



AI Improves Assessment of Bladder Cancer Treatment Response



A small multisite study recently showed that artificial intelligence (AI) improved the ability of physicians to determine whether bladder cancer patients responded to chemotherapy before a radical cystectomy.

Establishing whether bladder cancer patients show a complete response to chemotherapy is important for determining whether the bladder should be preserved or removed, given the impact organ removal will have on quality of life. When patients develop bladder cancer, surgeons often remove bladder to keep the cancer from returning or spreading. However, mounting evidence suggests radical cystectomy may be unnecessary if a patient has complete response to chemotherapy.

With this aim, the ability of an AI system to improve clinician diagnostic performance was tested by a team of University of Michigan researchers and their collaborators. Fourteen physicians from radiology, urology, and oncology specialties, two fellows, and a medical student examined pre- and post-treatment computed tomography urography (CTU) scans of 157 bladder tumours from 123 patients. These observers rated the level of chemotherapy response and made recommendations for radiation or surgery for each patient. Their final ratings were compared against tumour samples taken during bladder removal surgeries to gauge accuracy. When assisted by AI, regardless of speciality and experience level, the observers saw an improvement in their assessment's accuracy. In fact, those with the least experience saw the most gain.

"If you use the tool smartly, it can help you," said Dr Lubomir Hadjiyski, the study's senior author.

Source: [Tomography](#), [EurakAlert!](#)

Published on : Mon, 25 Apr 2022