

Singapore and Japan join forces in pioneering telesurgery trial

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To clarify and address the potential issues arising from remote surgeries



Singapore's National University Hospital (NUH) and the Yong Loo Lin School of Medicine at the National University of Singapore (NUS Medicine) are collaborating with Fujita Health University (FHU) in its first robotic telesurgery trial between Singapore and Japan.

Leveraging Japan's first surgical robot, clinician-scientists from NUH and NUS Medicine will remotely perform a gastrectomy (stomach surgery performed for cancer) from a surgeon cockpit in Singapore. The surgeons' movements will be transmitted, directed, and replicated by a robotic operation unit located in Japan via a dedicated international fiber-optic network, all performed on a simulated organ (refer to Annex A for technical details on the remote surgery setup and connection).

This collaboration follows the Memorandum of Understanding (MoU) signed between NUS Medicine and FHU, one of Japan's leading universities with a strong research focus in robotic surgery and telesurgery. The MoU aims to deepen academic partnership through active joint collaborations, including the execution of remote surgical experiments, and by promoting mutual exchange activities such as student exchange programmes.

Tapping on FHU's vast expertise in robotic surgery, this latest project aims to evaluate, clarify and address the potential issues arising from such remote surgeries.

The preclinical trial, involving a series of complex gastrectomy procedures conducted by both teams, aims to prove that long-distance robotic telesurgery for technically demanding procedures can be safely conducted using a robotic system connected by high-speed fiber-optic communication.

While robotic surgery is not new in Singapore, this collaboration between NUS Medicine, NUH and FHU marks a critical step towards making remote surgeries an accessible option to patients in the near future.