

SOUTH AUSTRALIAN MATERNAL SERUM ANTENATAL SCREENING (SAMSAS) PROGRAMME

Department of Chemical Pathology,
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website www.chempathadelaide.com/samsas

Update 10 ~ First Trimester Screening

SAMSAS has been involved in multi-analyte screening for over 12 years possessing the largest data sets in Australia. SAMSAS develops its own software and algorithms based on local populations and confirms its performance with yearly audits.

SAMSAS is pleased to announce it can offer combined ultrasound+biochemical screening for fetal Down syndrome in first trimester.

This service is offered in collaboration between SAMSAS and a number of ultrasonology practices that can offer nuchal translucency measurements. SAMSAS offers these practices feedback on nuchal translucency measurements for the purposes of quality assurance and programme performance.

The combined screening strategy produces a significant increase in detection of affected pregnancies at low false positive rates. The table below shows the % detected for various chromosomal disorders, which are detected as part of the increased risk group for Down syndrome, based on a 5% false positive rate. See Box Plots attached for graphical display.

	Combined Screen
Down syndrome	85%
Trisomy 18	82%
Turners	100%
Triploidy	80%

Second trimester screening of pregnancies for fetal Down syndrome and neural tube defects **remains in place** and can still be requested as before. We recommend, however, that if a pregnancy is screened in first trimester then any request for second trimester maternal serum screening be confined to **neural tube defect (NTD) screening only**. First trimester screening does not include detection of fetal NTDs.

Requesting first trimester screening

Two request forms are required, one for the blood analysis and one for the ultrasound scan;

BLOOD ANALYSIS

1. 5-10 mL clotted blood sample is required, taken, between 10 and 13 weeks gestation. A list of collection centres is provided on the reverse of the SAMSAS request form;
2. Use a SAMSAS request form (telephone (08) 8161 7285 if you require some of these, or download one from the website www.chempathadelaide.com/samsas).
 - (a) the test request is “**first trimester screen**”;
 - (b) complete the gestational age information, the gestation must be between 10+ and 13weeks6days;
 - (c) specify the ultrasound practice performing the nuchal translucency scan;
 - (d) refer **patient to the Privacy Act Disclosure on the SAMSAS request form**,
 - (e) give the patient the SAMSAS pre-test information booklet,
 - (f) send the blood specimen to Women’s and Children’s Hospital, **for interstate or remote areas check with SAMSAS on what services are available.**

ULTRASOUND

3. Book a nuchal translucency scan with the imaging group of choice. The fetus must be between **11+ and 13+ weeks** gestation at the time of the scan;
4. Complete an ultrasound request form, specifying “**risk of fetal abnormality**”; Specify “**Copy to SAMSAS**”. To comply with National Privacy Legislation, refer **patient to the Privacy Act Disclosure on the SAMSAS request form.**

SAMSAS will coordinate the results with the ultrasound practice and you will receive a single report giving the risks calculated for the pregnancy. Post-test information booklets are provided with all reports issued by SAMSAS on pregnancies found at increased risk of fetal abnormality. The same information is available on the SAMSAS website www.chempathadelaide.com/samsas.

Availability of first trimester screening

Combined ultrasound+biochemistry screening is not at present offered through all hospitals/clinics. Check with the hospital/clinic concerned.

Costs

For privately insured patients SAMSAS continues its policy of accepting ‘Medicare only’ for the serum biochemistry analyses. There may be a gap payment for the ultrasound measurement. Check with the practice providing this service.



