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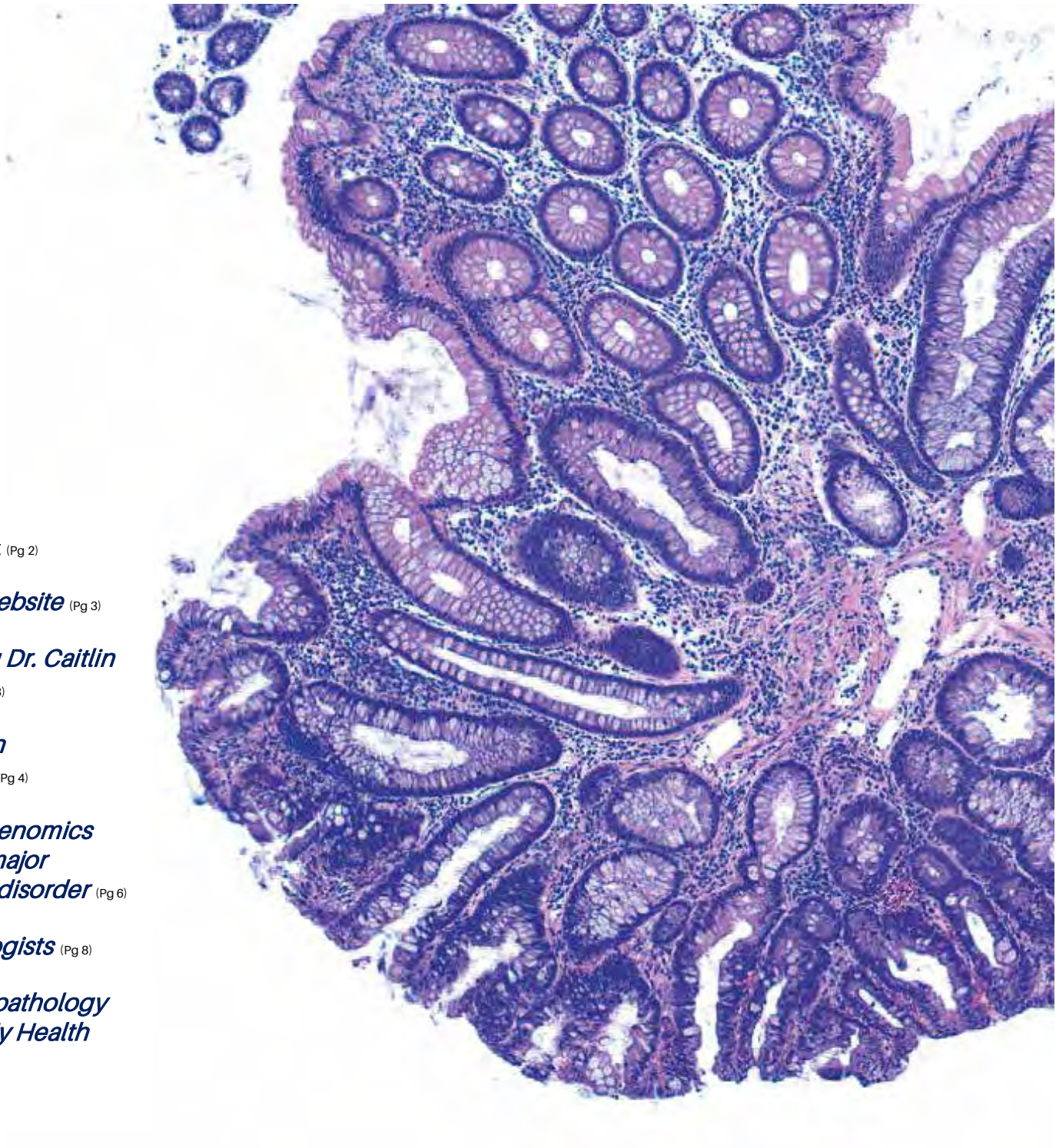
Doctors' Newsletter
Summer 2019



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Welcome to our Doctor's newsletter

It is our aim in these newsletters to present to you topics of practical interest and value. We are mindful of the fact that pathology testing is becoming increasingly complex - with the introduction of both new tests and testing regimes - and practical newsletters such as this will hopefully be of benefit.

This newsletter also provides me with the opportunity to introduce Dr. Caitlin Keighley to our practice. Dr. Keighley is an experienced Microbiologist and Infectious Diseases Physician who has worked at Westmead, St. George, Royal Prince Alfred, Alice Springs and Canberra Hospitals. Dr Keighley will be supervising our Microbiology Laboratory and will also be undertaking Infectious Diseases Clinics in Wollongong. Dr Keighley has a special interest in mycology and molecular microbiology and, in addition to her work at Southern.IML Pathology, is presently undertaking a PhD in this area.

In this edition we have provided you with a profile of all our local Pathologists and some health care related articles.

