

Patient management and clinical outcomes associated with a recorded diagnosis of stage 3 chronic kidney disease: **the REVEAL-CKD study**

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01. BACKGROUND



Guidelines for the treatment of CKD recommend **early intervention and management** to slow disease progression



We investigated **changes in prescribing practices and eGFR decline following a CKD diagnosis** in patients in the USA with **stage 3 CKD**

02. METHODS

Data were extracted from **TriNetX**, a database of integrated electronic medical records and claims data from patients in the USA



Eligible patients:

- Age ≥ 18 years
- Two eGFR measurements indicative of stage 3 CKD (≥ 30 and < 60 mL/min/1.73 m²) recorded 91–730 days apart from 2015 to 2020
- Lack of ICD-9/10 code for CKD any time before and up to 6 months after second qualifying eGFR measurement
- CKD diagnosis ≥ 6 months after second qualifying eGFR measurement

03. RESULTS

26,851 ▶ patients

57.4% ▶ female

71.3 years ▶ mean age

Median annual decline in **eGFR** (mL/min/1.73 m²) **significantly decreased** following a CKD diagnosis^a

Before **−3.20** 95% CI: −3.38, −3.00

After **−0.74** 95% CI: −0.96, −0.53

The rate of prescribing of guideline-recommended drugs **increased significantly** in the 180 days after (versus the 180 days before) a CKD diagnosis

ACE inhibitors **↑ 87%**

ARBs **↑ 91%**

MRAs **↑ 123%**

SGLT-2 inhibitors **↑ 62%**

Delayed CKD diagnosis (by 1-year increments) was associated with **elevated risk** of:

CKD progression (stage 4/5) **↑ 40%**

Kidney failure (transplant or chronic dialysis) **↑ 63%**

MACE+ (composite of MI, stroke and hHF) **↑ 8%**

04. CONCLUSION

An **early recorded diagnosis** of stage 3 CKD is an important first step to **reduce the risk of disease progression** and **associated complications**.



^aExcludes values taken within ± 0.5 years of CKD diagnosis. Abbreviations: ACE, angiotensin-converting enzyme; ARB, angiotensin-II receptor blocker; CI, confidence interval; CKD, chronic kidney disease; eGFR, estimated glomerular filtration rate; hHF, hospitalization for heart failure; MACE+, major adverse cardiovascular events; MI, myocardial infarction; MRA, mineralocorticoid receptor agonist; SGLT-2, sodium–glucose cotransporter-2. This infographic represents the opinions of the authors. For a list of declarations, including funding and author disclosure statements, please see the full text online. © The authors, CC-BY-NC 2022