

# HGVT

Org. No. A003523F

## PARAFFINALIA NEWSLETTER

**VOLUME 28, NUMBER 2**

**June 2024**

The HGVT aims to provide a dynamic continuing education program in which all persons with an interest in Histology and Histotechnology are freely invited to participate.

### **CONTENTS:**

President Address **Behind the Bench with Sam Arandelovic**

**Under the Microscope with Kellie Vukovic**

**Days of our Labs & In the News**

**Scientific Meeting Review – Tassie Case Studies by Kerrie Scott-Dowell**

**Article Review by May Chung**

**Antibody Review - CD3- Ki67 Dual IHC Stain By Maria Charvez**

**Under the Microscope with Alistair Townsend**

**Next Meeting**

**Future Events 2024**

# Committee Page

The members of the Histology Group of Victoria 2024 are:

| Name                 | Institution                           |
|----------------------|---------------------------------------|
| Samantha Arandelovic | Mater Hospital Brisbane               |
| Kerrie Scott-Dowell  | Dorevitch Pathology/ Leica Biosystems |
| Mark Bromley         | Sullivan Nicolaides Pathology         |
| Kellie Vukovic       | Melbourne Pathology                   |
| Alistair Townsend    | Royal Hobart Hospital                 |
| Christine Gorringe   | Royal Hobart Hospital                 |
| Elizabeth Banyai     | Cabrini Health                        |
| Bronwyn Christiansen | Royal Children's Hospital             |
| Tu Anh Huynh         | Royal Melbourne Hospital              |
| Snejana Ursache      | Alfred Hospital                       |
| Gulnur Orman         | Box Hill Hospital                     |
| Dodie Pouniotis      | RMIT University                       |
| Fatema Tajbhai       | Northern Health                       |
| Kerrie Howard        | Northern Health/ RMIT University      |
| Li Shan Ong          | Monash Pathology/ Melbourne Pathology |
| Enia Kakaflikas      | Pathology Solutions                   |
| Maria Chavez         | Monash Pathology                      |

Contact us at

<http://www.hgv.org.au/contact-us>

Membership enquiries: [membership@hgv.org.au](mailto:membership@hgv.org.au)

General enquiries: [secretary@hgv.org.au](mailto:secretary@hgv.org.au)

Sponsorship/Advertising enquiries: [trade@hgv.org.au](mailto:trade@hgv.org.au)

Newsletter enquiries: [editor@hgv.org.au](mailto:editor@hgv.org.au)

Advertising for the next edition of Paraffinalia closes: 25th August 2024

## Paraffinalia Rates:

**A4 Electronically Submitted \$300 (no GST)**  
(Will be colour for e-newsletter and B&W for hard copy)  
Flat Rate Per page colour

**Used Equipment FREE**  
50 words – no logos/no pictures

**Positions Vacant**  
**No Logo up to 75 words FREE**  
**A4 with logo \$200 (no GST)**

## Electronic Rates:

**Positions Vacant-FREE email to membership**

**-FREE list on Website**

## Articles & Reports:

Author enquiries and readers wishing to contribute articles or reports can contact the Editor - [editor@hgv.org.au](mailto:editor@hgv.org.au)

Please email articles (preferably Microsoft Word format) for inclusion in the next edition to [editor@hgv.org.au](mailto:editor@hgv.org.au)

All items submitted for publication will then become the sole property of the Histology Group of Victoria Inc.

## Disclaimer:

Any opinions expressed in this publication are solely those of the contributing author and are not necessarily reflective of the Histology Group of Victoria Incorporated or the editor.

**NOTE:** No responsibility is assumed by the Histology Group of Victoria Incorporated for any injury and/or damage to persons or property as a matter of products liability, negligence or otherwise, or from any use or operation of any methods, products, instructions or ideas contained in the material herein. It is the user's responsibility to ensure that all procedures are carried out according to appropriate Health and Safety requirements.

Copyright of this newsletter "Paraffinalia" is held by the Histology Group of Victoria Incorporated. No material may be reproduced in part or in whole without written consent from the copyright holders. All rights reserved



# Presidents Address

## Behind the Bench with Sam Arandelovic

This year is flying so fast! Everyone is working very hard and as the winter settles in embedding shift will be the most favourable.

As I mentioned in last newsletter that Trivia Night is on Friday 26th July. I hope you got a table because it's sold out, and for those that are coming, brush up on your Trivia as we have 175 people coming. It's going to be a fun night.

DIHC Conference in Tweed Heads was well attended. Great speakers and it's also so lovely to catch up with friends and colleagues that you haven't seen for a while. I'm very much looking forward to the National Conference in Sydney. If you haven't registered there is still time.

Some people may have noticed that they haven't received any emails from HGVT. If that is the case this is because you have subscribed to HGVT with your work email many healthcare providers are ramping up their firewall's security due to all the cyber attacks. Only way around that is to update your email address to your personal email address.

See you all at our next scientific meeting!





# Under the Microscope

## with Kellie Vukovic

### ***What was your first part time job?***

I got my first part time job at the end of year 12. I worked in retail at Ray's Outdoors even though I had never been camping before myself. I was mainly at the register but also worked in the clothing and footwear department. During high school I also umpired junior netball on the weekend.

### ***What is your current Job?***

I am the senior scientist in charge of accessioning and dissection at Melbourne Pathology. In this role I also perform complex dissection.



### ***How long have you been working in your role?***

I transferred from SNP in Brisbane at the beginning of 2020 after completing a senior cutup scientist role there from 2016. I am now part time in this role after having 2 babies.

### ***What skill do you want to learn and why?***

My husband would love to buy a caravan and do a big trip around Australia when our boys are older. I have been putting it off for years, but I really need to learn how to drive a manual car if we are going to do it. His car is manual and the one we would take.

### ***If money was no object, what would you do all day?***

I would 100% still work which my family thinks is crazy (maybe just a couple of days a week). I would love to have an event planning business on the side to help people create their dream event. I would also love to do heaps of travel. There would always be an amazing holiday to look forward to as soon as I was back from the last one.

### ***What's an ideal weekend for you?***

I have always liked to be busy so an ideal weekend is having multiple events with my family and friends. I love a bottomless brunch with my friends and we are slowly trying as many as we can around Melbourne. My extended family is expanding rapidly with 7 kids under 3 so we now like to hire Airbnb's and get away to different places around Victoria with us all.

### ***What's on your bucket list this year?***

I don't think a bucket list exists when you have a 2 year old and a 4 month old. I would love to go for a long weekend away this year with my friends to King Valley to do a Prosecco bike riding tour.

### ***What music/podcast is on your playlist at the moment?***

I am the worst person when it comes to music. I have zero playlists on any device. I hate to admit it but I have never listened to a podcast in my life. My 2-year-old is loving Taylor Swift at the moment so 'Shake it Off' is a popular YouTube search in my house.

### ***Where do you most want to travel, but have never been to?***

Italy – I did part of my uni placement in Edinburgh, Scotland and spent most weekends travelling to different countries. I never made it to Italy but would love to go for the food and scenery.



