

Table SI. Included studies for meta-analysis.

First author, year	Study design	Location	Study participants age group	Sample size	Cut-off for LAP index	Mean age, years	Diabetes mellitus cohort	CKD diagnostic criteria	(Ref.)
Amouzegar, 2023	Prospective	Iran	≥20 years	3,071	NR	NR	No	Based on eGFR values	(25)
Bullen, 2022	Prospective cohort	United States	≥45 years	11,538	208.08	65	No	eGFR<60 ml/min per 1.73 m ² , and ≥25% decline in individuals with baseline eGFR>60 ml/min per 1.73 m ² between the baseline and second in-home visit	(8)
Chen, 2023	Cross-sectional	China	18-79 years	2,720	36.83	63.9	No	eGFR<60 ml/min per 1.73 m ² or urinary ACR >30 mg/g	(21)
Choumessi, 2022	Cross-sectional	Cameroon	≥25 years	200	56.79	NR	Yes	eGFR<60 ml/min per 1.73 m ²	(16)
Dai, 2016	Cross-sectional	China	≥35 years	11,192	43.33	53.83	No	eGFR<60 ml/min per 1.73 m ²	(27)
Jin, 2023	Retrospective	South Korea	≥30 years	14,068	58.3	50.97	No	eGFR<30 ml/min per 1.73 m ²	(23)

Mousapour, 2020	Cross-sectional	Iran	≥18 years	6,693	4.07	41.38	No	eGFR<60 ml/min per 1.73 m ²	(24)
Ou, 2021	Cross-sectional	Taiwan	NR	1,872	NR	64	Yes	eGFR<30 ml/min per 1.73 m ²	(28)
Seong, 2021	Cross-sectional	South Korea	≥20 years	5,667	50.5	69.37	No	eGFR<60 ml/min per 1.73 m ²	(22)
Shi, 2022	Cross-sectional	China	>18 years	13,055	46.64	63.8	No	eGFR<60 ml/min per 1.73 m ²	(19)
Sun, 2023 (a)	Cross-sectional	China	NA	2,358	55.75	42	No	eGFR values fluctuating from 30 to 60 ml/min per 1.73 m ² or Men with uACR values ≥2.5 mg/mmol and women with uACR values ≥3.5 mg/mmol	(9)
Sun, 2023 (b)	Retrospective cohort	Taiwan	≥18 years	2,659	48.94	60.44	Yes	eGFR<60 ml/min per 1.73 m ² and/or uACR≥30 mg/g	(12)
Tang, 2023	Cross-sectional	China	>18 years	931	NR	55	Yes	ACR >30 mg/g or eGFR<60 ml/min per 1.73 m ²	(10)
Yan, 2021	Cross-sectional	China	≥40 years	7,202	50.16	61	No	Presence of albuminuria and/or a decreased eGFR	(20)
Yu, 2022	Cross-sectional	China	≥40 years	8,866	25.52	60.6	No	eGFR<60 ml/min per 1.73m ²	(18)
Zhang, 2017	Cross-sectional	China	≥18 years	10,012	45.63	56.41	No	eGFR<60 ml/min per 1.73m ²	(26)
Zhao, 2021	Cross-sectional	China	≥65 years	3,363	55.48	71.1	No	eGFR<60 ml/min per 1.73 m ²	(17)

NR, not reported; eGFR, estimated glomerular filtration rate; uACR, urine albumin-to-creatinine ratio; NA, not available.

Table SII. Risk of bias assessment.

First author, year	Representativeness	Sample size justification	Non-response	Ascertainment of exposure	Control for confounding	Follow-up	Assessment of outcome	Statistical tests	Risk of bias grade ^a (score)	(Ref.)
Amouzegar, 2023	0 star	0 star	0 star	1 star	0 star	0 star	1 star	0 star	High (2)	(25)
Bullen, 2022	0 star	0 star	0 star	1 star	0 star	1 star	1 star	0 star	High (3)	(8)
Chen, 2023	0 star	1 star	1 star	1 star	2 stars	1 star	1 star	0 star	Low (7)	(21)
Choumessi, 2022	0 star	0 star	1 star	1 star	0 star	1 star	0 star	0 star	High (3)	(16)
Dai, 2016	1 star	1 star	0 star	1 star	0 star	1 star	1 star	0 star	Moderate (5)	(27)
Jin, 2023	1 star	1 star	1 star	1 star	1 star	1 star	0 star	1 star	Low (7)	(23)
Mousapour, 2020	0 star	1 star	1 star	1 star	2 stars	1 star	1 star	1 star	Low (8)	(24)

Ou, 2021	0 star	0 star	0 star	1 star	0 star	1 star	1 star	0 star	High (3)	(28)
Seong, 2021	1 star	0 star	1 star	1 star	1 stars	1 star	1 star	1 star	Low (7)	(22)
Shi, 2022	1 star	1 star	1 star	1 star	1 star	1 star	1 star	1 star	Low (8)	(19)
Sun, 2023	0 star	0 star	1 star	0 star	2 star	0 star	0 star	0 star	High (3)	(9)
Sun, 2023 (b)	1 star	0 star	1 star	1 star	2 stars	0 star	1 star	1 star	Low (7)	(12)
Tang, 2023	1 star	0 star	0 star	1 star	1 star	0 star	0 star	0 star	High (3)	(10)
Yan, 2021	0 star	1 star	1 star	1 star	1 star	0 star	1 star	0 star	Moderate (5)	(20)
Yu, 2022	1 star	1 star	0 star	1 star	1 star	1 star	1 star	1 star	Low (7)	(18)
Zhang, 2017	1 star	0 star	1 star	1 star	2 stars	1 star	0 star	1 star	Low (7)	(26)
Zhao, 2021	0 star	0 star	1 star	0 star	1 star	0 star	0 star	1 star	High (3)	(17)

*Risk of bias score: 0-3, high risk; 4-6, moderate risk; 7-9, low risk.