AUSTRALIAN Clinicallabs

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PATHOLOGY FOCUS

December 2019 - Issue 9
Medical Newsletter

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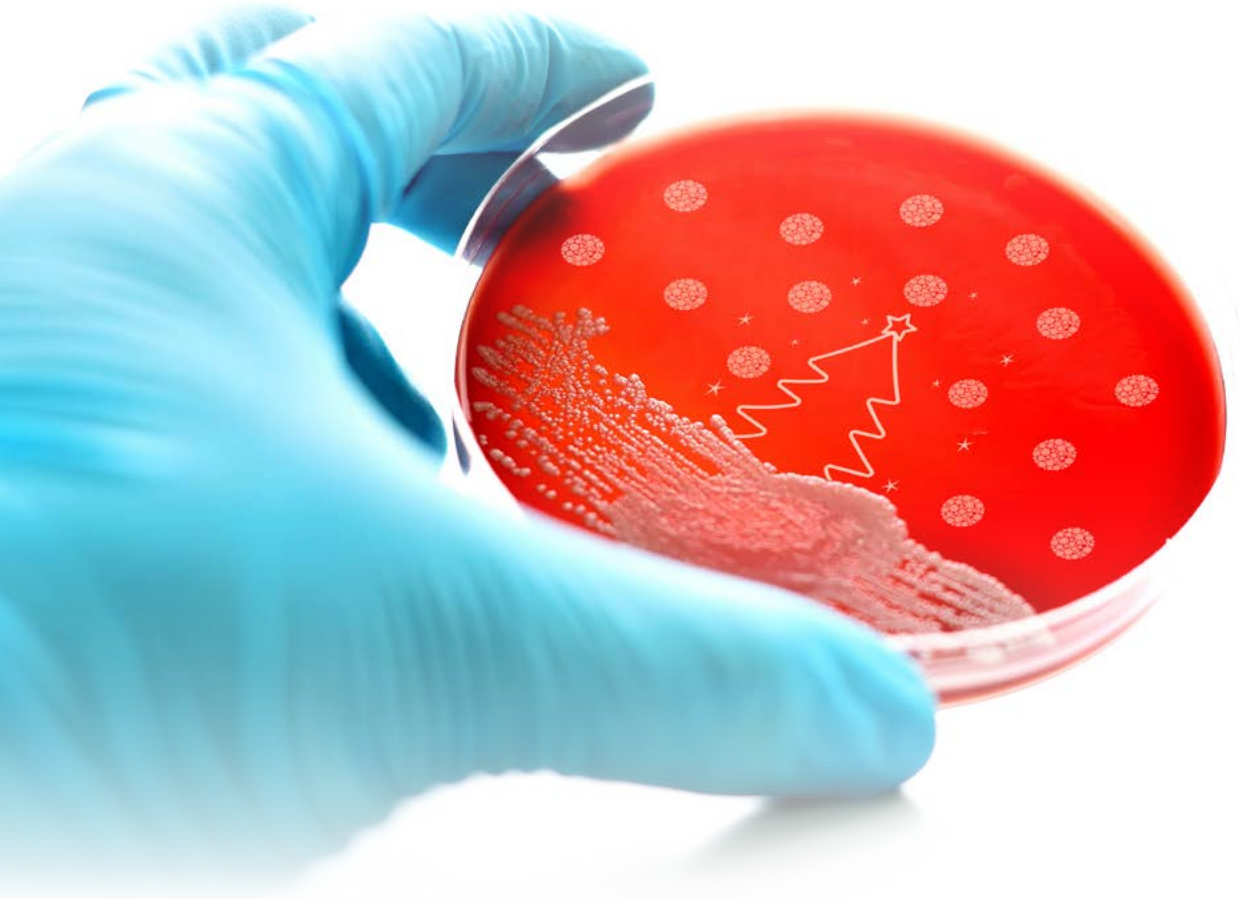


Season's Greetings & We Thank You For Your Support In 2019

From the team at Australian Clinical Labs, our pathologists, scientists & laboratory staff, collectors, couriers and sales and administrative staff, we wish all our referrers a happy and safe holiday season, and thank you for your continued support in 2019.

