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Dynamic apperception of the sick germinal centre insights gleaned by follow-up of early-pattern angioimmunoblastic T-cell lymphoma and its immune-architectural comparison with reactive lymphoid hyperplasia

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Angioimmunoblastic T-cell lymphoma (AITL) ranges widely in clinical tempo, on the one hand mimicking an immune reaction and on the other, being as aggressive as any T-cell lymphoma. This is reflected by its varied histological pattern, designated one through three, with hyperplastic, regressed or effaced germinal centers (GCs), respectively. Having recently being clinched as a neoplasm of follicular helper-T (T_{FH}) cells by gene expression profiling, it has now become pertinent and also feasible to distinguish the changes of pattern 1 AITL from reactive lymphoid hyperplasia by immune architectural analysis. In population studies, the life cycle of any organism can be inferred by photographing individuals of various ages, juxtaposing the most similar photographs to form a spectrum, then blending or morphing them to create meta-animation, so as to impart dynamic apperception of the organism's life cycle. This would effectively translate a cross-section of the population into a representation of an individual organism's entire lifespan, circumventing barriers of limited contact time and interference with natural history. In the same way, immunohistological sections, which are formalin-fixed, paraffin-embedded snapshots-in-time of living tissue can be interrogated with multiple photomicrographs of the GCs in early-pattern AITL, juxtaposed in similar gradation, and then shown in sequence to produce a meta-movie of the aberrant outward migration of neoplastic T_{FH} cells, as though being filmed in real-time through a microscope trained on live cells. Hence, this presentation aims to demonstrate a phenomenon hitherto unexpressed through conventional histopathology, coupled with clinical and scientific observations that support this dynamic interpretation.

Biography

Leonard Tan completed his Graduation at National University of Singapore, Faculty of Medicine in 1989 and completed his Degree in Histopathology at Royal College of Pathologists in London in 1999. He was a visiting Research Fellow in Hematopathology at Weill Medical College of Cornell University. He is now a Senior Consultant, Histopathologist at Singapore General Hospital, and has been Chief Diagnostic Pathologist of Lymphoma Work Group at National Cancer Centre, Singapore since 2006. His main research interest is in Lymphoid immuno-architecture, particularly of peripheral T-cell lymphomas with large B-cells.

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