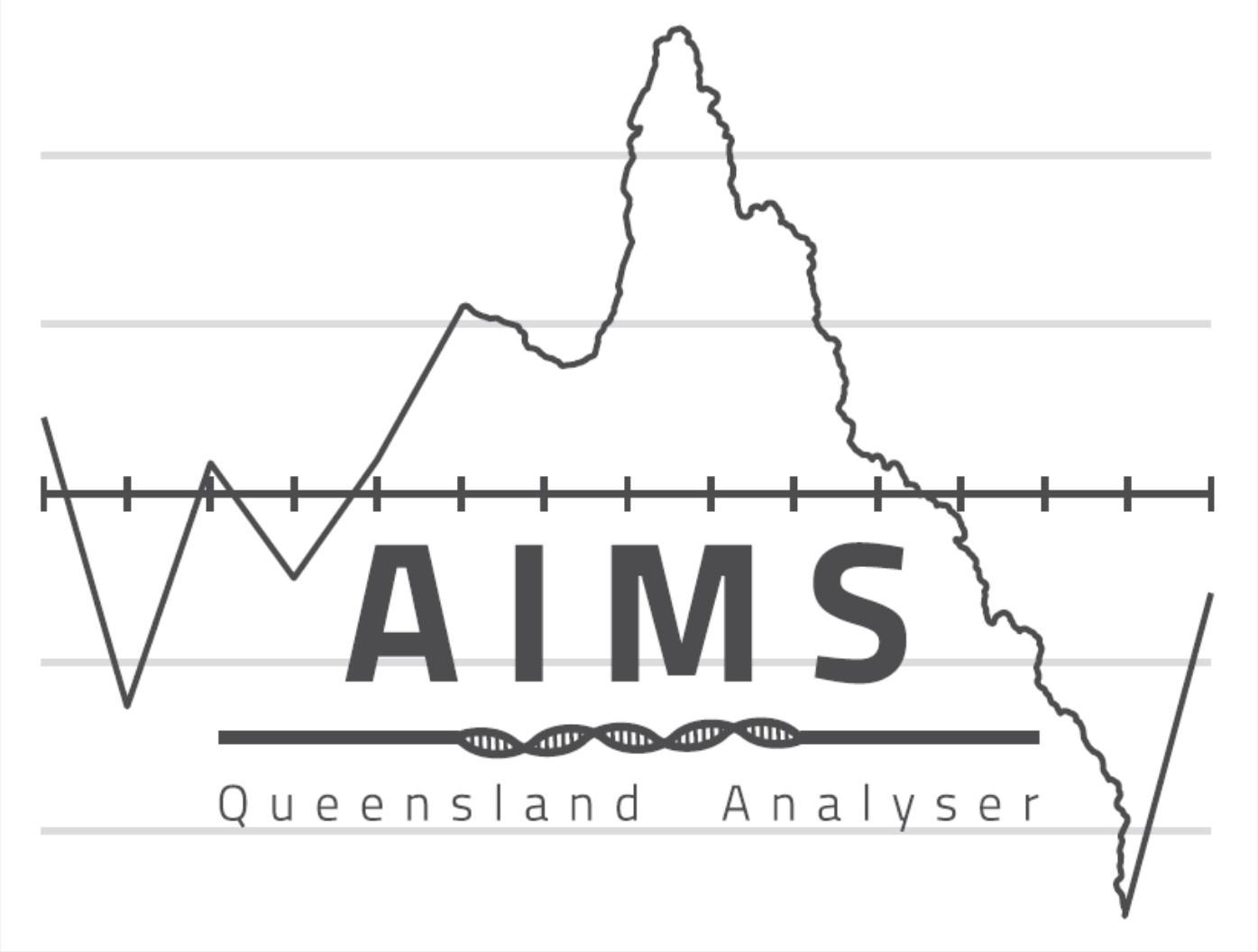


The official newsletter of the Queensland Branch of the Australian Institute of Medical and Clinical Scientists

In this Edition…

Queensland Branch Committee Members

Chair: Avinash Kundur

Vice Chair: Anne-Marie Christensen

Secretary: Wendy Walker

Committee Member: Allan Hicks

Committee Member: Christine Foulds

Committee Member: Patricia (Trish) Laube

Committee Member: Kylie Fitch

Committee Member: Borkwei Ed Nignpense

Committee Member: Karen Dent (Chair, PaLs QLD)

Student Members: Jacob Thamm (QUT)

Emma Dilley & Dennis Nguyen (Griffith)

For all enquiries, please contact: queenslandaims@gmail.com

Chair's Report

The AIMS Queensland Branch continues to deliver high-quality scientific events and professional development opportunities for members across the region. In 2025, the branch hosted two successful scientific meetings, both held virtually, reflecting our commitment to accessible and engaging education for medical laboratory professionals. We extend our sincere appreciation to all speakers, sponsors, and committee members whose contributions have been instrumental in the success of these events and the enrichment of our professional community.

