

Travel Fellowship Singapore General Hospital / Duke-NUS Medical School

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Background

The Singapore General Hospital (SGH) is one of the largest healthcare service providers in Singapore located in the centre South East Asia providing healthcare to an ethnically mixed population. In addition, the hospital is a global centre of clinical research and patients from all over the world come to this hospital to be treated. Established in 2005, the Duke-NUS Medical School, a postgraduate medical school, together with the Singapore General Hospital, focus on transforming medicine with their integrated expertise in clinical care, education, research and therefore improve patient's care. The Duke-NUS Medical School is supported by more than 160 research alliances, and has different world-class research programmes and cutting edge facilities.

The SGH pathology department was originally established in 1903 and has very recently moved into a brand-new building which includes a large molecular pathology facility. The laboratory holds full accreditation by the College of American Pathologists since 2003, participates regularly in several well-established locally and internationally recognised proficiency testing programmes.

The Residency Pathology programme is one of the Academic Clinical Programmes that offers a comprehensive span of cases with a wide variety ranging from common diagnosis to rare and complex entities from different population, such as the Indian, Chinese, and Malaysians. Many of the consultant pathologists hold teaching positions with Duke-NUS Medical School and are actively involved at the highest-level training.

I will have access to an extensive range of clinical material in histopathology and research. I am particularly interested in gaining my experience and knowledge in gastrointestinal pathology, haematopathology, and soft tissue pathology. I am able to experience the difference between the Western versus the South East Asian approach in diagnosing disease and providing relevant information in the multidisciplinary meetings. During the fellowship I will also take part in a research project which will expand my knowledge and skills in molecular pathology.

My experience begins ...

I started my first day on 29th July 2019. I arrived at the Singapore General Hospital (SGH) together with my supervisor Dr Tony Lim. He gave me a private tour of the hospital. Before I realized we were outside another tower or building of this big hospital. I felt lost in a 'small' country of almost 6 million people. After approximately 10 minutes walking, we arrived at the 10th floor of the Academia, the department of Anatomical Pathology where I would be working in the upcoming months.

At the very first day of my arrival, also my first working day, I was welcomed by many great people, I could hardly memorize all their names.

Lee May, the 'mother of the trainees', she introduced me to my buddy Dominique.

Finally, all the paper work was done and I could start working. I was settled in a cubicle with three other junior trainees. My fellow trainees were all from different countries, one from Hong Kong, one from Cleveland, and one from Sri Lanka. They had just started with their pathology residency programme.

I had travelled almost 16 hours all alone without friends and families nearby to an unfamiliar country called Singapore. Luckily, I was able to adapt this new environment and routine of work within a week all thanks to all the great and helpful people around me.



The indoor waterfall at Jewel Changi Airport

Observing

The first weeks, I mainly observed the routine of work in the department. The lab is very big. There are six tables for trimming specimens. Besides these six trimming tables, there was also one trained technician working on a table handling biopsy specimen. In contrast to my department in the Netherlands, trainees in Singapore do not handle fresh specimens. Although they are trimming almost every specimen nearly fresh (not entirely fixed) the next days. Every specimen is professionally trimmed according to a specific protocol. One thing I noticed was that most of the resected specimens were very colourful. Every resected margin had a different colour. It would be great if all trimming tables had a camera. Then there would be no need to walk to the camera table to take pictures of the specimens. There are plans to change the trimming room.

Frozen

The operating theatres are in a separate building from the pathology lab, at least 10 to 15 minutes' walk away. Therefore, somewhere in the corner next to the operating theatres there is a frozen section room. In this small corner room is all the equipment needed to give a proper frozen section diagnosis; two cryostats, one H&E stainer, one digital slide scanner, and one small trimming table.

I enjoyed the experience of whole 'frozen' sections day. The other trainees had warned me to bring my jacket, because it could be very cold in that small corner room. I thought how cold could it be. The day of frozen section, I walked with the other trainee to that corner room and I had forgotten to bring my jacket with me. That day I truly had a 'frozen day'. Luckily, there were lots of operations scheduled for frozen sections. At the end I was quite busy handling the specimens and forgot how cold it was in that tiny room.

