

INTRODUCTION

Estimation of glomerular filtration rate (eGFR) is the best index of kidney function, eGFR is limited by differences in creatinine generation in different age groups.

OBJECTIVE

Is to investigate the accuracy of the eGFR equations to predict renal function in geriatric population versus measurement of true GFR by diethylene triamine pentaacetic acid (^{99m}Tc- DTPA).

METHODS

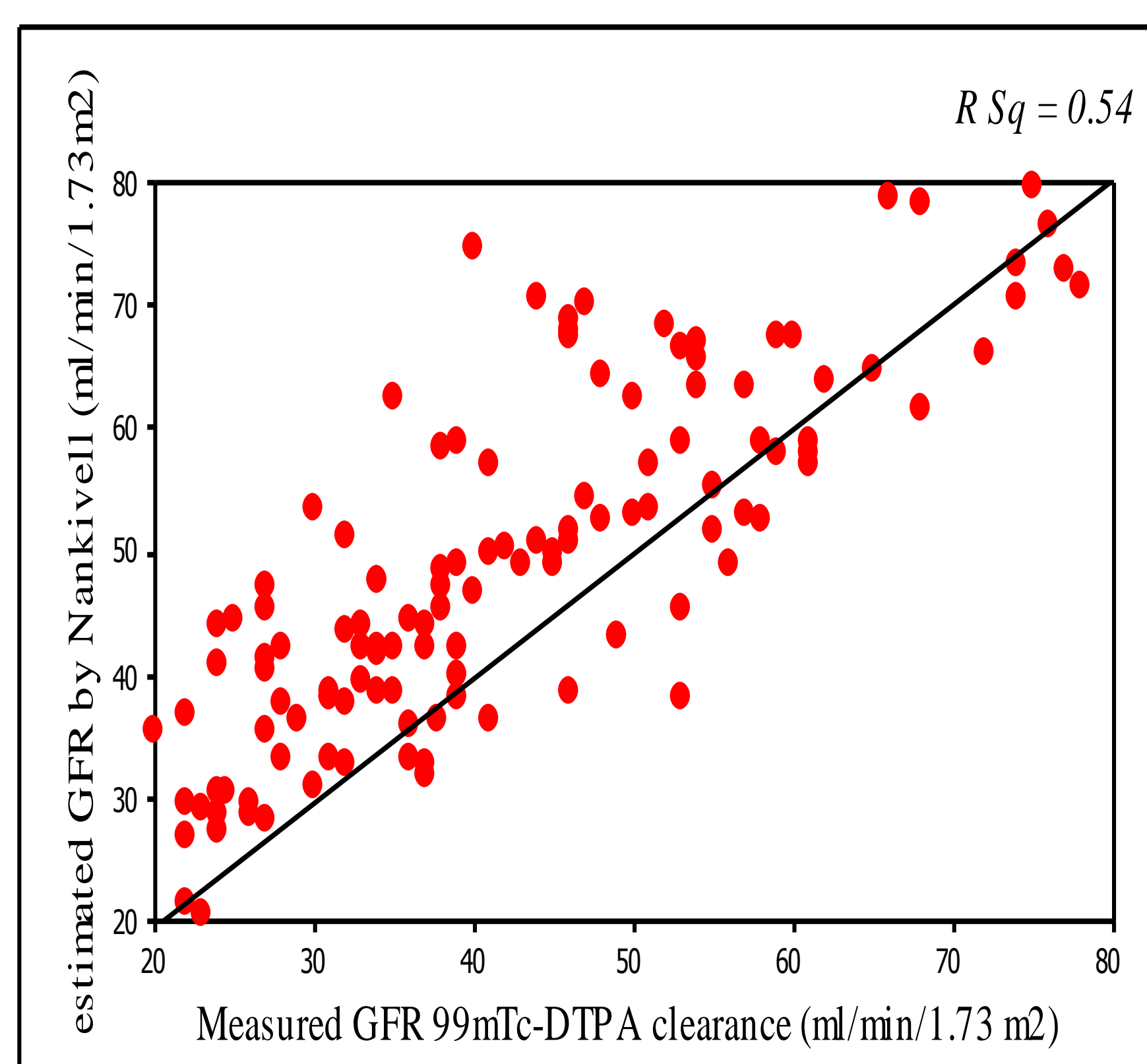