The Queensland Branch Committee has seen some changes in 2025. We would like to extend our heartfelt thanks to **Dr Bec King** for her valuable contributions and ongoing support of branch activities. Her dedication to the committee has been greatly appreciated.

The 2024 AIMS/AACB Quiz Night was successfully held on 3rd December 2024 at the Botanic Bar, Queensland University of Technology (QUT) City Campus. On 30 April 2025, the Queensland Branch partnered with the AIMS Tropical Division to host a virtual scientific meeting focused on "Quality Control & Quality Assurance." The event featured four expert speakers: Emily Torralba, Quality Officer at Sullivan Nicolaides Pathology; Stacie O'Brien, Central Blood Bank Supervisor at QML Pathology; Penny Toland, Medical Laboratory Manager for the Cellular Therapy Program; and Associate Professor Donna Rudd from James Cook University. The presentations covered a range of topics including pre-acceptance testing, the integration of QA and QC for quality improvement, and the importance of understanding measurement uncertainty in laboratory practice. The meeting was well attended and provided valuable insights for professionals working in transfusion and pathology services.

On 4 June 2025, AIMS collaborated with the Australian Society for Microbiology (ASM) to deliver a virtual meeting themed "Microbiology Menaces – Pathogens in Respiratory Diseases." The evening featured two engaging presentations. Associate Professor Jeff Warner discussed melioidosis, a common cause of fatal bacterial pneumonia in the tropics, and examined whether the disease is expanding beyond its traditional endemic zones. Dr Teja Yarlagadda presented research on how Lactobacillus rhamnosus modulates the cellular response to viral infection in nasal epithelial cells, highlighting the potential role of probiotics in respiratory health. This event showcased emerging research in respiratory microbiology and fostered meaningful dialogue among attendees.

As we move forward, the AIMS Queensland Branch remains committed to delivering a diverse range of in-person and virtual events that support continuing education, foster professional networking, and promote excellence in medical laboratory science.

Yours sincerely

Avinash Kundur

AIMS QLD Branch and AACB Combined Annual Trivia Night

Avinash Kundur

The 2024 AIMS/AACB Quiz Night was held on 3rd December 2024 at the Botanic Bar, Queensland University of Technology (QUT) City Campus. The evening brought together colleagues, students, and trivia enthusiasts for a fun and competitive night of knowledge and camaraderie.

Competition was fierce throughout the evening, but it was "The Mixed Buch" who ultimately claimed first place with 27 points. Close behind were the runners-up, "All Sorts of". Special thanks go to Dr Allan Hicks, for preparing the questions for the evening and to Steven Weier who kept the energy high and the laughter rolling as the evening's MC. The event proved to be a fantastic success, filled with fun, friendly rivalry, and community spirit.

AIMS QLD Branch would like to sincerely thank "Binding Site" from Thermo Fisher Scientific for sponsoring the event.

AIMS Qld Branch and AIMS Tropical Division Combined Scientific Meeting

Avinash Kundur

On **Wednesday, 30 April 2025**, the **AIMS Queensland State Branch** and **AIMS Tropical Division** hosted a highly engaging **Combined Scientific Meeting**, bringing together professionals and students for an evening of learning and collaboration. Held virtually via Zoom from **6:00 PM to 8:00 PM**, the event focused on the critical theme of **Quality Control (QC)** and **Quality Assurance (QA)** in medical laboratory science—a topic that continues to shape the future of pathology and transfusion services.

🔍 Spotlight on Quality: A Timely and Essential Discussion

As the healthcare landscape evolves, the demand for precision, safety, and accountability in laboratory practices has never been greater. This meeting provided a platform for experts to share their insights on how quality systems are implemented, monitored, and improved to ensure optimal patient outcomes. The evening featured four distinguished speakers, each offering a unique perspective on quality in the context of blood banking, cellular therapy, and laboratory diagnostics.

🧫🔬 Expert Presentations That Inspired

Stacie O'Brien, Central Blood Bank Supervisor at QML Pathology, opened the session and explored the topic: **"Pre-acceptance testing on screening cells: How low should we go?"** Her talk examined the sensitivity of screening protocols and the implications of adjusting testing in modern blood banking. Stacie's insights sparked thoughtful discussion around balancing accuracy with operational efficiency in transfusion medicine. Following her presentation, **Emily Torralba**, Quality Officer at Sullivan Nicolaides Pathology, provided a comprehensive overview of **Quality Control and Quality Assurance** in blood banking. She highlighted the importance of robust quality systems in maintaining the safety and reliability of blood products, and shared practical approaches to meeting regulatory and clinical standards.

Next, **Penny Toland**, Medical Laboratory Manager for the Cellular Therapy Program, presented her session titled **"QA + QC = QI."** Penny emphasized how the integration of QA and QC leads to **Quality Improvement (QI),** especially in the stem cell transplantation program, a continuous process that enhances laboratory performance, reduces errors, and fosters a culture of excellence, which may enhance stem cell viability and improve transplant success. Her presentation offered actionable strategies for implementing QI initiatives and encouraged attendees to view quality as a dynamic and evolving goal.