Our strong relationships with you, our referrers, have allowed us to strengthen our business and focus on improving the pathology services we offer you and provide to your patients from new, purpose-built, state-of-the art laboratories and upgrades with market-leading technology, to innovative new tests and updated system platforms.

We look towards 2020 with anticipation, to continued partnerships and the innovations to come.

Clinical Labs 2019 Highlights

We have had a busy and productive year at Clinical Labs, working on major projects to improve and grow the services we offer you and provide to your patients. We are pleased to share with you an overview of the key highlights from 2019. All of these changes have been made with both you, our referrers, and your patients at front of mind.

New Labs, Upgrades & Technology

Australian Capital Territory

In September, we opened our new state-of-the-art laboratory in ***Belconnen***, with a fully accredited collection centre on site to; support our work as the exclusive pathology provider for the Australian Defence Force, service several large medical centres in the area and welcome local referrers.

New South Wales

In April this year, we cut the ribbon to re-open our ***Bella Vista*** lab after it underwent a major upgrade, with the installation of an Aptio track system, Siemens Atellica instrumentation and more. These new systems are the first of their kind in Australia and, in terms of the Aptio track connectivity, certainly one of the first in the world. This new technology has increased productivity in the lab by improving the utilisation of lab resources, efficiency and processing.

Late last year, Clinical Labs commenced a long-term contract to provide pathology services at the new ***Northern Beaches Hospital***. Tests are performed on-site in a new, state-of-the-art lab, which operates 24 hours, 365 days per year.

South Australia

Earlier this year, we opened one of the most technologically advanced laboratories in South Australia, our ***Adelaide Airport*** lab. This high-tech facility features market-leading technology equipment, including an Aptio track system with Siemens Atellica instrumentation, as well as Sysmex Haematology and Coagulation analysers. The lab also features a purpose-built histology and cytology area, allowing for greater efficiencies and workflow, along with improved dictation and cutup facilities.

Victoria

This year we have made significant investments in our ***Clayton*** lab, with the introduction of new platforms and an increase in resources. In our Molecular department we have changed our HPV PCR testing to the Roche platform. In Microbiology we have introduced four new Urine Atellica analysers, which have led to greater reliability and accuracy, and made a large investment in additional resources. All of these changes at our Clayton lab will result in reduced turnaround times.

At the start of this year, we launched Clinical Labs ***Specialised Trials*** with a purpose-built lab in Port Melbourne, which is able to perform a broad range of tests. Specialised Trials was designed to offer a dedicated pathology approach to Phase I-V clinical trials, servicing clinical research, pharmaceutical and biotechnology clients. Since its launch, 40 different trials have been completed.

Western Australia

Over the last 12 months our ***Osborne Park*** lab has seen several major improvements which have led to greater efficiencies and reduced turnaround times. The redesign of the lab layout across all departments has not only improved workflow, but created valuable space for the addition of new analysers, including the Panther Fusion system in Serology. This enabled in house testing of Respiratory PCR within 24hrs during the flu season. Two new Atellica urine analysers were also installed in Microbiology, as well as the Sysmex automation system in Haematology, enabling the upgrade of manual processes with the latest technology.

Also, at our ***Subiaco*** lab, we have changed our HPV testing to a new Roche platform. This has enabled the test to be performed in half the time.

New Pathologists

We have had eight new pathologists join the Clinical Labs team this year. The new pathologists, based in our Western Australian, New South Wales and Victorian laboratories, bring with them expert knowledge and experience in specialised fields of pathology, including haematology, anatomical pathology and oral and maxillofacial pathology. Our new pathologists will provide a great wealth of knowledge to the Clinical Labs team and expert insights for our referrers regarding their patients' results.

New Tests

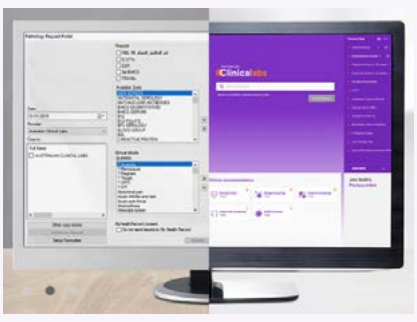
In 2019, we launched our new pre-pregnancy ***Comprehensive Carrier Screening*** test. The new test, which replaced Counsyl, includes more genes (up to 301) to cover more inherited genetic conditions than its predecessor, along with being less expensive and having a shorter turnaround time. Partner testing is also less expensive, and Genetic Counselling is offered by Clinical Labs for positive cases.

