First and second trimester antenatal screening for Down's syndrome: the results of the Serum, Urine and Ultrasound Screening Study (SURUSS)


Record Status
This is a bibliographic record of a published health technology assessment from a member of INAHTA. No evaluation of the quality of this assessment has been made for the HTA database.

Citation

Authors' objectives
To identify the most effective, safe and cost-effective method of antenatal screening for Down's syndrome using nuchal translucency (NT), maternal serum and urine markers in the first and second trimesters of pregnancy, and maternal age in various combinations.

Authors' conclusions
The results showed that screening performance in the first trimester of pregnancy was virtually the same as that in the second trimester, and in either it was much less effective than integrating screening measurements from both trimesters into a single test. In applying these results to screening practice several conclusions can be drawn. The following tests offer the most effective and safe method of screening:

- overall: the integrated test
- if an NT measurement is not available: the serum integrated test
- for women who do not attend for antenatal care until the second trimester of pregnancy: the quadruple test
- for women who choose to have a screening test in the first trimester: the combined test.

At a constant detection rate, the cost-effectiveness of these four tests is broadly similar, any extra screening costs tending to be offset by fewer diagnostic costs. The evidence presented in this report does not support retaining the double test, the triple test, or NT measurements on their own (with or without maternal age) because each would lead to many more women having invasive diagnostic tests, without increasing the proportion of Down's syndrome pregnancies detected.

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INAHTA brief and checklist

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MeSH
Costs and Cost Analysis; Down Syndrome; Mass Screening