The final speaker of the evening was Associate Professor **Donna Rudd** from James Cook University, who addressed the complex but essential topic of "Uncertainty of Measurement." Donna provided a deep dive into how measurement uncertainty affects laboratory results and clinical decision-making. Her talk underscored the importance of understanding statistical principles and maintaining transparency in diagnostic reporting.

💻 A Night of Learning and Connection

The meeting was more than a series of presentations—it was a vibrant exchange of ideas and experiences. The virtual format allowed for broad participation, making it accessible to professionals and students regardless of location. The event offered valuable insights that could be applied in both clinical and academic settings.

The AIMS Queensland and Tropical Division Scientific Meeting was a resounding success, reinforcing the importance of quality systems in laboratory medicine and inspiring attendees to continue striving for excellence in their practice. It served as a reminder that quality is not just a standard—it's a commitment to continuous improvement and patient safety.

AIMS and ASM Combined Scientific Meeting

Bec King/Avinash Kundur

AIMS QLD Branch, in collaboration with the **Australian Society for Microbiology (ASM) QLD Branch**, hosted a virtual Combined Scientific Meeting centred on the theme "**Microbiology Menaces – Pathogens in Respiratory Diseases**." Delivered virtually via Zoom from 6:30 PM to 8:00 PM, the event was complimentary for AIMS and ASM members and was attended by more than 35 members with more than 70 individuals registering for the event.

The first speaker, **Associate Professor Jeff Warner**, delivered a compelling presentation titled "*A Common Cause of Fatal Bacterial Pneumonia in the Tropics, but Is Melioidosis on the Move?*" His talk focused on *Burkholderia pseudomallei*, the causative agent of melioidosis—a serious and often fatal infection endemic to tropical climates in North Queensland. Professor Warner discussed the shifting geographic distribution of the disease due to **climate change**, its clinical manifestations, and the challenges associated with diagnosis and treatment. His insights underscored the importance of surveillance and awareness, particularly as climate change and global travel influence the spread of tropical pathogens.
Following this, **Dr Teja Yarlagadda** presented her research on the interaction between probiotics and viral infections in the respiratory tract. Her talk, "*Lactobacillus rhamnosus Modulates the Cellular Response to Viral Infection in Nasal Epithelial Cells,*" explored how this probiotic strain influences immune responses at the cellular level. Dr Yarlagadda's findings suggest promising avenues for therapeutic intervention, particularly in enhancing mucosal immunity and mitigating the severity of viral respiratory illnesses.

Both presentations highlighted the dynamic nature of respiratory microbiology and the need for continued research, innovation, and interdisciplinary cooperation. The event reinforced the importance of staying informed about emerging pathogens and exploring novel approaches to prevention and treatment. The joint scientific meeting between AIMS QLD Branch and ASM QLD Branch exemplified the value of interdisciplinary collaboration in advancing microbiological research and clinical practice. By bringing together experts in bacterial and viral respiratory pathogens, the event fostered a deeper understanding of emerging threats and innovative therapeutic approaches. Attendees left with enhanced awareness of current challenges and future directions in respiratory microbiology, reaffirming the importance of continued professional engagement and evidence-based practice.

An Interesting Case of Collusion Tumour of Squamous Cell Carcinoma and Chronic Lymphocytic Leukaemia/SLL in Cutaneous Tissue

Khanh Le[1]

1. Bachelor of Medical Laboratory Science, School of Pharmacy and Medical Sciences, Griffith University

Abstract

An 84-year-old male presented with a nodular lesion on the right ear lobe, which was excised and revealed a rare collision tumour comprising two distinct neoplasms: a poorly differentiated squamous cell carcinoma (SCC) and a low-grade B-cell lymphoma consistent with chronic lymphocytic leukaemia/small lymphocytic lymphoma (CLL/SLL). Histopathological analysis showed SCC without lymphovascular or perineural invasion in a subset of cases, consistent with findings from Barrett et al. (2021), who reported that 17% of early-stage tongue SCC lacked PNI and 8% lacked LVI, while the lymphoid infiltrate was confirmed as CLL/SLL by immunohistochemistry (CD20+, CD5+, CD23+, BCL2+). This case highlights the diagnostic challenges and clinical implications of synchronous cutaneous malignancies, reinforcing the importance of comprehensive histological and immunophenotypic evaluation. The identification of both neoplastic components necessitated a multidisciplinary approach involving surgical re-excision for local SCC control and referral to haematology for systemic lymphoma assessment.

Introduction

Collision tumours are rare entities in which two distinct neoplasms coexist at the same anatomical site without histological intermixing (Khan et al., 2018). In dermatopathology, they present diagnostic challenges due to their overlapping or misleading morphology, especially when one neoplasm is subtle or unexpected.

