

**Table 2. Outcomes**

Outcome	400 IU/day (n=90)	800 IU/day (n=90)	Effect Estimate (95% CrI)	Probability of Benefit
<b>PRIMARY OUTCOME</b>				
25(OH)D at 1 month (ng/mL)*^	32 ± 12	67 ± 26	MD: 34.6 (28.6-40.6)	>99%
25(OH)D at 1 month (<30 ng/mL)^	59%	2 %	RR: 0.16 (0.08-0.28)	>99%
<b>RESPIRATORY OUTCOMES</b>				
<b>Survival with less severe BPD†</b>	—	—	OR: 1.11 (0.67-1.85)	66%
• Death	10%	6%	—	—
• Grade 3 BPD (HFV/CV)	3%	8%	—	—
• Grade 2 BPD (CPAP/NIPPV)	40%	34%	—	—
• Grade 1 BPD (NC ≤2L)	25%	35%	—	—
• No BPD	21%	18%	—	—
BPD (any grade)	77%	81%	RR: 1.03 (0.91-1.18)	29%
Moderate-severe BPD (Grade 2-3)	49%	44%	RR: 0.91 (0.70-1.18)	75%
Supplemental oxygen at 36 weeks	67%	75%	RR: 1.10 (0.91-1.33)	16%
<b>MORTALITY &amp; MAJOR MORBIDITY</b>				
Death	10%	6%	RR: 0.70 (0.31-1.51)	81%
Sepsis	27%	18%	RR: 0.73 (0.44-1.18)	90%
Spontaneous intestinal perforation	16%	9%	RR: 0.68 (0.35-1.29)	88%
NEC ≥Bell stage 2b	20%	17%	RR: 0.87 (0.50-1.49)	70%
Bone fracture	8%	4%	RR: 0.73 (0.31-1.71)	76%
ROP ≥stage 2 or plus disease	30%	28%	RR: 0.93 (0.62-1.38)	65%
IVH grade 3-4	8.0%	13%	RR: 1.42 (0.71-2.91)	16%
PVL	6%	4%	RR: 0.89 (0.35-2.22)	60%
<b>COMPOSITE OUTCOMES</b>				
Death or Severe IVH	16 (18%)	16 (18%)	RR: 1.00 (0.58-1.72)	50%
Death or BPD	70 (79%)	73 (82%)	RR: 1.03 (0.92-1.16)	30%
Death or SIP or NEC	35 (39%)	26 (29%)	RR: 0.78 (0.54-1.13)	91%
Death or Sepsis	28 (31%)	20 (22%)	RR: 0.76 (0.49-1.17)	89%
Death or Fracture	15 (17%)	9 (10%)	RR: 0.69 (0.36-1.29)	87%

Abbreviations: BPD = Bronchopulmonary Dysplasia; CPAP = Continuous positive airway pressure; CrI = Credible Interval; CV = Conventional ventilation; HFV = High-frequency ventilation; IVH = Intraventricular Hemorrhage; MD = Mean Difference; NC = Nasal cannula; NEC = Necrotizing Enterocolitis; NIPPV = Non-invasive positive pressure ventilation; OR = Odds Ratio; PMA = Postmenstrual Age; PVL = Periventricular Leukomalacia; ROP = Retinopathy of Prematurity; RR = Relative Risk; SIP = Spontaneous Intestinal Perforation

\* Values presented as mean ± SD; all other values are %. ^ One infant withdrew and was not included in the primary outcome. † Ordinal outcome analyzed using proportional odds model with death as worst outcome.

Statistical Analysis: Bayesian methods with neutral priors.