Reviewer's report

Title: A comparison of the Charlson comorbidity index derived from medical records and claims data in patients undergoing lung cancer surgery in Korea: a population based investigation

Version: 1 Date: 24 April 2010

Reviewer: Gilwon Kang

Reviewer's report:

Major Compulsory Revisions : 1, 2, 3
Minor Essential Revisions : 5
Discretionary Revisions : 4

1. It is an interesting topic to use claims data for risk adjustment. However, the validity of diagnostic information of claims data is known to be low in Korea. Especially the accuracy of secondary diagnoses is very low. So the result of this study is easily anticipated. I wonder if authors considered this limitation of claims data in the stage of study design. I suggest that authors describe the reason why this study was designed in spite of this limitation in background.

2. I think that comparison of CCIs derived from two data sources and prediction of health outcomes using CCIs are different subjects. Also it is useless to predict health outcomes using inaccurate CCI derived from claims data. So I recommend that authors focus on one subject.

3. Authors modified CCI scoring. Authors think that chronic pulmonary disease can be the symptom of lung cancer. As a result, they did not assign a weighted value of 1 point to chronic pulmonary disease in calculating CCI scores that were obtained from the claims data. I wonder if authors did the same thing on the CCI scores that were obtained from medical records. If authors did not, it is no wonder that CCI scores from claims data are different from CCI scores from medical records. According to the coding rule of ICD, symptoms of a disease are not coded if the underlying disease is coded. So if authors think that chronic pulmonary disease codes are the symptoms of lung cancer, they should omit chronic pulmonary disease in both CCI scores from claims data and CCI scores from medical records.

4. Correction of the following nomenclatures is recommended.
   Major diagnosis -> Primary diagnosis
   Minor diagnosis -> Secondary diagnosis

5. Spacing of the words in the following sentences is needed.
In Results

In other words, chronic pulmonary disease can be the symptom of lung cancer. As a result, we did not assign a weighted value of 1 point to chronic pulmonary disease in calculating CCI scores that were obtained from the claims data.

According to the distribution of CCI scores between the two data resources, we observed that 134 patients (34.2%) had higher CCI scores on the claim data than on the medical records and 58 patients (14.8%) had lower scores. Therefore, the patients who had high CCI scores from claims data were larger in number than opposite cases.

Level of interest: An article whose findings are important to those with closely related research interests

Quality of written English: Acceptable

Statistical review: Yes, but I do not feel adequately qualified to assess the statistics.