

News Release

Dec. 10, 2013

MULTIMEDIA ALERT: Video of Dr. Sprung is available for download from the [Mayo Clinic News Network](#).

EMBARGOED: Hold for release until Dec. 17, 2013, at 12:01 a.m. E.T.
British Journal of Anaesthesia

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Pain Drugs Used in Prostate Gland Removal Linked to Cancer Outcome, Mayo Clinic-Led Study Finds *Research examines link between opioid suppression of immune system and cancer recurrence*

ROCHESTER, Minn. — The methods used to anesthetize prostate cancer patients and control pain when their prostate glands are surgically removed for adenocarcinoma may affect their long-term cancer outcomes, a study led by Mayo Clinic has found. Opioids, painkillers commonly given during and after surgery, may suppress the immune system's ability to fight cancer cells. The research suggests that supplementing general anesthesia with a spinal or epidural painkiller before a radical prostatectomy reduces a patient's need for opioids after surgery, and this finding was associated with a lower risk of cancer recurrence. The findings are published online in the *British Journal of Anaesthesia*.

The immune system's strength is especially important in cancer surgery because surgical manipulation of a tumor may spread cancer cells. The immune system can be impaired by general anesthesia, the overall stress surgery places on the body and by post-surgical systemic opioid use. The study found better outcomes in radical prostatectomy patients who had general anesthesia supplemented with spinal or epidural delivery of a long-acting opioid such as morphine, than in those who received general anesthesia only.

"We found a significant association between this opioid-sparing technique, reduced progression of the prostate tumor and overall mortality," says senior author Juraj Sprung, M.D., Ph.D., a Mayo Clinic anesthesiologist.

Researchers used Mayo Clinic's prostatectomy registry, anesthesia database and electronic medical records to identify patients who had prostate gland surgery for adenocarcinoma from January 1991 through December 2005. Reports of recurrence of cancer, cancer spread and death were confirmed with patients' physicians.

While promising, the findings must be tested in randomized trials, Dr. Sprung says: “Provided future studies confirm what we’ve found in this study, maybe down the line this would be a standard of care for pain management in patients undergoing cancer surgery.”

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