

# Update 15

## SAMSAS Prenatal Screening for Down syndrome

### Revised Age Specific Performance

#### 1<sup>st</sup> & 2<sup>nd</sup> Trimester Screening

#### at time of screen with risk cut off 1:250



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### HOW TO READ THIS TABLE

For a 30 year old screened using the 1<sup>st</sup> Trimester Combined Screen, there would be a **3.5%** chance of being screened “at increased risk” and a **75.1%** chance of detecting an affected pregnancy. For a pregnancy screened “at increased risk” there would be a **1 in 34** chance that the pregnancy is affected by Down syndrome and for a pregnancy screened “not at increased risk”, the chance would be **1 in 2,789**. Comparative performance figures for a second trimester screen are provided in the last 4 columns.

1 <sup>st</sup> Trimester Combined Screen						2 <sup>nd</sup> Trimester Screen				
Maternal age in years at time of screen	Maternal age risk at 12 weeks 1:n	% of pregnancies screened at increased risk	% of affected pregnancies detected	Odds of having an affected pregnancy following		Maternal age risk at 18 weeks 1:n	% of pregnancies screened At increased risk	% of affected pregnancies detected	Odds of having an affected pregnancy following	
				Increased risk report 1:n	Not at increased risk report 1:n				Increased risk report 1:n	Not at increased risk report 1:n
20	1131	2.4	73.6	37	4186	1330	4.4	59.3	99	3126
21	1118	2.4	73.6	37	4137	1316	4.4	59.3	98	3093
22	1102	2.5	73.6	37	4076	1297	4.5	59.3	99	3045
23	1081	2.5	73.6	37	3997	1273	4.5	59.3	97	2989
24	1054	2.5	74.1	36	3971	1243	4.6	60.0	96	2964
25	1020	2.6	74.6	35	3916	1203	4.7	60.0	94	2866
26	978	2.7	74.6	36	3749	1155	5.0	60.0	96	2743
27	926	2.9	74.6	36	3543	1096	5.3	61.3	94	2685
28	866	3.0	74.6	35	3310	1026	5.8	62.7	94	2590
29	796	3.2	74.6	34	3037	945	6.1	64.0	91	2464
30	719	3.5	75.1	34	2789	855	6.7	64.7	89	2257
31	636	3.6	78.6	29	2865	759	7.3	65.3	85	2030
32	552	4.0	81.1	27	2803	659	8.3	67.3	81	1851
33	468	4.3	84.6	24	2903	561	9.3	68.7	76	1624
34	390	4.9	86.1	22	2662	468	10.7	70.7	71	1425
35	318	5.7	88.1	20	2513	383	12.2	74.0	63	1293
36	256	6.6	88.6	19	2089	308	14.9	78.7	58	1229
37	203	7.7	91.0	17	2092	245	18.0	81.3	54	1077
38	159	9.5	92.5	16	1929	191	22.0	83.3	50	894
39	123	11.7	93.0	15	1559	149	26.5	88.7	45	966
40	94	14.4	95.0	14	1616	114	32.6	91.3	41	887
41	72	17.3	97.5	13	2394	88	38.3	92.7	36	740
42	55	21.6	98.0	12	2167	66	44.7	96.0	31	913
43	42	26.2	98.0	11	1557	51	52.4	96.7	28	728
44	31	31.5	99.0	10	2135	39	58.3	98.0	23	813
45	28	33.2	99.0	9	1879	33	61.6	99.3	20	1902

We believe these data will assist in counselling and decision making by providing health professionals and patients with odds that better reflect outcomes. They demonstrate improved sensitivity and specificity resulting from refinements made to the SAMSAS program since Update 12, December 2003, and reinforce the differential performance across age groups. The 1<sup>st</sup> Trimester Combined screen remains the primary population screen of choice.

**The data presented and the performances quoted in this Update are those of the SAMSAS program, SA Pathology and do not apply to other software or testing centres.**

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**Update 15 Supplement**  
**Trisomy 18 Age Specific Performance**  
**SAMSAS Prenatal 1<sup>st</sup> & 2<sup>nd</sup> Trimester Screening**  
**at time of screen with risk cut off 1:250**



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**HOW TO READ THIS TABLE**

For a 30 year old screened using the **1<sup>st</sup> Trimester Combined Screen**, there would be a **0.7%** chance of being screened “at increased risk” and an **85.2%** chance of detecting an affected pregnancy. For a pregnancy screened “at increased risk” there would be a **1 in 11** chance that the pregnancy is affected by Trisomy 18 and for a pregnancy screened “not at increased risk”, the chance would be **1 in 9,079**. Comparative performance figures for a second trimester screen are provided in the last 4 columns.

1 <sup>st</sup> Trimester Combined Screen						2 <sup>nd</sup> Trimester Screen				
Maternal age in years at time of screen	Trisomy 18 Maternal age risk at 12 weeks 1:n	% of pregnancies screened at increased risk	% of affected pregnancies detected	Odds of having an affected pregnancy following		Trisomy 18 Maternal age risk at 18 weeks 1:n	% of pregnancies screened At increased risk	% of affected pregnancies detected	Odds of having an affected pregnancy following	
				Increased risk report 1:n	Not at increased risk report 1:n				Increased risk report 1:n	Not at increased risk report 1:n
20	2426	0.6	85.2	16	16351	4146	0.8	92.3	35	53484
21	2366	0.6	85.2	16	15944	4035	0.9	92.3	38	52001
22	2329	0.6	85.2	16	15692	3970	0.9	92.3	37	51164
23	2290	0.6	85.2	16	15429	3906	0.9	92.3	37	50339
24	2232	0.6	85.2	15	15038	3812	0.9	92.3	36	49128
25	2147	0.6	85.2	15	14463	3674	0.9	92.3	34	47349
26	2033	0.6	85.2	15	13695	3485	0.9	92.3	33	44913
27	1890	0.6	85.2	13	12732	3247	1.0	92.3	34	41806
28	1724	0.7	85.2	14	11606	2967	1.1	96.2	33	76327
29	1541	0.7	85.2	12	10372	2659	1.2	96.2	32	68337
30	1349	0.7	85.2	11	9079	2335	1.2	96.2	28	60010
31	1157	0.8	85.2	11	7777	2007	1.2	96.2	26	51530
32	972	0.9	90.2	10	9793	1689	1.6	96.2	29	43197
33	799	0.9	90.2	8	8047	1393	1.9	96.2	28	35522
34	644	1.1	91.8	8	7769	1125	2.1	96.2	25	28632
35	510	1.3	91.8	7	6140	893	2.9	100.0	26	n/a
36	397	1.6	93.4	7	5957	696	3.3	100.0	23	n/a
37	306	2.0	93.4	6	4575	537	3.6	100.0	19	n/a
38	234	2.4	96.7	6	6965	412	4.3	100.0	18	n/a
39	179	2.9	96.7	5	5302	314	5.8	100.0	18	n/a
40	136	3.6	96.7	5	4001	239	7.0	100.0	17	n/a
41	102	4.0	98.4	4	5976	180	8.3	100.0	15	n/a
42	76	5.0	98.4	4	4404	133	11.1	100.0	15	n/a
43	55	6.8	98.4	4	3128	97	16.1	100.0	16	n/a
44	44	10.1	98.4	5	2413	75	20.5	100.0	15	n/a
45	43	10.1	98.4	4	2358	74	20.5	100.0	15	n/a

\*Calculation not applicable due to 100% detection however practically a default low risk odds of < 1 in 30,000 can be quoted.

We believe these data will assist in counselling and decision making by providing health professionals and patients with odds that better reflect outcomes.

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