POWERED BY

SHANDON

MICROM

MENZEL-GLASER

Richard-Allen Scientific

## Epredia Cytospin 4 Cytocentrifuge

### The gold standard in cytocentrifugation

The Cytospin™ 4 cytocentrifuge has been synonymous with cytocentrifugation for over 40 years and is used in laboratories around the world.

When combined with Epredia cytology consumables, it provides economical thin-layer preparations from any liquid matrix, especially hypocellular fluids such as spinal fluid and urine.

Discover our full range of high quality Epredia cytology consumables, including cytofunnels (single-use or reusable), EZ funnels, clips, slides (coated / non-coated) and fixation solutions.



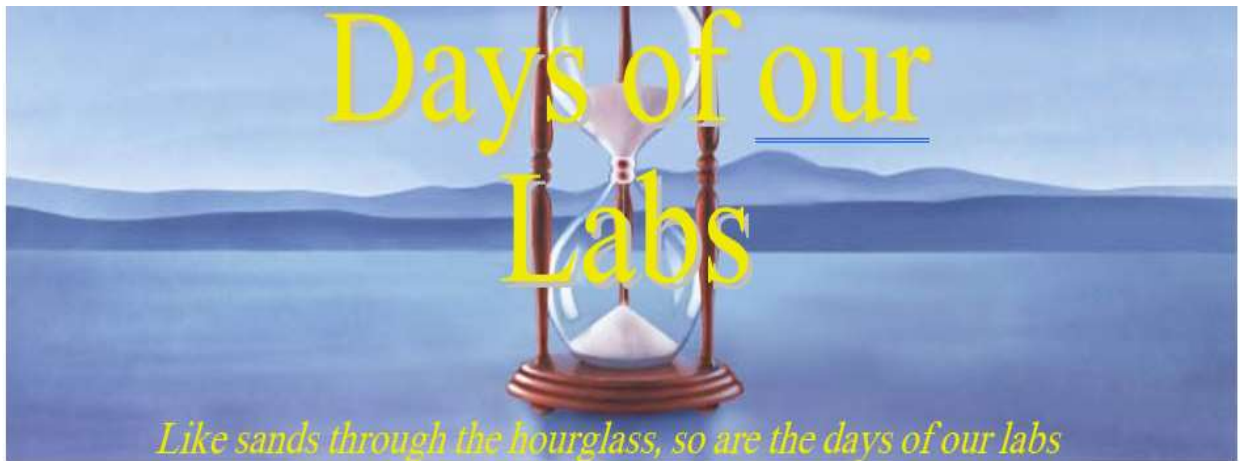
☎ 1800 00 84 53 [Australia]

✉ [sales.au@bio-strategy.com](mailto:sales.au@bio-strategy.com)

🌐 [www.bio-strategy.com](http://www.bio-strategy.com)







# Days of our Labs

*Like sands through the hourglass, so are the days of our labs*



**Friday morning breakfast at Mater-Bacon and egg roll.**



# PathTracker™

## Bulk Barcode Reader



1 Scan...  
**150**  
Barcodes!!

- Bulk Scanning of Slides and Cassettes
- Logs Barcodes into your LIS
- In-Process Sample Tracking
- Sample Archive Management
- Save Time and Eliminate Mistakes





**The Alfred Hospital - Length of Service Awards  
Congratulations!!! Mark Donovan for 40 years of service at the Alfred AP!!!**



**Royal Melbourne Hospital - Length of Service Awards  
Congratulations!!!  
Marzia Lahza for 30 years &  
Rosa Agostino for 40 years of service at RMH AP!!!**





WHITEPAPER

# Sectioning: A Deeper Look

There are numerous factors that must be considered when preparing tissue for IHC staining. Due to the diversity of tissue and media that may be involved, there is significant variability in sample preparation and no single answer for best practices. However, some key contributing factors can be identified. One oft-overlooked factor is sectioning thickness.

The amount of light permitted to pass through the tissue is critical for microscopic examination.<sup>2</sup> This is partially controlled by section thickness, which affects the contrast, sharpness, and morphological details of the tissue under the microscope, thus greatly influencing staining quality.<sup>1</sup>

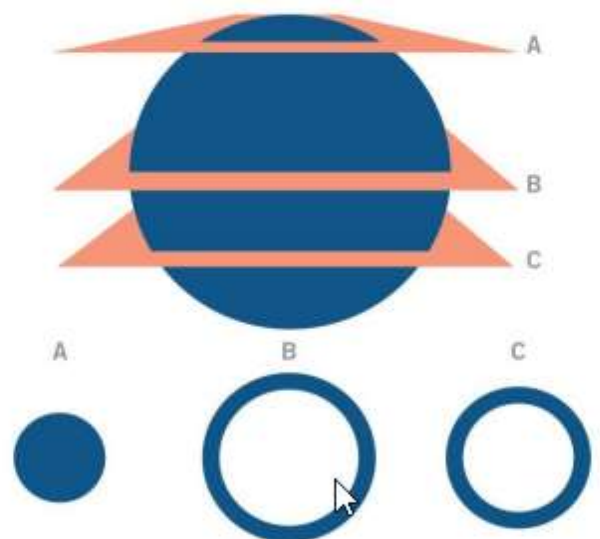
Generally, thicker sections demonstrate greater staining intensity due to more protein being present and labeled in a thicker three-dimensional structure. For example, a 7 $\mu$ m section will have increased staining intensity compared to a 4 $\mu$ m section. In addition, what is visible in a 7 $\mu$ m-thick section may be lacking in a 4 $\mu$ m-thick section since less tissue is present.

Another area of consideration in sectioning thickness is how it affects the contents and composition of the block. Cells can range in size from 1 to 100  $\mu$ m. In mammals, organelles and cellular components similarly vary in size. A ribosome may be 0.2  $\mu$ m in diameter, while a cell nucleus may have a diameter of 6  $\mu$ m. As a result, different-sized sections will better visually represent different cellular components, such as the membrane, cytoplasm, or nucleus.<sup>1,2</sup> Tissue sections >5  $\mu$ m can produce more variation in staining intensity and make the assessment of cytoplasmic and membrane staining more complex than for nuclear staining.<sup>3</sup>

Tissue preservation and embedding medium should also be considered when determining section thickness.<sup>1</sup> Tissue is made firmer by the fixation process to preserve its structure and then may be infiltrated with a medium, such as wax or plastics, to support it, or may be fresh frozen. Section thickness typically ranges from 8-15  $\mu$ m for frozen sections, 4-10  $\mu$ m for wax sections, and 0.5-3  $\mu$ m for plastic histological sections. For IHC staining, sections are cut between 3-5  $\mu$ m.

