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Singapore accelerates integration of AI-powered solutions into clinical care

07 July 2022 | News

ASUS and Tan Tock Seng Hospital co-develop an AI-based tool to improve the accuracy and efficiency of diagnosis in blood diseases

ASUS and Tan Tock Seng Hospital (TTSH) have inked a three-year Memorandum of Understanding (MoU) to formalise their collaborative efforts on building a more robust healthcare system to meet the evolving needs of patients. Since 2021, both parties have been working on novel AI solutions to enhance the value of clinical care delivered to patients.

One notable result of this collaboration is Blade, an AI-powered software co-developed by engineers from ASUS Intelligent Cloud Services (AICS) and medical professionals from TTSH. Blade is aimed at automating peripheral blood cell identification in the laboratory setting.

The traditional method of reviewing peripheral blood film is by light microscopy, performed by a laboratory technologist. This is labour intensive and can be subject to human fatigue. Films with abnormal features or unclear diagnosis are then escalated to a haematologist for further review.

Blade can automate blood cell identification and classification with high accuracy. This means that technologists will only need to load the blood films into a digital slide scanner. The AI tool will then process and analyse the digitalized films and flag any critical findings such as leukaemia, enabling early clinical intervention.

Looking ahead, ASUS and TTSH are working on solutions for breast screening and colon cancer detection, with both parties seeing potential in jointly developing AI-based laboratory solutions for pathology, cytology and microbiology.