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In reply

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To reduce health care disparities and to provide optimal, cost-effective medical care for individuals, concepts of sex health need to become routine in the design and presentation of emergency care research. We hope that this illustration will propel other investigators to be inclusive of sex.

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In reply:

Thank you for your interest in our article and for your insightful comments about sex as an important consideration in computed tomography (CT) imaging of the chest.1 When designing our study, we did not anticipate that there would be a difference by sex in the main outcomes of the article and hence did not initially perform this analysis. Given that our focus is chest CT, we agree that risk of breast cancer in women from diagnostic radiation is a valid concern.

Recall that the original article calculated the prevalence of “occult injury” observed on chest CT but not on immediately preceding chest radiograph. The most important injuries were pulmonary contusion, pneumothorax, hemothorax, and multiple rib fractures (>2). Our major interventions of interest were chest tube placement for pneumothorax and hemothorax, mechanical ventilation for pulmonary contusion, and pain control or observation for greater than 24 hours for rib fractures.

To address your question and comments, we have performed 2 more analyses. The first addressed whether women more commonly had occult injury than men, and the second assessed whether women were more likely to have major or minor interventions for their injuries than men. We used logistic regression to calculate the odds ratio and 95% confidence interval (CI) for the first analysis and added an interaction term of major or minor intervention for the second analysis (Table).

We found all of these comparisons, except for pain control or observation for rib fractures, to be consistent with chance. Because we did not set out to determine sex differences, even pain control is not statistically significant when corrected for multiple (12) comparisons.

It appears, then, that our published decision instruments from an overlapping data set (n=11,477, including both patients who had chest radiography alone and both chest radiography and chest CT, as in this article) should be valid for both sexes. The decision instrument for major injuries, which consisted of abnormal chest radiograph result, distracting injury, chest wall tenderness, sternal tenderness, thoracic spine tenderness, and scapular tenderness, had a sensitivity of 99.2% (95% CI 95.4% to 100%), a specificity of 31.7% (95% CI 29.9% to 33.5%), and a negative predictive value of 99.9% (95% CI 99.3% to 100%) for major injury.2
This subsequent analysis did not suggest a need to apply the decision instrument differently by sex. Thank you for bringing this important point to our and Annals readers’ attention.

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