Sectioning thickness is often overlooked as a factor in IHC staining outcomes but should always be considered in terms of tissue preservation, embedding medium, and staining quality.<sup>1</sup> At a minimum, consistency in sectioning is critical for the quality of patient care to prevent variability and confounding results. Sectioning thickness has significant implications in medical care, both now and in the future as digital imaging pathology becomes more prominent.<sup>1</sup>

### Sectioning a sphere with a wall of finite thickness



Molecules

Organelles

Cells

Tissues

1. Libard, Sylvania Cerjan, Dijana, Alafuzof, Irina (2019) Characteristics of the tissue section that influence the staining outcome in immunohistochemistry. *Histochemistry and Cell Biology* 151, p91-96.  
 2. MacMillan, D.B. Harris, R.J. (2018). *An Atlas of Comparative Vertebrate Histology. Diagnostic and Translational Research Guide.* P 9-29  
 3. Shinobu Masuda, MD, PhD. Ryohei Suzuki, ME et al. (2021) Tissue Thickness Interferes with the Estimation of the Immunohistochemical Intensity: Introduction of a Control System for Managing Tissue Thickness. *Applied Immunohistochemistry and Molecular Morphology* 2021;29: p118-126



Dorevitch  
Pathology  
Histology  
Department  
celebrated  
the Biggest  
Morning Tea  
with goodies  
baked by  
their team  
members.



The Alfred Hospital –  
Mark Donovan’s Farewell  
Tea Party



Any news!!!

We would love to hear from you! Submit a pic and a short description to “Days of our labs” to the HGVT Facebook messenger or email [editor@hgv.org.au](mailto:editor@hgv.org.au)







# In the news

Northern Hospital Senior Scientist of Anatomical Pathology Fatema was featured on the Northern Health's "Get to Know us" -

Read more here: <https://www.nh.org.au/get-to-know-fatema-tajbhai/>



MAY 31, 2024

#WeAreNorthern

Meet Fatema Tajbhai, Senior Scientist in our newest service -- Anatomical Pathology.

**Q: Firstly, your coffee order, Fatema?**

It varies and is very mood dependent – long black or batch brew (depending on the cafe)/ soy latte/soy magic.

**Q: How would you describe your role?**

It is a very challenging but rewarding role. Anatomical Pathology is a new service to the Northern Hospital, only operational since 5 February 2024. Currently, I am managing the operational aspects of running the laboratory and doing all the background work to try and offer the best service we can.

**Q: How did you get into this role?**

I studied and worked as a medical scientist back in the UK and when I moved to Melbourne, I continued in the same line of work. When the Anatomical Pathology Service was being set up at Northern Health, I was excited to get involved and be a part of this new venture. I applied for a position and was fortunate enough to get it!



# TekEquipment

**Our full sized band saws are reliable, high performance & cutting edge across all sizes.**

## Walter Messner Diamond Saws

Available in standalone full sized or compact benchtop models, Walter Messner saws offers excellent cutting performance for the preparation of tissue, bone or composite materials. Diamond coated cutting bands & direct water cooling result in exceptionally clean cuts.

- Made in Germany out of stainless steel
- 0.1-0.4mm bandsaw blade thickness
- Direct water cooling eliminates aerosol material
- Optional laser & guide bar
- Quick tensioning & variable speed bandsaws
- Mechanical engine braking & built in safety systems
- **Units in stock for fast delivery!**

**Online demos available!**



**Cut Grinder - Full Size**  
• 77 x 81 x 160cm external dimensions  
• 40cm floor clearance  
• 31cm cutting height



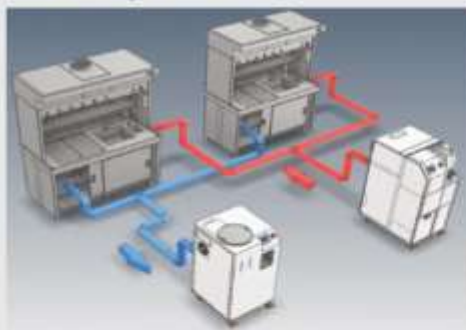
**Primus 2 - Benchtop**  
• 50 x 59 x 87cm external dimensions  
• 40cm working height  
• 21cm cutting height

**Handling formalin has become a lot easier with this new product for your laboratory.**

## Zenonmed Formadose Automated Formalin Dispensing

A formalin dispensing device that allows you to breathe easier in a cost & space efficient way. The Formadose eliminates manual processes with precise dosing, reducing possible contact or inhalation of formalin, all while reducing the amount of storage space & workload compared to conventional storage solutions.

- Constructed out of galvanised & stainless steel
- 100 Litre tank capacity
- Can feed multiple grossing stations
- Automatic mixing with adjustable timing
- Prevents buildup of formalin residue
- Less workload with liquid buffer automatically added
- User friendly software
- 75 x 65 x 120cm (L/W/H) dimensions



**For more products, download our full Pathology catalogue:**



**Contact Us today!**

**1300 368 138**  
tekequipment.com.au  
info@tekequipment.com.au



# Review of Scientific Meeting

## HGVT Scientific Meeting Review

2nd May 2024

By Kerrie Scott-Dowell

We were lucky enough to have Agilent sponsor our meeting with 2 Tasmanian Speakers presenting some rare and interesting cases. What else would you expect from Tassie.

Presenter- Christine Gorringe

### CASE 1 Ewing's Sarcoma

A 25yo male who had a BMT and a BM aspirate. The aspirate showed aggregates of malignant cells. In the trephine H&E, 40% of the bone marrow showed contiguously spreading, tumour cells. IHC showed very strong membrane staining for CD99 and 60-70% nuclear positivity for Ki67. Scans showed disseminated malignancy in the spinal cord and lung. LDH (Lactate Dehydrogenase) levels were very high.

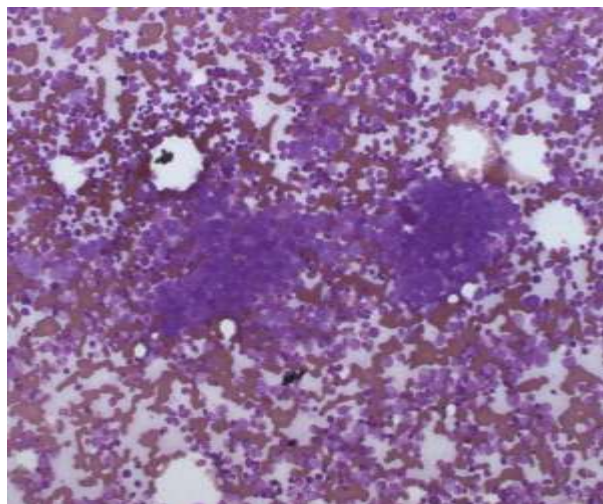


Fig 1 Bone Marrow Aspirate

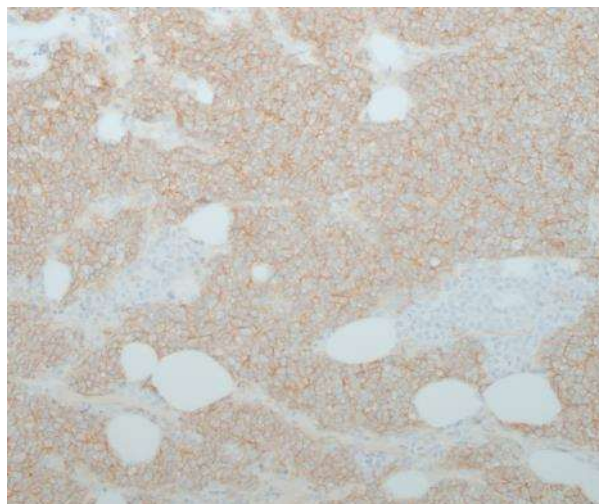


Fig 2 CD99

The diagnosis was metastatic Ewing's Sarcoma, which has a very poor prognosis.