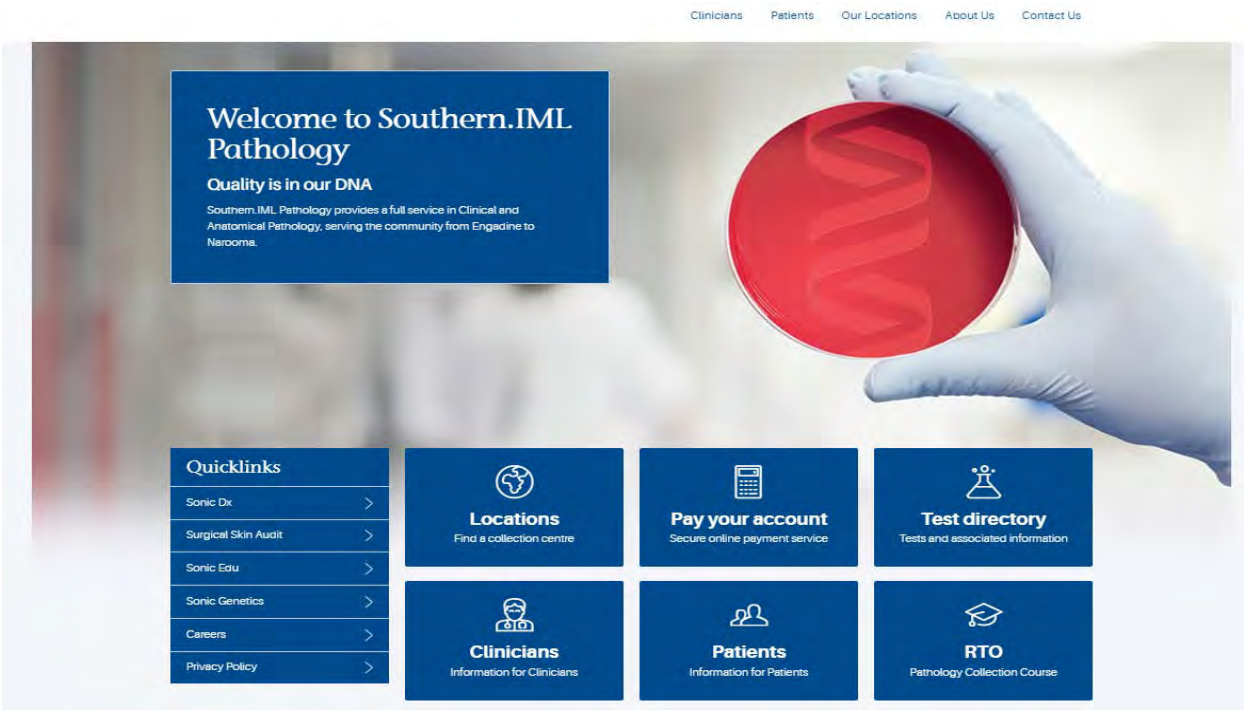
Southern.IML Pathology will soon be able to upload pathology results into the My Health Record, for episodes that are referred to us via an electronic order (eOrder). The upload will include the patient's Individual Health Identifier (IHI) and the flag to indicate the patient has given consent to send the pathology results to the My Health Record system.

On behalf of all the staff at Southern.IML Pathology, thank you for your ongoing support. We greatly value the support from the medical community and, in turn, it assists us in our commitment to provide you with state of the art diagnostic pathology and support the high level of clinical healthcare that is delivered on the South Coast of NSW.

Dr. Lawrie Bott
Chief Executive Officer

New look website

Southern.IML Pathology has recently updated its website providing relevant information regarding our pathology services, locations and testing. The Clinicians section has been designed to provide referrers with easy access to specific pathology testing information. The website can be accessed via computer, laptop, tablet or smartphone.



Introducing Dr Caitlin Keighley

Dr Caitlin Keighley

MBBS Bmed Sc (Hon), FRCPA, FRACP and DRANZCOG

Specialty: Microbiologist

Phone Number (02) 4224 7474

Email: Caitlin.Keighley@southernpath.com.au

Dr Keighley is a Microbiologist and Infectious Diseases physician with interests that include obstetrics and the immunocompromised host. She joins us after having worked at Westmead, St George, Royal Prince Alfred, Alice Springs and Canberra Hospitals. Dr Keighley has also worked with the Queensland Institute of Medical Research.
Dr Keighley has published numerous articles in mycology, antenatal infections and antimicrobial resistance, has been active in quality improvement activities and held various teaching positions. She is a contributor to the Wollongong Antimicrobial Resistance Research Alliance (WARRA).

Dr Keighley will be running an Infectious Diseases clinic on a Wednesday afternoon. The contact number for this clinic is 4229 9400.

Dr Keighley's extensive experience will provide valuable expertise in the area of Microbiology and Infectious Disease within the region.

Infections in pregnancy

Infections in pregnancy represent a challenging area. Given that ambiguous laboratory findings without specific symptoms may lead to unnecessary anxiety, interpretation and judgment are required for appropriate investigation and management. This is an excerpt from an article in the MJA highlighting some infections that can affect the fetus or neonate[1].