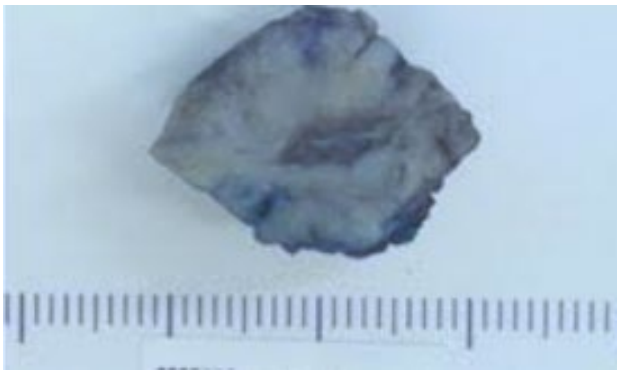
Cutaneous squamous cell carcinoma (SCC) is a common skin malignancy, particularly in elderly males with significant sun exposure (Stang et al., 2019). It can range from well-differentiated lesions to poorly differentiated, invasive tumours. Chronic lymphocytic leukaemia/small lymphocytic lymphoma (CLL/SLL) is a low-grade B-cell lymphoproliferative disorder that may occasionally infiltrate the skin, although this is uncommon (Grange et al., 2002).

This case describes a rare collision tumour composed of a poorly differentiated

SCC and incidental dermal infiltration by CLL/SLL in the same lesion. It highlights the importance of histological and immunophenotypic assessment in identifying multiple malignancies, which may have different prognoses and treatment pathways.

Case Presentation and Description

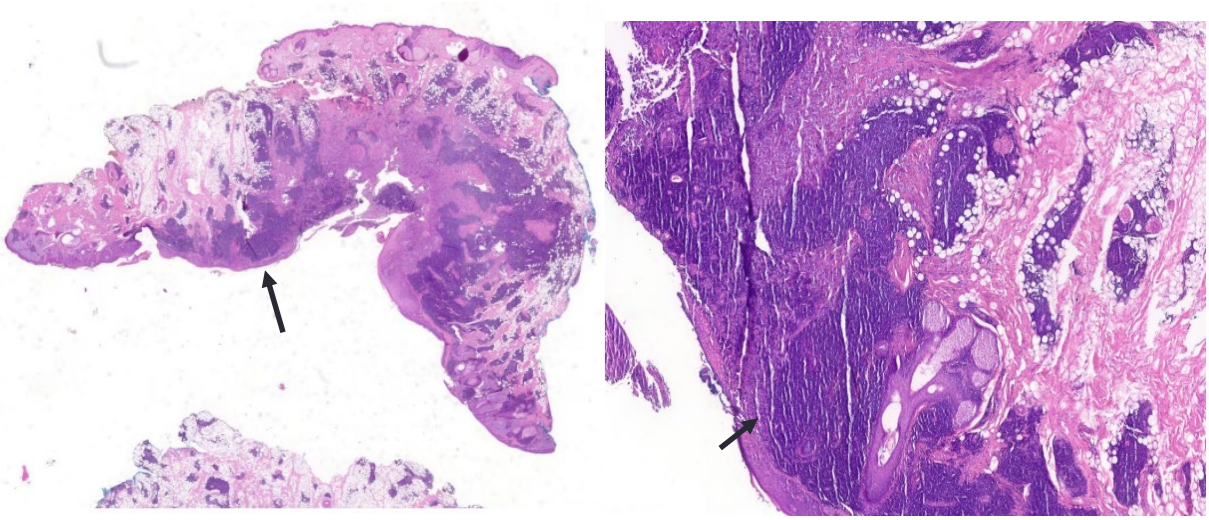
An 84-year-old male presented with a long-standing, raised, crusted lesion on the right ear lobe, which had recently become nodular and intermittently bled. The lesion measured approximately 22 × 17 mm with poorly defined borders and was clinically suspected to be a non-melanoma skin cancer. Complete excision was performed and submitted for histopathological analysis.



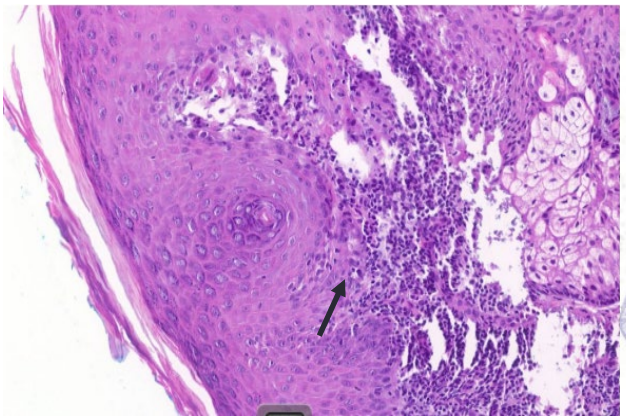
Microscopy revealed two distinct pathological components consistent with a collision tumour. The first was a poorly differentiated squamous cell carcinoma (SCC), displaying nests of atypical squamous cells with hyperchromatic nuclei, limited keratinisation, and frequent mitoses. The tumour extended into the subcutaneous tissue and involved the deep surgical margin, but no lymphovascular or perineural invasion was observed.