Specialized training ...

My daily work started early in the morning, usually between 7:00 and 8:00am. I was mainly interested in gastrointestinal pathology, haematopathology, soft tissue pathology and molecular pathology.

Therefore, I received mainly new diagnostic cases of these themes. The daily diagnostic cases were divided between the trainees and the consultants. All the pathologists or consultants see cases from all themes, even if one is specialized in specific theme. In these five months, I was supervised by three professional pathologists, Dr Tony Lim, Dr Leow Wei Qiang, and Dr Kesavan Sittampalam.

Every day I received new diagnostic cases from my supervisors. They gave me the opportunity to work up the cases. And after I had reviewed the slides of the cases, I could check them with my supervisors. They are all easily approachable and very responsive to emails or messages. During supervision, they asked questions that triggered me to read more about specific diagnosis in the literature. Thus, they helped me broaden my knowledge via this personal tutorial.

The Singaporean healthcare system partially consists of a private sector. Due to the difference in the reimbursement in the public and private health care systems, I had to learn to make a diagnosis with a limited number of tests for private cases. The diversities of diagnoses in Singapore reminded me that some 'rare' diseases still exist in some parts of the world. I had never seen so many cases with infectious diseases, gastric cancers, hepatocellular carcinomas, pancreas cancers, and T-cell lymphomas.

Training and research

Every week there was at least one lecture, such as gastrointestinal pathology, neuropathology, cytology, and bone & soft tissue pathology. During the lectures different slides of cases were shown. Amongst trainees, we discussed the differential diagnoses and finally proposed a diagnosis. The aetiology, histological features, additional stains, possible molecular alterations of the disease, and treatment of the final diagnosis were discussed. Talking about lectures, I was surprised that many of them were planned on Saturdays as well. In addition, the pathology lab runs partially also on Saturdays.

The combination of training and research was not easy to deal with. After a busy day of complexed diagnostic cases, it was not easy to focus on the research project. My supportive supervisors gave me the time and opportunity in these 5 months. I was able to finish drawing more than 1000 annotations of primary gastric cancers and lymph node metastases. At the same time, I had finished classifying these cases according to agreed phenotypical features. The manuscript of this research project in collaboration with Dr Raghav Sundar and Prof Patrick Tan is currently under revision with Gut.



The border between two countries

Workshops and symposia

The last months of my fellowship there were lots of workshops and symposia. I am grateful that I could take part in these international meetings. Discussing complicated cases, presenting updates in histopathology of the World Health Organization classification in diseases, sharing experiences with other international pathologist, ... helped me to narrow the distance between the East and West.

6th Pathology Academic Clinical Programme Research Day, 29 October

I had finally the opportunity to meet a world-renowned GI pathologist, Dr John Goldblum, one of the authors of the book – titled ‘Odze and Goldblum Surgical Pathology of the GI Tract, Liver, Biliary Tract, and Pancreas’ I have on my desk. During the research day and the special sessions for trainees, we did not discuss about the gastrointestinal pathology, but it was all about the lipomatous tumours. A ‘simple’ adipocyte can challenge us in daily practice.

10th SGH Breast Pathology Course, 8-10 November

While celebrating the 10th Anniversary of the Breast Pathology Course, I was listening attentively to the lectures of Prof Emad Rakha, Prof Ian Ellis and Prof Puay Hoon Tan. Most of the trainees I have met do not like breast pathology. “It’s too fatty.” “Ooh no, the specimens fall apart after trimming.” “Another iodine marker again and it was not mention on the form?” “Which margin, cranial or dorsal margin is tumour positive?” “It’s all about invasive carcinoma NST or lobular carcinoma.” After two and a half day of breast pathology, I could tell there are also interesting and diagnostic challenging papillary lesions and phyllodes tumour.