Dr Caitlin Keighley
MBBS Bmed Sc (Hons)
FRCPA, FRACP, DRANZCOG

1 General advice to pregnant women to prevent infections*

Advice	Details	Reasoning
Protect from travel-related infections	Pre-travel consultation for any travel when planning pregnancy or pregnant	Prevention of infections, including Zika virus infection and toxoplasmosis
Wash hands with soap and water or alcoholic hand rub	Wash hands after: • using the toilet; • touching raw meat, raw eggs or unwashed fruit and vegetables; • preparing food and before eating; gardening or touching dirt or soil	Prevention of toxoplasmosis, listeriosis, salmonellosis
Reduce contact with saliva and urine from babies and young children	• Kiss infants and young children on the cheek or head rather than on the lips • Wash hands after changing diapers	Prevention of CMV
Avoid unpasteurised (raw) milk and derived foods	Do not eat (unless pasteurised) soft cheese (eg, feta, Brie, *queso fresco*)	Prevention of listeriosis
Avoid unwashed or pre-cut fruit and vegetables	• Eat freshly made salad • Do not eat sprouts	Prevention of listeriosis
Do not touch or change dirty cat litter	If necessary to change cat litter, wear gloves and wash hands afterwards	Prevention of toxoplasmosis
Practise safe sex	• Protect yourself from STIs • Get tested for STIs if indicated	Treatment and prevention of vertical STI transmission
Talk to your health care provider about vaccinations	Some vaccinations are recommended before pregnancy and some during pregnancy	Live vaccines before pregnancy; whooping cough and influenza during pregnancy
Avoid people who have an infection	Avoid contact with people who are symptomatic	Prevention of rubella, chickenpox, parvovirus B19 infection

CMV = cytomegalovirus; STI = sexually transmissible infection. * Adapted from the Centers for Disease Control and Prevention[11] and NSW Food Authority.[12]

Management of infection in pregnant women

Possible or confirmed exposure

Prompt assessment of possible exposure is key. The woman's susceptibility to infection can be determined, the nature of the exposure assessed and diagnosis confirmed in the contact. Assessment for infection may continue for many weeks and is best done in consultation with laboratories and specialists. In all cases, the possibility of false positive or false negative test results should be discussed.

Presentation with symptoms and proven infection

As with any patient, an assessment of clinical symptoms and potential exposures in the context of a full medical history is followed by targeted diagnostic tests as well as screening for potential complications.

The best serological evidence of recent primary infection is an IgG seroconversion (ie, a change from a negative to a positive IgG), which may be demonstrated in acute and convalescent sera over 2–3 weeks. A significant increase in IgG detection between the two serum specimens tested in parallel by the same laboratory also suggests recent infection. Prior antenatal specimens can be forwarded to other laboratories to enable testing in parallel with the more recent sample. Although IgM may be due to recent infection, non-specific, false positive or persisting IgM levels occur, particularly in pregnancy. Microbiologists at the testing laboratory are available to assist in guiding and interpreting serology.

Fetal effects depend on the type of infection and the timing of infection in gestation. Women with a confirmed, potentially vertically-transmissible infection should be referred to a specialist with expertise in the management of perinatal infections. In pregnancies complicated by possible congenital infection, neonates may need prompt paediatric review for time- critical investigation and treatment.

3 Differential diagnosis and investigation of a symptomatic infective illness during pregnancy*

Presentation	Possible diagnoses	Tests
Influenza or glandular fever-like illness (lethargy, fever, malaise, myalgia, with or without headache, with or without lymphadenopathy)	• Primary CMV infection (can cause hepatitis and lymphocytosis) • Primary toxoplasmosis (lymphadenopathy often prominent) • Listeriosis (often associated with diarrhoea) • Influenza and other viral infections	• IgG and IgM (paired sera and avidity if indicated) • IgG and IgM (paired sera and avidity if indicated) • Blood culture (faecal culture for *Listeria* requires special or non-routine selective media and the significance of faecal excretion in perinatal infection is uncertain) • Respiratory viral swab, serology if appropriate
Maculopapular rash with or without fever, with or without arthritis or arthralgia	• Rubella • Parvovirus B19 infection • Enterovirus infection	• IgG and IgM (paired sera) • IgG and IgM (paired sera) • Throat or rectal swab for PCR
Vesicular rash	• Varicella • Hand, foot and mouth disease (enterovirus, usually coxsackie virus)	• Characteristic rash allowing for a clinical diagnosis, but if in doubt, serology (IgG/IgM, paired sera) and/or vesicular fluid swab for PCR • Throat and rectal swab for PCR
Genitourinary symptoms (frequency, dysuria, genital ulcer, vaginal discharge)	• Urinary tract infection • Chlamydial infection, gonorrhoea, trichomoniasis, bacterial vaginosis (may all be asymptomatic) • Genital herpes • Primary syphilis (chancre)	• Urine microscopy and culture • First pass urine or vaginal swab (can be self-collected) for chlamydia and gonorrhoea PCR. Vaginal swab for gram stain, microscopy and culture for trichomoniasis and bacterial vaginosis. PCR also available for trichomoniasis • Ulcer swab for herpes simplex virus PCR • Syphilis serology interpreted in the context of clinical history. Ulcer swab for syphilis PCR
Intrapartum fever or fever in the setting of ruptured membranes or pre-term labour	• Chorioamnionitis • Urinary tract infection • Obstructed labour	• High vaginal swab for gram stain, microscopy and culture • Blood culture • Urine microscopy and culture • Clinical assessment

CMV = cytomegalovirus; PCR = polymerase chain reaction. * Adapted from Gilbert.[1]

