



Guide for Obstetrics and Gynaecology

Mater Pathology has been supporting Obstetricians and Gynaecologists in the Queensland community for over 90 years with 24/7 assistance and specialised services. Our commitment to you and your patients never sleeps and our care never stops.

How does Mater Pathology support Obstetricians and Gynaecologists?

We provide comprehensive testing in all areas of pathology to ensure Obstetricians and Gynaecologists are extensively serviced.

The **Cytogenetics** laboratory performs prenatal cytogenetic testing on Amniotic Fluid and Chorionic Villus samples with extensive expertise developed since the introduction of this service in 1996. Cytogenetic testing is also available for products of conception and for the investigation of patients with repeated miscarriage/infertility. Depending on the clinical indication, chromosome analysis can be performed by either high resolution *microarray* or by *karyotype*. *FISH* testing is performed for patients undergoing prenatal testing to provide rapid detection/exclusion of the common aneuploidies. *FISH* testing can also be performed on *formalin fixed paraffin embedded (FFPE) tissue*, from products of conception, when no fresh tissue is available.

Our **Molecular Genetics** department offers a range of molecular genetic tests applicable to obstetrics and gynaecology. *Fragile X* testing is available for pre-conception carrier screening and for the investigation of premature ovarian failure. We also offer pre-conception carrier testing for *alpha-thalassaemia*, *MODY* genetic testing for a possible genetic cause for gestational diabetes, microsatellite testing for gestational moles, and Factor V Leiden and Prothrombin genotyping for thrombophilia. Prenatal genetic testing, for example for congenital *adrenal hyperplasia* or *Noonan Syndrome*, is also available. Molecular Genetics refers samples for *NIPT* testing to Victorian Clinical Genetics Services who perform the PERCEPT test using Illumina technology. The turnaround time is 3-5 days, usually 3, and the cost to patient is \$450.

As well as routine chemistry tests, such as, *Beta-hCG*, *Glucose Tolerance Tests*, *Iron Studies* and *ELFTs*, **Chemical Pathology** also provides specialised tests for pregnancy. These tests include *Bile Acids* for the investigation of cholestasis of pregnancy, *Placental Growth Factor* and First Trimester Screening (*PAPP-A* and *Free Beta-hCG*) for aneuploidies. Our technologically advanced Chemical Pathology laboratory also analyses *Sex Steroids* and *Vitamin D* by *Mass Spectrometry* to provide more accurate and sensitive results than regular immunoassay methods. The mass spectrometry Sex Steroids assay is routinely used to measure *Androgens* in all patients and *Oestradiol* in children, men, postmenopausal women, women receiving treatment for breast cancer, or on request.

Unique to our **Haematology** department is our *24/7 Feto-maternal haemorrhage (FMH)* testing by *flow cytometry*. Urgent as well as non-urgent FMH testing is available. Additionally, obstetricians are assisted in the diagnosis of bleeding tendencies,

haemoglobinopathies, and inherited or acquired hypercoagulable conditions associated with pregnancy loss. Although often considered routine, the *FBC*'s ability to point to microangiopathic conditions like HELLP syndrome, TTP, and DIC is especially important for Obstetricians. Our experienced haematologists and haematology scientists can assist you in the timely diagnosis and follow-up of these conditions.

Our **Blood Bank** can also crucially assist in the identification of atypical antibodies and the timely issuing of blood and blood products. Our massive transfusion protocol is well-established and has been successfully utilised in many cases of post-partum haemorrhage.

The **Immunology** department provides a variety of routine antenatal and pre-conception serology including *Hepatitis B Surface Antigen*, *Hepatitis C*, *HIV*, *Rubella IgG* and *Syphilis*. We do not require a separate request for *Hepatitis B Surface antibody*, just add it to your regular antenatal screen. Additionally, *TORCH Serology* is available if congenital infection is suspected and includes, *Toxo IgG and IgM*, *Rubella IgG and IgM* and *CMV IgG and IgM*.

Microbiology provides support to OandGs through microscopy, culture, antibiotic susceptibility testing and PCR for the diagnosis and investigation of infectious agents in OandG patients. A unique offering from our Microbiology department is an *STI panel PCR* which tests for *Chlamydia trachomatis*, *Neisseria gonorrhoeae* and *Trichomonas vaginalis*. Additionally, the investigation of pregnancy loss is assisted by providing full infectious agent investigation support including post mortem microbiology.

Our **Anatomical Pathology** department has strong expertise and interest in Gynaecological Pathology, including Gynaecological Oncology, Reproductive Gynaecology and Cytology. Additionally, as Mater Mothers' Hospital is a tertiary referral centre for mothers and babies, our Anatomical Pathology Department is vastly experienced in placental and perinatal pathology, due to the high volume and complexity of work received on the Mater Campus. The same level of expertise is applied to our off-campus referrals. Due to the complexity of this work, our expert pathologists offer phone-based discussions with potential referrers, particularly in the case of fetal dissection and perinatal autopsies. Due to the sensitive nature of these procedures, our anatomical pathologists regularly consult with Doctors to ensure the results are respectfully and thoughtfully distributed.

