

ISSUE #086

IN THIS ISSUE

- Australia, leading the way in cervical cancer and HPV screening
- Pathology, it's in the blood: Dr Bruce van den Heever and Dr Ursula van den Heever
- Alpha-1 antitrypsin deficiency the facts
- International Pathology Day 2018

INTERESTING FACTS

10

The number of countries that recognise International Pathology Day each year. These are Australia, New Zealand, Hong Kong, Singapore, Malaysia, UK, Ireland, USA, Canada and South Africa.

259

The number of deaths caused by cervical cancer in Australia in 2016.¹ In New Zealand around 50 deaths are caused by cervical cancer each year.¹

Welcome to the November issue of ePathway

ePathway is an an e-magazine designed for anyone who is interested in their health and wellbeing and the integral role pathology plays in the diagnosis, treatment and management of diseases.

This month's issue of *ePathway* will look at the following:

- Australia, leading the way in cervical cancer and HPV screening
- Pathology, it's in the blood: Dr Bruce van den Heever and Dr Ursula van den Heever
- Alpha-1 antitrypsin deficiency the facts
- International Pathology Day 2018

Cervical cancer develops from tissues of the cervix and is the third most commonly diagnosed gynaecological cancer in Australian women. We speak to Professor Annabelle Farnsworth to discuss cervical cancer and the HPV vaccine.

In this month's quarterly 'Pathology, it's in the blood' feature, father and daughter, Dr Bruce van den Heever and Dr Ursula van den Heever discuss how they both came to be in the pathology profession and what it's like to work side by side.

To recognise alpha-1 antitrypsin deficiency awareness month, we speak to Dr Alan McNeil to discuss the important role that pathologists play in the diagnosis of this inherited genetic disorder.

And finally, International Pathology Day 2018 took place on Wednesday, 14 November 2018, with the RCPA hosting an event that had a strong focus on supporting the Government's National Bowel Cancer Screening Program. The RCPA was joined by Anton Enus, the highly respected and admired reporter for SBS World News, who shared his personal experience with bowel cancer. In addition, Sophie Scott, ABC Medical Reporter, led the event's proceedings; she is also a Bowel Cancer Ambassador.

On a separate note, for those of you who haven't yet seen the RCPA's latest video on pathology, take a look! The <u>video</u> which features AFL star, Greater Western Sydney player, Sam J Reid, explains the

2007

The year that the HPV vaccine was introduced in Australia. In New Zealand, the vaccine was introduced in 2008.²

1 in 13

The proportion of Australians that will develop bowel cancer in their lifetime.²

Source

[1] https://www.cancer.org.au/aboutcancer/(ypes-of-cancer/cervical -cancer.html

[2] <u>https://www.bowelcanceraustralia.org/</u> what-is-bowel-cancer

importance of pathology and is aimed at a younger target age group.

Remember to follow us on Facebook (@TheRoyalCollegeofPathologistsofAustralasia), Twitter (@PathologyRCPA) or on Instagram (@the_rcpa). CEO, Dr Debra Graves can be followed on Twitter too (@DebraJGraves).

Australia, leading the way in cervical cancer and HPV screening

We sat down with Professor Annabelle Farnsworth, professor of pathology, anatomical pathologist and specialist gynaecological histopathologist and cytopathologist, to get the latest on cervical cancer, cervical screening and the human papillomavirus (HPV).



Professor Annabelle Farnsworth

read more »

IMPORTANT MESSAGE



SUGGEST TO A FRIEND

Know someone who might be interested in this website? Why not <u>suggest the website</u> to them.

PREVIOUS EDITIONS

Did you miss something from last month? You can view our previous editions at any time.

SUBSCRIBE NOW!

Subscription is easy! Simply fill in our <u>subscription form</u>.

