

Supplementary data

Table S1

Mortalities before discharge #/18 months \*, all subjects

	Low saturation	High saturation	RR (95% CI)
SUPPORT *	140/633	118/648	1.25 (1.00-1.55)
BOOST UK #	115/484	96/483	1.20 (0.94-1.52)
BOOST AU #	99/567	83/567	1.19 (0.91-1.56)
BOOST NZ #	21/170	24/170	0.88(0.51-1.51)
COT *	97/585	88/577	1.12 (0.78-1.61)
Total	472/2439 (19.4%)	409/2445 (16.7%)	

Table S 2

Severe ROP

	<u>Low saturation</u>	<u>High saturation</u>	<u>RR (95% CI)</u>
Support	41/475	91/509	0.52 (0.37-0.73)
BOOST UK	67/395	86/403	0.79 (0.60-1.06)
BOOST AU	32/482	43/493	0.76 (0.49-1.18)
BOOST NZ	11/158	12/148	0.86 (0.39-1.89)
COT	64/500	66/503	0.95 (0.65-1.39)
Total	215/2010	298/2056	
	10.7%	14.5%	

Table S 3

BPD \*

	Low saturation	High saturation	RR (95%CI)
Support	203/540	265/568	0.82(0.72-0.93)
BOOST UK	193/372	212/392	0.96 (0.84-1.10)
BOOST AU	161/473	191/492	0.88 (0.74-1.04)
BOOST NZ	40/153	58/147	0.66 (0.47-0.92)
Total	597/1538	726/1599	
	38.9 %	45.4 %	

\* oxygen dependency at 36 weeks

No data from COT

Table S 4

BPD (Physiologic)

	Low saturation	High saturation	RR (95% CI)
SUPPORT#	205/540	237/568	0.92 (0.81-1.05)
BOOSTUK **	160/353	172/376	0.99 (0.85-1.16)
COT ^	164/515	171/517	0.94 (0.71-1.23)
Total	529/1408 37.6%	580/1461 39.7%	

# Oxygen supplementation  $\geq$  30% or the need for positive pressure support at 36 weeks, or in case of need of less than 30% oxygen, the need of any oxygen at 36 weeks after an attempt at oxygen withdrawal

\*\* Oxygen supplementation at 36 weeks postmenstrual age to maintain an actual oxygen saturation of 90%

^ Oxygen supplementation for more than 12 hours on at least 28 days plus need for  $\geq$  30% oxygen or positive airway pressure at a postmenstrual age of 36 weeks

No data are available from BOOST AU and BOOST NZ

Table S 5

NEC

	Low saturation	High saturation	RR (95% CI)
Support	76/641	70/649	1.11( 0.82-1.54)
BOOST UK	71/484	52/480	1.35 (0.97-1.89)
BOOST AU	41/567	33/567	1.24 (0.80-1.94)
BOOST NZ	15/170	12/170	1.25 (0.60-2.59)
COT	74/602	56/599	1.38 (0.94-2.02)
Total	277/2464	223/2465	
	11.2 %	9.0 %	

Table S 6

IVH grade 2-4 or "brain injury"

	Low saturation	High saturation	RR 95% CI)
Support	83/630	81/640	1.06 (0.80-1.40)
BOOST UK	69/468	58/476	1.21 (0.87-1.67)
BOOST AU	58/565	56/566	1.04 (0.73-1.47)
BOOST NZ	13/170	12/169	1.08 (0.51-2.29)
COT	123/598	136/589	0.85 (0.64-1.13)
Total	346/2431	343/2440	
	14.2%	14.1%	