Ewing's is a highly metastatic form of sarcoma that affects predominantly young adults. The high LDH level has a poor prognostic significance. The differential diagnosis was Ewings vs other small round cell tumours. 80% of Ewing's cases are CD99 positive. 70% of cases have recurrence. This patient unfortunately died 5 months after diagnosis.

## CASE 2 Amyloidosis

A 68yo male presented with renal impairment. The EGFR (estimated glomerular filtration rate) was 26 and the normal range is greater than 90, so it indicates a very low renal function. A renal biopsy was performed, and all glomeruli showed disruption of the tissue architecture by amyloid deposits.

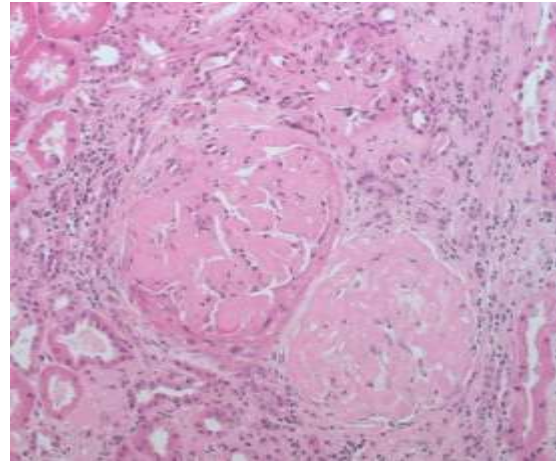


Fig 3 Renal H&E

The amorphous infiltrate was visible on the H&E, PAS and PASMMT stains and the Congo Red showed the classic birefringence. A BMT was also performed and also showed Congo Red staining amorphous infiltrate. Amyloidosis occurs when beta sheet fibrillar proteins aggregate in various tissues. There are different types and different treatments. The current treatment for this patient is initial drug treatment followed by a stem cell transplant.

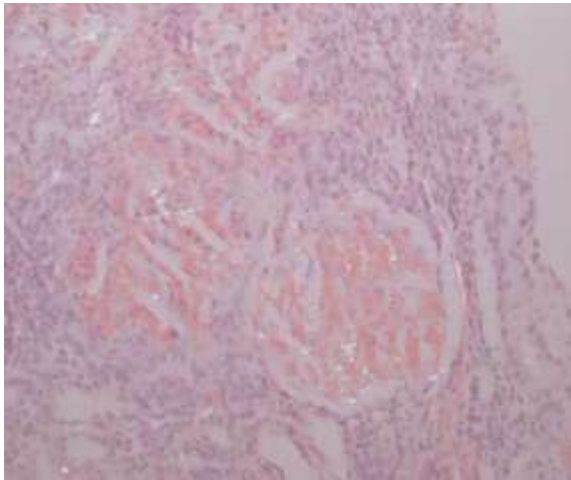


Fig 4 Renal Congo Red in Polarized light

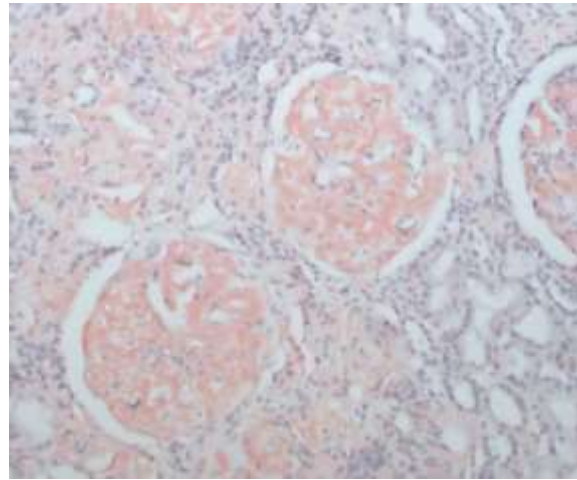
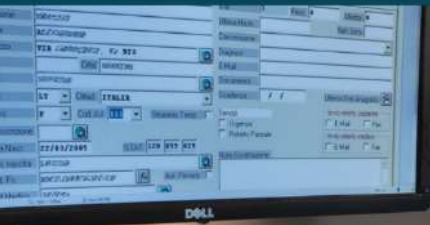


Fig 5 Renal Congo Red





**MILESTONE**  
HELPING  
PATIENTS



# UltraGROSS

The new benchmark in grossing

- Discover next generation grossing
- You dreamt it, we built it

### ENHANCED USER SAFETY

Sliding safety shield, backdraft and downdraft ventilation. Bio-decontamination system to disinfect all the surfaces.



### TAILOR-MADE MODULARITY

UltraGROSS counts on stainless-steel AISI 316 modules to be placed across the large basin, to match any working set-up, even with two-operators.



### MACRO DIGITAL DOCUMENTATION

Built-in MacroPATH system for documenting the dissection procedure and creating image-enhance reports.



### SMART USER INTERFACE

8" touchscreen terminal with all functions at reach. Capability to upload external files, like AAPA guidelines and training videos.



### OPTIMAL ERGONOMICS

Adjustable working height. Mobility through sturdy industry casters. Compliance to anthropometric requirements (EN ISO 14738).



Scan QR code to learn more and request a quote



**Distributed by Abacus dx - Contact Sue for a quote**  
**Sue Moon**  
 Business Development Specialist  
 0400 047 618 | s.moon@abacusdx.com | www.abacusdx.com

**abacus dx**  
 a partner you can count on

## Presenter Alistair Townsend

### Case3 Tuberculosis

Right testicle 75yo – No clinic notes. Macroscopically the testis is identified, but no normal epididymis identified. An area of necrosis and cystic area containing fibrin and haemorrhage. The H&E shows necrosis, with a lymphatic infiltrate, giant cells and granulomatous change. ZN and Wade Fite showed positive staining bacteria. Diagnosis of an isolated tuberculous epididymitis would be very rare ( Only 4% of TB are genitourinary), and most masses of testes are tumours, so without any patient history a large number of IHC stains were performed to eliminate.

