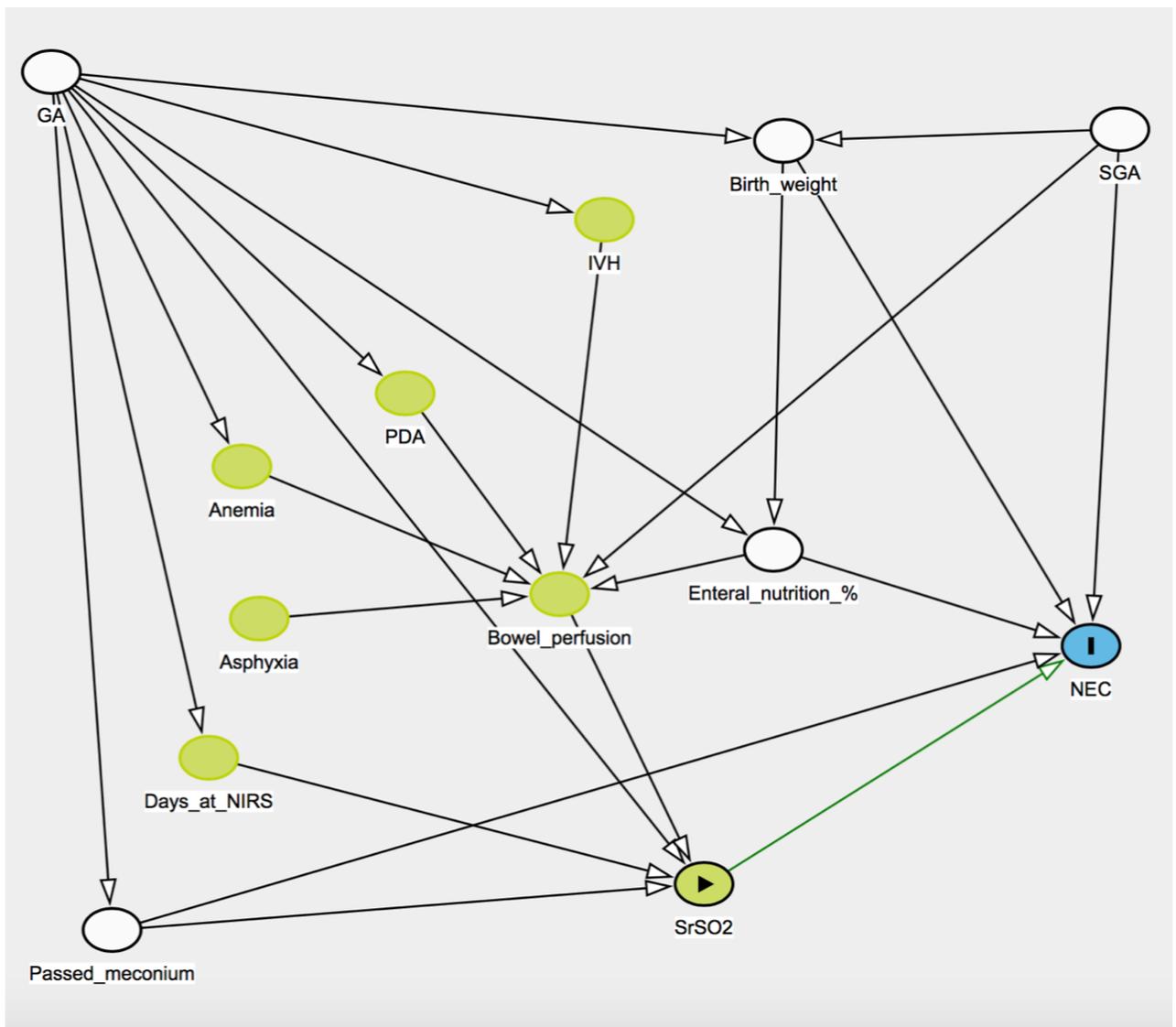


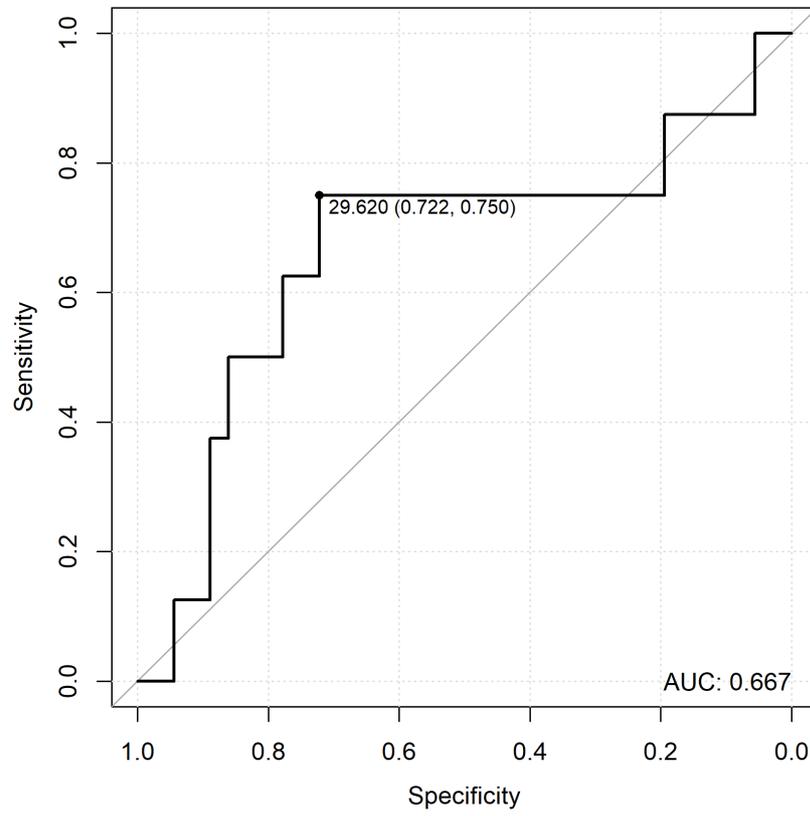
Supplemental Digital Content 1: Directed Acyclic Graphs (DAGs) are graphs that simplify the interpretation and communication in causal inference and they are useful for covariate selection in observational studies.

It is used to identify possible confounders that may induce non-causal association between mean SrSO₂ and risk for NEC (in blue). Each arrow represents a causal influence. In white are the confounders that could induce a non-causal association between mean SrSO₂ and risk for NEC according to the DAG.



GA= gestational age, PDA =patent ductus arteriosus, SGA= small for gestation age, IVH =Intraventricular hemorrhages

Supplemental Digital Content 2: ROC curve for Splanchnic oxygenation (SrSO2) and risk for NEC