The second component consisted of a nodular dermal infiltrate of small lymphoid cells. Immunohistochemistry confirmed this as a low-grade B-cell lymphoma consistent with chronic lymphocytic leukaemia/small lymphocytic lymphoma (CLL/SLL). The lymphoid cells were positive for CD20, CD5, CD23, and BCL2, and negative for CD3, CD10, BCL6, and cyclin D1, excluding mantle cell and follicular lymphoma. No features of high-grade transformation were identified. The final diagnosis was a collision tumour composed of SCC and CLL/SLL. The SCC component involved the deep excision margin, while the lymphoid component appeared confined to the superficial dermis. Follow-up recommendations included re-excision for margin clearance and referral to haematology for systemic staging of the CLL/SLL.

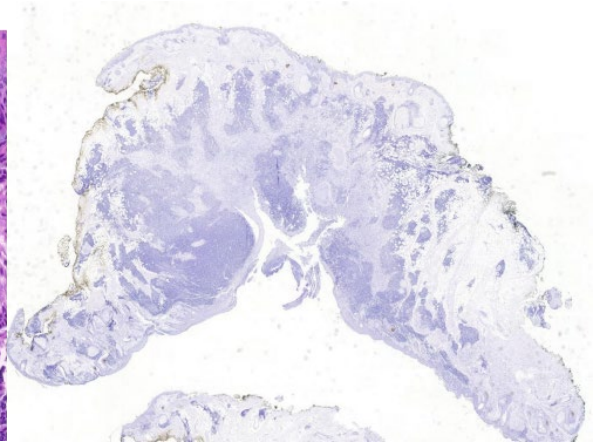
H & E Staining



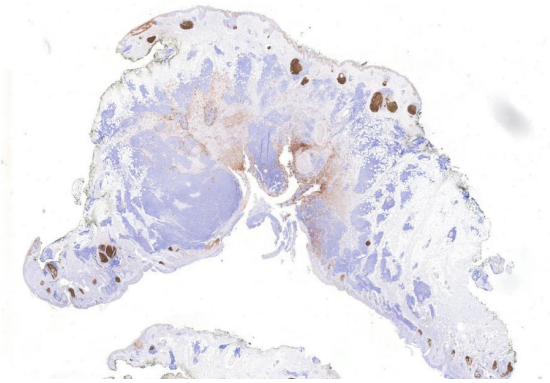
H & E



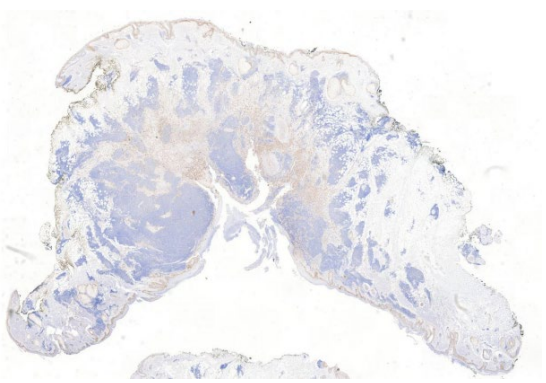
CD 1



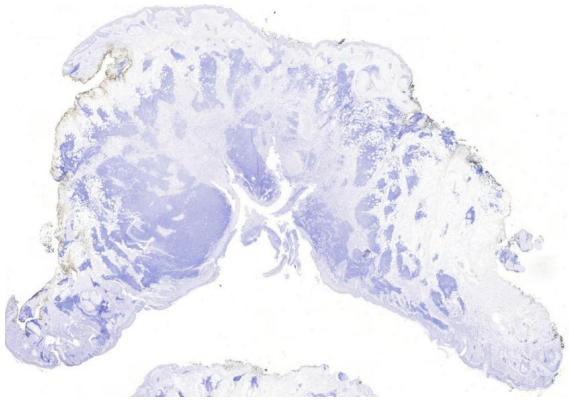
P40



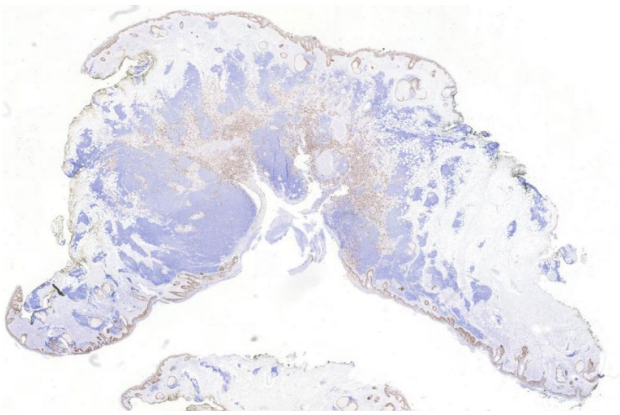
PMA



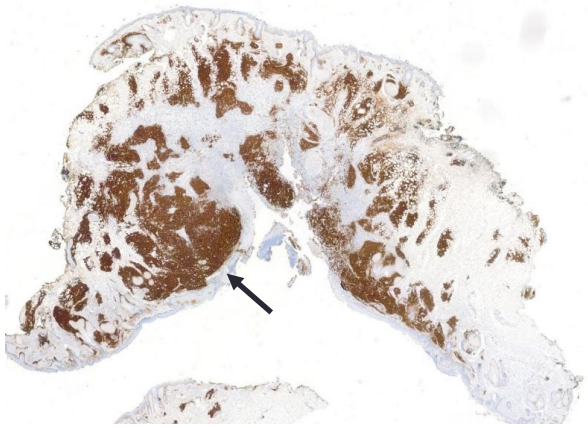