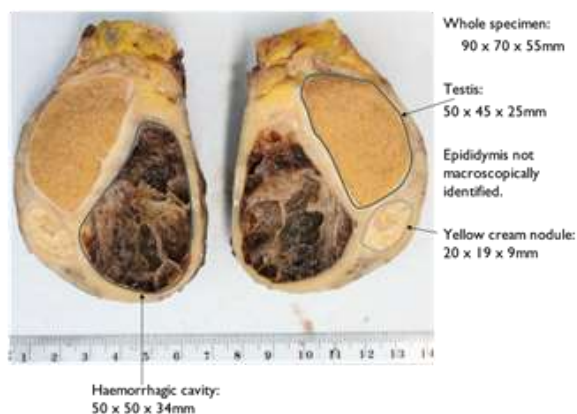


Fig 1 Bisected gross specimen of the Testis

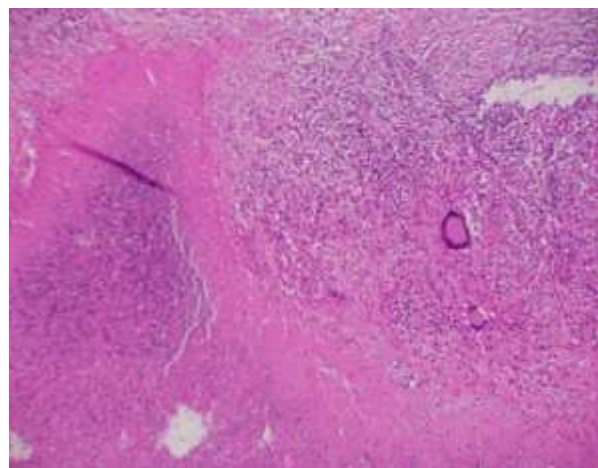


Fig 2 H&E showing necrosis with an area of surrounding activated macrophages and a lymphocytic infiltrate with occasional multinucleated giant cells

When more details were obtained about the patient, it was seen he had previous respiratory TB, spends a lot of time in Asia, resulting in large gaps in his medical history, but probably most significantly has been frequently recatheterised in Vietnam, making this the most probable source of infection.

Diagnosis -Tuberculous Epididymitis. Treatment 6-9 month drug therapy.



## Case 4 Schwannoma

36 male Pleural Mass (no clinical notes).

Pathology had to call to get information such as chest tightness for some time, all blood test normal and a history of mine-work.

H&E showed spindle cells. A large range of IHC antibodies were used . S100 and SOX10 were strongly positive, as was TTF1, BCL2 and CD99 was weak patchy staining. CD34 was negative for the spindle cells and Ki67 positivity was low. All other IHC were negative. The diagnosis was a Schwannoma, which is a benign, slow growing, peripheral nerve sheath tumour. It is rarely seen in the thoracic area ( 2% only) .

Alistair lamented the waste of resources and time in both of his cases presentations, due to a lack of clinical notes accompanying the specimens.

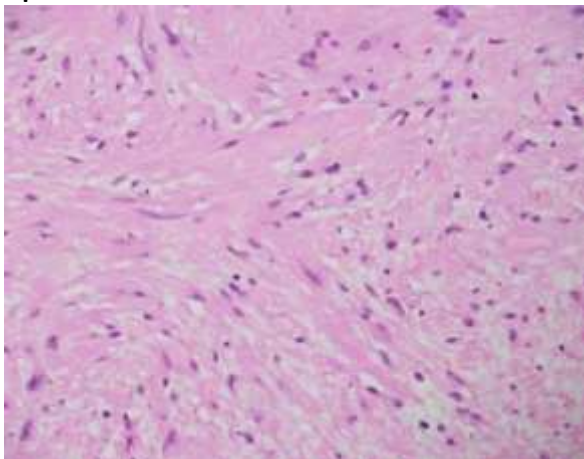


Fig 3 H&E x 400 showing Spindle Cells

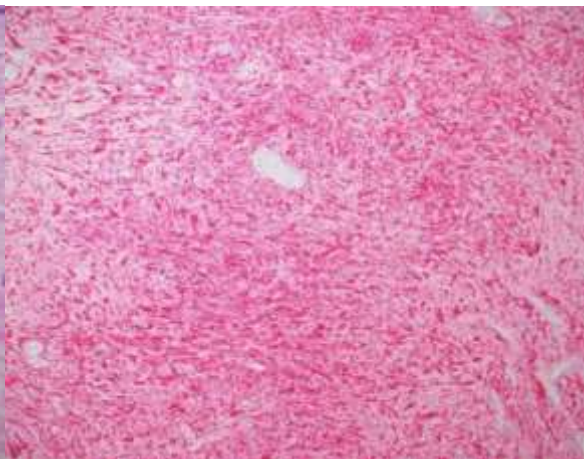
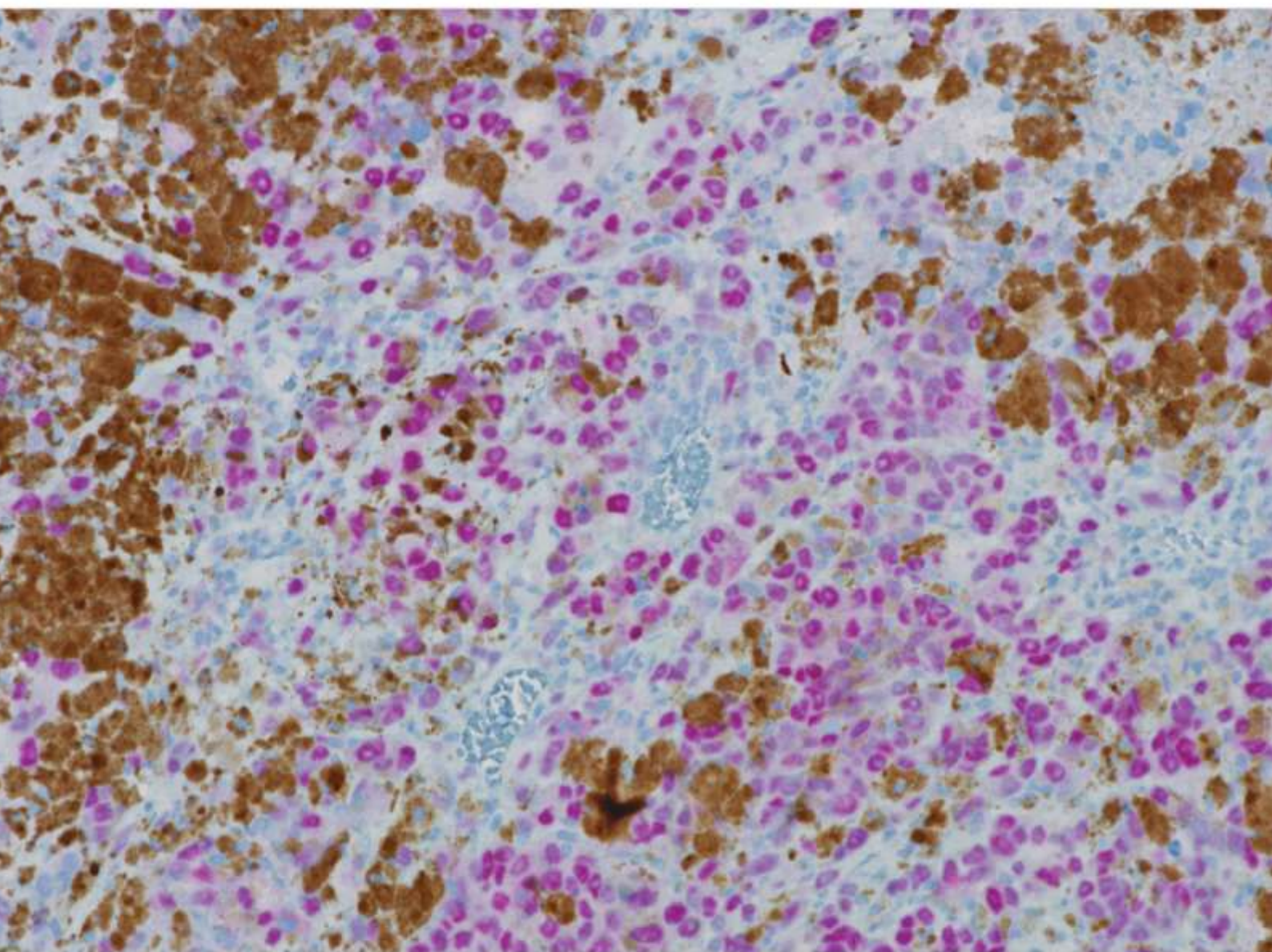


Fig 4 S100 IHC staining demonstrating Spindle Cells

# Anti-PRAME (EPR20330) Rabbit Monoclonal Primary Antibody

Anti-PRAME (EPR20330) is a ready-to-use IHC antibody that enables you to evaluate the expression of PRAME protein with clinical confidence. Available as 50 tests and 250 tests.



