Survival Index in Low Birthweight Newborn Infants

Overview: The expected survival in a low birthweight neonate can be estimated from clinical findings shortly after birth. The survival estimate is intended to be more accurate than the Apgar score alone.

Patient population

• Premature infants weighing 500 to 1 800 grams.

Parameter	Finding	Value
number in family		(siblings) + (parents)
RDS value	respiratory distress present	1
	respiratory distress absent	0
prenatal ultrasound value	ultrasound performed	1
	ultrasound not performed	0
premature labor value	spontaneous premature labor present	1
	spontaneous premature labor absent	0
birthweight AGA value	birthweight appropriate for gestational age	1
	birthweight not appropriate for gestational age	0
convulsion value	present	1
	absent	0

A = 10.9755 - (0.0024 * (birthweight in grams)) - (0.3077 * (number in family)) + (1.9809 * (RDS value)) - (1.3486 * (prenatal ultrasound value)) + (1.333 * (premature labor value)) - (1.2490 * (birthweight AGA value)) + (3.446 * (convulsion value)) - (0.2617 * (gestational age in weeks)) - (0.1807 * (1 minute Apgar score))

neonatal survival index = 1 / (1 + EXP(A))

References:

Carter RL Behnke M et al. An index for early assessment of neonatal survival in low birthweight infants. Am J Perinatol. 1995; 12: 392-395.