

中文題目:接收操作特徵曲線(receiver operating characteristic; ROC) 曲線分析確定的台灣老年女性肥胖指標切點以預測低的估算腎小球濾過率 (estimated glomerular filtration rate< 60 ml/min) 的無用分析:以社區為基礎的逆行性研究

英文題目:Futility Analysis of ROC Determined Cut-off Points of Indices of Adiposity in Elderly Female Taiwanese in the Prediction of Low eGFR: a Community- Based Retrospective Study

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**Background:** Association between indices of adiposity and low estimated glomerular filtration rate (eGFR) in adults are demonstrated. Our aim was to examine the validity of receiver operating characteristics (ROC) analysis determined cut- off points of indices of adiposity in the prediction of low eGFR in a cohort of elderly female Taiwanese.

**Methods:** We performed a retrospective study; 1106 elderly female patients from a single community hospital were enrolled. Baseline serum biochemistry, hemogram, history of comorbidity and anthropometric parameters were recorded. We applied ROC analysis to identify new cut-off points of indice of adiposity (body mass index, waist circumference, weight to height ratio, numbers of metabolic syndrome, and conicity index) to discriminate low eGFR. Futility analysis of ROC analysis determined cut- off points were examined by comparison with common cut- off points with the usage of ten fold cross validation, area under the receiver operating characteristics curve for the prediction of low eGFR and adjusted P values in multivariate logistic regression analyses for the prediction of low eGFR in split sample.

**Results:** In generally, Our study showed that common cut-off points of indices of adiposity had a comparably significant adjusted P value and area under the receiver operating characteristics curve than ROC analysis determined cut-off points. Diagnostic accuracy of common cut-off points was comparable to those of ROC analysis determined cut-off points except numbers of metabolic syndrome( $n \geq 2$ ) and lower cut-off point of waist( $\geq 77.25$ cm).

**Conclusions:** It suggested that we could use common cut-off points of indices of adiposity as action levels to prevent low eGFR in elderly female Taiwanese. When we used ROC analysis determined cut-off points of numbers of metabolic syndrome ( $n \geq 2$ ) and lower cut-off point of waist (77.25cm), a higher diagnostic mean accuracy of chronic kidney disease and lower economic burden could be achieved.