Refining the classification of breast phyllodes tumours (PTs)

Project summary: This project proposes to build a robust, international, living library of rare breast phyllodes tumours (PTs), with a focus on borderline and malignant grades, as well as PTs with malignant heterologous elements. Genomic and histological analyses will inform and refine future classifications.

Justification

Breast PTs are rare neoplasms, even in Asia where it is more prevalent than in Western populations. Studies often encounter limitations of small sample size, especially of the borderline and malignant varieties. Current classification of PTs is not perfect and could be further refined for better prognostication and treatment stratification. The impact of malignant heterologous elements on biological behaviour of PTs remains uncertain.

Vision

Refined future classifications through genomic and histological analyses of rare PTs.

Goal

To produce Evidence Gap Map (EGM), perform molecular profiling for signatures of PT recurrence and metastasis, use findings of a survey on the hierarchy of use of diagnostic criteria for grading PT. and explore Artificial Intelligence Modelling in grading breast phyllodes.

Target audience

Pathologists, oncologists, breast surgeons, breast diseases researchers

This project is developed under Singapore Breast Surgery Center's leadership, led by Dr Puay Hoon Tan.
In association with Dr. Dilani Samarawickrema Lokuhetty and Dr. Ian Cree (IARC), Prof Hamid R. Tizhoosh, Dr. Shi Ruoyu, Dr. Natthawadee Laokulrath, Dr. Sunil Lakhani, Dr. Stephen Fox, Nur Diyana Md Nasir, and in coordination with the WCT EVI MAP project.

IC3R collaboration for cancer classification