BCL 2



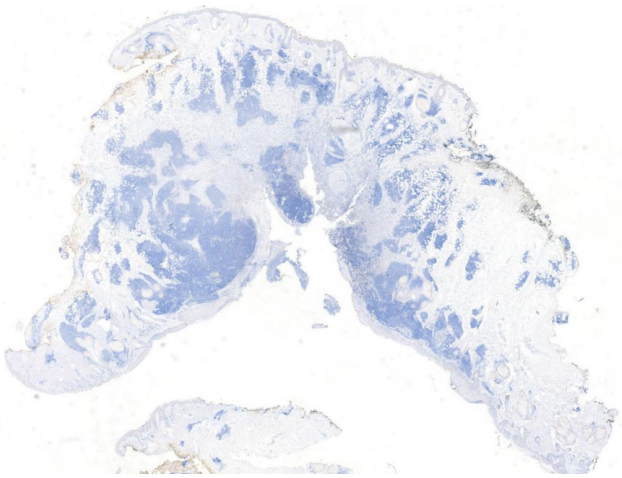
SOX 10



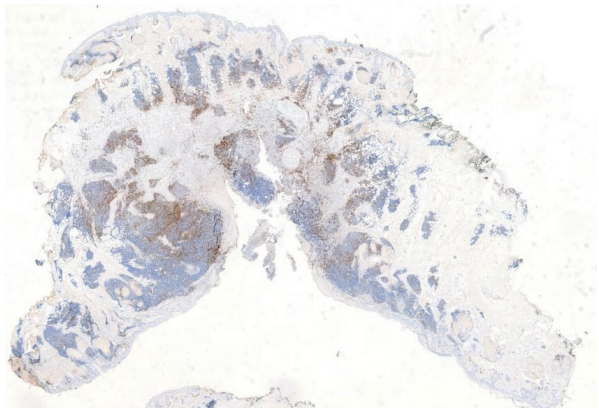
BCL 6



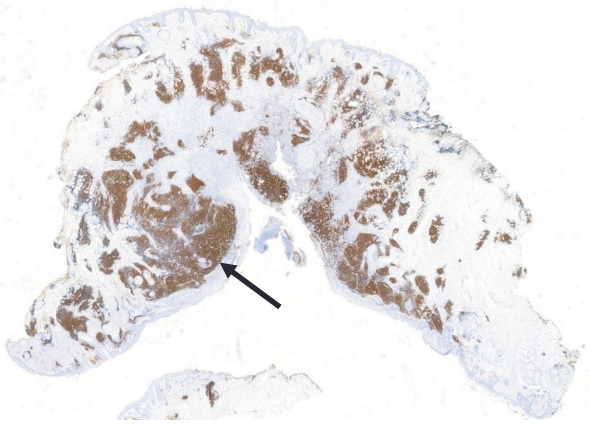
CD 3



CD 20



CD 5



Discussion

The identification of two histologically distinct neoplasms within the same cutaneous lesion necessitated a careful, integrated diagnostic approach, combining morphological assessment with a targeted immunohistochemical panel. The squamous cell carcinoma (SCC) component was confirmed histologically by nests of pleomorphic epithelial cells with hyperchromatic nuclei and eosinophilic cytoplasm (Berezowska et al., 2023). Immunohistochemistry supported this interpretation, with diffuse expression of p40, a high-specificity marker of squamous differentiation that confirms commitment to the squamous lineage (Miyai et al., 2022). Additional positive staining for EMA (epithelial membrane antigen) reinforced epithelial origin, while the absence of SOX10 and BerEP4 helped exclude other cutaneous carcinomas such as adnexal tumours or basal cell carcinoma (Shabeer, Nair, & Vijayaraghavan, 2023).

