

algnesia for breast cancer and epidural analgesia for colon cancer.<sup>6</sup> Others will start soon.

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## References

1. Biki B, Mascha E, Moriarty DC, Fitzpatrick JM, Sessler DI, Buggy DJ: Anesthetic technique for radical prostatectomy surgery affects cancer recurrence: A retrospective analysis. *ANESTHESIOLOGY* 2008; 109:180-7
2. Exadaktylos AK, Buggy DJ, Moriarty DC, Mascha E, Sessler DI: Can anes-

thetic technique for primary breast cancer surgery affect recurrence or metastasis? *ANESTHESIOLOGY* 2006; 4:660-4

3. Bar-Yosef S, Melamed R, Page GG, Shakhar G, Shakhar K, Ben-Eliyahu S: Attenuation of the tumor-promoting effect of surgery by spinal blockade in rats. *ANESTHESIOLOGY* 2001; 94:1066-73

4. Page GG, Blakely WP, Ben-Eliyahu S: Evidence that postoperative pain is a mediator of the tumor-promoting effects of surgery in rats. *Pain* 2001; 90:191-9

5. Sessler DI: Does regional analgesia reduce the risk of cancer recurrence? A hypothesis. *Eur J Cancer Prev* 2008; 17:269-72

6. Sessler DI, Ben-Eliyahu S, Mascha EJ, Parat MO, Buggy DJ: Can regional analgesia reduce the risk of recurrence after breast cancer? Methodology of a multicenter randomized trial. *Contemp Clin Trials* 2008; 29:517-26

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## Surgical Demand Time Variance: A Possible Explanation for Lunar Effects and Some Other Mysterious Cycles

*To the Editor:*—In response to Moore *et al.* "Observations on Surgical Demand Time Series: Detection and Resolution of Holiday Variance," September 2008, it is worthwhile to speculate on the origin of some of the highly significant nontrivial cycles of surgical demand time that were detected in the authors' frequency analysis and that were not attributable to statutory holidays or other "trivial explanations."<sup>1</sup>

I would propose the possibility that at least two of the highly significant nonlinear variances are readily attributable to the cycle of Jewish holidays not accounted for in the authors' United States statutory holiday variance model. The 28.09-day cycle which the authors may rightly ascribe to possible "lunar effects" perhaps reflects the Jewish lunar calendar during which the three major festivals of Sukkoth, Passover, and Shavuot each occur at the full moon of their respective lunar months, and during which observant Jews refrain from most forms of non-life-saving work. Moreover, the 8.08-day cycle may reflect the power of a single 8-day cycle occurring during the Jewish high holidays between the second day of Rosh Hashanah and Yom Kippur. Again, observant Jews would refrain from work, including nonemergent surgeries, during these days.

Lending credence to this theory is the subjectively notable bump in variance in figure 7 that occurs after Labor Day and before

Columbus Day during the period of the Jewish high holidays. Although the authors do not specify which major academic institution was the source of their data, the possibility of its coming from the University of Pennsylvania, home to one of the study authors as well as a large population of observant Jews, may lend further credence to my suggestion.

It would be interesting to see how accounting for some widely observed nonstatutory United States holidays such as the Jewish holidays mentioned above may have affected the authors' analysis. Of course, the data itself will ultimately determine the importance such holidays might have held in the analysis of the authors. If the above explanation were validated, it might perhaps lead to improved models for predicting surgical demand.

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## Reference

1. Moore IC, Strum DP, Vargas LG, Thomson DJ: Observations on surgical time demand series: Detection and resolution of holiday variance. *ANESTHESIOLOGY* 2008; 109:408-16

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*In Reply:*—The authors are grateful to Dr. Schonberger for his thoughtful comments with respect to our recent manuscript entitled "Observations on Surgical Demand Time Series: Detection and Resolution of Holiday Variance."<sup>1</sup>

Dr. Schonberger's speculations regarding the Jewish lunar calendar are astute, and we believe they may have merit. We are investigating these nontrivial cycles of surgical demand further and hope to determine a definitive answer in the near future.

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## Reference

1. Moore IC, Strum DP, Vargas LG, Thomson DJ: Observations on surgical time demand series: Detection and resolution of holiday variance. *ANESTHESIOLOGY* 2008; 109:408-16

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