	0,0533
Viral coinfection	16%	56%	0,001
Viral coinfection without RSV	3%	19%	0,0193
Viral coinfection with RSV	14%	38%	0,0266
Only RSV positive	78%	38%	0,0015
Bacterial coinfection	38%	100%	<0,001
PICU length of stay (days)	4,5	15,9	<0,001
Total	n = 252 (94%)	n = 16 (6%)	

RSV = Respiratory syncytial virus