Pathology, it's in the blood: Dr Bruce van den Heever and Dr Ursula van den Heever

Dr Bruce van den Heever is a chemical pathologist with the Medlab Central group of laboratories and is based in Palmerston North, New Zealand. His daughter, Dr Ursula van den Heever is an anatomical pathologist based in Auckland, New Zealand.



read more »

LINKS

RCPA Manual

Lab Tests Online

Know Pathology Know Healthcare

Alpha-1 antitrypsin deficiency - the facts

The month of November is alpha-1 antitrypsin deficiency awareness month here in Australia. As this is not a well-known disease in the general community, we spoke to Dr Alan McNeil, a chemical pathologist, to find out more about this inherited disorder, which can cause emphysema and cirrhosis.



read more »

RCPA celebrates International Pathology Day 2018

On Wednesday 14 November, pathologists, scientists and laboratories around the globe gathered to celebrate the seventh International Pathology Day (IPD).



read more »

Copyright © 2018 The Royal College of Pathologists of Australasia

RCPA - Durham Hall - 207 Albion St Surry Hills NSW 2010 AUSTRALIA | (+61) 2 8356 5858 | www.rcpa.edu.au



ISSUE #086

Australia, leading the way in cervical cancer and HPV screening



We sat down with Professor Annabelle Farnsworth, professor of pathology, anatomical pathologist and specialist gynaecological histopathologist and cytopathologist, to get the latest on cervical cancer, cervical screening and the human papillomavirus (HPV).

Professor Farnsworth said,

"The majority of cervical cancer cases are caused by the human papillomavirus (HPV). The interesting thing is that HPV is a very common infection; it's a sexually transmitted disease that most people will contract at some point in their lives. The majority of people get rid of the infection naturally. In a very small number of people, the infection persists and changes occur in cells which can develop into cervical cancer, but this takes many years.

Cervical cancer is the growth of abnormal cells in the lining of the cervix. The most common cervical cancer is squamous cell carcinoma, accounting for 80% of cases. There were 898 cases of cervical cancer diagnosed in Australia in 2014. In 2016, 259 were deaths caused by cervical cancer in Australia. Cervical cancer death rates in Australia have halved since the National Cervical Screening Program began in 1991.^[1]

"In Australia, we have a vaccine against HPV, so the women of Australia are very well protected. The vaccine has been available for over ten years; it was introduced in Australia in 2007. It's primarily given to boys and girls in their first year of high school; these are students aged 12 to 13 years.

"The HPV vaccine was an Australian invention, created by Professor Ian Fraser and his

team. It's a highly effective vaccine and there's lots of scientific evidence to show that HPV infections and the downstream effects of HPV are diminishing. There has been recent talk that Australia may eradicate cervical cancer in 10 years' time. However, the HPV vaccine alone will not eradicate the disease – we still need to screen for the precursor lesions.

In Australia, as of 1st December 2017, the Pap smear test was replaced with a new Cervical Screening Test.^[2] Instead of looking for changes to the cells of the cervix, the new HPV Cervical Screening Test allows scientists to look for the virus that causes the cell changes in the first place. HPV testing looks for the virus inside the cervical cells, which means doctors can find women who could be at risk of developing cervical cancer in the future. If HPV is found, the scientists will do a liquid-based cytology test (a form of the Pap test) on the same sample of cells. Under the new program, most women aged 25-74 years will be tested every five years. If an individual previously had a Pap smear test, they should have their first HPV test two years after their last Pap test.

"Australia has had an extremely successful cervical screening program over the past 20 years. Because of the (HPV) vaccine effect and the availability of technology, the decision was made to change from cytology (the Pap smear that everyone was traditionally familiar with), to screening for the virus (HPV), instead. The transition from the traditional Pap smear test to the new cervical screening occurred in December last year; therefore, women in Australia are now being tested for HPV.

"For the patient, the way the sample is taken is exactly the same, but instead of the sample being spread out onto a glass slide, it is now placed in fluid that is then tested for HPV. On the basis of the result of the screening test, the patient is then given a 'risk category'. If the test is negative, she is at 'low risk' of developing cervical cancer and is recommended to come back in five years' time for her next screening round. If the test is positive, the types of HPV are sub-categorised as there are some types of HPV that are a higher risk than others. If the test is positive for those types, the patient is classified as a 'higher risk' and needs further investigation. There's also an 'intermediate risk' where the recommendation is to get a repeat sample taken in twelve months' time and not wait for five years.

"As this is a screening test, what we are really screening for are pre-cancerous lesions, cellular abnormalities that develop before full-blown cancer occurs. This is possible due to the sensitivity of the test. But the HPV test can detect the virus even before any disease has developed. After testing positive for HPV, a cytology test is also done which further indicates what is going on. By picking up cellular abnormalities earlier when they are still in the pre-cancerous phase, it is easier to treat via a minimally invasive procedure. Follow up needs to happen, but the patient is basically cured at this point, rather than going on to develop cervical cancer.

