

Guide for Digestive, Colorectal and Gastrointestinal Investigations

Mater Pathology proudly supports Gastroenterologists, Colorectal and Gastrointestinal surgeons in the Queensland community with comprehensive investigations and services available 24/7.

How does Mater Pathology support Gastroenterologists, Colorectal and Gastrointestinal surgeons?

We provide comprehensive testing in all areas of pathology to ensure Gastroenterologists, Colorectal and Gastrointestinal surgeons are extensively serviced.

Microbiology provides support to gastroenterology and gastrointestinal/colorectal surgery through microscopy, culture, antibiotic susceptibility testing and PCR for the diagnosis and investigation of infectious agents in these patients. A unique offering from our Microbiology department is the use of MALDI-TOF MS identification technology directly on positive blood culture bottles which provides a more rapid turnaround time (average 24 hour reduction in turnaround time) for the investigation of sepsis in gastroenterology and gastrointestinal/colorectal surgery patients compared to standard blood culture testing. Additionally, we offer a Faecal PCR panel which tests for common bacterial, viral and parasitic causes of diarrhoea, as well as a *C. difficile* PCR panel. We also provide routine faeces microscopy and culture, and investigations for ova, cysts and parasites. We liaise closely with reference laboratories and are able to refer for testing of other pathogens of concern such as Shiga-toxin producing *E. coli*. Furthermore, Mater Pathology provides testing for *Helicobacter pylori* including culture and antibiotic susceptibility testing. Further information on our PCR panels may be found on pathtest.mater.org.au or in the adjacent table.

Our **Molecular Microbiology** and **Serology** departments both provide extended testing for hepatitis viruses. Hepatitis B and C viral load testing is available to assist in the assessment and management of patients with hepatitis.

Anatomical Pathology offers tertiary hospital-level expertise and experience in reporting all forms of gastrointestinal pathology, including histopathology, aspiration cytology, immunochemistry and molecular testing as needed. The team can handle both endoscopic and resection specimens from a range of inflammatory and neoplastic diseases, with 24 hour turnaround for most small specimens. Our vastly experienced Anatomical team have a tradition of working closely with clinicians in both inpatient and outpatient settings, including clinicopathological correlation and involvement in clinical meetings to improve patient outcomes, and working with clinician researchers. We offer 24-hour pathologist availability for advice and reports regarding urgent samples that dictate immediate patient management. Attendance at frozen sections and cytology support for attended FNA cytology specimens is available for regular referrers. To organise attendance, please contact us in advance for a booking.

Chemical Pathology offers a variety of tests that assist gastroenterology and gastrointestinal/colorectal surgery including nutritional testing (B12, active B12, methylmalonic acid, folate, homocysteine, iron studies, plasma zinc), faecal occult blood, gastrointestinal tumour markers, inflammatory markers and urea breath testing for *Helicobacter pylori*. Using a combination of accurate and sensitive methodologies including high performance liquid chromatography, gas chromatography and mass spectrometry, the consequences of fat mal-absorption can be detected with our unique plasma fat soluble vitamin assays (A, E and D) and plasma essential fatty acids testing (omega-3, omega-6). Our essential fatty acid testing is also relevant for extremely fat restricted diets. Detection of inflammatory bowel disease can also be provided by our faecal calprotectin testing.

Haematology primarily assists gastrointestinal investigations through the analysis of characteristic changes in peripheral blood counts/morphology. This assessment helps the diagnosis of nutritional deficiencies, which can prompt gastrointestinal tract investigations for chronic blood loss or a mal-absorptive syndrome. A number of specialised tests are also offered in conjunction with other divisions. These include the diagnosis of Pernicious anaemia, Lymphoma with hepatic/splenic/gastric involvement, Myeloproliferative disorders, Haemochromatosis/Liver disease and Haemolysis due to certain anti-hepatitis medications or associated with alcohol-related liver disease. Our Coagulation laboratory is well-versed in investigating abnormal routine coagulation tests/bleeding, in which liver disease is one of the potential causes.

Our **Blood Bank** assists in the provision of blood products where necessary. Additionally, an established protocol is in place for replenishing iron stores pre-operatively in iron-deficient patients in order to reduce post-operative blood transfusions.

The **Cytogenetics** laboratory provides a comprehensive suite of testing for the diagnosis of chromosome rearrangements by both conventional karyotyping methodology and molecular based technologies. The laboratory has an extensive repertoire of FISH probes which can test for rearrangements and abnormalities of prognostic and clinical significance to assist with diagnosis as well as disease monitoring.