The second component, a nodular dermal infiltrate of small, mature-appearing lymphoid cells, initially raised the differential diagnosis of a reactive lymphoid infiltrate versus a cutaneous lymphoma. Morphologically, the infiltrate appeared monomorphic and perivascular, with a lack of germinal centers, prompting further immunophenotypic evaluation (Goyal et al., 2019). The neoplastic lymphocytes showed strong membranous positivity for CD20, indicating B-cell lineage. Co-expression of CD5 and CD23 was critical in narrowing the diagnosis to chronic lymphocytic leukaemia/small lymphocytic lymphoma (CLL/SLL), as this immunophenotype is characteristically aberrant—normal B cells do not express the T-cell marker CD5. CD23 expression further supported this diagnosis by excluding mantle cell lymphoma, which is CD23-negative in most cases. BCL2 was diffusely positive, reflecting the anti-apoptotic nature of the infiltrate, a hallmark of indolent B-cell neoplasms.

Negative staining for CD3 definitively ruled out a T-cell process. Furthermore, cyclin D1 was absent, effectively excluding mantle cell lymphoma, which typically shows cyclin D1 overexpression due to the t(11;14) translocation. The lack of CD10 and BCL6 expression ruled out follicular lymphoma, which arises from germinal centre B cells and commonly expresses both markers (Swerdlow et al., 2016). No evidence of large cell transformation or high mitotic activity was seen, confirming the infiltrate as low-grade in nature. The spatial separation between the SCC and the B-cell infiltrate, along with their distinct immunophenotypic profiles, fulfilled the criteria for a true collision tumour—rather than a single neoplasm with secondary inflammatory or lymphoid features (Shi et al., 2023). Importantly, this distinction carries separate management implications: the SCC, involving the deep surgical margin warrants re-excision

to achieve local control, while the incidental finding of dermal CLL/SLL prompts further systemic staging, including full blood count, flow cytometry, and possibly bone marrow biopsy.

This case underscores the indispensable role of immunohistochemistry in differentiating neoplastic from reactive processes, especially in skin biopsies from elderly patients, where immune senescence and chronic sun damage may obscure histological interpretation. It also highlights how comprehensive marker panels can prevent misdiagnosis, ensure appropriate follow-up, and ultimately guide multidisciplinary patient care.

References

Barrett, A. W., Pratt, M. K., Sassoon, I., Bisase, B. S., Newman, L., Tighe, J. V., Norris, P. M., Dhanda, J., & Gulati, A. (2021). Perineural and lymphovascular invasion in squamous cell carcinoma of the tongue. *Journal of Oral Pathology & Medicine, 50*(1), 32–38. https://doi.org/10.1111/jop.13104

Berezowska, S., Dettmer, M. S., Arndt, V., Behrens, H. M., & Rüschoff, J. (2023). Pulmonary squamous cell carcinoma and lymphoepithelial carcinoma: morphology and diagnostic features. *Histopathology, 82*(3), 410–421. https://doi.org/10.1111/his.14858

Goyal, A., Mansoor, A., Khan, M., Ivan, D., Duvic, M., & Mirani, N. (2019). Cutaneous involvement by chronic lymphocytic leukemia/small lymphocytic lymphoma: Clinicopathologic features and prognostic factors. *Annals of Diagnostic Pathology, 41*, 66–71. https://doi.org/10.1016/j.anndiagpath.2019.06.005

Grange, F., Hedelin, G., Joly, P., Beylot-Barry, M., Delaunay, M., Thomine, E., Tancrede-Bohin, E., Bernard, P., Bedane, C., Doutre, M. S., Lambert, D., Lok, C., Robert, C., Verola, O., & Wechsler, J. (2002). Prognostic factors in patients with skin involvement of B-cell chronic lymphocytic leukemia: A study of 42 cases. *Journal of the American Academy of Dermatology, 46*(1), 45–50. https://doi.org/10.1016/S1521-6926(02)00087-7

Khan, M. S., Kirkwood, M. L., Alzubaidi, S., & Subramaniam, R. M. (2018). Collision tumors: imaging findings and review of the literature. *Abdominal Radiology, 43*(7), 1715–1725. https://doi.org/10.1007/s00261-017-1200-x

Miyai, H., Loda, M., Drebin, R., & Sholl, L. M. (2022). Morphologic and molecular characterization of squamous cell carcinomas of the pancreas. *Cell Reports Medicine, 3*(1), 100521. https://doi.org/10.1016/j.oooo.2021.07.010

Shabeer, N., Nair, N. G., & Vijayaraghavan, L. (2023). Expression of BerEP4 and CD10 IHC markers in basal cell carcinoma, squamous cell carcinoma and adnexal tumours of follicular differentiation: A comparative study. *Indian Journal of Dermatology, 68*(3), 233. https://doi.org/10.4103/ijd.ijd_416_21

Shi, J., Huang, Y., Huang, C., Xie, Y., Li, Y., He, Y., & Lin, D. (2023). Collision tumor composed of squamous cell carcinoma and chronic lymphocytic leukemia/small lymphocytic lymphoma in the same lymph node: A case report and literature review. *Frontiers in Immunology, 14*, 1233085. https://doi.org/10.3389/fimmu.2023.1233085

Stang, A., Khil, L., Kajüter, H., Pandeya, N., Schmults, C. D., Ruiz, E. S., Karia, P. S., & Green, A. C. (2019). Incidence and mortality for cutaneous squamous cell carcinoma: comparison across three continents. *Journal of the European Academy of Dermatology and Venereology, 33*(Suppl. 8), 6–10. https://doi.org/10.1111/jdv.15967

2025 planner – what's happening next year?