2 Recommended routine antenatal screening for infections in Australia

Test	Reasoning	Action/amplifying comments
Rubella IgG status	Antibody titre can decline after immunisation	If non-immune, give MMR vaccine ideally before pregnancy or wait until post partum*
Hepatitis B serology	Surface antigen to detect chronic carriers	Chronic carriers of hepatitis B virus should have an assessment of their liver function and viral load (ie, HBV DNA level and HBeAg status) performed, and be referred for specialist support. If positive, administer hepatitis B immunoglobulin to infant at birth in addition to vaccine
Hepatitis C serology†	Interventions that increase the risk of transmission to the baby can be avoided, including fetal scalp blood sampling, internal electronic fetal scalp electrode Curative treatment can be offered post partum for chronically infected women identified by screening	Hepatitis C positive women should have an assessment of liver function and viral load (ie, HCV RNA PCR). Specialist support and post partum follow-up and treatment are recommended
HIV serology (Ab and Ag)	Testing should be offered to all women regardless of risk factors	HIV positive women are recommended to receive specialist support; antiretroviral therapy for the mother significantly reduces vertical transmission
Syphilis serology	Women at high risk should also be tested in the third trimester and at delivery in addition to initial assessment in pregnancy	If positive on TPHA or TPPA, seek specialist support and treat with appropriate penicillin course. A postnatal paediatric review may be indicated
Varicella IgG‡	Check varicella antibodies, ideally when planning pregnancy, when there is no definite history of chickenpox	If non-immune, give varicella vaccine before pregnancy (delaying conception one month after vaccination) or post partum if already pregnant. Vaccination is contraindicated in pregnancy*
MCS urine	Anatomical changes increase the risk of urinary tract infection and pregnancy complications	Current guidelines suggest treating asymptomatic bacteriuria during pregnancy due to an increased risk of pyelonephritis and pre-term labour
HPV	Cervical screening (HPV DNA testing) is recommended at the first antenatal visit for any woman whose regular screening, according to cervical screening guidelines, would fall during the pregnancy	There is no evidence to suggest that cervical screening in pregnancy is harmful (a Cytobrush [CooperSurgical] should not be inserted into the cervix). If positive, referral for colposcopic examination should be made
Chlamydial infection, gonorrhoea, trichomoniasis	Transmission to neonate and maternal complications (eg, pelvic inflammatory disease) can occur	Investigate high risk and symptomatic women

Ab = antibody; Ag = antigen; HBeAg = hepatitis B e antigen; HBV = hepatitis B virus; HCV = hepatitis C virus; HIV = human immunodeficiency virus; HPV = human papilloma virus; MCS = microscopy, culture and sensitivities; MMR = measles, mumps, rubella; PCR = polymerase chain reaction; TPHA = *Treponema pallidum* haemagglutination assay; TPPA = *Treponema pallidum* particle agglutination. * There is no evidence that inadvertent administration of live vaccines during pregnancy adversely affects the fetus and is therefore not an indication for termination. † With new, effective HCV treatments, known chronic carriers should be offered treatment before conception. ‡ Varicella testing is not mentioned in the recently published *Pregnancy care guidelines*,[15] although it remains in the recent Royal Australian and New Zealand College of Obstetricians and Gynaecologists (RANZCOG) guidelines.[16] NB: Routine screening for group B streptococcus at 35–37 weeks gestation with combination low vaginal with our without anorectal swab or a clinical risk factor-based approach are both acceptable strategies dependent on local health jurisdiction practices. Table adapted from the Department of Health[17] and RANZCOG.[16]

[1] Keighley, Skrzypek et al (2019) Infections in Pregnancy. MJA 211 (3) 134-131

Pharmacogenomics (PGx) a major depressive disorder

Pharmacogenomic testing can improve remission rates by individualising the selection and dose of antidepressants.

Major depressive disorder (MDD) is a common condition with significant clinical, social and financial costs. The management of MDD encompasses a range of pharmacological, psychological and social interventions. Antidepressant prescribing is complicated by the diversity of drug choices (>20 in Australia), poor response rates to the initial drug selected and frequency of side effects. The resulting changes in medication are drawn out and can be complicated.[1]

Some of the variation in response rates and frequency of side effects can be attributed to variation in genes involved in the absorption, distribution, metabolism and excretion of specific drugs. Genetic analysis of these genes, that is, 'pharmacogenomics' or PGx, has the potential to guide drug and dose selection, such that patient outcomes are improved. However, studies to confirm or refute the utility of PGx in the management of MDD have been challenging because of variation in genes and variants tested, diversity of clinical settings, different prescribing practices and the use of different outcome measures.

Meta-analysis of PGx-informed prescribing in MDD

A recent meta-analysis reviewed the outcome of randomised controlled trials of PGx in the pharmacological management of MDD.[2] The meta-analysis concluded that PGx-informed prescribing was associated with a significant improvement in the rate of remission of MDD.

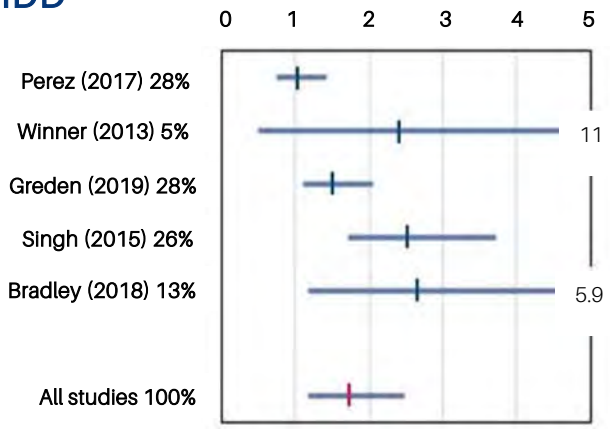


Figure 1. RR of remission (95% CI) in each trial and the pooled analysis. The weight (%) of each trial in the analysis is shown.