"Preliminary numbers from the screening program to date show that approximately ten percent of the female population will test positive for HPV. Only a tiny percentage of those individuals will develop cervical cancer.

"It's very important to stress that if a woman has any abnormal bleeding or a particularly abnormal discharge or any other significant changes she might notice, she needs to see a doctor irrespective of her screening history. Don't wait for five years between the testing. Early changes in cervical cells rarely cause symptoms. If early cell changes develop into cervical cancer, the most common signs include vaginal bleeding between periods; menstrual bleeding that is longer or heavier than usual; bleeding after intercourse; unusual vaginal discharge; vaginal bleeding after menopause; excessive tiredness; leg pain or swelling; and low back pain.

"HPV sample testing, as part of the cervical screening program, is done in laboratories by scientists and pathologists. HPV testing is a molecular test looking for viral DNA. It is done by pathologists and scientists using highly specific state-of-the-art analysers. The cytology component is also undertaken by scientists and pathologists using computerised highly sophisticated image analysis techniques with liquid-based specimens.

"The advances we have implemented in HPV testing and liquid-based cytology with

image analysis are world-leading. Australia really is at the forefront of this new screening method. I've just come back from the US and it's fair to say that the eyes of the world are looking at us to see how our new screening program performs. It is such a significant shift in comparison to what we have done over the last 50 years or so."

For further information on the cervical cancer screening program, please visit - <u>https://www.cancer.org.au/cervicalscreening</u>

[1] https://www.cancer.org.au/about-cancer/types-of-cancer/cervical-cancer.html

[2] https://www.cancer.org.au/cervicalscreening

You are welcome to circulate this article to your contacts, share it on your social media platforms and forward it to any relevant contributors and experts for them to share and post on their websites. If you do reproduce this article in any such fashion you must include the following credit:

This article appeared in the November 2018 Edition of ePathWay which is an online magazine produced by the Royal College of Pathologists of Australasia (<u>http://www.rcpa.edu.au/Library/Publications/ePathway</u>).

« Back to Home Page

Copyright $\textcircled{\sc c}$ 2018 The Royal College of Pathologists of Australasia

RCPA - Durham Hall - 207 Albion St Surry Hills NSW 2010 AUSTRALIA | (+61) 2 8356 5858 | www.rcpa.edu.au



ISSUE #086

Pathology, it's in the blood: Dr Bruce van den Heever and Dr Ursula van den Heever



Dr Ursula van den Heever & Dr Bruce van den Heever

Dr Bruce van den Heever is a chemical pathologist with the Medlab Central group of laboratories and is based in Palmerston North, New Zealand. His daughter, Dr Ursula van den Heever is an anatomical pathologist based in Auckland, New Zealand.

Dr Bruce van den Heever:

"Becoming a pathologist was, for me, accidental rather than by design. After completing my medical degree in South Africa, I found myself in the army for a two year stint. Fortunately, this involved putting our medical skills to good use rather than any military activity. Early on, a volunteer was requested to staff the South African Institute for Medical Research as a Medical Officer in Pathology at the branch in Windhoek (Namibia). As no one put their hand up, my name was selected by virtue of the fact my surname was the last one alphabetically! This proved to be very interesting as I was exposed to all aspects of pathology under the tutelage of a great, if somewhat eccentric, German pathologist. After completing my stint in the army I did six months as a general practitioner which only served to convince me that pathology was the profession of choice for me.

"I completed my training as a general pathologist at the Free State Medical School. In 1994, following a few years in private practice, I emigrated with my family to New Zealand where I have worked initially as a general pathologist and, for the last decade, I have concentrated solely on chemical pathology. I live in Palmerston North where I am one of the managing pathologists for Sonic Healthcare's Medlab Central group of laboratories. "It is not uncommon for children of medical doctors to enter the medical profession too, but it is not that common for pathologists to come from the same family. In our case, whilst I provided the initial idea, Ursula has made the decision to train in the field on her own. We share many personality traits, but her work ethic and attention to detail (an admirable quality for a pathologist) make me a very proud father.

