

SUPPLEMENTARY TABLES

Suppl. Table 1. Statistical model for HbF % over postnatal age (PNA) using random coefficient models, with normal distribution and unstructured covariance pattern, including significant interactions. Time modeled with natural cubic splines.

Variable	F		PNA		Estimate	SE	95% LCL	95% UCL	t-value	p-value	
	value	p-value	spline	GA cat.							
PNA spline	37.66	<.0001	1		0.000						
			2		-1.900	0.681	-3.237	-0.564	-2.792	0.0054	
			3		-0.286	0.160	-0.600	0.028	-1.785	0.07	
GA cat.	16.66	<.0001		22-24w	-13.193	2.562	-18.227	-8.160	-5.150	<.0001	
				25-27w	-3.045	2.278	-7.521	1.431	-1.337	0.18	
				28-29w	0.000						
Sex	3.78	0.052			3.424	1.761	-0.037	6.885	1.944	0.052	
PNA spline * GA cat.	18.72	<.0001	1	22-24w	0.000						
			1	25-27w	0.000						
			1	28-29w	0.000						
			2	22-24w	-4.105	0.535	-5.155	-3.055	-7.674	<.0001	
			2	25-27w	-1.751	0.493	-2.718	-0.783	-3.550	0.0004	
			2	28-29w	0.000						
			3	22-24w	0.298	0.130	0.043	0.554	2.287	0.022	
			3	25-27w	0.287	0.128	0.035	0.538	2.235	0.025	
			3	28-29w	0.000						
PNA spline * Sex	7.74	0.0005	1		0.000						
			2		-0.323	0.348	-1.006	0.361	-0.927	0.35	
			3		0.270	0.071	0.131	0.409	3.801	0.0001	

Suppl. Table 2.1. Statistical model for FiO₂ over postnatal age (PNA) using random coefficient models, with lognormal distribution and unstructured covariance pattern, including significant interactions. Time modeled with natural cubic splines.

Variable	F	p-value	PNA	GA cat.	Estimate	SE	95% LCL	95% UCL	t-value	p-value	
	value		spline								
PNA spline	33.05	<.0001	1		0.000						
			2		-0.037	0.011	-0.059	-0.015	-3.277	0.0011	
			3		0.006	0.004	-0.001	0.013	1.714	0.09	
GA cat.	0.27	0.76		22-24w	0.032	0.047	-0.061	0.125	0.670	0.50	
				25-27w	0.029	0.043	-0.055	0.113	0.677	0.50	
				28-29w	0.000						
Sex	3.47	0.06			-0.039	0.021	-0.081	0.002	-1.863	0.06	
PNA spline * GA cat.	8.13	<.0001	1	22-24w	0.000						
			1	25-27w	0.000						
			1	28-29w	0.000						
			2	22-24w	0.023	0.013	-0.004	0.049	1.694	0.09	
			2	25-27w	0.007	0.013	-0.018	0.031	0.524	0.60	
			2	28-29w	0.000						
			3	22-24w	0.011	0.004	0.003	0.019	2.635	0.0084	
			3	25-27w	0.005	0.004	-0.002	0.013	1.385	0.17	
			3	28-29w	0.000						

Suppl. table 2.2. Statistical model for alveolar-arterial (A-a) gradient over postnatal age (PNA) using random coefficient models, with lognormal distribution and unstructured covariance pattern, including significant interactions. Time modeled with natural cubic splines.