Clinical Labs is now offering the ***Placental Growth Factor (PlGF)*** blood test, to be carried out between 11 and 14 weeks of gestation for early screening of pre-eclampsia (PE). The test is new to the pathology market after undergoing validation studies. Several studies have shown that women who subsequently develop PE have significantly lower maternal PlGF concentrations in the first trimester than those with normal pregnancies. A systematic review and meta-analysis demonstrated that PlGF is superior to the other biomarkers for predicting PE. Serum PlGF biomarker can identify up to 75% of women who develop pre-term PE with delivery at <37 weeks' gestation and 90% of those with early PE at <32 weeks, at a screen-positive rate of 10%.

In April this year we replaced our old TSH receptor antibody test with a ***Thyroid Stimulating Immunoglobulins (TSI)*** test. The TSI test is used to measure the stimulating thyroid receptor autoantibodies, which are considered to be more specific and sensitive markers for the diagnosis of Graves' disease. In addition to its superior clinical relevance to autoimmune thyroid disease, the introduction of TSI testing has significantly improved our reporting turnaround time.

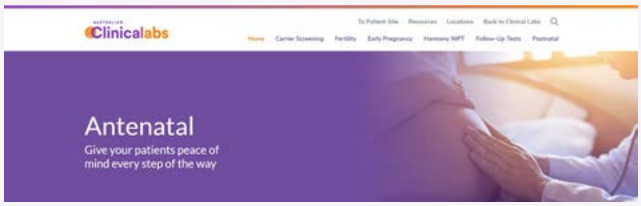
New Digital Services

Our ***eOrders*** digital service has been upgraded, for MedicalDirector Clinical 3.18+. Ordering pathology tests has been simplified with a predictive search function, predicting your preferred test combinations, suggesting additional tests based on the latest recommendations and allowing you to easily create a 'Favourites' list. See clinicallabs.com.au/doctor/results/new-eorders for more information.



New Resources

In October, we launched our new ***Antenatal*** doctor and patient resource websites. The doctor site, antenatal.clinicallabs.com.au/doctor, features detailed information, brochures, articles, videos, request forms and pricing for our comprehensive Antenatal test offering, including Harmony NIPT.



We have also updated the ***Molecular Cancer Services*** information on our website, to provide you with detailed information including gene panels, brochures, videos, turnaround times, pricing and request forms for our lung, colorectal and breast cancer and melamona tests. clinicallabs.com.au/cancer-services

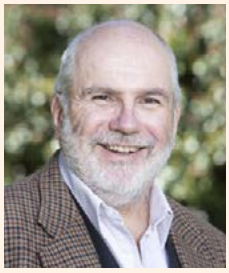
GP Connect: LYMPHOCYTE SURFACE MARKERS

In this edition of GP Connect, Clinical Labs' haematologist/pathologist, Associate Professor Chris Barnes, responds to questions asked by general practitioner, Dr Jon Barrell, about the topic of lymphocyte surface markers.

A/Prof Chris Barnes
(Pathologist)

MBBS, FRACP, FRCPA

A/Prof Chris Barnes is a clinical and laboratory-trained haematologist and the National Director of Haematology at Australian Clinical Labs. He also works as Director of the Haemophilia Treatment Centre at the Royal Children's Hospital, Melbourne.



Dr Jon Barrell
(General Practitioner)

MBBS, DRACOG, FRACGP

Dr Jon Barrell is founding principal of Springs Medical and works full-time between the Daylesford and Trentham clinics. He is also Conjoint Senior Clinical Lecturer in the School of Medicine, Faculty of Health, at Deakin University.

Dr Jon Barrell (General Practitioner)
I have a 65-year-old patient who has mild lymphocytosis – what tests should I order next?

