Title: Estimation of glomerular filtration rate by a radial basis function neural network in patients with type-2 diabetes mellitus

Version: 1 Date: 2 November 2012

Reviewer: Kearkiat Praditpornsilpa

Reviewer's report:

The study evaluated the validation of MDRD eGFR equation and GFR estimation by a radial basis function (RBF) network by comparing with measured GFR by isotope dynamic imaging in DM type 2 CKD patients. There are critical issues should be concerned:

Major compulsory revision

1. The measured GFR as gold standard for GFR measurement (99mTc-DTPA renal dynamic imaging) used in this study is an operator dependent measurement, The measured GFR that should be used in this study should be either inulin clearance, renal isotope clearance or plasma isotope clearance.

2. The radial basis function (RBF) network GFR calculation has not been well described and it is impossible for the reader to evaluate the validation of the study results.

3. The creatinine assay in this study was not standardized to reference serum creatine such as SRM 967 material. The non standardized serum creatine cause uncertain of the study results.

4. The conclusions of the studies are contradict with the results.

Level of interest: An article of insufficient interest to warrant publication in a scientific/medical journal

Quality of written English: Not suitable for publication unless extensively edited

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