VENTANA is a trademark of Roche. All other trademarks are the property of their respective owners.

©2023 Roche

Published by:  
Roche Diagnostics Australia Pty Ltd  
2 Julius Avenue  
North Ryde NSW 2153

Ph: +61 2 9860 2222 ABN 29 003 001 205

MC-AU-02756

[diagnostics.roche.com](https://diagnostics.roche.com)

THIS PRODUCT IS NOT AVAILABLE FOR PURCHASE BY THE GENERAL PUBLIC.

ALWAYS READ THE LABEL AND FOLLOW THE DIRECTIONS FOR USE



# Article Review | By May Chung

---

## **Bridging bytes and biopsies: A comparative analysis of ChatGPT and histopathologist in pathology diagnosis and collaborative potential.**

M L Oon et al. (Histopathology 2024, 84, 601-603.)

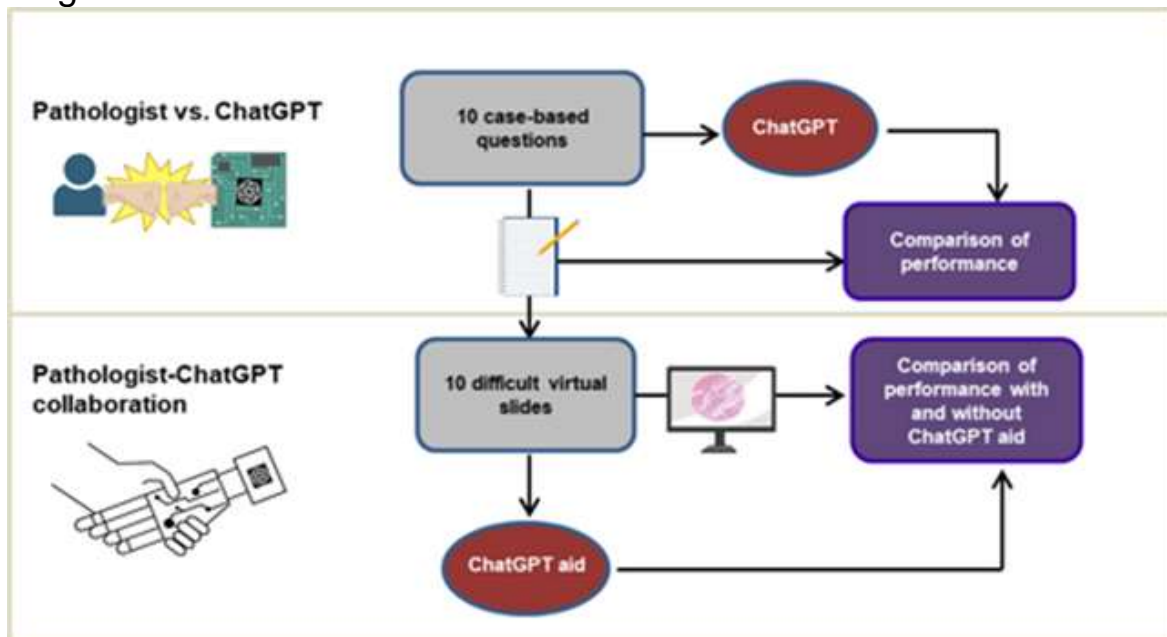
ChatGPT (an AI chatbot, using **G**enerative **P**retrained **T**ransformer) has shown capabilities in analysing human input and generating responses to mimic humans. It can be useful in performing clerical tasks, refining dialogue and written text and as a clinical decision support system (CDSS). It has shown it can perform just as well as humans in providing factual and relevant answers in several knowledge domains, including one instance where it was reported ChatGPT had outscored humans in a virtual specialist Obstetrics and Gynaecology Objective Structured Clinical Examination (OSCE). Its usefulness in histopathology, where visual interpretation is vital, has not been determined. The authors set out a study to analyse this.

The study was completed in two parts, the first hoping to establish a benchmark for ChatGPT against pathologists. The second explores the potential of pathologists using ChatGPT as an aid to achieve more accurate diagnoses. A group of junior pathologists and trainees with less than 10 years' experience was recruited.

In Part 1, Chat GPT was primed to answer a series of questions pertaining to diagnostic histopathology. The pathologists and ChatGPT then had a set of standardised histopathology questions to answer. These questions covered different disciplines of pathology and focused on common diagnostic challenges. It also evaluated specific knowledge domains. The outcome showed on average, pathologists scored 8 out of 10, compared to ChatGPT which scored 6 out of 10.

In Part 2, the pathologists reviewed a set of 10 challenging virtual slides and provided their answers, with no assistance in any form. Afterwards, they were instructed to use ChatGPT to aid them. The interaction with ChatGPT could take any form, i.e. asking ChatGPT to provide a list of differential diagnoses based on descriptions of microscopic features or prompt ChatGPT to pose questions to refine the diagnosis. The pathologists were then given the opportunity to revise their diagnosis after using ChatGPT, if they wished. The outcome showed pathologists scored 8 out of 10, both before and after consulting ChatGPT. A deeper look at

the results showed some pathologists improved their score after using ChatGPT, whereas some performed worse after using ChatGPT. Some diagnoses were incorrect and remained incorrect after ChatGPT.



In their discussion, the authors conclude that the current version of ChatGPT was less useful in reaching an accurate diagnosis. This has to do with its understand of language and linguistics versus its inadequate mathematical knowledge, vital for the pathologist when including and excluding differential diagnoses. It also showed inconsistency, sometimes outputting different answers to the same prompts.

By contrast, using ChatGPT as an aid was more promising, with the pathologists praising its ability to function as an advanced search engine. A pitfall to be aware of in this scenario however, is the quality of ChatGPT output is dependent on accurate descriptions being entered in the prompts. If the pathologist does not identify or accurately describe a microscopic feature in their prompts, the output may not be useful. Another pitfall is the risk of confirmation bias, where the prompts entered in to ChatGPT based on the pathologists first impressions, confirms the diagnosis.

