EuroSciCon

4th International Conference on

Digital Pathology

August 22-23, 2019
Zurich, Switzerland

Arch Clin Microbiol 2019, Volume: 10

Validation study on lymphoma diagnosis using WSI

Tomoo ITOH

Kobe University Hospital, Japan

Background: Recently, FDA allowed marketing of first whole slide imaging (WSI) system for digital pathology, which enables us use the system even for primary diagnosis. This epoch-making achievement owes a lot to scientific evidences indicated that WSI is eligible for making accurate pathological diagnoses. However,the cases requiring immunohistochemistry or special staining, such as malignant lymphoma, were excluded from those studies.

Objective: To provide an evidence of usability of WSI diagnosis for primary diagnosis of malignant lymphoma compared to conventional glass slide diagnosis and optical microscope.

Design: All retrieved lymphoma cases were digitized using a WSI scanner, NanoZoomer RS (Hamamatsu), with x40 magnification, and a well-trained pathologist for lymphoma diagnosis had reviewed and made diagnosis for the digitized cases with more than 2 months of washout time interval. Discrepancies between microscope slide and WSI diagnosis were classified into three categories; concordance, major discrepancy (defined as ones associated with significant difference in clinical treatment), and minor discrepancy (defined as ones associated with no significant difference in clinical treatment).

Result: We've already presented the tentative result on the last 2nd International Conference on Digital Pathology & Image Analysis held at San Antonio. Tentative data showed excellent concordance rate, over than 90%, and which was much better than we expected. We are going to talk about the final data at this conference.

Conclusion: WSI is applicable for primary diagnosis of malignant lymphoma, if we make diagnoses with combination of adequate clinical information, H&E morphology, and immunohistochemistries.