"As pathologists, we provide clinical doctors with the information they need to make the correct diagnoses for patients in a large proportion of cases. This is a critical role and not only encompasses knowledge of the basic sciences, but a range of medical disciplines. The information provided informs the treatment and care of patients from 'cradle to grave', a privilege not afforded to any other specialty.

"Examples of our scope of work include:

- Pregnancy, e.g. nutritional information (folate and iron levels), foetal wellbeing (exclusion of genetic disorders), testing to exclude diabetes.
- Newborn testing, e.g. to exclude amongst others serious metabolic and thyroid disorders.
- Childhood, e.g. to advise on vital immunisation requirements.
- Adults, e.g. testing for infectious diseases, endocrine disorders, fertility testing, autoimmune disorders.
- All ages, e.g. the histologic examination of any tumours (growths) to diagnose cancers and provide prognoses of these.
- Post mortem, i.e. autopsies to ascertain the cause of death in both non-suspicious and suspicious cases (homicides).

"Pathology is a vital part of the medical process and can provide a fulfilling career pathway in a variety of sub-disciplines (haematology, chemical pathology, microbiology/virology, anatomical pathology, forensic pathology and immunology). Not to forget molecular genetics, which is an exponentially developing field; the increasing diagnostic capability in this area will provide effective treatment options that will no doubt have an enormous impact on healthcare in the future.

"I am delighted Ursula has chosen this wonderful profession and I am sure she will have a richly rewarding career."

Dr Ursula van den Heever:

"For me, the path into pathology was a long, winding road. I had a keen interest in biology, languages and art history at high school, but never had a clear idea of what I wanted to do career-wise. I finally decided to enrol in a BCA/BCom degree majoring in HR, French and Psychology. After completing two years, I realised commerce did not suit me at all and, although I enjoyed the arts component, I could not see a clear future for myself. Soon after, I came across an advert for a beauty therapy and massage diploma course. On a whim, I quit my degree and enrolled. I am extremely thankful that I took the risk. Part of this course entailed anatomy and physiology, which reignited my interest in human biology. Treating clients and seeing results in women with problems such as stress, hirsutism and chronic back pain made me realise that medicine is what I should have been doing all along. Of course, you would think that that was the obvious choice given that my father is a pathologist, but my parents did not want to put pressure on us to follow in his footsteps. However, they were both incredibly supportive when I told them I was applying to get into medicine.

"Even at medical school, which I attended in Auckland, it never occurred to me that pathology could be an option. I had limited knowledge as to what the profession really entailed and just how vital it is to all areas of medicine. I completed my house surgeon year at Auckland City Hospital in various surgical and medical rotations. It was a challenging year and there was pressure to make a decision as to what specialty I would go into. My father would often joke about me doing pathology and how great it would be if we could work together. I never took it seriously until, on one holiday, I spent some time visiting him in Palmerston North. An anatomic pathology (AP) training position had come up at his lab and he suggested I visit and find out a bit more. I spent time with an enthusiastic senior registrar and after two days I walked out of that lab knowing I had finally found what I was meant to do. I subsequently spent three years at Medlab Central in Palmerston North and then completed my training at Wellington Hospital. I was lucky enough to do my first year as a consultant back in Palmerston North with the most supportive group of consultants, including my father. I only know of a handful of people with pathology in the family and not many of those would have had the chance to work together in the same lab!!

"I am forever grateful to him as he has spent many a night talking to me on the phone and supporting me through the ups and downs of medical school, my pathology training and, now, as I make my way through the first few years of being a consultant. He has worked extremely hard throughout his life, always putting his family first. Bringing us to New Zealand was a huge sacrifice, but it has given my siblings and I incredible opportunities. As I get older, I realise that we probably do have similar personalities and, in particular, attention to detail is what makes us well suited to the profession of pathology.

"I now work at Auckland DHB Anatomic Pathology Service (APS), which provides community referred histology and cytology services for the greater Auckland region. I am still learning every day and, as time goes on, I have an increasing appreciation for the importance of pathology. It really is the basis for everything in medicine. I encourage any aspiring doctor to seriously consider this specialty which, for me, is already proving to be a fulfilling career."

