

Supplemental Table 1: Demographic data of BPD grades I, II, and III

	BPD grade I (n=62)	BPD grade II (n=149)	BPD grade III (n=37)	<i>p</i>-value
Maternal				
Maternal age (year)	28.68 ($\pm$ 1.88)	27.96 ($\pm$ 2.00)	27.95 ($\pm$ 1.78)	0.19
Antenatal steroid	60 (96.8)	135 (90.6)	36 (97.3)	0.15
Completed dose	35 (56.5)	80 (53.7)	24 (64.9)	0.47
Diabetes mellitus	6 (9.7)	20 (13.4)	2 (5.4)	0.35
Hypertensive disorder	6 (9.7)	37 (24.8)	13 (35.1)	0.008
Chorioamnionitis	8 (12.9)	16 (10.7)	2 (5.4)	0.49
IUGR	6 (9.7)	23 (15.4)	4 (10.8)	0.47
Cesarean section	29 (46.8)	105 (70.5)	28 (75.7)	0.002
Multiple pregnancy	9 (14.5)	34 (22.8)	12 (32.4)	0.11
Neonatal				
GA (weeks)	28.7 ($\pm$ 1.9)	28.0 ($\pm$ 2.0)	27.9 ($\pm$ 1.8)	0.04
24 ^{0/7} -26 ^{6/7} weeks	12 (50)	52 (34.9)	12 (32.4)	0.08
27 ^{0/7} -31 ^{6/7} weeks	50 (80.6)	97 (65.1)	25 (67.6)	
Birth weight (grams)	1143.2 ($\pm$ 282.4)	981.4 ($\pm$ 318.0)	902.4 ($\pm$ 292.1)	< 0.001
Male	34 (54.8)	89 (59.7)	24 (64.9)	0.60
1-minute Apgar score	5 [3-8]	3 [1-6]	4 [2-5]	<0.05
5-minute Apgar score	8 [6-9]	7 [5-9]	6 [5-7]	<0.05

Expressed as the count (%), mean $\pm$ SD, median [IQR].

Abbreviations: GA, gestational age; IUGR, intrauterine growth restriction.

Supplemental Table 2: Neonatal comorbidities among BPD Grades I, II, and III

	BPD grade I (n=62)	BPD grade II (n=149)	BPD grade III (n=37)	<i>p</i>-value
Intubation at DR	32 (51.6)	102 (68.5)	28 (75.7)	0.02
Intubation at NICU during admission	49 (79.0)	134 (89.9)	37 (100.0)	0.005
Surfactant administration	15 (24.2)	65 (43.6)	18 (48.6)	0.02
Repeated dose of surfactant	1 (1.6)	8 (5.4)	3 (8.1)	0.31
Pulmonary hemorrhage	4 (6.5)	15 (10.1)	5 (13.5)	0.50
PPHN	2 (3.2)	12 (8.1)	10 (27.0)	< 0.001
iNO initiation	0	1 (0.7)	3 (8.1)	0.003
Use of inotropic drugs	40 (64.5)	75 (50.3)	13 (35.1)	0.02
Use of hydrocortisone	1 (1.6)	17 (11.4)	3 (8.1)	0.07
Late onset sepsis	22 (35.5)	79 (53.0)	34 (91.9)	< 0.001
NEC stage ≥ 2	9 (14.5)	38 (25.5)	5 (13.5)	0.10
Surgical treatment	0	12 (31.6)	1 (20.0)	0.14
Treatment of PDA	31 (50.0)	101 (67.8)	28 (75.7)	0.02
Medical closure	21 (67.7)	59 (58.4)	12 (42.9)	0.11
PDA ligation	10 (32.3)	42 (41.6)	16 (57.1)	0.05
Age at PDA ligation (days)	17 [10-21]	18 [14-27]	24 [22-38]	0.007
PMA at PDA ligation (weeks)	29.1 (± 1.6)	30.3 (± 3.9)	32.2 (± 2.4)	<0.001
Postnatal steroid	1 (1.6)	39 (26.2)	21 (56.8)	< 0.001
PHT at 34-36 weeks PMA	1 (1.6)	10 (6.7)	6 (16.2)	0.02
Total MV days	6.5	18.0	70.0	< 0.001
	[1.0-18.8]	[6.0-43.5]	[53.0-96.0]	
PMA at discharge (weeks)	41.9 (± 13.1)	44.7 (± 9.4)	52.9 (± 13.1)	< 0.001

Expressed as the count (%), mean $\pm$ SD, median [IQR].

Abbreviations: DR, delivery room; iNO, inhaled nitric oxide; MV, mechanical ventilation; NEC, necrotizing enterocolitis; PDA, patent ductus arteriosus; PHT, pulmonary hypertension; PMA, postmenstrual age; PPHN, persistent pulmonary hypertension of the newborn.

Supplement Table 3: Univariate logistic regression analysis of risk factors for BPD, comparing the no BPD group and the all-grade BPD or death group.

	Crude OR	95% CI	<i>p</i> -value
Antenatal steroid	1.29	0.76–2.19	0.35
IUGR	1.65	1.02-2.66	0.04
Chorioamnionitis	1.43	0.84-2.43	0.19
Cesarean section	1.20	0.89-1.63	0.23
GA < 27 weeks	11.33	6.99-18.37	< 0.001
Male	1.38	1.02-1.85	0.04
1-minute Apgar score	0.69	0.65-0.74	< 0.001
5-minute Apgar score	0.65	0.60-0.70	< 0.001
Intubation at DR	18.52	11.78-29.12	< 0.001
Surfactant administration	7.82	5.22-11.71	< 0.001
Pulmonary hemorrhage	6.00	2.90-12.40	< 0.001
PPHN	11.52	4.79-27.71	< 0.001
Late onset sepsis	4.60	3.31-6.39	< 0.001
NEC stage ≥ 2	1.60	1.09-2.35	0.02
Use of hydrocortisone	14.08	5.46-36.33	< 0.001
PDA ligation	13.73	7.12-26.47	< 0.001
Postnatal steroid	8.71	5.12-14.81	< 0.001
PHT at 34-36 weeks PMA	4.87	2.02-11.73	< 0.001
Total mechanical ventilation (days)			
• Never intubation	ref		
• MV < 7 days	5.82	3.59-9.43	< 0.001
• MV 7-42 days	20.26	12.26-33.49	< 0.001
• MV > 42 days	159.6	59.64-427.13	< 0.001

Abbreviations: DR, delivery room; MV, mechanical ventilation; IUGR, intrauterine growth restriction; NEC, necrotizing enterocolitis; PDA, patent ductus arteriosus; PHT, pulmonary hypertension; PMA, postmenstrual age; PPHN, persistent pulmonary hypertension of the newborn.

Supplemental Figure 4: ROC curve for predicting BPD