The investigators identified five trials which examined the efficacy of PGx-informed prescribing in the management of MDD in adults. Remission (as determined by the HDRS-17 score in all trials) was selected as the primary outcome measure. There was heterogeneity across the five trials regarding the country, patient population, inclusion criteria, genes analysed, medications available, prescribing practices and study duration.

Each of the studies showed an increase in the relative risk (RR) of remission with PGx-informed prescribing versus treatment as usual (range 1.03-2.52) (Figure 1). For two of the studies, the increase in RR of remission was not significant.

It is striking that, despite the acknowledged heterogeneity in the patient populations, genes analysed, prescribing practices, study durations and effect sizes, the pooled relative risk of remission in the PGx-informed versus non-informed cohorts across these five trials was significantly increased, that is, 1.71 (95% CI: 1.17–2.48).

There was statistically significant heterogeneity between the trials, as might be expected, given the diversity of settings and trial designs. The robustness of the pooled RR of remission was tested by removing each of the studies in turn from the pooled analysis (Figure 2). The pooled RRs of remission in each of these permutations was in the range 1.46–1.98 c/f the value of 1.71 when the five studies were combined. Only one permutation (omitting Singh 2015) yielded a non-significant RR of remission (95% CI 0.99–2.16).

The cost is $197* and a Medicare rebate is not available. The turnaround time is up to 10 business days, and results can be accessed electronically via Sonic Dx by fax or by phone.

The investigators commented that the clearest benefit may be confined to patients with moderate to severe depression who had failed to respond to (or who could not tolerate) at least one medication. However, this issue could not be directly assessed in their analysis.

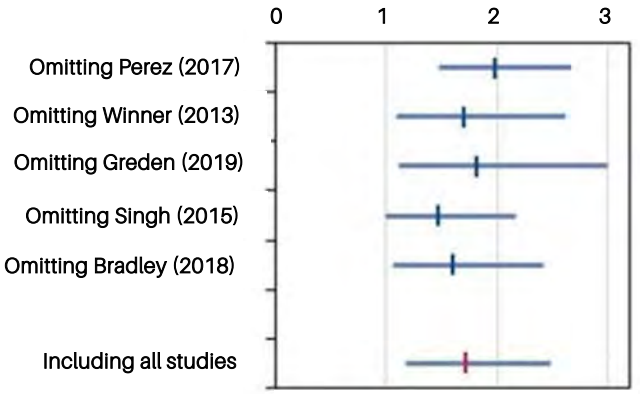


Figure 2. Pooled RR of remission (95%) after omitting each of the trials in turn.

Utility of PGx-informed prescribing for cohorts versus individuals

The pooled RR of remission in this meta-analysis identified the benefit of PGx-informed prescribing for a cohort of patients. However, this benefit was not distributed uniformly across the cohort; it was derived only from those patients with a PGx test result that lead to a change to their prescription. For example, if the doctor did not have to change the prescription on receipt of the patient's PGx test result, that is, the prescription was congruent with that result, the test had little utility for that patient. In contrast, the principal beneficiaries of PGx-informed prescribing were those patients whose prescriptions needed to be modified in the light of their PGx test result.

The 'patient-specific' benefit of PGx-informed prescribing could be described as the RR of remission in patients treated with congruent versus non-congruent medications. This measure of benefit for an individual will be higher than the benefit for the cohort as a whole because the individual benefits are distributed over the entire cohort, including patients for whom the test (in hindsight) did not have utility.

The degree to which the individual RR of remission exceeds the cohort's RR depends on numerous parameters that are often not reported in publications, thus precluding a meta-analysis. However, one of the trials did provide this information. Greden, et al. reported a cohort RR of remission of 1.51 (Figure 1).[3] Among the subset of patients who were initially taking non-congruent medications, the individual RR of remission among those changed to congruent medications versus remaining on non-congruent medications was 2.50 (Figure 3).

The cohort and individual RRs of remission are not directly comparable, as the patients defining the cohort RR were not selected on the basis of their PGx result and current therapy, while those defining the individual RR were.

This study by Greden, et al. illustrated the principle that PGx is more beneficial for a subset of patients taking non-congruent medications than for the cohort as a whole.[3]

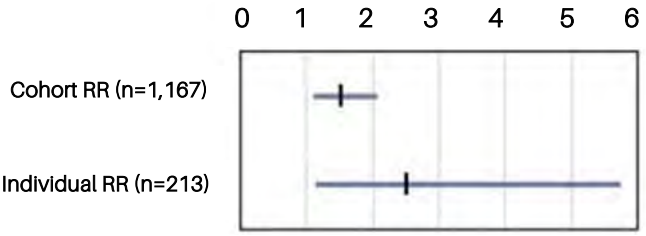


Figure 3. RR of remission (95% CI) for the cohort versus individuals in the Greden 2019 trial.

This observation is in keeping with the comment noted above, that the clearest benefit of PGx-informed prescribing may be in patients who have failed to respond to (or who could not tolerate) an antidepressant, that is, those on non-congruent medications.[2]

The only study in the meta- analysis that was exclusively limited to patients with an inadequate or adverse response to a psychotropic medication was the study by Greden, et al.[3] Despite this inclusion criterion, the cohort RR of remission in this study was similar to that of the other studies. At this stage, there is insufficient evidence to justify the limitation of PGx testing to patients with MDD who have failed a trial of an antidepressant. Furthermore, such a policy would be of little benefit for the 60–70% of patients with MDD who have inadequate or adverse responses to their initial antidepressant.[1]

Conclusion

PGx-informed prescribing in patients with major depressive disorder increases the probability of remission. This benefit is more pronounced in patients who have already failed a trial of an antidepressant or who could be prescribed an antidepressant that is not congruent with their PGx result. A comprehensive Sonic PGx Panel is available nationally through Sonic Genetics. The report provides explicit dosing recommendations.

