

## Errata

In the abstract titled "Increased post-operative opioid consumption is associated with greater incidence of non-small cell lung cancer recurrence: a retrospective analysis" (Maher et al, J Pain 15:S86, 2014), the text that appeared was incorrect. The corrected text appears below.

**(442) Increased post-operative opioid consumption is associated with greater incidence of non-small cell lung cancer recurrence: a retrospective analysis**

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Evidence suggests that opioid sparing perioperative pain management techniques can impact long term surgical outcomes such as cancer free survival.<sup>1,2</sup> The phenomenon is potentially due to the suppressive effects of opioids on cell mediated immunity, especially natural killer cells.<sup>3,4</sup> After obtaining IRB approval, we reviewed the records of consecutive patients who underwent a VATS lobectomy for Stage I or IIa biopsy proven Non-Small Cell Lung Cancer (NSCLC). Perioperative information including demographics, laboratory data, surgical, anesthetic, nursing and pharmacy reports were collected. Opioid doses were then converted to the equianalgesic dose of oral morphine. Data was then compared to the National Cancer Registry's incidence of recurrence or disease free survival for five years from the time of diagnosis. 456 charts of patients seen between July 2006 and April 2008 were analyzed. A total of 99 patients were included in the final analysis, 73 of whom were NSCLC free at five years and 26 were found to have NSCLC recurrence within five years. The average amount of opioid received in the perioperative period was 168 mg of morphine for the cancer free group and 294 mg of morphine in the recurrence group ( $p=0.009$ ). Intraoperative opioid, hospital length of stay, and post-operative pain scores using numerical rating scale (NRS) did not have a statistical relationship to cancer free survival. This retrospective study suggests a robust, statistically significant association between increased doses of opioid during the perioperative period and higher recurrence rates of NSCLC. (1. Biki B, Mascha E, Moriarty DC, Fitzpatrick JM, Sessler DI, Buggy DJ. Anesthetic technique for radical prostatectomy surgery affects cancer recurrence. *Anesthesiology* 2008;109:180-7; 2. Exadaktylos AK, Buggy DJ, Moriarty DC, Mascha E, Sessler DI. Can anesthetic technique for primary breast cancer surgery affect recurrence or. *Anesthesiology* 2006;105:660-4; 3. Mathew B, Lennon FE, Siegler J, Mirzapioazova T, Mambetsariev N, Sammani S, Gerhold LM, LaRiviere PJ, Chen CT, Garcia JG, Salgia R, Moss J, Singleton PA. The novel role of the mu opioid receptor in lung cancer progression: a laboratory. *Anesth Analg* 2011;112:558-67; 4. Snyder GL, Greenberg S. Effect of anaesthetic technique and other perioperative factors on cancer. *Br J Anaesth* 2010;105:106-15.)