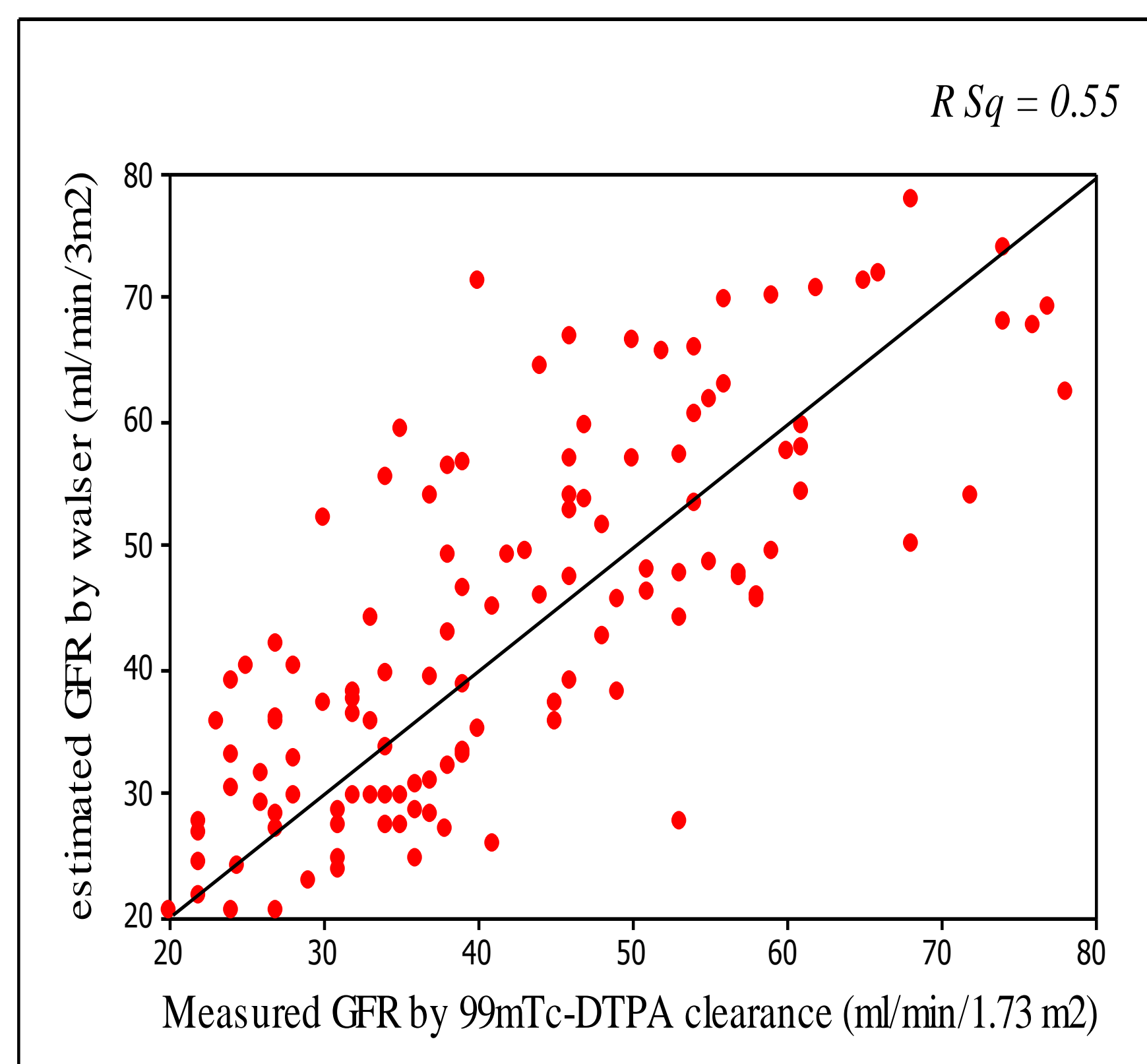
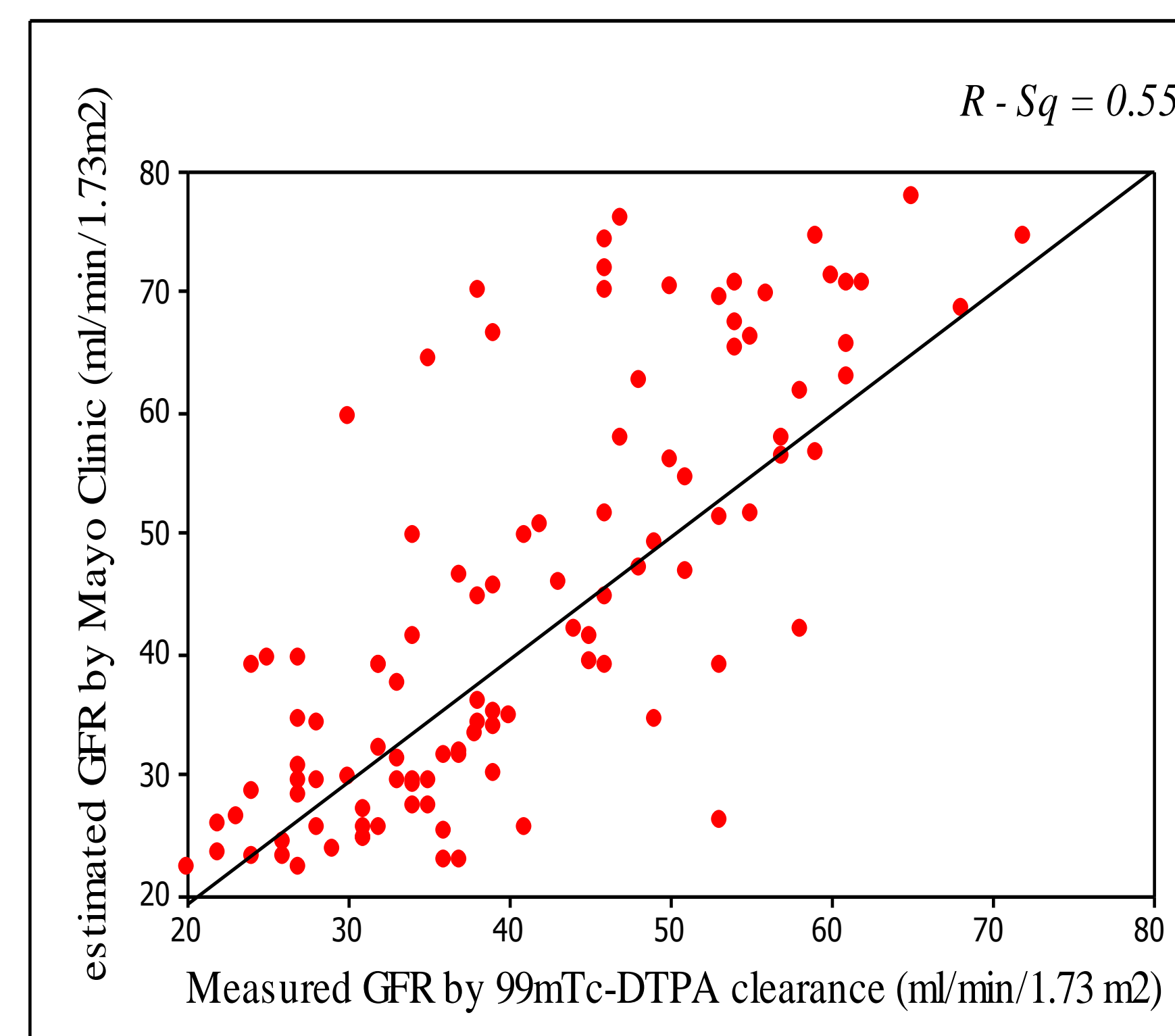
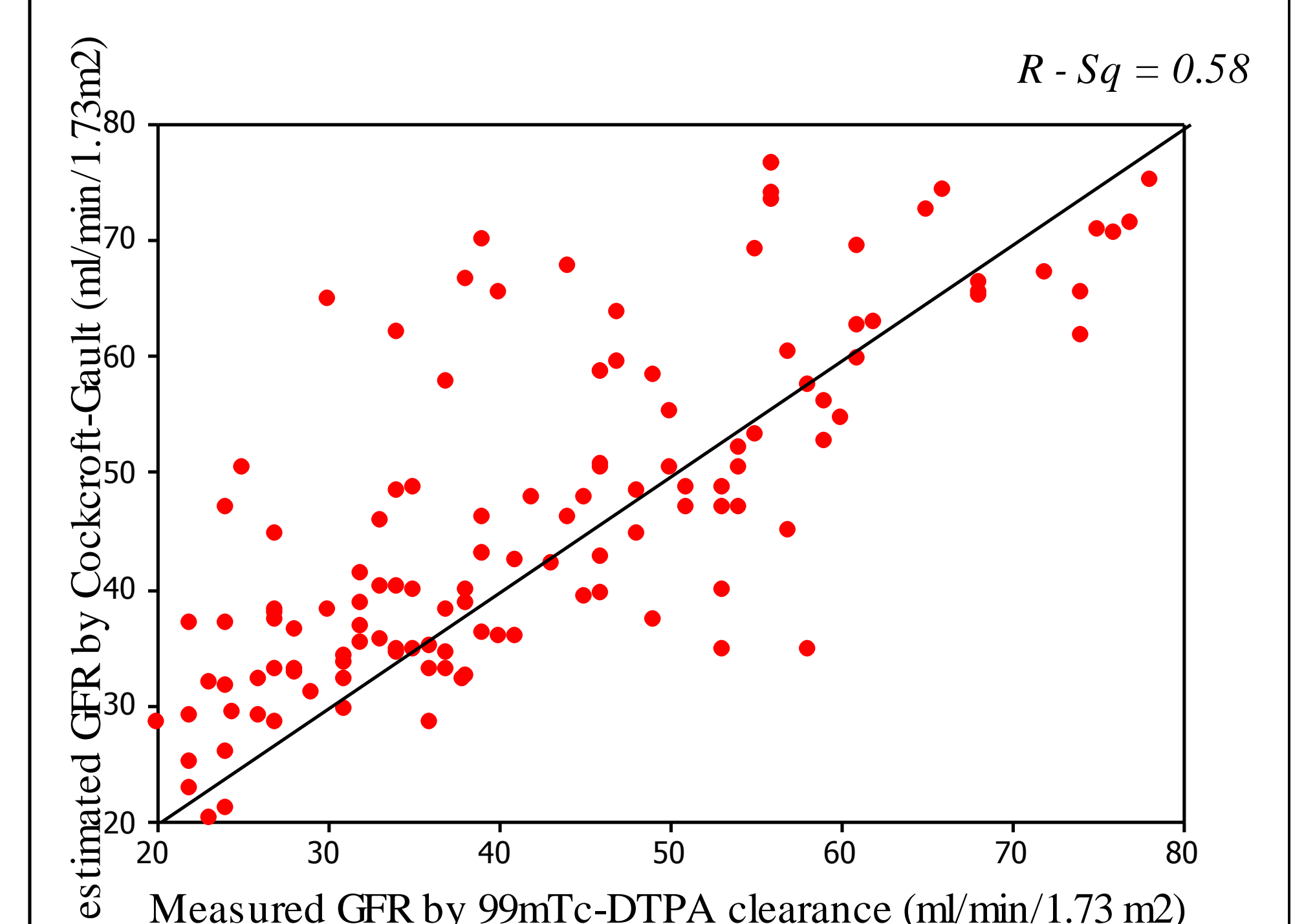
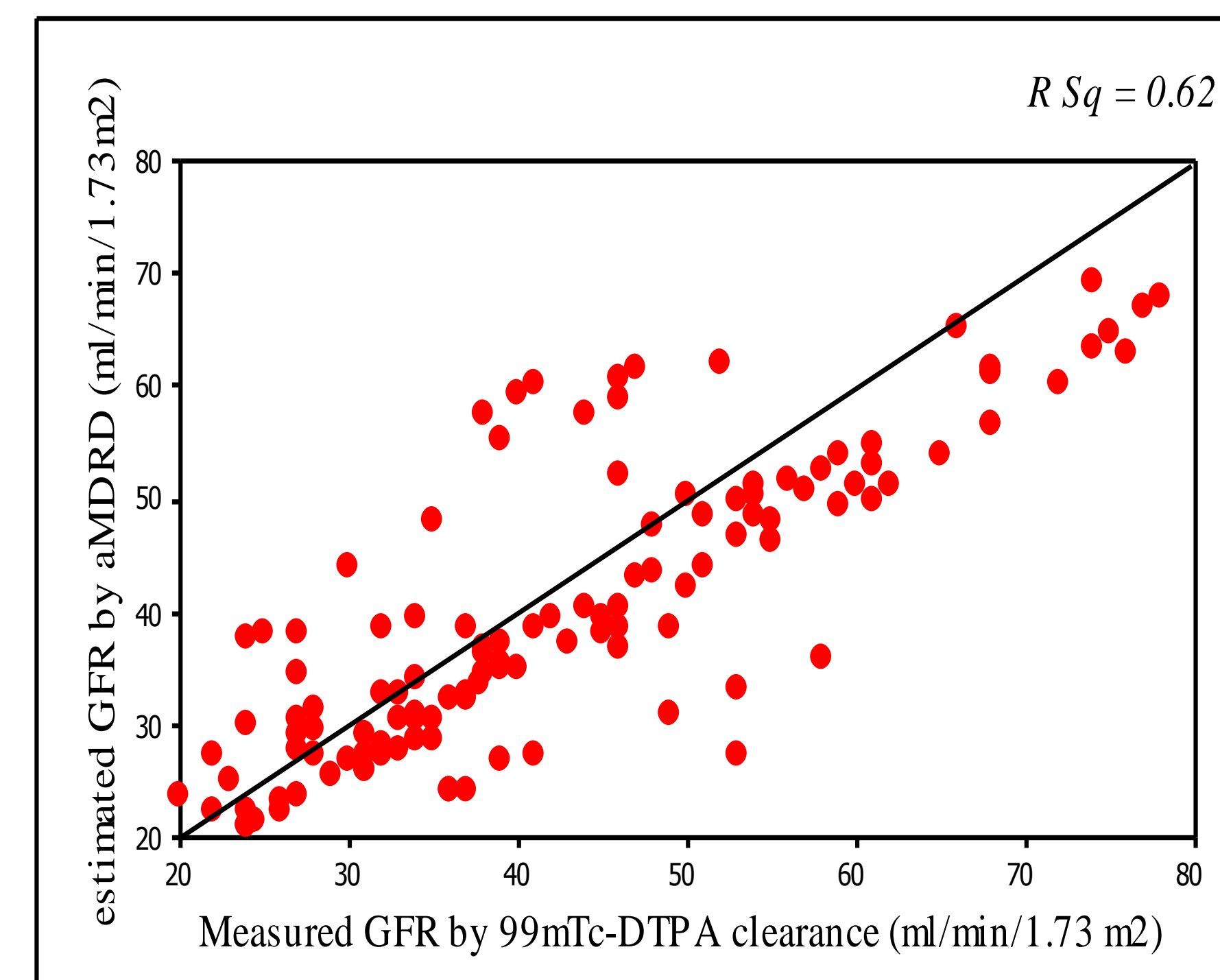