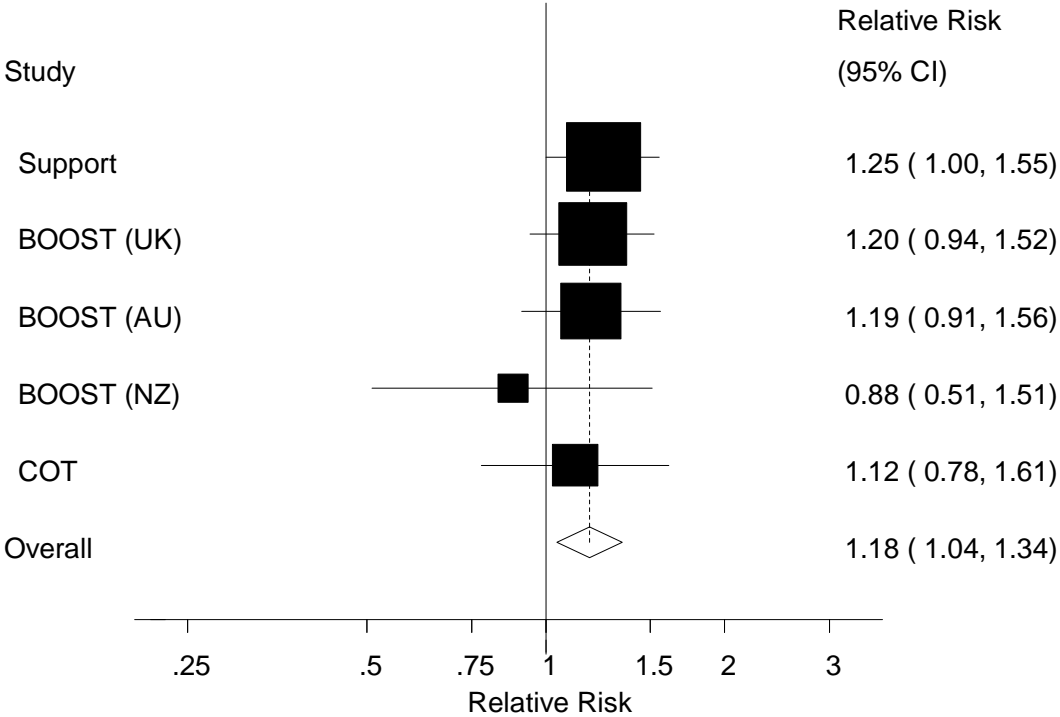
Table S 7

PDA

	Low saturation	High saturation	RR (95% CI)
SUPPORT	307/641	324/648	0.96 (0.86-1.07)
BOOST UK	198/482	186/483	1.07 (0.91-1.25)
BOOST AU	279/567	277/566	1.01 (0.89-1.13)
BOOST NZ	104/170	90/170	1.16 (0.96-1.39)
COT	324/602	332/599	0.93 (0.73-1.19)
Total	1212/2462	1209/2466	
	49.2%	49.0%	

Figure 1 supplement

Mortality all infants (old and revised software)