References

1. Keks N, Hope J, Keogh S. Switching and stopping antidepressants. *Aust Prescr*. 2016;39(3): 76-83
2. Bousman C, et al. Pharmacogenetic tests and depressive symptom remission: a meta-analysis of randomized controlled trials. *Pharmacogenomics*. 2019;20(1): 37-47
3. Greden J, et al. Impact of pharmacogenomics on clinical outcomes in major depressive disorder in the GUIDED trial: A large, patient- and rater-blinded, randomized, controlled study. *J Psychiatr Res*. 2019;111: 59-67

Our Pathologists

A fundamental basis of our practice is that our referring doctors have ready and convenient access to our pathologists on a daily basis, for consultation and professional support.

The specialist pathologists at Southern.IML Pathology offer expertise across all specialties of pathology. They include specialists in all the major sub-disciplines of pathology (biochemistry, haematology, immunology, microbiology, histopathology and cytopathology) and are available to provide expert and up-to-date advice in all areas of pathology. All our pathologists are experienced and highly qualified. They are Fellows of the Royal College of Pathology and are actively involved in professional and educational activities with colleagues. Our pathologists are actively involved in the School of Medicine at the University of Wollongong.

Our pathologists encourage doctors to contact them if they can be of assistance in any way and are available to discuss individual patients and to provide information or advice on ordering of tests, result interpretation, or any other aspect of pathology. The pathologists wish to develop personal and ongoing relationships with referring doctors so that they may support and assist practitioners in clinical practice.

Chief Executive Officer
Dr Lawrie Bott MBBS (Hons), FRCPA.
Chief Executive Officer – Southern.IML Pathology

Dr Lawrie Bott is the Chief Executive Officer of Southern.IML Pathology; a role he took on in mid-2000. In this position he covers both administrative and clinical roles. Lawrie trained as a general pathologist at Concord Hospital in Sydney, and since then has had a long history of involvement in the provision of pathology services to clinicians. Prior to his move to Southern.IML Pathology, Lawrie was a partner and pathologist at Barratt & Smith Pathology becoming that organisation's Chief Executive Officer in 1995. As a General Pathologist, Lawrie has training and experience in all areas of pathology. Apart from his clinical work, he has also had extensive involvement in the development of computer systems to improve the quality of pathology result generation and reporting. Lawrie has served on many committees for the Royal College of Pathologists of Australasia, including Council from 2000 to 2007. Lawrie was also a Branch Councillor of the NSW Branch of the AMA.
The combination of his personal involvement in the South Coast, his wide-ranging professional skills, and his experience, are the base upon which his role with Southern.IML Pathology has developed. Southern.IML Pathology has a tremendous record for quality and commitment to the needs of local doctors in private practice, and, in his role as CEO, Lawrie continues this proud history.

Department Head – Anatomical Pathology
Dr Jane Nankervis MBBS, FRCPA.
Anatomical Pathology Department Head – Southern.IML Pathology
Special Interests: Histopathology and Cytopathology

Dr Jane Nankervis graduated in 1991 from the University of NSW and spent four years working at St. Vincent's Hospital, Darlinghurst and Prince of Wales Hospital, Randwick before deciding to pursue a career in anatomical pathology. The five years of pathology training was based at St George Hospital, Kogarah, with secondments to Glebe morgue, The New Children's Hospital at Westmead and her final three months at Southern.IML Pathology. Jane is a fellow of the Royal College of Pathologists and a member of the International Academy of Pathologists.
Dr Nankervis joined the Anatomical Pathology Department with Southern.IML. Pathology in 2001, and was appointed Head of the Department in 2016.

Dr Mohammad Al-Shiddidi MBBS, BSc (Med) FRCPA.
Anatomical Pathologist – Southern.IML Pathology
Special Interests: Histopathology and Cytopathology
Dr Mohammad Al-Shiddidi completed the New Zealand medical registration exams in 1999. He was granted a diploma in Obstetrics and Gynaecology from Auckland University in 2001. Dr Al-Shididi started his training in pathology as a Heamatology Registrar before moving to the discipline of Anatomical Pathology. In 2008, he moved from New Zealand to Australia and completed his training and exams in Anatomical Pathology, where he was also granted an Australian Medical Council Certificate. Dr Al-Shididi received his fellowship to the Royal College of Pathologists Australasia in 2011.

Dr Steve Andersen OAM MBBS, FRCPA MBA BSC FIAC MAACB MASM
General Pathologist – Southern.IML Pathology
Dr Andersen after completing a Bachelor of Medicine and a Bachelor of Surgery from the University of Sydney moved to Tasmania where he completed his junior residency at Royal Hobart Hospital. This was followed by completing his senior residency with St George Hospital. Dr Andersen then undertook specialist training in pathology at Sydney Hospital. During this time, Dr Andersen also accepted a secondment to Goroka Hospital in Papua New Guinea. Dr Steve Andersen's commitment to providing quality health care for the Illawarra Region began in 1982, when he commenced operating a local pathology service. For his outstanding contribution to the Illawarra Community the University of Wollongong awarded Dr Andersen a Doctor of Science, honoris causa.