Test	Who is it for?	What is the value of the test?	How much does it cost the patient?
Faecal PCR Panel	<p>Detects all of the following:</p> <ul style="list-style-type: none"> Bacterial pathogens: <i>Salmonella</i> species, <i>Campylobacter</i> species, <i>Shigella</i> species and <i>Yersinia enterocolitica</i>. Viral pathogens: Rotavirus, Adenovirus, Astrovirus and Sapovirus. Parasites: <i>Giardia lamblia</i>, <i>Cryptosporidium parvum/hominis</i>, <i>Dientamoeba fragilis</i>, <i>Blastocystis hominis</i> and <i>Entamoeba histolytica</i>. 		Medicare rebatable
Hepatitis viral load PCR	<p>Mater Pathology offers a sensitive quantitative real-time Hepatitis B PCR assay with lower limit of detection of 10 IU/mL to assist in identifying patients who have suboptimal response to treatment that may benefit from additional therapy, and patients who have virologic breakthrough on treatment.</p> <p>The sensitive Hepatitis C virus RNA detection and quantitative assay, with the lower limit of detection of 12 IU/mL, used at Mater Pathology, assists with prediction of SVR.</p>		Medicare rebatable
<i>Helicobacter pylori</i>	<ul style="list-style-type: none"> The following tests are available for diagnosis of <i>Helicobacter pylori</i> infections: Urea breath tests, stool antigen tests, <i>H. pylori</i> culture with antibiotic sensitivity testing, to detect antimicrobial resistance, from biopsy specimens 		Medicare rebatable
Contemporary identification of microbial pathogens	<p>The use of innovative technology ensures reduced turnaround times for identification of cultured organisms.</p> <p>In addition to the abovementioned PCRs, Mater Pathology offers a range of qualitative and quantitative nucleic acid tests for the identification and monitoring of gastrointestinal infectious causes including CMV quantitative PCR.</p> <p>These assays expedite investigations for gastroenterology and gastrointestinal/colorectal surgery patients.</p>		Medicare rebatable
Attended Frozen and FNA Service	We provide an attended Frozen section and FNA service for regular referrers. Bookings are essential and can be made via 07 3163 8500.		Medicare rebatable
Essential Fatty Acids	<p>Conditions at risk of essential fatty acid deficiency include:</p> <ul style="list-style-type: none"> Fat malabsorption Intestinal resection Inflammatory bowel disease Cystic fibrosis Restricted diets and parenteral nutrition Chronic liver disease <p>Interpretation by a Pathologist is included on the report.</p>		\$200
Vitamin D by LC-MS/MS	Our Mass Spectrometry methods provide more accurate and sensitive results due to the elimination of interference from drugs and related compounds.		Medicare rebatable if Item 66833 requirements are satisfied.
Calprotectin	A sensitive and specific marker of intestinal inflammation, faecal calprotectin has been suggested to be useful for distinguishing inflammatory from non-inflammatory causes of chronic diarrhoea.		\$75
Serology/Immunology	<p>In addition to Hepatitis C serology and full antigen/antibody marker testing for Hepatitis B, Mater Pathology offers Hepatitis B sAg quantitative testing for treatment monitoring.</p> <p>A number of autoimmune and antibody tests such as smooth muscle antibody and mitochondrial antibody tests are also available for investigating causes of liver abnormalities.</p>		Medicare rebatable

Meet our Pathologists with a special interest in Gastroenterology, Colorectal and Gastrointestinal surgery



Dr Rohan Lourie, *Consultant Anatomical Pathology*

☎ 07 3163 8681 ✉ Rohan.Lourie@mater.org.au

Dr Rohan Lourie has worked at Mater Pathology for over 10 years. He is currently completing a PhD which focuses on epithelial cell responses in inflammatory bowel disease. Areas of special interest are gynaecological, gastro-intestinal, and perinatal pathology.



Dr Bhuvana Srinivasan, *Consultant Anatomical Pathologist*

☎ 07 3163 8617 ✉ Bhuvana.Srinivasan@mater.org.au

Dr Bhuvana Srinivasan has over 19 years of Pathology experience. Her interests include gastro-intestinal, breast pathology and urology. Dr Srinivasan cherishes collaboration with clinical teams.



Dr Vikram Vaska, *Consultant Microbiologist*

☎ 07 3163 1679 ✉ Vikram.Vaska@mater.org.au

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.



Dr David Wong, *Consultant Anatomical Pathologist*

☎ 3163 8284 ✉ David.Wong@mater.org.au

Since joining Mater Pathology in 2009, David has covered a wide range of general pathology with increasing experience and developing interests in gastro-intestinal and dermatopathology and attendance at multidisciplinary meetings.

Contact us

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

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

myResults

Electronic results are viewable at any time on any device via **myResults**. Visit pathology.mater.org.au to register for **myResults**, view a list of our collection centres and find the latest news about our service.



07 3163 8500



pathology.enquiries@mater.org.au



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