From Laboratory of Urology

Support System of Cystoscopic Diagnosis for Bladder Cancer Based on Artificial Intelligence.



The objective evaluation of cystoscopic images using artificial intelligence (AI) is expected to contribute to improvement in the accuracy of the diagnosis and treatment of bladder cancer.

Cystoscopy is essential for diagnosing and monitoring bladder cancer, but lesions are overlooked while using white-light imaging.

A total of 2102 cystoscopic images, consisting of 1671 images of normal tissue and 431 images of tumor lesions, were used to create a dataset with an 8:2 ratio of training and test images. We constructed a tumor classifier based on a convolutional neural network (CNN)

By objectively evaluating the cystoscopic image, it was possible to classify the image, including tumor lesions and normality.

References: Atsushi Ikeda et al., J Endourol. 2020 Jan 14. doi: 10.1089/end.2019.0509. [Epub ahead of print] Contact: Prof. Hiroyuki Nishiyama or Clinical Assistant Prof. Atsushi Ikeda