Dr John Bothman MBBS, FRCPA MIAC
Anatomical and General Pathologist – Southern.IML Pathology
Special Interests: Fine needle aspiration cytology, gastrointerstinal pathology, dermatopathology and general clinical pathology.
Dr Bothman graduated in medicine from the University of Sydney in 1973 and completed his training in general pathology in 1981, after spending over twelve months in general practice. Dr Bothman commenced pathology registrar training in 1976, was the Charman of the Division of Investigative Medicine at Launceston General Hospital and director of Tamar Pathology in Launceston. Dr Bothman is a member of the Academy of Cytology, the International Academy of Pathology and the Australasian Association of Clinical Biochemists and has been an RCPA examiner in anatomical pathology as well as the Chief Examiner in general and clinical pathology.

Dr Chandra Bura MBBS, MSc (Population Health) FRCPA.
Anatomical Pathologist – Southern.IML Pathology
Special Interests: Neuro Pathology and Dermatopathology.
Dr Chandra Bura graduated in 2005, from the University of Kathmandu, Nepal. He completed a Masters in Science (population health) at the University of Wollongong in 2008. Dr Bura completed his training in Anatomical Pathology in both public and private laboratories including Westmead Hospital, Douglas Hanly Moir Pathology and a six month rotation at the Childrens Hospital at Westmead. He obtained his fellowship with the Royal College of Pathologists Australasia in 2015. He commenced as a consultant Anatomical Pathologist at Southern.IML Pathology in 2016. Dr Chandra Bura joined the Anatomical Pathology Department at Southern.IML Pathology in 2011.

Dr Anita Iyer MBBS, FRCPA, FCAP, FASCP.
Anatomical Pathologist – Southern.IML Pathology
Special Interests: Gastrointestinal and Liver Pathology
Dr Anita Iyer has specialist expertise in Gastrointestinal/hepatobiliary Pathology and is a Fellow of the Royal College of Pathologists of Australasia (FRCPA), the college of American Pathology (FCAP) and the American Society of Clinical Pathology (FASCP). Dr Iyer trained in Anatomical Pathology in the United States in 2003, at the Yale University, School of Medicine and completed a one year Fellowship program in Gastrointestinal Pathology. Dr Iyer has trained and practiced in tertiary level academic institutions, with extensive experience in both neoplastic and non-neoplastic pathology of most organ systems including: head-face-neck, genitourinary, gyn-breast, neuropathology, pulmonary, hepato-biliary, gastrointestinal, bone and soft tissue. Dr Iyer has been actively engaged in conducting GI/hepatobiliary multidisciplinary conferences, was a member of the Vermont Cancer Centre and has served on the protocol review committee. Since relocating to Australia in 2012, Dr Iyer obtained Fellowship of the RCPA. Dr Iyer joined the Anatomical Pathology Department at Southern.IML Pathology in 2014.

Dr Bryan Knight BSc (Anat); MB, ChB; M Med (Anat Path); PhD; ACAP; LMCC (EE); FRCPA; FIAC
Anatomical Pathologist – Southern.IML Pathology
Special Interests: Gynaecologic Pathology, Cytopathology
Dr Bryan Knight received his medical training at the Godfrey Huggins School of Medicine in Rhodesia. He trained in pathology at the University of Cape Town, South Africa and obtained his PhD at the same institution. He is an Associate of the College of American Pathologists, Fellow of the Royal College of Pathologists of Australasia, Fellow of the International Acacemy of Cytology and has a special interest in gynaecologic pathology and in cytopathology. He was also a senior lecturer in the Pathology Department at University of Cape Town and became Director of the Yvonne Parffitt Cytology Laboratory. He has worked in Edmonton, Alberta in Canada, and was latterly the Interim Medical Director at the BC Cancer Agency, Vancouver, British Columbia. In 2009, Dr Knight was Head of Cytology at Queensland Medical Laboratories. In 2014, he was appointed Director of VCS Pathology at the Victorian Cytology Services in Melbourne. Bryan has retained academic connections, serving as Associate Clinical Professor at the Universities of Alberta and British Columbia, and is currently an External Examiner in the University of Stellenbosch, South Africa. He does peer-reviews for several cytology journals. Dr Knight joined the Anatomical Pathology Department at Southern.IML Pathology in 2016.

Dr John Milross MBBS BSc(MED) FRCPA
Anatomical Pathologist – Southern.IML Pathology
Dr John Milross graduated from the University of New South Wales with BSc (Med) MBBS (Hons) in 1993 before undertaking internship and residency at St George Hospital and associated hospitals. He commenced pathology training in 1996 at St George, gaining experience in clinical chemistry, including the performance of various endocrine stimulation tests. After this experience in clinical pathology, he focused on anatomical pathology for the remainder of his training. John completed his training in histopathology and cytology at the Prince of Wales Hospital, Randwick, gaining Fellowship of the Royal College of Pathologists of Australasia in 2001. Dr Milross joined the Pathology Department at Southern.IML Pathology in 2001.

