

FIRST TRIMESTER 'COMBINED' TESTING (NT/PAPP-A/Free-Beta)

Down Syndrome (DS) Risk Sample Calculations (Haddow / Nicolaides 1998 parameters)

Age	Maternal Serum Result (MoM)			Combined DS Risks 1:n	
	NT	PAPP-A	Free-Beta	1st trimester (term) 80 days	
25.5	0.50	0.30	1.50	460	(810)
25.5	0.70	0.30	0.70	3300	(5900)
25.5	0.70	0.30	2.50	140	(240)
25.5	1.70	0.10	0.70	61	(110)
25.5	1.70	1.30	2.50	460	(810)
25.5	1.70	0.30	0.70	180	(310)
25.5	1.70	1.90	2.50	1100	(2000)
25.5	2.00	0.30	0.20	120	(200)
25.5	2.00	0.70	1.50	64	(110)
25.5	2.00	1.90	0.70	2000	(3600)
35.5	0.70	0.30	0.70	880	(1500)
35.5	0.70	0.30	2.50	36	(63)
35.5	0.70	1.30	2.50	2300	(4000)
35.5	1.70	0.30	0.70	47	(82)
35.5	1.70	1.90	2.50	300	(520)
35.5	1.70	3.50	2.50	330	(580)
35.5	2.00	0.30	0.70	12	(21)
35.5	2.00	1.90	0.70	540	(950)
35.5	2.00	1.90	4.00	42	(74)
35.5	3.00	1.90	0.70	220	(380)

Haddow JE, Palomaki GE, Knight GJ, Williams J, Miller WA, Johnson A: Screening of maternal serum for fetal Down's syndrome in the first trimester. *The New England Journal of Medicine* 1998; Vol. 338, No. 14, pp. 955-961.

Nicolaides KH, Snijders RJM, Cuckle HS: Correct estimation of parameters for ultrasound nuchal translucency screening. *Prenatal Diagnosis* 1998; 18:511-523.

Morris JK, Mutton DE, Alberman E: Revised estimates of the maternal age specific live birth prevalence of Down's syndrome. *Journal of Medical Screening* 2002; 9:2-6.

Medians and Standard Deviations

Marker	Unaffected		Down Syndrome		Truncation Limits
	Log Median	Log SD	Log Median	Log SD	
NT	0	0.120	0.305	0.235	0.8-2.2
PAPP-A	0	0.251	-0.370	0.272	0.2-2.2
Free-Beta	0	0.275	0.311	0.257	0.5-5.0

Correlations

	Unaffected	Down Syndrome	
	All Weeks		All Weeks
NT,PAPP-A	0	NT,PAPP-A	0
NT,Free-Beta	0	NT,Free-Beta	0
PAPP-A,Free-Beta	0.154	PAPP-A,Free-Beta	-0.038

Maternal Age Risk Equation:

Term:

$$((1))/(1/(1+EXP(7.33-4.211/(1+EXP(-0.2815*((maternal\ age-0.5)-37.23))))))$$

First Trimester:

$$((1))/(1/(1+EXP(7.33-4.211/(1+EXP(-0.2815*((maternal\ age-0.5)-37.23)))))/.57)$$

Maternal Age Range

15-45