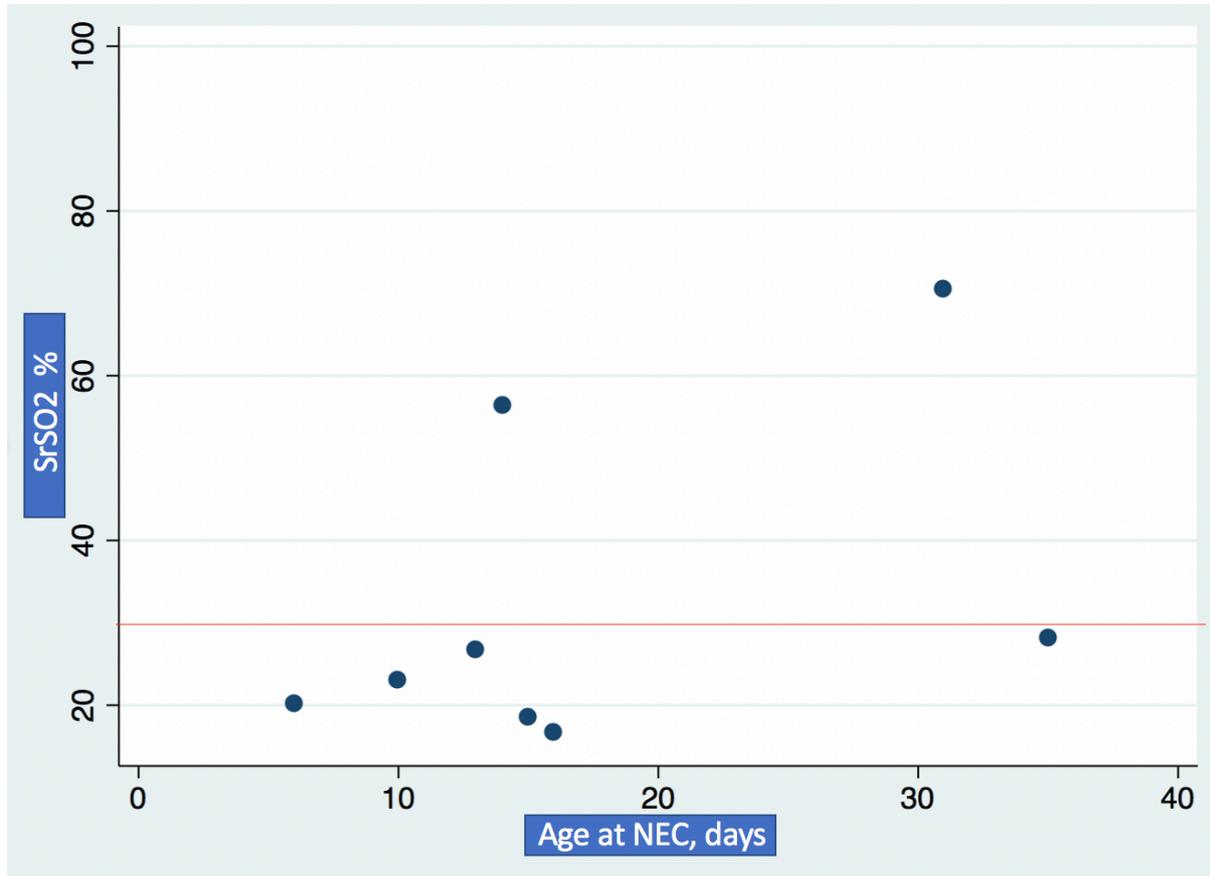


Supplemental Digital Content 3: Results: Cerebral and splanchnic oxygenation in infants who develop NEC and infants who did not develop NEC (non-NEC)

	NEC (N=8)	NO NEC (N=36)	p value
SrSO₂, median (IQR)	24.82 (19.38-42.25)	39.28 (27.67-53.41)	0.14
SrSO₂<30%, n(%)	6 (75.00%)	10(27.78%)	0.02
SrSO₂ STANDARD DEVIATION, median(IQR)	6.45(5.70-7.20)	9.77 (6.49-12.04)	0.01
CoVAR, median (IQR)	0.25(0.17-0.32)	0.24(0.16-0.35)	0.83
CrSO₂,median (IQR)	71.87 (64.40-82.47)	76.82 (70.68-80.16)	0.33
SCOR, median (IQR)	0.37 (0.27-0.63)	0.53(0.35-0.76)	0.19
SCOR2 excluding infants with IVH, median (IQR)	0.44(0.27-0.88)*	0.49(0.33-0.60)#	0.94

IQR= Interquartile range, SCOR= splanchnic-cerebral oxygenation ratio, .CoVAR= coefficient of variation (SrSO₂ Standard deviation/ SrSO₂). IVH =Intraventricular hemorrhages.
 Just 6 patients *Just 26 patients #

Supplemental Digital Content 4: Graph showing the relation between SrSO₂ value (in %) and age at NEC development (in days). The red line indicate SrSO₂ = 30%



Supplemental Digital Content 5: Risk ratio in the extremely preterm infants for developing necrotizing enterocolitis shown as crude and adjusted for the different variables (generalized linear model analysis, NEC as dependent variable). Excluded the infant bolus-fed.

	RISK RATIO (95% confidence interval)
SrSO₂ <30% ,CRUDE	5.06 (1.16-22.15)*
SrSO₂ <30% (adjusted for birth weight)	5.98 (1.46-24.58)*
SrSO₂ <30% (adjusted for gestational age)	8.93 (2.04-39.14)*
SrSO₂ <30% (adjusted for SGA)	5.30 (1.22-23.02)*
SrSO₂<30% (adjusted for post-natal age at NIRS)	7.14 (1.60-31.75)*
SrSO₂<30% (adjusted for passed first stool)	5.30 (1.22-23.03)*
SrSO₂<30% (adjusted for CrSO₂)	5.34 (1.24-22.93)*

SrSO₂= splanchnic oxygen saturation SGA= Small for Gestational Age, S CrSO₂= Cerebral regional oxygen saturation.

*= p<0.05