

Researchers look for causes of unexpected early bladder cancer recurrence after laparoscopic surgery

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Although laparoscopic radical cystectomy (LRC) and robotic assisted radical cystectomy (RARC) continue to grow in popularity and are successful in the treatment of bladder cancer, they are still considered experimental approaches. Using data collected by the Section of Uro-Technology of the European Association of Urology (ESUT), a team of researchers found that about 5% of patients experienced unexpected relapses of cancer after LRC, even with favorable pathology. Their results are reported in *The Journal of Urology*.

Currently most large multicenter studies suggest minimally invasive cystectomy is noninferior in terms of cancer control compared to open radical cystectomy (ORC). While ORC is the standard of care in the surgical management of muscle invasive and high risk nonmuscle invasive [bladder cancer](#), the associated risk of death has motivated urologists to examine the feasibility and safety of LRC and RARC. In order to track these data, ESUT has been compiling a large, multicenter, prospective database of [patients](#) who have undergone LRC since 2000, which now includes more than 800 patients across Europe.

In the current study, researchers investigated possible causes for the unexpected early recurrence of cancer. 627 patients met the criteria for analysis and 311 had favorable pathology reports after LRC pT0-pT2N0R0. Of this group, 27 (4.3%) experienced disease progression during the first 24 months. Most of these patients

experienced progression to large tumor volume metastatic disease.

Urothelial cancers are often aggressive and exhibit seeding capabilities, whereby a few cells escape the surgical procedure and reestablish tumors in other parts of the body. The investigators suggest that the use of pneumoperitoneum, or gas injected into the abdomen during LRC, may increase the chance of this occurring at distant landing sites through the venous plexus of Batson, a network of valveless veins that connect deep pelvic veins with vertebral and thoracic vessels. According to lead investigator Simone Albisinni of the Department of Urology, Institut Jules Bordet, Université Libre de Bruxelles, Brussels, Belgium, "These findings raise important questions concerning the spread of malignant urothelial cells and a possible role of pneumoperitoneum and intermittent insufflations on tumoral hematogenous migration during minimally invasive radical cystectomy."

The findings of early unexpected recurrences after LRC in almost 5% of patients, all with favorable pathological characteristics raise some doubts about the safety of the laparoscopic approach. "A role in the development of these relapses may have been played by the pneumoperitoneum. Specifically designed studies are necessary to further investigate the role of pneumoperitoneum in urothelial [cancer](#) recurrence," emphasized Dr. Albisinni.

More information: Simone Albisinni et al. Critical Analysis of Early Recurrence after Laparoscopic Radical Cystectomy in a Large Cohort by the ESUT, *The Journal of Urology* (2016). [DOI: 10.1016/j.juro.2016.01.008](#)

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