For more information on other AIMS events check…
https://www.aims.org.au/Web/Web/Events/Upcoming-Events.aspx

Student membership application

AIMS Student Membership is available to students enrolled AIMS Accredited undergraduate or postgraduate programs. Students can apply for membership online using the link below. Your application will be reviewed and your membership eligibility will be determined based on the information provided in the online application. The online application is available at online student membership application

History of AIMS

Written by Ian Stanger, Bruce Munro, Jim Ruxton, Emeritus Professor Tony Webber, Tom Bell and Len Lawler. The book is available online and gives a detailed and rich recount of the history of AIMS over 100 years. AIMS members also have access to the electronic version, and it can be accessed and read in the Member Centre of the AIMS website.

https://www.aims.org.au/Web/AboutUs/News/Articles/Aims-History-100.aspx.

The **APACE** (**Australasian Professional Acknowledgement of Continuing Education**) scheme is a voluntary programme that recognises continuing education, formal courses and a wide range of professional activities which contribute to your professional growth.

The healthcare industry is undergoing rapid change. We are expected to keep our knowledge and skills up to date to enable us to perform to the highest professional standard. The **APACE** scheme provides a method by which your professional activities are recognised.

APACE has been approved by the **New Zealand Medical Laboratory Science Board** as a re-certification programme for **New Zealand Medical Laboratory Scientists**.

APACE has been approved by the **Royal College of Pathologists Australia** (**RCPA**) as a continuing professional development recognition programme for Fellows of the Faculty of Science.

Let's Spend 5 Minutes with ……Christine Foulds

1. Where do you work?
   Pathology Queensland Public Health Virology

2. What future development/s direction/s in the industry are you excited about?
   About Genomic and molecular testing in the public health field and the advances being made in this area to better understand viruses affecting the community.

3. If you could choose to have any superpower, what would it be and how would you use it?
   Being able to see into the future to prevent disease outbreaks and provide cures in incurable diseases.

4. What is your favourite book? Or what book are you reading now?
   Pride and Prejudice

mindray

MC-80 + SC-120

Automated Digital Morphology Meets Precision Slide Prep

MC-80

The **MC-80** is taking digital morphology analysis to the next level, delivering clearer images which are able to capture abnormalities in more detail. *Stand-alone version now available!*

- **Exceptional Clarity:** Captures ultra-high-resolution images using advanced optics and multilayer fusion technology, enabling detailed visualisation of cell morphology.
- **Smart Intelligence:** Automatically pre-classifies WBCs, RBCs, and PLTs, including abnormal cells like blasts and reactive lymphocytes, reducing manual workload.
- **Platelet Pro-mode:** Can scan the tail and edges of the slide when user defined flags are present e.g. platelet clumps and low platelets.
- **High Throughput:** Processes up to 60 slides per hour, supporting efficient lab operations.
- **Remote Review:** Enables multi-location access for slide review and consultation, improving collaboration.
- **User-Friendly Workflow:** Intuitive interface and customisable configurations to suit diverse lab needs.

MC-80

Together, the **MC-80** and **SC-120** form a powerful duo for modern haematology labs—boosting accuracy, efficiency, and diagnostic confidence.

SC-120

The **SC-120** automates slide preparation and staining, ensuring consistent quality and faster turnaround.

- **Reliable Automation:** Handles up to **180 slides** with minimal intervention; supports STAT mode for urgent samples with just **40µL** of blood.
- **High-Quality Smears:** Uses a sapphire glass spreader with auto-adjusting speed and angle based on sample consistency for optimal smear quality.
- **Efficient Staining:** Supports Wright, Wright-Giemsa, and May-Grünwald-Giemsa protocols with **up to 20x stain recycling,** reducing reagent costs.
- **Contamination Control:** Heat-drying before and after staining minimises contamination risk.
- **Flexible Integration:** Functions as a standalone unit or integrates seamlessly into Mindray's CAL 6000 / 8000 lines.

SC-120

Distributed by Abacus dx - Contact Mark for a quote

Mark Conte

Business Development Specialist- QLD / NT / WA

0499 600 945 | **m.conte@abacusdx.com** | **www.abacusdx.com**

abacus dx

a partner you can count on

Leave a copy of the *'Queensland Analyser'* in your tea/lunch room for others to enjoy!

Got any suggestions or contributions for future editions? Let us know…
queenslandaims@gmail.com