You are welcome to circulate this article to your contacts, share it on your social media platforms and forward it to any relevant contributors and experts for them to share and post on their websites. If you do reproduce this article in any such fashion you must include the following credit:

This article appeared in the November 2018 Edition of ePathWay which is an online magazine produced by the Royal College of Pathologists of Australasia (<u>http://www.rcpa.edu.au/Library/Publications/ePathway</u>).

« Back to Home Page

Copyright © 2018 The Royal College of Pathologists of Australasia

RCPA - Durham Hall - 207 Albion St Surry Hills NSW 2010 AUSTRALIA | (+61) 2 8356 5858 | www.rcpa.edu.au



ISSUE #086

Alpha-1 antitrypsin deficiency - the facts



The month of November is alpha-1 antitrypsin deficiency awareness month here in Australia. As this is not a well-known disease in the general community, we spoke to Dr Alan McNeil, a chemical pathologist, to find out more about this inherited disorder, which can cause emphysema and cirrhosis.

"Alpha-1 antitrypsin is a protein that protects the lungs from inflammatory enzymes. These enzymes are there to destroy microbes, but if they are unregulated through the absence of alpha-1 antitrypsin, they damage the fine membranes of the lungs themselves. This is emphysema which causes abnormal expansion of the lungs, progressive breathlessness, and sometimes respiratory failure.

"The disorder is pretty uncommon - it's an inherited condition that affects approximately 1 in 2000 people in Australia. The particular mutations that are problematic originated in Northern Europe; therefore the condition mainly affects people with European heritage," said Dr McNeil.

Mutations in the SERPINA1 gene cause alpha-1 antitrypsin deficiency.

"The alpha-1 antitrypsin protein is naturally made in the liver and would normally enter your system to help protect against these enzymes. Some people simply don't make enough alpha-1 antitrypsin and are at risk of emphysema. However, in those with the most serious mutation, the so-called Z mutation, alpha-1 antitrypsin builds up in the individual's liver causing chronic liver disease and cirrhosis, as well as emphysema. In simple terms, the condition is caused by this protein, alpha-1 antitrypsin, being stuck in the wrong part of the body and not getting to the parts that it needs to."

The signs and symptoms of this condition, and the age at which they appear, vary

among individuals; however, early symptoms can include shortness of breath following mild activity, reduced ability to exercise and wheezing. Onset of lung problems is typically between 20 and 50 years old.^[1]

"In terms of a diagnosis for this disease, if an individual has a family history of alpha-1 antitrypsin deficiency, it's great to get tested to see if it has been inherited. If not, the disorder may be identified via pathology tests with babies or in adulthood. For those with the Z mutation, the protein accumulates in the liver; therefore this might present in babies with abnormal liver tests or prolonged jaundice. So, for that reason, the first hint can be in babies with liver abnormalities; however, they can often resolve spontaneously, so they may or may not be identified at that stage. If that is missed, some may present later in life with symptoms such as emphysema, shortness of breath, or even respiratory failure. Or it can present in adults with liver problems for the reasons discussed earlier. A patient in their forties, for instance, might have a blood test that shows abnormal liver function, and so they will go through a range of pathology tests to identify the issue.

"The other involvement of the pathologist is when an adult might have a liver biopsy to see why they have abnormal liver function. The pathologist will be able to make the diagnosis by seeing the characteristic accumulation of alpha-1 antitrypsin in the liver."

"Once alpha-1 antitrypsin deficiency is diagnosed, the treatment needs to be adjusted for the individual patient. Avoiding smoking or air pollution is essential to reduce the risk of progressive emphysema, and reducing alcohol intake for those at risk of liver disease. For people with emphysema and very low alpha-1 antitrypsin levels in their blood, the Therapeutics Goods Administration (TGA) in Australia has approved weekly infusions of alpha-1 antitrypsin. This needs to be organised through your doctor and usually a specialist clinic. This treatment won't help with the liver disease of course, and some people might eventually require a liver transplant. One advantage of this dramatic treatment is that the new liver will produce the alpha-1 antitrypsin that was not made by the original liver. Genetic testing of family members is also important when someone is diagnosed. One day we hope there will be a treatment where the defective gene is fixed before someone is born," concluded Dr McNeil.

