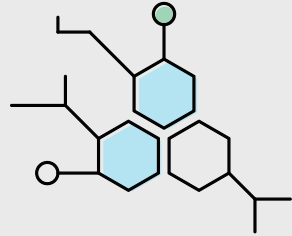


# REFLECT, REFRESH, RENEW



Text by Dr Jipson Quah

As the first year of residency comes to a close, it is a lovely time for reflection, refreshment and renewal. Returning to pathology residency after a couple of years in National Service was challenging and required a great deal of re-adaptation. The eyes had become a little unaccustomed to microscope work and the brain was not able to distinguish between the tens of thousands of entities. Not to mention the fact that I had successful LASIK surgery performed on me by Dr Lee Hung Ming just two months prior to my return, and it did take some getting used to. Nevertheless, I embraced my work and training in histopathology and cytology with relish.

## Ensuring documentation

A great deal of pathology is about gross examination of specimens and I really enjoy “trimming” – as we call it. Every day, hundreds of surgical specimens and cytology fluids arrive in our laboratory and are processed for examination. What pathologists do, with the help of technicians and pathology assistants, is to first find correlations between clinical history and the corresponding specimen before documenting the detailed findings of the specimen and its pathology. In addition to

Photo: Ms Chua Hui Min

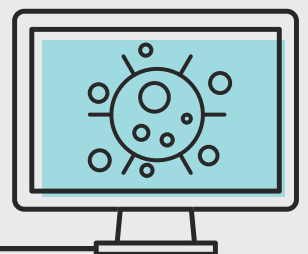


being photographed, the specimens are described, measured, weighed and orientated before dissection. Following that, specific areas of the specimen are sampled to yield the most informative diagnosis and placed into tissue cassettes where they then undergo further fixation and processing. This first process usually takes two to three days before the slides are produced.

## The investigative process

Next, the slides arrive! We then proceed with microscopic examination, studying the architecture, morphology and

cytology of the cells before coming up with the diagnosis and histopathology reports. This is one of the best bits – picking up minuscule cellular details and features that influence diagnoses and management. For example, Kimmelstiel-Wilson lesions, Tenney-Parker changes and Cowdry bodies are all identifiable microscopic features in renal pathology, placental pathology and dermatopathology, respectively. Every day is filled with “Where’s Wally?” exercises and eureka moments – if you get them right, that is.





Very often, other stains are required to yield grading, staging and prognostic information after the initial assessment. Special stains like Periodic Acid–Schiff, Grocott’s methenamine silver, and Ziehl-Neelsen stains are commonly used, along with hundreds – maybe thousands – of immunohistochemical stains for oestrogen and progesterone receptors, cytokeratins, neuroendocrine markers, p53, ki-67, among others. It may take another one or two days before the newly-stained slides are available. Also, molecular tests such as epidermal growth factor receptor tests, fluorescence in situ hybridisation tests and next-generation sequencing are among the latest developments in pathology, and they heavily influence surgical, chemotherapy and new immunotherapy regimes. *(Dear clinician colleagues, please let us know in advance if you are going to review the patient or present the case at tumour board reviews really soon. We will try our utmost to rush it out or at least call you regarding a preliminary report. We certainly wish to avoid scenarios where a report is not ready and further discussion on management is not possible.)*

### Reporting results

Finally, the report! After accruing all the gross and microscopic details, a report is drafted, stating the significant findings and investigations that led to the diagnosis and other prognostic information. Difficult cases are discussed among numerous subspecialty consultants, and sometimes even sent overseas to improve accuracy of diagnosis, and to reduce doubt and ambiguity. The report is usually crafted meticulously with tender loving care, with special attention given to the gross, microscopic findings and diagnosis. We try to imbue meaning into every word and line so that the most concise and important information is conveyed. *(Dear clinician colleagues, we enjoy discovering and reporting all this information to assist your management and we really hope you like reading them too.)*

The department is also heavily involved in research and education. Thus, we are often given numerous tutorials to improve our diagnostic skills, as well as ample opportunities to participate in research as part of the Pathology Academic Clinical Programme. This year, I also had

the privilege of presenting a few posters at a conference in Sydney and organising a fundraising classical music recital. Lastly, I would like to use this opportunity to offer my gratitude to all my seniors and colleagues who have taught me so much and offered a lot of encouragement during this wonderful year. I am looking forward to the second year of residency and I hope it will be just as rewarding, if not more, as my first. ♦

Photo: Ms New Lee May



### Legend

1. Doctors and guests who performed at the Pathology Academic Clinical Programme’s fundraising classical music recital
2. Consultants and residents from the Department of Histopathology at a department dinner event
3. Prof Tan Puay Hoon presenting A/Prof Lai Siang Hui, outgoing residency programme director, with a token of appreciation from the residents

Photo: Ms New Lee May



Dr Jipson Quah is currently a resident in the Department of Histopathology at Singapore General Hospital. He enjoys music-making, fitness-related activities and editorial work in his free time.

