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This document is no longer in use. Refer to the chapter on [Screening for Down's syndrome, Edward's syndrome and Patau's syndrome](#) in the [Fetal anomaly screening programme \(FASP\) handbook](#).

Twin pregnancies: second trimester screening for Down's syndrome (T21)



Information for health professionals

The test of choice for both singleton and twin pregnancies is first trimester combined screening and every opportunity must be made to maximise this offer.

Women who have a twin pregnancy and miss first trimester screening should be offered a second trimester quadruple test. It is the woman's choice whether to have screening or not.

For women with a twin pregnancy who choose to have a quadruple screening test, FASP recommends the discussion take place with a health professional with a specialist interest in multiple pregnancies. This is due to the complexities and limitations of the quadruple test in this scenario. There might also be other factors to consider when offering screening or making decisions about further diagnostic testing and management of the pregnancy eg fetal sex (where chorionicity is unknown) and other ultrasound findings.

This information sheet includes the minimum information to include in the discussion with the woman.

Prevalence

There are likely to be between 500 and 1,600 women with twin pregnancies in the eligible population each year who fall outside of the combined screening programme who may be offered second trimester quadruple testing.

Among these, fewer than four pregnancies affected with Down's syndrome would be expected.

When is the quadruple screening test offered?

There is the choice of quadruple screening in twin pregnancies for:

- women who present for the first time in the second trimester
- where the nuchal translucency (NT) could not be measured in the first trimester

Quadruple screening can be offered between 14 weeks and 2 days, and 20 weeks and 0 days. The ideal time to screen is around 16 weeks of pregnancy.

Monochorionic twins – the risk of a T21 birth from a monochorionic pregnancy is lower than that from a singleton pregnancy due to a higher fetal loss rate among affected pregnancies.

Dichorionic twins – the risk of a T21 birth of at least one baby from a dichorionic twin pregnancy is higher than that from a singleton pregnancy.

Key issues:

- pregnancies in this group are more likely to be of uncertain chorionicity
- the decision making process is more difficult at the second trimester stage
- the second trimester quadruple test is less sensitive than first trimester combined screening
- any subsequent decisions about invasive diagnostic testing and selective reduction will have to be made later in the pregnancy

Performance using a 1 in 150 cut-off at term

The performance of screening in monozygotic twins is comparable to that of singletons.

In dizygotic twins where one baby is affected and the other unaffected, the performance is poorer due to the markers being less discriminatory.

However, it is better than using maternal age only where the detection rate is only 30% for a 5% screen positive rate.

The approach used in calculating quadruple twin pregnancy risk is referred to as 'pseudo risk' in the literature.

This is the established

methodology currently available and simply means that the risk would be accurate in predicting a false-positive rate (which relates only to the marker distributions in unaffected twin pregnancies).

As the calculation of risks in twin pregnancies relies on limited evidence and assumptions, the risk estimate should be interpreted as a guide only.

Monozygotic twins:

detection rate is 80% for a screen positive rate of 3%.

Dizygotic twins: detection rate of 40-50% for a screen positive rate of 3%.

Clinician notes

(can be inserted into woman's hand-held maternity notes if required)

Diagnostic test

The risks of miscarriage and other procedure related complications are higher, around 1 in 50, in twin pregnancies.

If one fetus is affected, selective reduction may be an option.

The method of diagnostic testing depends on the clinician performing the procedure.

Although both chorionic villus sampling (CVS) and amniocentesis can be performed in a twin pregnancy, there is evidence that a double amniocentesis has a lower risk of sampling the same fetus twice (known as contamination) compared

to double CVS. It is essential that any invasive diagnostic test is performed in a unit with experience in invasive procedures in multiple pregnancies and preferably by the same person who will be responsible for a selective feticide if required.

The pregnancy should be clearly mapped using ultrasound scan prior to the procedure, using features such as placental localisation, fetal sex, fetal biometry and any structural features, such that each fetus can be specifically identified at a later stage if selective feticide is required.