[1] https://ghr.nlm.nih.gov/condition/alpha-1-antitrypsin-deficiency

You are welcome to circulate this article to your contacts, share it on your social media platforms and forward it to any relevant contributors and experts for them to share and post on their websites. If you do reproduce this article in any such fashion you must include the following credit:

This article appeared in the November 2018 Edition of ePathWay which is an online magazine produced by the Royal College of Pathologists of Australasia (<u>http://www.rcpa.edu.au/Library/Publications/ePathway</u>).

« Back to Home Page

Copyright © 2018 The Royal College of Pathologists of Australasia

RCPA - Durham Hall - 207 Albion St Surry Hills NSW 2010 AUSTRALIA | (+61) 2 8356 5858 | www.rcpa.edu.au

<u>Unsubscribe</u>



ISSUE #086

RCPA celebrates International Pathology Day 2018



Left to right: Dr Bruce Latham, President at the RCPA; Anton Enus, SBS World News reporter; Sophie Scott, ABC national medical reporter; and Dr Debra Graves, CEO at the RCPA.

On Wednesday 14 November, pathologists, scientists and laboratories around the globe gathered to celebrate the seventh International Pathology Day (IPD).

Launched originally by the Royal College of Pathologists of Australasia (RCPA), this annual awareness day highlights the fundamental role of pathology in the healthcare community and in the lives of everyone. It is now recognised in Australia, New Zealand, Hong Kong, Singapore, Malaysia, the UK, Ireland, the USA, Canada, and South Africa.

In Sydney, Australia, the RCPA hosted an event at their headquarters in Surry Hill. The main theme was a focus on the Government's National Bowel Cancer Screening Program (the Program). Pathologists provided insights into the Program, along with an overview of the successful #justpooit campaign, which was recently launched in Tasmania.

Anton Enus, the highly respected and admired reporter for SBS World News, was also in attendance to share his personal experience with bowel cancer which was discovered after he returned a free kit he received in the post. National medical reporter for the ABC, Sophie Scott, also returned for a second year to lead the event's discussions, which highlighted the vital role that pathologists are playing in the diagnosis and treatment of bowel cancer and the importance of participating in the Program.

Anton Enus, SBS reporter, said,

"Today, my morning started with putting out a tweet which essentially said 'thank you to

pathologists, the unsung heroes of the medical industry who saved my life' and I don't think it is overly dramatic to say that.

"In December 2016, I was diagnosed with bowel cancer out of the blue. I was fortunate because I was diagnosed early, I was part of a system that is designed to pick up those clues. I credit the National Bowel Cancer Screening Program for saving my life because that was what alerted me, and everyone else, to the fact that there was something going on. Even then I was reluctant as a middle aged man to admit that there was a problem, admit that there was a vulnerability, admit that something is out of my control and I have to trust someone else in order to fix that problem. I had to place my trust in the pathologists that were involved and I'm so glad I took that step to follow up on the stool sample test because I really do believe that that saved my life."

Professor Anthony Gill, said,

"Australia has one of the highest rates of bowel cancer in the world. 17,000 people were diagnosed with bowel cancer this year – that's 46 Australians every single day. It is normally asymptomatic for a very long time. If bowel cancer is detected early, it's very curable with standard treatments, and it's much easier to treat than an advanced disease.

"With the National Bowel Cancer Screening Program – it's been studied at length and we know that even at the current rates of participation, which, remember, is only 40% of people who receive the kit, it will prevent 97,000 Australians from getting colon cancer by 2040. That's better than curing cancer; it will stop people from developing it by removing these precursor polyps. It will also save 57,000 lives. It will save \$1.7 billion before 2040."

Dr Bruce Latham, President of the RCPA, said:

"At International Pathology Day, the main purpose is to raise the awareness of pathology in the community. But the other part of it is that we also need to raise awareness of pathology in our own profession because we as a profession are becoming more and more taken for granted by our medical colleagues. More and more of what we do is accessorised by other people so we do need to raise our awareness in our own profession as well."

The RCPA also debuted a new video at the event, featuring AFL star, Greater Western Sydney player, Sam J Reid. The <u>video</u> explains the importance of pathology and is aimed at a younger target age group.

Watch out for a video of Anton Enus discussing his experience with bowel cancer, which will appear on the RCPA's Facebook page in December.

