DukeNUS Medical School

CSCB Cancer and Stem Cell Biology Seminar Series

The potential of computer vision and deep learning to predict the molecular phenotype and survival in gastric cancer

Abstract:

Cancers including gastric cancers (GCa) are complex organ-like structures where neoplastic epithelial cells interact with surrounding fibroblasts, immune cells, vessels, nerves and extracellular matrix.

Using digital slides from biopsies and resection specimens from large GCa patient cohorts including TCGA as well as randomised phase III trials linked to high quality clinical and molecular data allowed our research group to use modern image analysis tools including deep learning/artificial intelligence algorithms to link the complex histological phenotypes with molecular information including presence of EBV from Haematoxylin/Eosin stained sections. Furthermore, we are the first to apply hypothesis-free deep survival learning to characterise the tumour microenvironment in gastric cancer and identify low risk B-cell predominated clusters and specific Ki67 positive sub-regions.

This seminar will highlight the added value of high-content image analysis of routinely available tissue sections to identify new prognostic and predictive biomarker in GCa and influence future patient management.

Speaker:

Dr. Heike I. Grabsch

Professor in Gastrointestinal Pathology
Dept. of Pathology, Maastricht University Medical Center+, Maastricht, NL
Pathology & Data Analytics, University of Leeds, Leeds, UK

Heike Grabsch (MD PhD) is a UK trained histopathologist specialised in gastrointestinal pathology currently holding a Chair at Maastricht University, NL, as well as at the University of Leeds, UK. Heike's major research focus is in predictive and prognostic biomarker for patients with gastric and oesophageal cancer increasingly using cutting edge histiomics in combination with molecular markers. She has published widely in this field often in collaboration with Prof Patrick Tan.

Date:

25 Sep 2019 (Wednesday)

Venue:

Meeting Room 7C
Level 7
Duke-NUS Medical School
8 College Road
Singapore 169857

Time:

12:00 - 1:00 p.m.

Host:

Patrick Tan MD, PhD
Professor, Programme in Cancer & Stem Cell Biology
Director, SingHealth Duke-NUS Institute of Precision Medicine (PRISM)
Duke-NUS Medical School
Singapore

No registration is required. All are welcome.

Any enquiries, please contact:
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