Supplementary Data Table S1

Table S1 Quality assessment of included studies using QUADAS-2

Study	**Risk of bias**				**Applicability concerns**		
	Patient selection	Index test	Reference test	Flow and timing	Patient selection	Index test	Reference test
Xiaoshuang [1]	High	Low	High	Low	Low	Low	Low
Yong [2]	High	Low	High	Low	Low	Low	Low
Min-Yang [3]	High	Low	High	Low	Low	Low	Low
Zheng [4]	High	Low	High	Low	Low	Low	Low
Kumar [5]	Low	Low	Low	Low	Low	Low	Low
Tang [6]	High	Low	High	Low	Low	Low	Low
Yang 2017 [7]	Low	High	High	Low	Low	Low	Low
Chen [8]	Low	Low	High	Not clear	Low	Low	Low
Guan 2017 [9]	Low	Low	High	Not Clear	Low	Low	Low
Guan 2018 [10]	Low	Low	High	Low	Low	Low	Low
Huang [11]	Low	Low	High	Not clear	Low	Low	Low
Can Hu [12]	Low	Low	High	Not clear	Low	Low	Low
Yang 2019 [13]	Low	Low	High	Not clear	Low	Low	Low
Xie [14]	Low	Low	Low	Not clear	Low	Low	Low
Adachi [15]	Low	Low	Low	Low	Low	Low	Low
Fen li [16]	Low	Low	High	Low	Low	Low	Low
Yue L. [17]	Low	Low	High	Low	Low	Low	Low
Pei [18]	Low	Low	High	Low	Low	Low	Low
Feng [19]	Low	Low	High	Low	Low	Low	Low
Horio [20]	Low	Low	Low	Low	Low	Low	Low
Teo BW [21]	Low	Low	High	Low	Low	Low	Low

For the “Patient Selection” domain, the risk of bias was variable across the studies selected, as the description of processes involved in recruitment were either inconsistent or a group of healthy controls were recruited with the group having target clinical condition. For domains of “index test” and “reference test” there was an unclear risk of bias in these studies as they did not describe whether results of mGFR and eGFR were interpreted without knowledge of each other. For the “index test” domain only the study conducted in the Korean population with renal transplant recipients [1] had a high risk of bias as the thyroid function test was not performed after 1 year of kidney transplantation which can affect the interpretation of serum cystatin C test and might have introduced bias. For “reference test” we concluded that 17 studies (80%) ([1], [2], [3], [4], [6], [7], [8], [9], [10], [11], [12], [13], [16], [17], [18], [19], [21]) have high risk of bias, as 99mTc-DTPA has been shown to be unsuitable to be employed as reference method especially when investigating CKD-EPI equation validity and interfere with interpretation of results. For the domain of “flow and timing” we observed that 5 (23.8%) studies ([8], [9], [11], [12], [13]) have an unclear risk of bias as they did not report the interval between the index test and reference test. The applicability concerns were low in the included studies.

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