Test	Who is it for?	What is the value of the test?	How much does it cost the patient?
<i>Sex Steroid Panel by Mass Spectrometry</i>	Women with suspected PCOS or related disorders	Mass Spectrometry is more sensitive and specific by eliminating interference from drugs and related steroids.	Medicare rebatable
<i>Placental Growth Factor</i>	Pregnant patients in first trimester	Combined with uterine artery Doppler ultrasound, this test can help identify women at risk of preeclampsia. Also used in first trimester aneuploidy screening.	\$40
<i>NIPT by Victorian Clinical Genetic Services</i>	Pregnant patients who are over 10 weeks pregnant	Identifies the most prevalent chromosome conditions in infants. The most accurate prenatal screening test for Down Syndrome.	\$450
<i>CMV IgG and IgM and Toxo IgG and IgM</i>	Pregnant patients	Includes both IgG and IgM testing, to identify current and/or past infection.	Medicare rebatable
<i>FISH Testing on Formalin Fixed Paraffin Embedded Tissue (FFPE)</i>	Patients who have an unexpected miscarriage or stillbirth	When NO Fresh tissue is available, FFPE FISH can be used to exclude the common aneuploidies (13, 18, 21, X, Y and triploidy).	\$255
<i>FISH - Prenatal Panel</i>	Pregnant patients - Amniotic Fluid or CV samples	Rapid preliminary test to detect fetal aneuploidies for chromosomes 13, 18, 21, X and Y.	\$255
<i>Karyotype</i>	Prenatal diagnosis (Amniotic fluid or CVS), infertility investigation, recurrent (≥ 3) miscarriage investigation and products of conception studies in cases of unexplained miscarriage or stillbirth.	To exclude fetal chromosome abnormalities in prenatal and product of conception samples; to exclude carrier status for patients who have repeated miscarriage/infertility.	Medicare rebatable
<i>Microarray</i>	Prenatal microarray testing on Amniotic Fluid or CVS and for products of conception samples in cases of unexplained miscarriage or stillbirth.	Preferred test when fetal malformation is suspected as it enables detection of small copy number changes not detectable by karyotype. Reduces the risk of tissue culture failure and maternal cell contamination in products of conception samples.	Medicare rebatable
<i>Feto-maternal haemorrhage assessment using Flow Cytometry</i>	Pregnant patients	For identification of feto-maternal haemorrhage and need for anti-D treatment in the prevention of Haemolytic Disease of the Newborn (HDN).	Medicare rebatable
<i>Haemoglobinopathy Testing</i>	Patients planning pregnancy, newborns and pregnant patients	Targeted pre-conception, antenatal or new born testing for the identification of haemoglobin disorders including the thalassaemias and Sickle cell disease.	Medicare rebatable
<i>STI Panel with Chlamydia trachomatis, Neisseria gonorrhoeae and Trichomonas vaginalis</i>	Symptomatic, Asymptomatic and Exposed patients.	Includes testing for <i>Trichomonas vaginalis</i> , which causes Obstetric complications including premature rupture of the membranes, pre-term delivery, low birth weight and postpartum sepsis.	Medicare rebatable

Meet our Pathologists with a special interest in Obstetrics and Gynaecology



Dr Deborah Smith, *Consultant Anatomical Pathologist*

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Dr Smith has a Fellowship in Gynaecologic Pathology, focusing on gynaecologic oncological pathology. She is actively involved in gynaecologic oncological research, and has a special interest in uterine neoplasia.



Dr Rohan Lourie, *Consultant Anatomical Pathology*

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Dr Rohan Lourie is currently involved in gynaecological cancer research at Mater. Areas of special interest are gynaecological pathology, particularly gynaecological oncology and perinatal pathology, including post mortem examinations.



Dr Admire Matsika, *Consultant Anatomical Pathologist*

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Dr Matsika has a special interest in general gynaecological, perinatal and placental pathology and has worked as a Staff Specialist for Queensland Children's and Royal Brisbane and Women's Hospitals.



Dr Vikram Vaska, *Consultant Microbiologist*

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Dr Vaska has trained in Paediatric Infectious Diseases as well as Microbiology in Adelaide and Brisbane. Interests include the diagnosis and management of infections in children and in staphylococcal infections.

Contact us

Our 24/7 laboratories are situated in the following convenient locations to ensure our community is thoroughly serviced:

- Main Laboratory situated at **Mater's South Brisbane campus**
- Stat Laboratory in **Mater Private Hospital Springfield**.

myResults

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