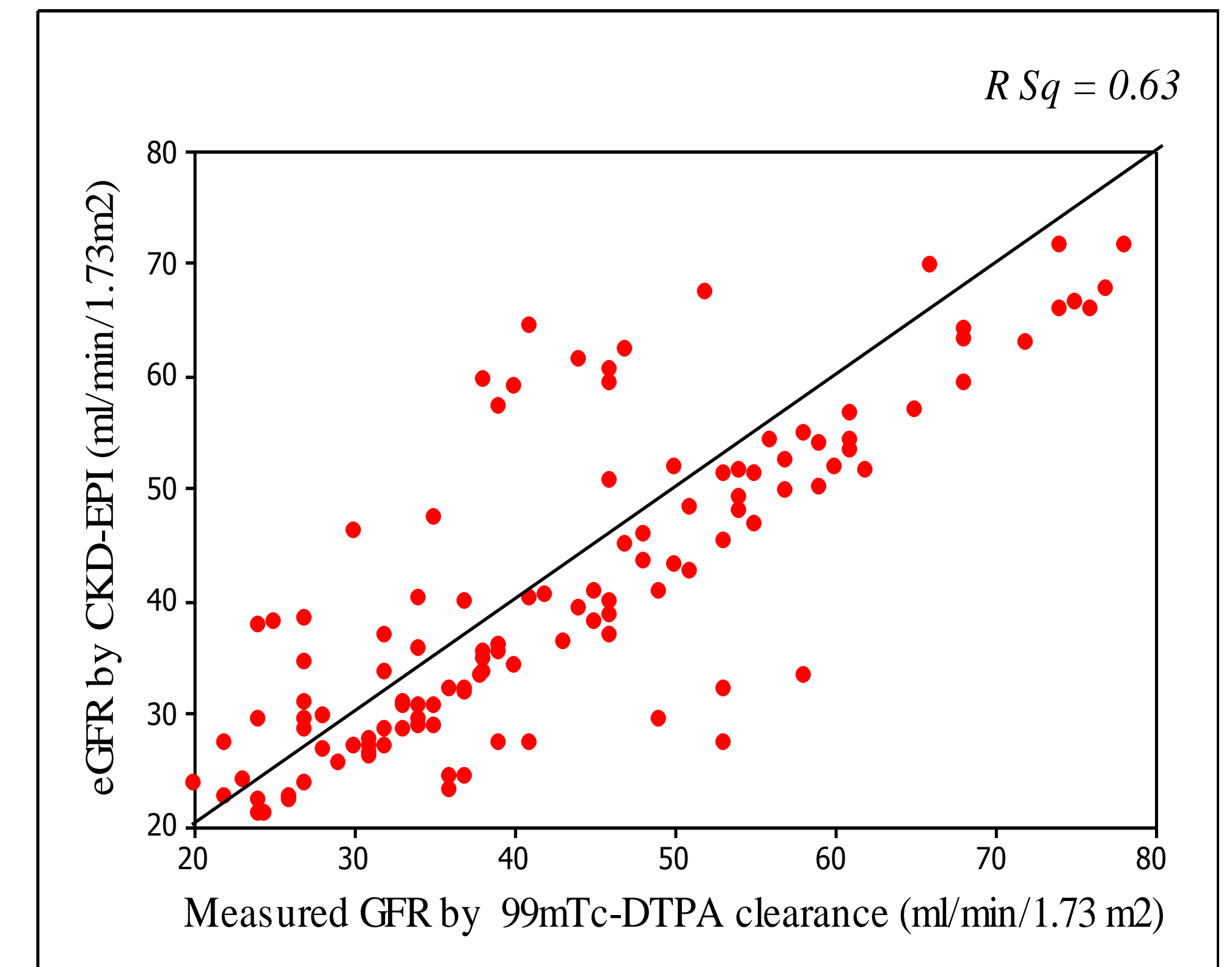
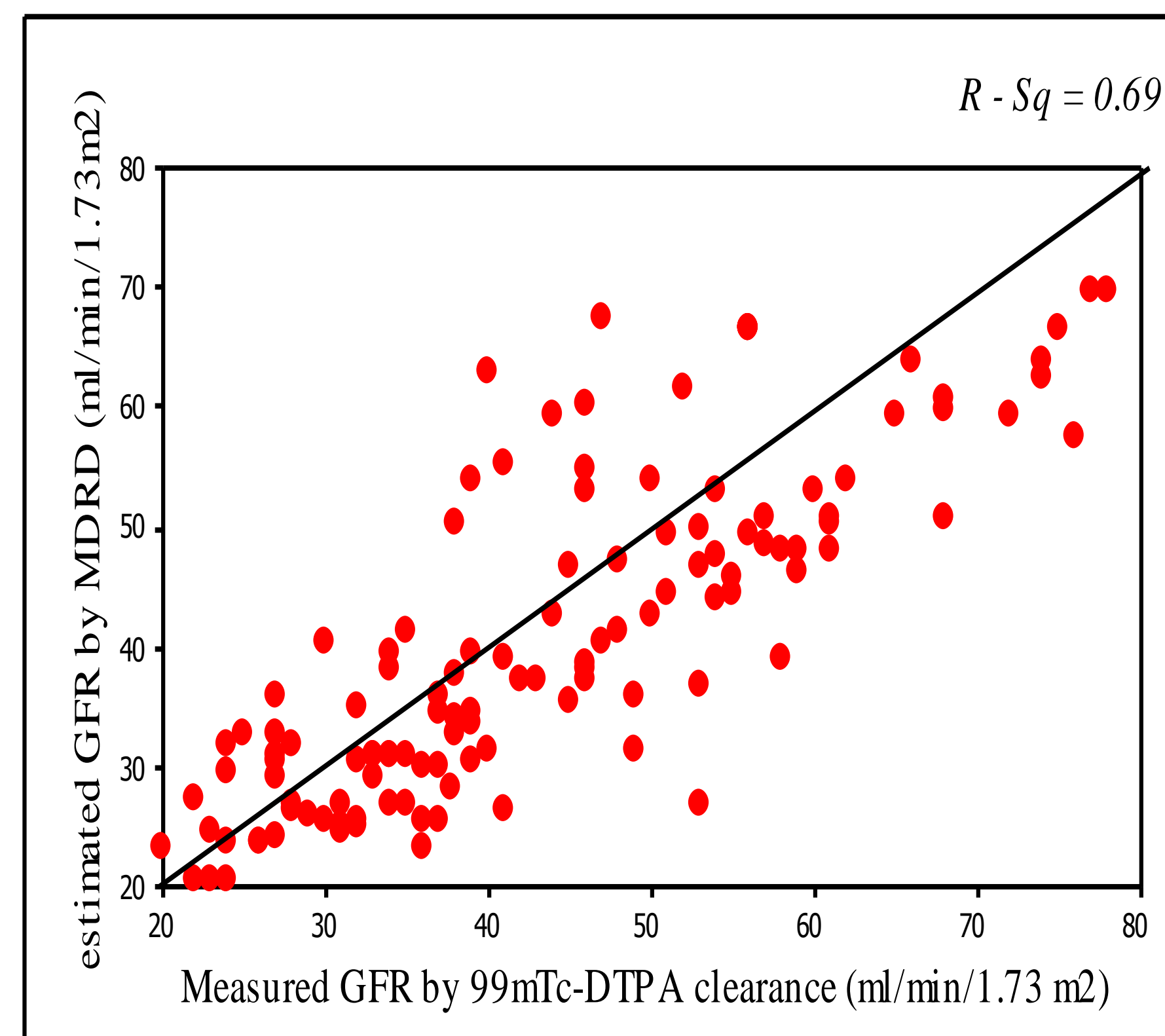
The study included 160 elderly persons, 93 females (58%) all persons are from Minia Governorate, Egypt. GFR was estimated using MDRD, aMDRD, Walser, Nankivell, Cockcroft-Gault, Mayo clinic and CKD-EPI.

