

## Remove or spare ovaries at hysterectomy?

Although I appreciate many of the comments made by Dr. David S. Guzick and Dr. Andrew W. Menzin in their critique of our study in the November installment of *Examining the Evidence*, I would like to clarify a few points.

Dr. Menzin noted that the risk of ovarian cancer decreases after hysterectomy because abnormal-appearing ovaries are removed at the time of hysterectomy. However, as our paper points out, the risk remains diminished for 20 years, longer than any screening effect would last. Current explanations of the reduced risk of ovarian cancer after hysterectomy include the interruption of carcinogen transport through the genital tract or formation of MUC1 antibodies after destruction of genital tissue during surgery.<sup>1</sup>

Dr. Guzick questioned our use of Nurses' Health Study data for coronary heart disease (CHD) mortality, but Colditz et al<sup>2</sup> noted that the results and relative risks were similar for nonfatal and fatal myocardial infarction. Therefore, we used the same relative risks for all CHD events. Regarding the reference to statistical significance, we presented the 95% confidence intervals with standard errors derived from the Monte Carlo Simulation method, which is designed to test the reliability of findings and is analogous to statistical significance.

We agree with Dr. Guzick's concern about selection bias in the Nurses' Health Study. However, for the risk of ovarian cancer to outweigh the risks of CHD and hip fracture following oophorectomy, CHD

deaths would need to be less than 5% of our estimates, or hip fracture mortality less than 70% of our estimates. None of our sensitivity analyses changed our findings.

Although contemporary medical practice includes treatment of CHD with statins, antihypertensives, and stents, many women either die before treatment or do not avail themselves of it. Studies show only 20% compliance with statins or bisphosphonates 1 year after they are initially prescribed.<sup>3</sup> Therefore, the assumption that medical treatment can ameliorate these conditions is questionable; any protection afforded by a woman's own ovaries would be beneficial.

Dr. Menzin mentions the morbidity of potential post-hysterectomy adnexal mass surgery, which is reported to be only 2.8%, while the mortality from such surgery is 0.07%, so we chose not to include these small numbers in our model. Nor did we include morbidity from crippling hip fracture, nonfatal myocardial infarction, or the quality-of-life concerns associated with estrogen deficiency in an era when most women avoid estrogen therapy.

We do agree wholeheartedly with the final point; we hope our paper will foster conversations between women and their physicians about the risks and benefits of oophorectomy or ovarian conservation. Conversation currently focuses on ovarian cancer, an extremely rare disease, to the exclusion of all other long-term risks of estrogen deficiency. We hope our paper helps to change this way of thinking.

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**“The assumption that medical treatment can ameliorate CHD is questionable; any protection afforded by a woman’s own ovaries would be beneficial.”**

**“Don’t ignore an individual woman’s history in favor of statistics that describe groups of patients”**

#### REFERENCES

1. Cramer D, Titus-Ernstoff L, McLoanis J, et al. Conditions associated with antibodies against the tumor-associated antigen MUC1 and their relationship to risk for ovarian cancer. *Cancer Epidemiol Biomarkers Prev.* 2005;14:1125–1131.
2. Colditz G, Willett W, Stampfer M, Rosner B, Speizer F, Hennekens C. Menopause and the risk of coronary heart disease in women. *N Engl J Med.* 1987;316:1105–1110.
3. Huser M, Evans T, Berger V. Medication adherence trends with statins. *Adv Ther.* 2005;22:163–171.

#### Dr. Guzick responds:

Readers will appreciate, as I do, the care with which Dr. Parker and his colleagues conducted their simulations. Also appreciated are his well-reasoned responses to my methodologic concerns. To the extent that estimates of the impact of ovarian conservation on the prolongation of life expectancy are based on cohort studies, however, my opinion remains that counseling of patients with respect to estimates of this impact must be tempered by the difficulty in making the leap from observational data to causal inference. Furthermore, even if we accept the findings of Parker et al at face value, recommendations for overall populations of women do not necessarily apply to an individual patient with a particular risk profile.

When counseling an individual patient about the disposition of her ovaries at the time of hysterectomy, we would do well to take the simulations of Parker et al into account, as well as the patient’s risk profile and likelihood of compliance with early medical management, if indicated. For each woman, there is a set of probabilities associated with the various outcomes; her decision about ovarian conservation will take these probabilities into consideration, along with the psychological cost she attaches to the different outcomes.

#### Dr. Menzin responds:

The association between hysterectomy without oophorectomy and a reduced rate of ovarian cancer is an epidemiologic finding; the potential explanations for this finding remain hypotheses.

As to the significance of perioperative morbidity as a surgical consideration, I reiterate my impression that it is an

important factor as one determines the appropriate operation for each patient. To ignore an individual’s history in favor of statistics that describe groups of patients, I feel, would be imprudent.

We certainly all agree that informed dialogue is at the heart of optimal patient care.

## Technique can’t avert all risks of 4th cesareans

In regard to Dr. Robert L. Barbieri’s September editorial, “Repeat cesarean again and again and again,” it is not just surgical technique on the 4th cesarean that is important. We also need to be very honest with patients and discuss the increased risk cesarean births pose for future pregnancies. I am aware of 2 tragedies related to this issue. Both occurred in rural hospitals. The first was on a Navajo reservation in a blizzard, when extra personnel and blood products were unable to reach the patient before she died. The second patient spontaneously aborted at 20 weeks and bled out within minutes of reaching her small local hospital. Presumably both women had previas with accreta. Please discuss the option of sterilization with the patient and her partner before doing her third cesarean.

Remember: Your patient may not stay in an urban area with access to tertiary care. She may not make it to a planned 4th cesarean under controlled circumstances. Many of my patients have been willing to settle for 3 and are grateful for the family they have, including an intact mother.

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#### Dr. Barbieri responds:

I agree, whole-heartedly, with Dr. Kerr. As noted in my editorial, at the time of a high-order repeat cesarean section, consideration of a permanent or reversible contraceptive is critical to the reproductive health of the woman and her family. Additional research on the safety of a fourth pregnancy after 3 cesareans for women who live in rural areas would be of special importance.