Robert Cocciolone, BAppSc, Med Lab Sc

on behalf of the South Australian Maternal Serum Antenatal Screening (SAMSAS) Programme

Gestational Age Windows for Antenatal Screening for Birth Defects

First Trimester	Blood sample 10w0d – 13w6d	Ultrasound 11w0d – 13w6d
Second Trimester	Blood sample 14w0d – 20w6d	

SOUTH AUSTRALIAN MATERNAL SERUM

ANTENATAL SCREENING (SAMSAS) PROGRAMME

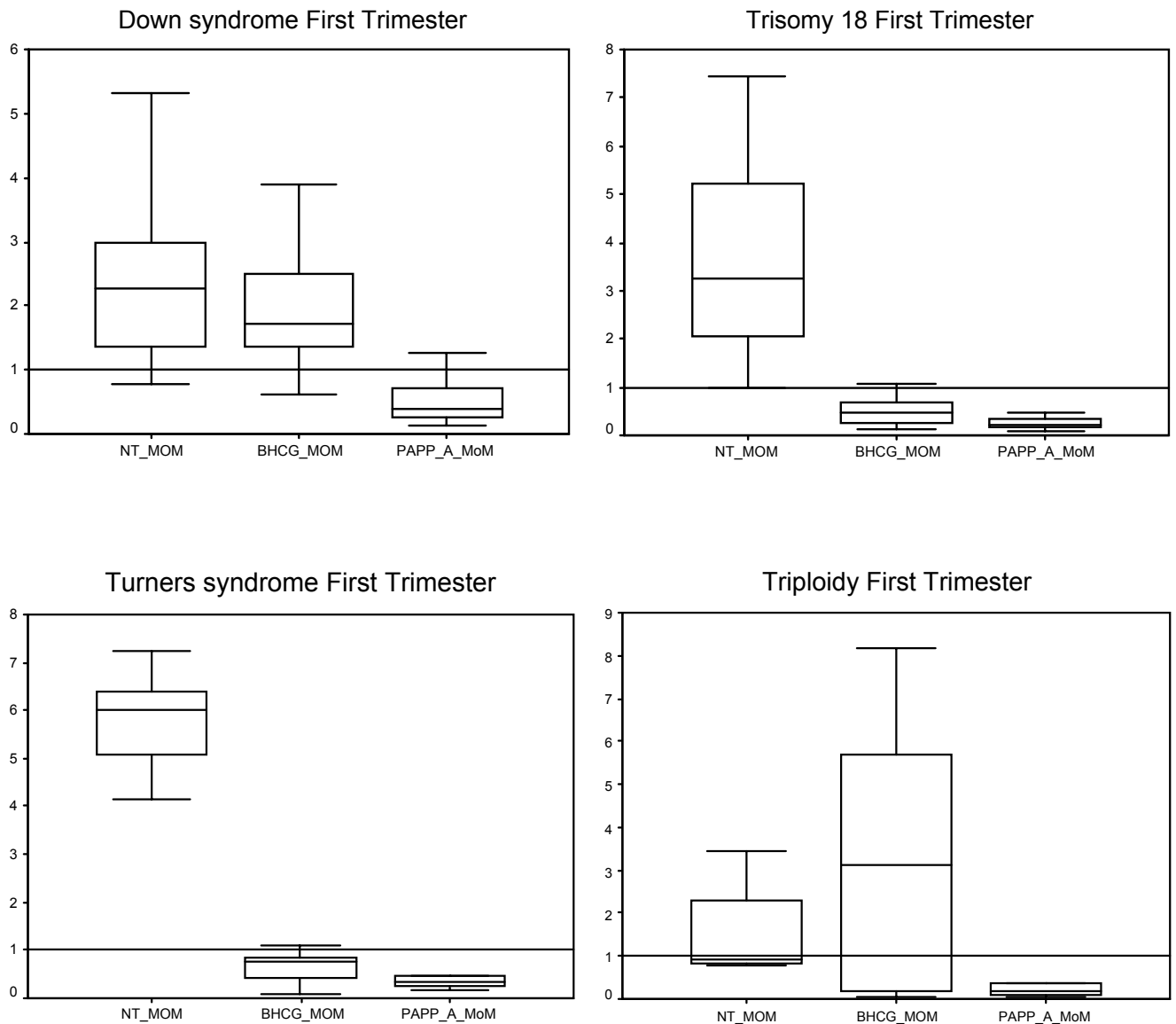
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Box Plots of Affected Cases



Markers are expressed in **MoM** values (**M**ultiples of the population **M**edian). A reference line of 1 MoM is drawn.