A/Prof Chris Barnes (Pathologist)
Lymphocytosis is commonly picked up by a screening test and is often the transient result of a viral infection. However, lymphocytosis that is still persistent after six weeks needs further assessment to rule out an emerging lymphoproliferative disorder. The next step is to order lymphocyte surface markers. Lymphocyte surface markers are used to determine if there is an abnormal (clonal) population of lymphocytes present in the peripheral blood. The test relies on fixing antibodies to cell surface markers and looking for a particular monoclonal population.

Dr Jon Barrell (General Practitioner)
What does it mean if there is a monoclonal population on lymphocyte surface markers?

A/Prof Chris Barnes (Pathologist)
The presence of a monoclonal population may mean that the patient has indicators of an early lymphoproliferative disorder, e.g., lymphoma or chronic lymphocytic leukaemia (CLL). Whilst this sounds bad, many lymphoproliferative disorders are very low-grade and may not need any treatment; monitoring of the patient is all that is required. Other lymphoproliferative disorders may require early therapy. Referral to a haematologist is generally recommended.

Dr Jon Barrell (General Practitioner)
What if the lymphocyte surface markers are negative and the patient still has lymphocytosis?

A/Prof Chris Barnes (Pathologist)
Lymphocyte surface markers is a good test for B-cell lymphoproliferative disorders. However, lymphocyte surface markers may not be abnormal in T-cell lymphoproliferative disorders (T-cell disorders are much less common). T-cell disorders may require additional testing (e.g. T-cell receptor rearrangement). Other causes of lymphocytosis include hyposplenism, recurrent viral infections, some autoimmune disorders and other malignancies. Smoking may also cause a low-level lymphocytosis. If the cause for lymphocytosis is not clear, ongoing monitoring, repeat assessment of lymphocyte surface markers or referral to a haematologist may be helpful.

Dr Jon Barrell (General Practitioner)
In practice, I find CLL the most common cause of chronic lymphocytosis in older patients, and I find lymphoma more commonly presents as a mass lesion without lymphocytosis. Am I correct?

A/Prof Chris Barnes (Pathologist)
CLL is a very common cause of lymphocytosis in the aging population with the average age, at the time of diagnosis of CLL, being around 70 years. CLL is uncommon in patients less than 40 years of age. Somewhat confusingly, the term small lymphocytic lymphoma (SLL) refers to patients who have cells with the same morphology and immunophenotype of CLL within lymph nodes or other tissues, but these cells are not present in the peripheral blood.

Other lymphoproliferative disorders present less commonly with lymphocytosis. Follicular lymphoma and diffuse large B-cell lymphoma (DLBCL) collectively represent approximately two thirds of all adult non-Hodgkin's lymphoma. These lymphoproliferative disorders may present with isolated lymph node enlargement (e.g. follicular lymphoma) or extra nodal mass lesions (e.g. DLBCL). Follicular lymphoma in particular often presents in younger adult patients with a median age in the 6th decade.

Dr Jon Barrell (General Practitioner)
What if the lymphocyte surface markers are negative, but I am suspicious the patient has CLL or another lymphoma?

A/Prof Chris Barnes (Pathologist)
Lymphocyte surface markers are a sensitive test – many millions of cells are analysed during each assessment using modern flow cytometry methods. Detecting monoclonal populations or populations of cells that express usual antigens is the focus of flow cytometry techniques. Specially trained flow cytometry scientists run these tests using standard operating procedures and carefully controlled and calibrated methods. Isolated results of single tests should, however, never replace clinical experience. Should there be a discrepancy between the results and the clinical findings of the patient, I would suggest calling your local haematologist to discuss your concerns. Repeat, or additional tests (e.g. T-cell receptor rearrangement studies or molecular testing) may be indicated.

ACLMAR-NEWS-NAT-0023.5 11/19

The next program for the new triennium is commencing in January, 2020. Pre-register now by emailing your CPD number and practice address to skinaudit@clinicallabs.com.au

AUSTRALIAN Clinicallabs

Skin Excision Evaluation Program

Join thousands of general practitioners nationwide and earn your CPD QI points!

RACGP

Australian College of Rural & Remote Medicine
WORLD LEADERS IN RURAL PRACTICE

An application for this program as a (Category 1) Accredited activity is pending for the 2020-2022 triennium.

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Thank you