



PreGen Inclusion Criteria

General Inclusion criteria

- PreGen is limited to those families who will undergo genomic diagnostic testing as a family trio or where both the mother/egg donor and father/sperm donor are available for testing. Single parent families or those requiring a gene panel or singleton test may access prenatal genomic testing but cannot be included in the translational PreGen project.
- PreGen will also accept:
 - Families considering the option of termination if they fulfill other inclusion criteria
 - Families who have decided to have a termination where the process of termination has not begun, if they fulfill other inclusion criteria
 - Referrals from private practitioners if the patient/ family meets the inclusion criteria and a clinical geneticist or clinical genetic counsellor is involved in their care.
 - Public referrals when alternatives for funded genomic testing (e.g. a clinically appropriate genomic panel) is available as a local alternative test.
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Eligible participants must also be able to:

- Provide informed consent
- Be Medicare eligible

Testing in PreGen is limited to:

Families where the fetus is believed to be alive at the time of enrolment (preterminal imaging findings are exclusion criteria).

Clinical Inclusion Criteria

A fetus with a structural anomaly likely to have a single gene germline aetiology including:

- A significant/ severe brain abnormality
- A significant cardiac abnormality
- Renal anomalies with a likely Mendelian basis
- A phenotype consistent with skeletal dysplasia
- Evidence of multi-joint arthrogyrosis
- Non-immune fetal hydrops

Significantly abnormal biometry:



- Growth restriction (< 1st centile) without placental insufficiency
- Cleft lip/palate and other malformations that usually occur in isolation when in the presence of additional ultrasound markers.

Exclusion Criteria

- The family do not wish to take part in PreGen
- The process of termination of pregnancy has begun.
- Likely non-genetic or undiscoverable aetiologies including teratogenesis, viral infections, and poorly controlled maternal diabetes.
- Recognised syndromes/ malformation complexes with no known gene associations (Pentalogy of Cantrell/ limb body wall complex/ cloacal anomalies/ field defects)

Anomalies with a low diagnostic yield including

- Apparently isolated talipes
- Isolated increased nuchal translucency
- Apparently isolated anatomical cardiovascular defect with minimal implications for postnatal clinical care (such as ASD, VSD, PDA)
- Isolated mild unilateral or bilateral ventriculomegaly

Inclusion criteria for specific families will be discussed in a PreGen subcommittee if their acceptability into the project is unclear.

Additional non-PreGen funded clinical diagnostic testing may be requested by the treating clinician outside of these criteria after discussion with the testing laboratory.