An upcoming version of ChatGPT will have a feature to accept image-based prompts. This may work around the limitations of pathologist's interpretation, as well as going some way to resolve the issue of confirmation bias. Current sentiments towards ChatGPT show that pathologists are willing to embrace it as a diagnostic aid, with every confidence it will not be replacing the important role pathologists play any time soon.





# ECLIPSE Ui

DIGITAL IMAGING MICROSCOPE

## A Real Solution for Digital Pathology

### LIVE ON-SCREEN OBSERVATION

Nikon's new ECLIPSE Ui Digital Upright Microscope provides accurate microscopy-based observation imaging. View and share high quality images in real time with easy-to-use software for a more streamlined workflow.

#### VIEW

Display high quality images in real time

#### FAST

Fast imaging for quicker workflow

#### USABILITY

User-friendly and simple for operational efficiency

#### NETWORK ACCESS

Digital medical system compatible with network for remote viewing and data sharing

#### EASY TO USE ON A DAILY BASIS

Functions to support multiple use cases and applications



### ECLIPSE Ci-L Plus

Upright Clinical Microscope

Also available at Abacus dx



BOOK A DEMONSTRATION



Distributed by Abacus dx - Contact Sue for a quote  
**Sue Moon**

Business Development Specialist

0400 047 618 | [s.moon@abacusdx.com](mailto:s.moon@abacusdx.com) | [www.abacusdx.com](http://www.abacusdx.com)

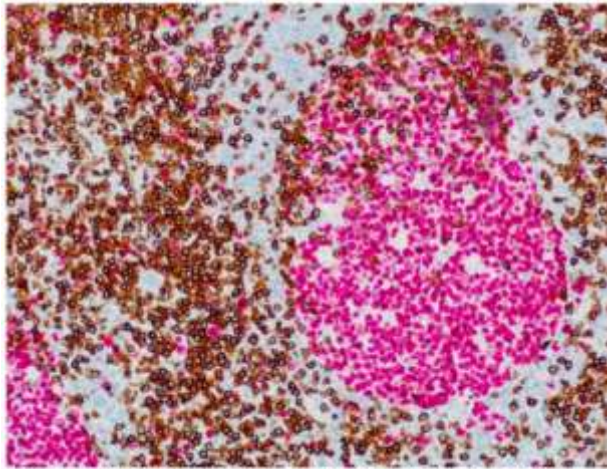


# CD3- Ki67 Dual Immunohistochemistry Stain | By Maria Charvez

CD3 is a multimeric protein complex composed of four distinct polypeptide chains; gamma, delta, epsilon and zeta. This rabbit monoclonal antibody (Roche -Ventana) detects the epsilon chain of CD3 which is expressed on T cells and natural killer cells.<sup>1</sup>

In T cells, CD3 is initially expressed in the cytoplasm of early thymocytes and then later, on the cell membrane of mature T cells. The CD3 rabbit monoclonal antibody is highly specific and an ideal pan T cell marker, useful for the detection of normal and neoplastic T cells. Approximately 80% of T cell lymphomas produce a positive staining pattern with CD3.<sup>2</sup>

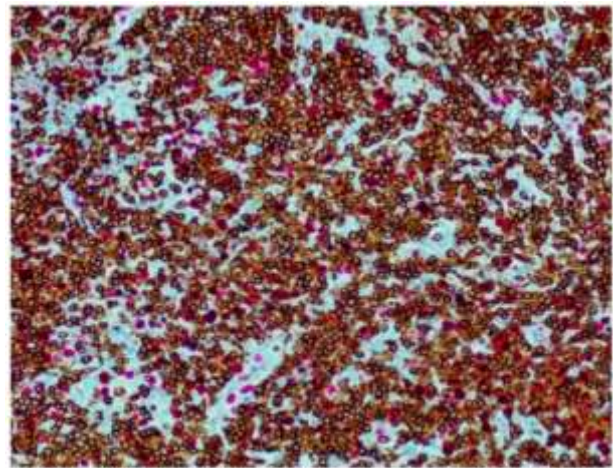
Ki67 is a nuclear protein expressed in proliferating cells through all active stages of the cell cycle and plays a critical role in cell division. It is not expressed in resting cells. The absence of



Normal Tonsil: CD3 DAB Brown, Ki67 Alkaline Phosphatase Red

Ki-67 in resting cells and its expression in all proliferating cells, whether normal or neoplastic, makes the Ki-67 antibody useful for determining the growth fraction of any given human cell population. Ki67 is often used to differentiate between benign versus malignant disease, assist in grading of tumours and determine the prognosis of breast, bladder and prostate cancers and chordoma. Cancers with a high Ki67 proliferation index have a worse prognosis.

In our laboratory, the test is performed on the Roche Benchmark Ultra instrument. The combined CD3 -ki67 dual stain utilises alkaline phosphatase red detection kit to demonstrate Ki67 (nuclear stain) and DAB brown detection (membranous stain) for the demonstration of CD3. This test has been extremely beneficial when determining the proliferation index of cases of lymphoma, in particular B cell, marginal and follicular lymphomas. A rich reactive (benign) T cell population is often associated with low grade B cell lymphomas, a single Ki67 IHC test does not differentiate between proliferating neoplastic B cells and proliferating reactive (benign) T cell lymphocytes. To the reporting pathologist, these types of cases may initially appear as high-grade disease, when it is actually a low-grade lymphoma. The CD3 – Ki67 dual stain allows for an accurate evaluation and enumeration of ki67 proliferation index of cases of lymphoma as it provides a clear distinction between the neoplastic B lymphocytes and reactive benign T cell lymphocytes. Furthermore, this has a direct impact on the prognosis and patient management.



Marginal Zone Lymphoma: CD3 DAB Brown, Ki67 Alkaline phosphatase red. Cells which are positive for both are excluded from the Ki67 proliferation index.

<sup>1</sup> <https://elabdoc-prod.roche.com/eLD/api/downloads/49729da6-7333-ea11-fa90-005056a772fd?countryIsoCode=us>

<sup>2</sup> de Boysson H, Geffray L. Granulomatose lymphomatoïde [Lymphomatoid granulomatosis]. Rev Med Interne. 2013 Jun;34(6):349-57. French. doi: 10.1016/j.revmed.2012.08.017. Epub 2012 Oct 1. PMID: 23036780.

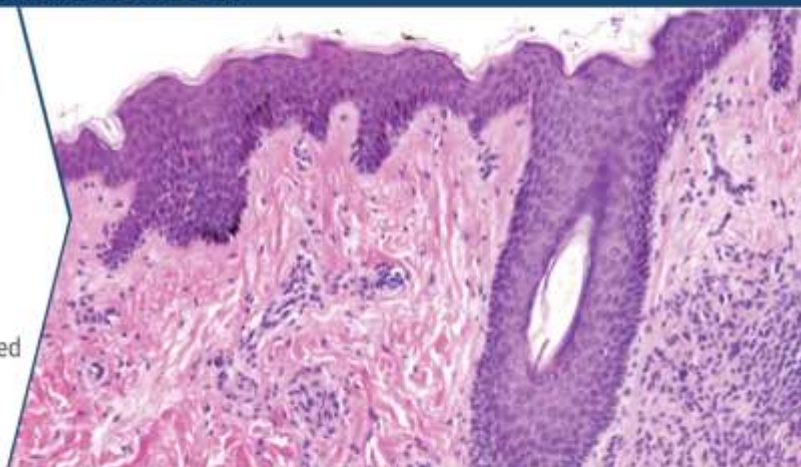


# MOHS SOLUTION

COMPLETE YOUR MOHS SET UP

## DON'T MISS OUT ON THIS FANTASTIC BUNDLED PRICING.

Leica Biosystems presents a unique package, combining our marketing lead Leica CM1860 and compact Leica ST4020 designed to enhance your MOHS Laboratory set-up. For a limited time, we are offering an exclusive promotion that combines the Leica CM1860 and Leica ST4020 at an impressive price, just for you.