SGH Haematolymphoid Pathology Workshop, 11 November

Early in the morning at 7:00am we gathered to prepare this successful one-day workshop and lectures. As member of the trainee group, I enjoyed to help participants during the light microscopy. Through

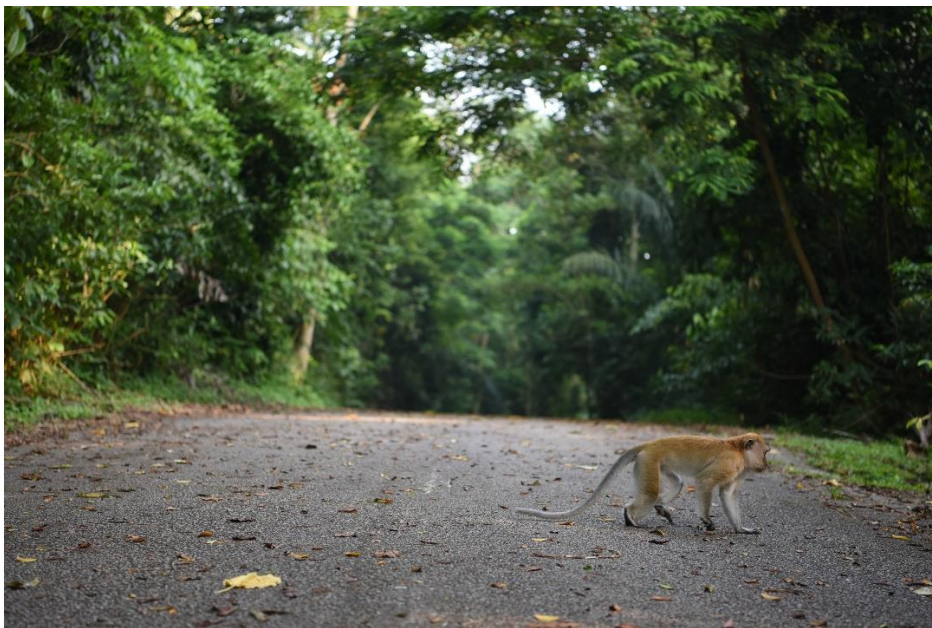
light microscopy and digital slides, we were able to discuss the variety of nodal T-cell lymphomas. It was my pleasure to listen to the lectures of the invited speaker Dr Ayoma Attygalle from UK.

KK Women's and Children's Hospital Joint Gynaecological Pathology Conference, 15-16 November

Another two intense days of lectures and discussions of interesting cases. From updates in cervical carcinomas, Lynch syndrome diagnosis and screening, IsGyP guidelines on endometrial carcinomas, session of ovarian tumours to final session of common vulvar dermatoses and pre-neoplastic disease.



Capturing the beauty on land



Just passing by ...



From another point of view



Time flies



The detail of the paintings

“Dank je wel”, “Thank you”, “謝謝”, “Terima kasih”, “நன்றி”

I am grateful to my supervisor Heike Grabsch in Maastricht for her precious time and support in arranging this fellowship in Singapore. I am very grateful to the BDIAP for the financial support of this fellowship. This fellowship has deepened my understanding in mainly gastrointestinal pathology, bone and soft tissue pathology, haematopathology, and molecular pathology. There are differences between the East and West in diagnoses and treatment, but nevertheless we all want to achieve the very best patients care.

The time one had shared during the evening, weekends, and holidays in educating trainees, running the stains in the lab, reading doctor’s illegible handwritings, typing all the details in the system, cleaning the department, ... All the generous people I had encountered in SGH during this fellowship were very welcoming and helped me a lot.

I was blessed to be part of this big family for 5 months. Thank you to my Singaporean supervisor Tony for sharing his knowledge, experiences and taking good care of me during this fellowship. Thank you, Wei Qiang for sharing your knowledge in gastrointestinal pathology, especially the non-neoplastic liver diseases. Thank you, Dr Kesavan for sharing your interesting bone and soft tissue cases. Thank you, Jacqueline for taking care of me during 'hard' times. Thank you, Lee May for showing me where to get tasty local cuisine. Thank you, my fellow friends, Amos, Yihan, Logesh, Jayanthi, Ruoyu, Sze Jet, Audrey, Mandy, Dominique, Xiu Fen, Gary, Zitong, Fan Foon, Shihleone, and Chun Yuen. Thank you, guys, Xiaoyang, Malinda, and Ben for allowing me to bother you for months. I am looking forward to meet you again in the near future.



Light behind the clouds