Variable	F		PNA		Estimate	SE	95% LCL	95% UCL	t-value	p-value	
	value	p-value	spline	GA cat.							
PNA spline	21.14	<.0001	1		0.000						
			2		-0.073	0.028	-0.127	-0.018	-2.628	0.0087	
			3		0.007	0.009	-0.010	0.023	0.773	0.44	
GA cat.	4.53	0.011		22-24w	0.738	0.277	0.194	1.282	2.666	0.0079	
				25-27w	0.713	0.251	0.219	1.206	2.838	0.0047	
				28-29w	0.000						
Sex	0.38	0.54			0.164	0.129	-0.089	0.417	1.275	0.20	
PNA spline * GA cat.	7.76	<.0001	1	22-24w	0.000						
			1	25-27w	0.000						
			1	28-29w	0.000						
			2	22-24w	0.037	0.034	-0.029	0.103	1.108	0.27	
			2	25-27w	0.005	0.031	-0.056	0.066	0.158	0.87	
			2	28-29w	0.000						
			3	22-24w	0.029	0.009	0.011	0.048	3.123	0.0018	
			3	25-27w	0.014	0.009	-0.004	0.032	1.540	0.12	
			3	28-29w	0.000						
GA cat * Sex	2.36	0.10		22-24w	-0.285	0.169	-0.618	0.048	-1.682	0.09	
				25-27w	-0.322	0.150	-0.617	-0.026	-2.140	0.033	
				28-29w	0.000						

Suppl. Table 3 (3.1 and 3.2). Relative risk (RR) with 95% CI from the statistical model for FiO_2 (A) and A-a gradient (B) as a function of HbF(%), pCO_2 , gestational age (GA) and postnatal age (PNA), adjusted for pH and sex using random coefficient models, with lognormal distribution and unstructured covariance pattern, including significant interactions.

3.1: Estimates per 20 units increase in HbF(%)	RR (95% CI)	p-value
PNA 1d $\text{pCO}_2\text{kPa}(Q1)$	0.99 (0.98 - 1.00)	0.19
PNA 1d $\text{pCO}_2\text{kPa}(Q3)$	1.01 (0.99 - 1.02)	0.25
PNA 4d $\text{pCO}_2\text{kPa}(Q1)$	0.94 (0.93 - 0.95)	<.0001
PNA 4d $\text{pCO}_2\text{kPa}(Q3)$	0.96 (0.95 - 0.97)	<.0001
PNA 7d $\text{pCO}_2\text{kPa}(Q1)$	0.89 (0.88 - 0.91)	<.0001
PNA 7d $\text{pCO}_2\text{kPa}(Q3)$	0.91 (0.89 - 0.93)	<.0001

3.2: Estimates per 20 units increase in HbF(%)	RR (95% CI)	p-value
PNA 1d $\text{pCO}_2\text{kPa}(Q1)$	1.01 (0.98 - 1.05)	0.42
PNA 1d $\text{pCO}_2\text{kPa}(Q3)$	1.05 (1.01 - 1.08)	0.0065
PNA 4d $\text{pCO}_2\text{kPa}(Q1)$	0.92 (0.89 - 0.94)	<.0001
PNA 4d $\text{pCO}_2\text{kPa}(Q3)$	0.95 (0.92 - 0.97)	0.0002
PNA 7d $\text{pCO}_2\text{kPa}(Q1)$	0.83 (0.79 - 0.87)	<.0001
PNA 7d $\text{pCO}_2\text{kPa}(Q3)$	0.85 (0.82 - 0.89)	<.0001

Suppl. Table 4. Mean difference with 95% CI from the statistical model for arterial oxygen saturation (SaO₂) as a function of HbF(%), pCO₂, gestational age (GA) and postnatal age (PNA), adjusted for pH and sex using random coefficient models, with normal distribution and unstructured covariance pattern, including significant interactions. Q1 and Q3 of pCO₂ represent the 25th and 75th percentile respectively.

Estimates per 20 units increase in HbF(%)	LS mean difference (95% CI)	p-value
PNA 1d pCO ₂ kPa(Q1)	-0.08 (-0.30 - 0.13)	0.45
PNA 1d pCO ₂ kPa(Q3)	-0.16 (-0.38 - 0.05)	0.14
PNA 4d pCO ₂ kPa(Q1)	0.14 (-0.04 - 0.31)	0.12
PNA 4d pCO ₂ kPa(Q3)	0.06 (-0.11 - 0.23)	0.48
PNA 7d pCO ₂ kPa(Q1)	0.36 (0.11 - 0.61)	0.0055
PNA 7d pCO ₂ kPa(Q3)	0.28 (0.04 - 0.52)	0.022