### LEICA ST4020 SMALL LINEAR STAINER

Combines the software programming features of a linear stainer with a compact design.

- Advanced automation gives the user the freedom to start a run and dedicate their time to other urgent tasks.
- Flexible programming also makes the Leica ST4020 ideal for a wide variety of samples, such as skin (Mohs specimens), frozen sections, fine needle aspirates, and biopsies.



### LEICA CM1860 UV CRYOSTAT

The Leica CM1860 UV has been designed to focus on diagnostic confidence, stability and ergonomics. High-throughput cryosection machines reliably produce good sections to aid in accurate diagnosis.

The cryosection machine safely protects experimenters around the device with ozone-free UVC disinfection and AgProtect, an antibacterial nano-silver coating. AgProtect coating provides superior safety by reducing exposure to surface pathogens.

#### TERMS & CONDITIONS

This offer cannot be used in combination with any other Leica Biosystems discounts or promotional offers, please contact your sales representative. This offer is valid from 17th June until 31st August 2024. Offer only available in Australia and New Zealand only.

Contact your local sales representative today to seize this opportunity.

CONTACT US

For In Vitro Diagnostic Use.

Advancing Cancer Diagnostics  
Improving Lives

**Leica**  
BIO SYSTEMS



# Under the Microscope

## with Alistair Townsend

---

### **What was your first part time job?**

Working in the Automotive section of the local K-Mart store

### **What is your current Job?**

Medical Scientist in Charge – Anatomical Pathology, Royal Hobart Hospital

### **How long have you been working in your role?**

16 years

### **What skill do you want to learn and why?**

I'm currently learning Spanish and I'd like to get to a level of fluency where I can have basic conversations when travelling in Spanish speaking countries.

### **If money was no object, what would you do all day?**

Retire and travel. I'd also want to do more volunteering at major sporting events and any sort of voluntary work in developing countries.

### **What's an ideal weekend for you?**

Catching up with friends at a sporting match and then grabbing a great meal out.

### **What's on your bucket list this year?**

Travel to Greece

### **What music/podcast is on your playlist at the moment?**

I just listen to whatever is on the radio at the time.

### **Where do you most want to travel, but have never been to?**

Antarctica.







**Australasian Association  
of Histology  
and Histotechnology**

**9<sup>th</sup> - 11<sup>th</sup> Aug**

**Doltone House,  
Darling Island,  
Sydney, Australia**

# HISTOTECHNOLOGY

**10<sup>th</sup> NATIONAL CONFERENCE**  
**August 2024**

**Click the links for more info**

[Conference overview](#)

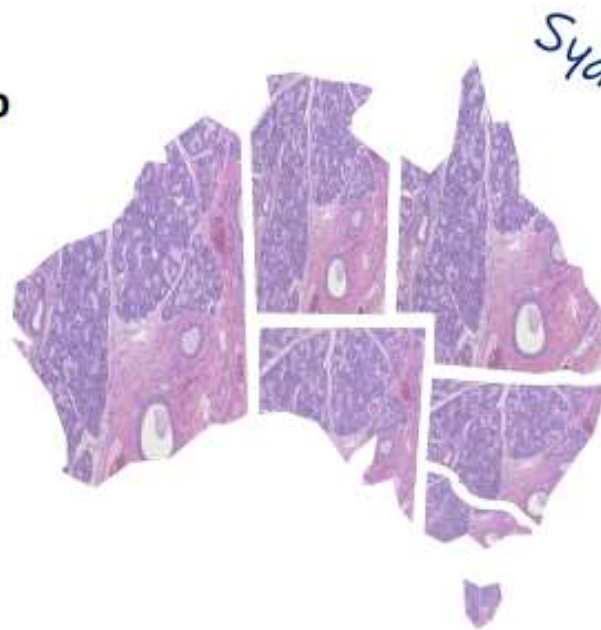
[Program of topics](#)

[Guest presenters](#)

[Poster submission info](#)

[Student poster Prizes](#)

[Wet workshop program](#)



*Sydney, Australia*

Scan for more information



**HISTOTECHNOLOGY**  
SOCIETY OF NSW

Hosted by the  
Histotechnology Society of NSW  
[Secretary@histonsw.org.au](mailto:Secretary@histonsw.org.au) | <https://histonsw.org.au/histo2024/>



**HISTOLOGY GROUP OF  
VICTORIA & TASMANIA**

## **TRIVIA NIGHT 2024**

**Date:** Friday 26<sup>th</sup> July

**Time:** 6.30pm-10.30pm

**Location:** Burnley Brewing  
643/650 Bridge Road  
Richmond 3121

**Price:** \$30 per person  
(Tables of 6, 8 and 10)

Including: sit down dinner, Trade sponsored prizes and rounds with a professional host

Additional drinks at bar prices.

**Payment due by Friday 5th July.**

Please be quick as tables are limited and sold on a first in best dressed basis!

(Menu to follow at a later date for preordered meals)

Limited street parking is available.







Org. No A0035235F

## PAYMENT DETAILS

**PLEASE RETURN THIS SLIP WITH YOUR GROUP PAYMENT –  
MENU TO FOLLOW**

Email: [kellie\\_vukovic@hotmail.com](mailto:kellie_vukovic@hotmail.com) or [kellie.vukovic@mps.com.au](mailto:kellie.vukovic@mps.com.au)

Direct deposit (please leave name as a reference)

Account Name: Histology Group of Victoria and Tasmania

BSB: 063 449

Account no.: 10065881

---

Please forward this information to Kellie Vukovic via email listed above after payment.

Name of Institution: \_\_\_\_\_

Contact Name: \_\_\_\_\_

Contact Number: \_\_\_\_\_

Contact Email: \_\_\_\_\_

Number of Tables \_\_\_\_\_

Total number of people attending: \_\_\_\_\_



# Future Events 2024

Org. No. A0035235F

## Next Meeting

---

27th June 2024

HGVT Scientific meeting

**Topic:** Introduction to Cut Up  
Kellie Vukovic and Kerrie Howard

Date: 26th July 2024

HGVT Trivia

**Venue:** Burnley Brewing  
650 Bridge Rd, Richmond.

Date: 9<sup>th</sup>-11<sup>th</sup> August 2024

National Histology Conference

**Venue:** Sydney, New South Wales  
**Presenters:** Various

Date: 5th Sep 2024

HGVT Scientific meeting

**Topic:** Student Presentation  
**Presenters:** TBA