RESULTS

All 7 eGFR correlated with ^{99m}Tc-DTPA clearance (p<0.05), but their r² was low, ranging from 0.69 to 0.54 Their respective r² values were: MDRD 0.69 CKD-EPI 0.63, aMDRD 0.62, Cockcroft-Gault 0.58, Mayo Clinic 0.55, Walser 0.55, Nankivell 0.54 .

Clinical and anthropometric Data

	Mean ±SD	Median	Range
Age (years)	67±7	65	61-93
Weight (Kg)	71±8	71	52-81
Height (meter)	1.7±0.1	1.7	1.5-1.9
BMI Kg/m ²	26±2	25	19-35
S.albumin (g/dl)	4±1	4	3-5.7
S.Creatininemg/dl)	0.9±0.2	0.9	0.8-1.6
BUN (mg/dl)	19±3	19	9-24



True GFR & eGFR By Different Equations

(ml/min/1.73m ²)	Mean ± SD	Median	Range
True GFR	66±15	51	21-78
eGFR MDRD	62±11	49	23-80
eGFR CKD-EPI	64±13	49	22-76
eGFR aMDRD	63±11	50	20-69
eGFR Walser	68±14	54	20-80
eGFR C.G	70±12	56	24-81
eGFR Mayo	71±21	53	23-81
eGFR Nankivell	52±18	60	22-82

Conclusions & Recommendation

In the geriatric population all 7 equations are far from being ideal but eGFR MDRD was superior to other equations in precision and accuracy.. So; it is the best one for eGFR in Geriatric population.

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