Reviewer’s report

Title: Shear wave elastography in chronic kidney disease: a pilot experience in native kidneys

Version: 1  Date: 13 March 2015

Reviewer: Wen-Ping Wang

Reviewer’s report:

Discretionary Revisions (which are recommendations for improvement but which the author can choose to ignore)

1. In introduction, the authors only listed the potential benefit of contrast-enhanced ultrasound quantitative analysis, which is also a promising technique to quantify CKD severity.

Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)

P value should be described as “P” in italic script but not “p” in the manuscript.

Major Compulsory Revisions (which the author must respond to before a decision on publication can be reached)

1. The authors aim was to explore whether SWE-derived estimates of tissue stiffness may serve as a non-invasive biomarker that can distinguish normal and abnormal renal parenchymal tissue. However, CKD in the early stage may be quite difficult to be differentiated from healthy ones. The authors need to make clear classify of their patients included, and compare the differenced of SWE between CKD (stage I~II) and advanced CKD (stage III~V) in the statistical analysis.

2. Inclusion criteria for healthy control subjects need to be more detailed classified. As the authors did not mention eGFR standard of those healthy controls, but only some common medical conditions.

3. In methods, authors mentioned “SWE measurements were obtained in the position offering the shortest distance to either kidney” “in a single region of interest (minimum 21 diameter 6 mm) an area of renal parenchyma at least 1 cm deep of the capsule”. Were the regions of interest in the same depth between different patients? Including only the renal cortex or the whole parenchyma? As we known, in the quantitative analysis, the size and depth of region of interest always had direct relations to the results, authors should describe in details in methods, make certain statistical analysis and discuss about various influential factors during SWE measurements.

4. Most of cases were male (64%) and most of controls were female (75%). However, the authors found in the results that “among cases, estimated tissue YM was associated with female gender (p= 0.03)”, it seemed the gender distribution of cases and controls was not comparable, and why YM of cases will
be associated with female gender (only 36%)?

**Level of interest:** An article of limited interest

**Quality of written English:** Needs some language corrections before being published

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

**Declaration of competing interests:**

I declare that I have no competing interests.