You are welcome to circulate this article to your contacts, share it on your social media platforms and forward it to any relevant contributors and experts for them to share and post on their websites. If you do reproduce this article in any such fashion you must include the following credit:

This article appeared in the November 2018 Edition of ePathWay which is an online magazine produced by the Royal College of Pathologists of Australasia (<u>http://www.rcpa.edu.au/Library/Publications/ePathway</u>).

Copyright $\textcircled{\sc c}$ 2018 The Royal College of Pathologists of Australasia

RCPA - Durham Hall - 207 Albion St Surry Hills NSW 2010 AUSTRALIA | (+61) 2 8356 5858 | www.rcpa.edu.au



PUBLISHED BY RCPA

Previous Editions

THE ROYAL COLLEGE OF PATHOLOGISTS OF AUSTRALASIA

OCTOBER 2018 | PUBLISHED BY RCPA

ISSUE #085

IN THIS ISSUE

- Diagnosing and treating osteoporosis
- Troponin, an important biomarker in the diagnosis of heart attacks
- Welcome to the October issue of ePathway

ePathway is an an e-magazine designed for anyone who is interested in their health and wellbeing and the integral role pathology plays in the diagnosis, treatment and management of diseases.

This month, we discuss

- and toxicity
- An insight into life awar
- Diagnosing and treating osteoporosis
- Troponin, an important biomarker in the diagnosis of heart attacks
- · The risks of lead exposure and toxicity

2018

<u>077 - February 2018</u>	<u>078 - March 2018</u>	<u>079 - April 2018</u>
<u>080 - May 2018</u>	<u>081 - June 2018</u>	<u>082 - July 2018</u>
<u>083 - August 2018</u>	084 - September 2018	085 - October 2018
2017		
<u>066 - February 2017</u>	<u>067 - March 2017</u>	<u>068 - April 2017</u>
<u>069 - May 2017</u>	<u>070 - June 2017</u>	<u>071 - July 2017</u>

072 - August 2017 075 - November 2017 073 - September 2017 076 - Dec 2017/Jan 2018

056 - March 2016

059 - June 2016

045 - March 2015

<u>048 - June 2015</u>

051 - September 2015

054 - Dec 2015/Jan 2016

062 - September 2016

065 - Dec 2016/Jan 2017

2016

055 - February 2016 058 - May 2016 061 - August 2016 <u>064 - November 2016</u>

2015

044 - February 2015 <u>047 - May 2015</u> 050 - August 2015 053 - November 2015

2014

<u>033 - February 2014</u>	<u>034 - March 2014</u>	<u>035 - April 2014</u>
<u>036 - May 2014</u>	<u>037 - June 2014</u>	<u>038 - July 2014</u>
<u>039 - August 2014</u>	040 - September 2014	<u>041 - October 201</u>
<u>042 - November 2014</u>	<u>043 - Dec 2014/Jan 2015</u>	

2013

<u>022 - February 2013</u>	023 - March 2013	<u>024 - April 2013</u>
<u>025 - May 2013</u>	<u>026 - June 2013</u>	<u>027 - July 2013</u>
<u>028 - August 2013</u>	029 - September 2013	<u>030 - October 2013</u>
<u>031 - November 2013</u>	<u>032 - Dec 2013/Jan 2014</u>	

2012

<u>010 - Dec 2011/Jan 2012</u>	
<u>013 - April 2012</u>	
<u>016 - July 2012</u>	
<u>019 - October 2012</u>	

2011

001 - March 2011 <u>004 - June 2011</u> <u>007 - September 2011</u> <u>011 - February 2012</u> 014 - May 2012 017 - August 2012 <u>020 - November 2012</u>

002 - April 2011 <u>005 - July 2011</u> 008 - October 2011 074 - October 2017

057 - April 2016 060 - July 2016 063 - October 2016

046 - April 2015 049 - July 2015 052 - October 2015

4

012 - March 2012 015 - June 2012 018 - September 2012 021 - December 2012

003 - May 2011 006 - August 2011 009 - November 2011

« Back to Home Page

Copyright © 2018 The Royal College of Pathologists of Australasia

RCPA - Durham Hall - 207 Albion St Surry Hills NSW 2010 AUSTRALIA | (+61) 2 8356 5858 | www.rcpa.edu.au

Privacy Policy | Legal | Disclaimer