Dr Sarbar Napaki MBChB MMBS FRCPA

Anatomical Pathologist – Southern.IML Pathology

Dr Sarbar Napaki graduated from the University of Salahaddin in the city of Erbil in Northern Iraq in 1990. He did his internship in Iraq for two years. In 1992 he migrated to Australia and did three years of residency in medical, surgical and emergency terms. Sarbar also did general practice work until 1997 when he started his training in anatomical pathology. He received his FRCPA at the end of 2002 and started working at Southern IML Pathology as a consultant pathologist in 2003. Currently Sarbar is Head of Department in Anatomical Pathology at the Wollongong Hospital, which is serviced by Southenr.IML Pathology. Dr Napaki re-joined the Pathology Department at Southern.IML Pathology in 2016.

Dr Asma Naveed MBBS, FRCPath, PGA(molecular techniques), MMed

Anatomical Pathologist – Southern.IML Pathology

Dr Asma Naveed is an experienced pathologist, trained and qualified from the United Kingdom (North West Region). Asma has experience in all major branches of anatomical pathology including cytopathology and has also obtained fellowship of RCPA. She has completed her PGA award in basic molecular biology techniques from University of Warwick, UK in 2012. Her main areas of interest are Dermatopathology, Head and Neck, GIT/Pancreaticobilliary, Breast and Urology. Dr Naveed is lecturing the medical students at The University of Wollongong and is working closely with the trainee registrars. She is a member of the academy of medical educators (AOME) of Europe and is continuing her interest in medical education with Wollongong University. Dr Naveed joined the Pathology Department at Southern.IML Pathology in 2014.

Assoc. Prof. Raj Ramakrishna BMed FRACP FRCPA MPH MD

Consultant Haematologist – Southern.IML Pathology

Associate Professor Rajeev Ramakrishna completed his medical training at University of Newcastle and his fellowships with The Royal College of Physicians and Royal College of Pathologists Australasia. He undertook further studies in Haematology including bone marrow transplantation. He has been providing comprehensive clinical and laboratory Haematology services in the Illawarra Region since 1995. A/Prof Ramakrishna is a fully certified physician heamatologist who has long been involved in clinical research programs. He has been associated with the Graduate School of Medicine since 2005. He continues to play a vital role with teaching and research. Dr Ramakrishna joined Southern.IML Pathology as a consultant in 2001.

Dr Chee Vun MBBS BMed Sc, FRCPA

Consultant Haematologist – Southern.IML Pathology

Dr Vuncompleted his Bachelor of Medicine and Surgery at the University of Melbourne in 1979, and obtained his fellowship with The Royal College of Pathologists in 1995 and specialised in Haematology. Dr Vun is involved with the Graduate School of Medicine and provides Haematology clinic services in the Illawarra and Shoalhaven. Dr Vun joined Southern.IML Pathology in 2001.

My Health Record pathology results upload

A guide for medical practitioners

When can results be uploaded?

We will be able to upload pathology results for episodes that are referred to us as an electronic order (eOrder) that includes the patient's Individual Health Identifier (IHI) and the flag to indicate the patient has given consent to send the pathology results to the My Health Record system.

What Practice Management Systems (PMSs) currently send suitable eOrders?

Currently there are two PMS vendors whose PMSs are enabled. These are:
Best Practice - Lava SP3 and later
Medical Director - 3.17.2 and later

I can't send an eOrder? Why can't you look up the patient's IHI to upload to the My Health Record system?

The patient's IHI is the single identifier that the My Health Record system uses to link a patient's pathology results to the patient's My Health Record. To prevent a patient's results being uploaded to the wrong My Health Record, we will only use an IHI that is electronically transmitted with the electronic pathology order from your database to ours. This also protects patient privacy because the IHI is not visible during the pathology request-test-report process.

What pathology results will be uploaded to the My Health Record system?

All results of all pathology tests that are referred to us as an eOrder from a compatible practice management system.

When will patients be able to see their pathology results?

When the pathology results are finalised and sent to the referring doctor they will also be uploaded in PDF format to the patient's My Health Record. You will have a seven-day window for consultation and discussion of the results with the patient, after which they can access their results in their My Health Record. Patient access to pathology results after 7 days is an agreed national approach.

When can I see pathology results in a patient's My Health Record?

Healthcare professionals will be able to access pathology results soon after they are uploaded. Access to the My Health Record system is governed by the Australian Digital Health Agency.

Does the whole practice need to be set up to upload pathology results?

Uploading pathology results starts by enabling your medical centre. This is managed in our Laboratory Information System.

Can I decide to opt out and not upload any pathology results to the My Health Record system?

Yes. We understand that you may choose to opt out and not upload SIML pathology results for your patients. This is a customisation that we believe is very important. You can opt in or out at any time.

I don't want to send a specific pathology result for a patient. Is this possible?

Yes. At the time you are creating the pathology request, check the box labelled 'Do not send to the My Health Record'. This box is located at the bottom of the SIML eOrder pathology request screen. This is the only way to prevent specific pathology results from uploading to a patient's My Health Record.

To stop results being uploaded, can I tick the 'Do not send to My Health Record' box that prints on the request form?

No. This tick box was introduced in the early development of the My Health Record system. The ADHA now recommend that only the flag in the eOrder be used for this purpose.

Where can my patients learn more about the pathology tests that have been ordered for them?

By visiting Lab Tests OnlineAU [at www.labtestsonline.org.au/.](http://www.labtestsonline.org.au/)

More information

For more information about enabling uploading of SIML Pathology results to My Health Record system, please contact the Customer Service Department on (02) 42 247435

www.southernpath.com.au

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