

**Title:** Improving the Accuracy of Reporting Ki-67 IHC by using an AI Tool

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**Abstract:**

Ki-67 proliferative index (PI) scoring is measured by estimating the proportion of the number of active cell nuclei in hotspot regions within immunohistochemical (IHC) stained slides. It provides valuable information about the rate of proliferation in a tumour. Manual scoring of Ki-67 PI is laborious, time-consuming and often the victim of interobserver variability between pathologists. This motivated us to develop an AI-based method to automate Ki-67 PI scoring with the aim to improve the concordance of pathologists' inter-observability through aided diagnosis. We sourced 88 sequential cases of sarcomas for our study. We applied watershed algorithm to perform nuclear segmentation on 440 regions of interest (ROI). A study was conducted where three pathologists scored the Ki-67 PI on the ROIs with and without AI-assistance. Our study demonstrated great concordance between the pathologists scoring with AI-assistance. After AI assistance, inter-pathologist discordance was significantly reduced by 82.1 %

**Biography:**

Dr. Sahil Ajit Saraf completed his MD in 2015 from the Rajiv Gandhi Institute of Medical Sciences, Bengaluru, India. Then underwent further training at the Tata Memorial Hospital, Mumbai, India. He then worked as a consultant pathologist in Kochi, India before joining the national cancer center and Singapore general hospital (SGH) in 2019. He completed his fellowship in anatomical pathology at SGH. He was also first a senior pathologist at Qritive Pte Ltd, before becoming the medical director there. He has been working at V. G Saraf

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