

# Laparoscopic Telesurgery Between the United States and Singapore

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## Abstract

**Introduction:** *Telemedicine is the use of electronic digital signals to transfer information from one site to another. With the advent of a telepresence operative system and development of remote robotic arms to hold and manoeuvre the laparoscope, telemedicine is finding its role in surgery, especially laparoscopic surgery. Clinical Features and Treatment:* We report two successful cases of laparoscopic surgery—radical nephrectomy and varicocelectomy for a 3-cm renal tumour and for bilateral varicoceles causing pain, where a less experienced laparoscopic surgeon in Singapore was telementored by an experienced laparoscopic surgeon located remotely in the United States. Both patients recovered uneventfully and returned home on postoperative day 4 and on the day of surgery, respectively. **Outcome:** *This study demonstrates that telementored laparoscopic systems are feasible and safe, between countries halfway across the world. Conclusions:* *As the Internet expands in utility and the cost of higher bandwidth telecommunication lines decreases, even to remote countries, telementoring systems will become more affordable and may potentially pave the way for advanced surgical and laparoscopic applications and training for the future.*

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**Key words:** *Laparoscopic nephrectomy, Telemedicine, Telementoring, Teleproctoring, Telestration*

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