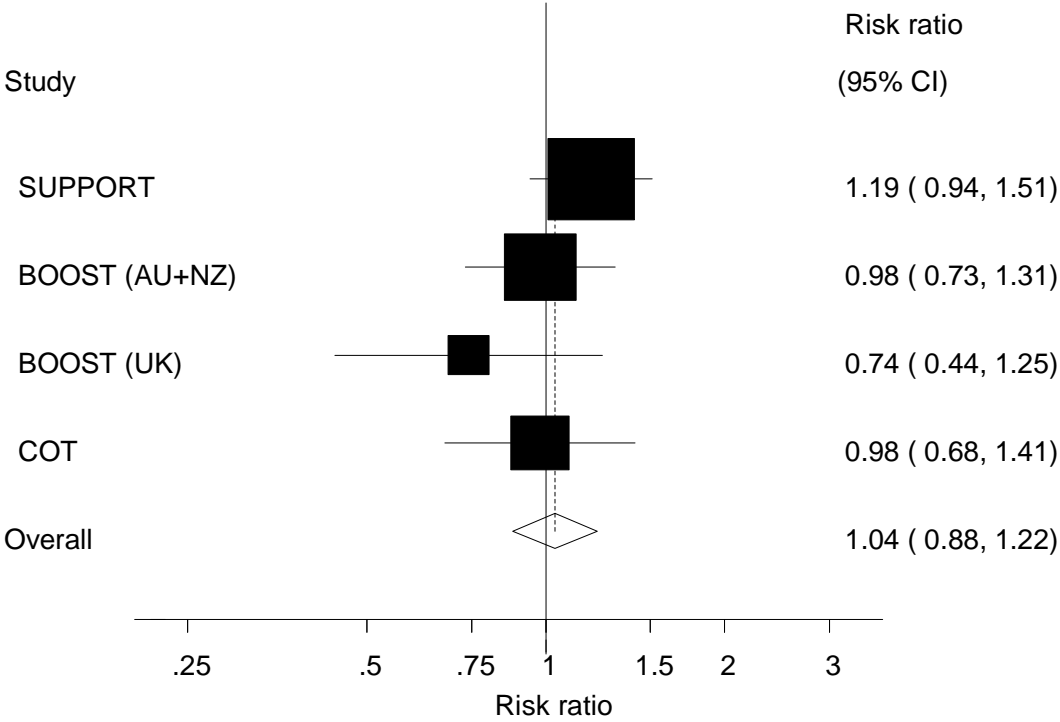


RR > 1 is favouring high oxygen target



Figure 2 supplement

Mortality based on data using the old software

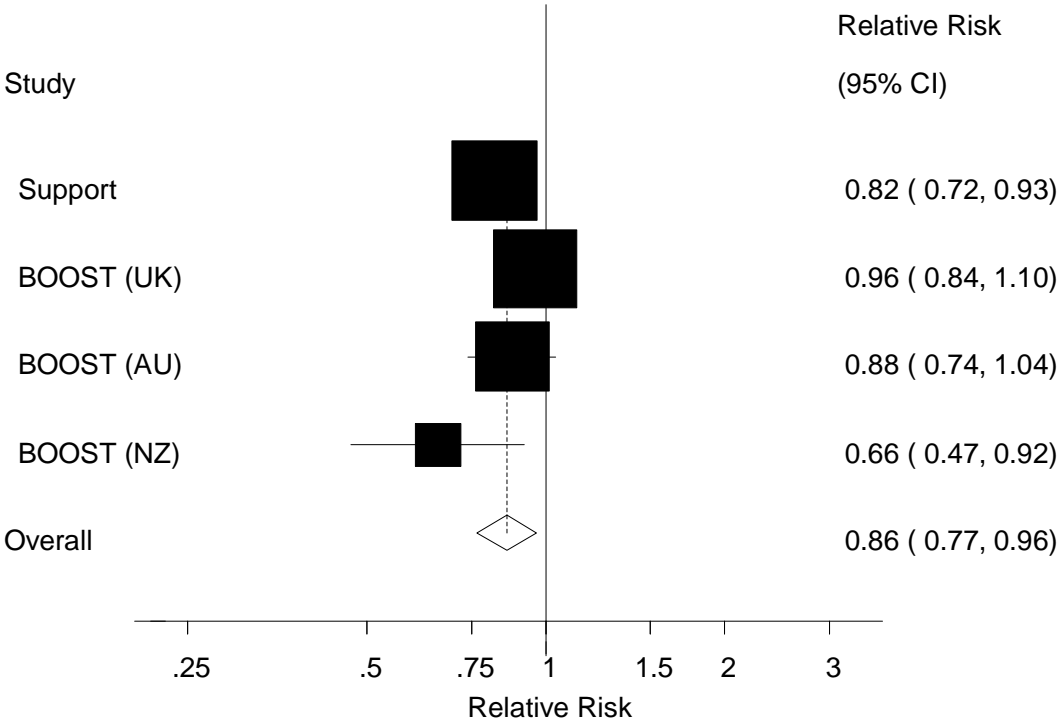


RR > 1 is favoring high oxygen target

Figure 3 Supplement

BPD

(oxygen dependency at 36 weeks post conceptional age)



RR > 1 is favouring high oxygen target