LEARN WHY

THE **PRESSURE** IS ON TO DIAGNOSE CKD

TAKE THE PRESSURE OFF BY DIAGNOSING EARLY.

CKD, chronic kidney disease.

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START

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HIGH PREVALENCE. LOW DIAGNOSIS.

CKD is a life-threatening condition that is vastly underdiagnosed.[1] In fact, 9 out of 10 people with CKD are not aware they have it—in both developed and developing countries.[1] As few as 10% of adults with CKD are diagnosed, even in Stage 3.[2,3]

Contributing to its underdiagnosis, CKD is a "silent disease", with most patients experiencing no symptoms until the disease has progressed.[4] Additionally, data show that the elderly are less likely to be diagnosed with CKD than younger people.[5]

Be vigilant, for your patients' sake. They depend on you to diagnose CKD in its earlier stages. This brochure provides information and insights you can use when discussing CKD with your patients—including who is at high risk, screening guidelines, and why early intervention can help to slow the progression of disease.

CKD, chronic kidney disease.

Patient image for illustrative purposes only, not an actual patient.

YOU CAN **MAKE A DIFFERENCE.**

When you diagnose CKD early, you make a difference. Identifying patients and intervening early can slow disease progression, preserve kidney function, and reduce complications.[2,6]

Pay particular attention to your high-risk patients. Hypertension and diabetes are the most common causes of CKD and kidney failure in adults.[1,7,8] Other common risk factors include cardiovascular disease and increased age.[8,9]

Regularly checking your patients' eGFR and performing a UACR test, especially in high-risk patients, can inform early diagnosis, allowing for appropriate interventions.[10,11] Help your patients continue living the life they know and love longer.[2,6]

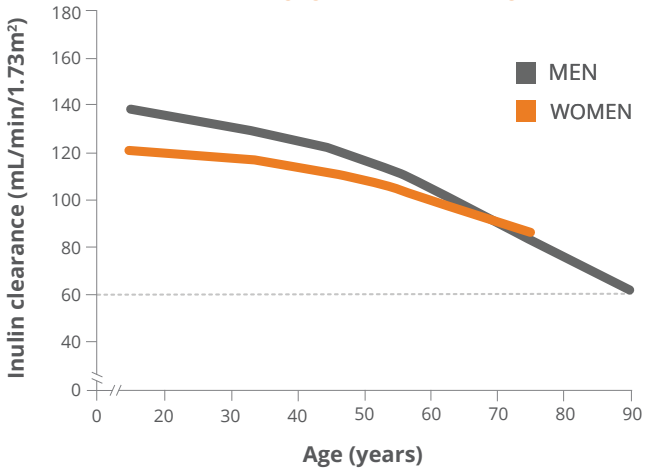
CKD, chronic kidney disease; eGFR, estimated glomerular filtration rate; UACR, urine albumin-to-creatinine ratio.

Patient image for illustrative purposes only, not an actual patient.

INCREASED AGE IS NO REASON TO DISMISS CKD

It is understood that, as people age, there is a corresponding natural decline in kidney function that begins to occur.[11] However, epidemiologic literature shows that an **eGFR <60 mL/min/1.73m² is not normal for any age**.[12]

NORMAL GLOMERULAR FILTRATION RATE VALUES IN MEN AND WOMEN



Adapted from: Measurement and Estimation of Kidney Function. https://abdominalkey.com/measurement-and-estimation-of-kidney-function/

Solid lines represent the mean value of GFR per decade of age; data for women included those up to approximately 75 years of age.

Patients with compromised kidney function—especially those who are older—should be evaluated, diagnosed, and managed early to help improve clinical outcomes.

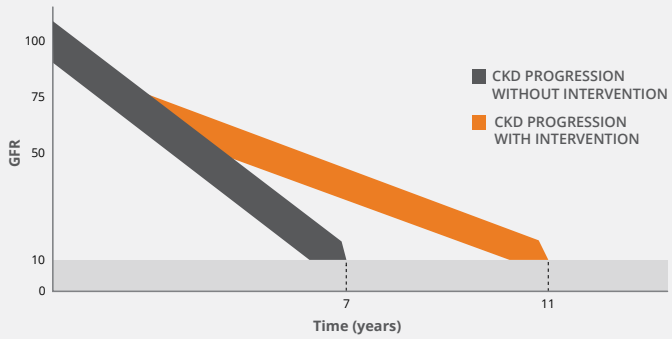
CKD, chronic kidney disease; eGFR, estimated glomerular filtration rate; GFR, glomerular filtration rate.

Patient image for illustrative purposes only, not an actual patient.

EARLIER INTERVENTION: SIGNIFICANT IMPACT

Early intervention has been shown to slow disease progression in patients with CKD and reduce the risk of complications; declines in kidney function have been shown to produce widespread effects leading to poorer outcomes, including cardiovascular events, hospitalisation, and mortality.[2,6,9]

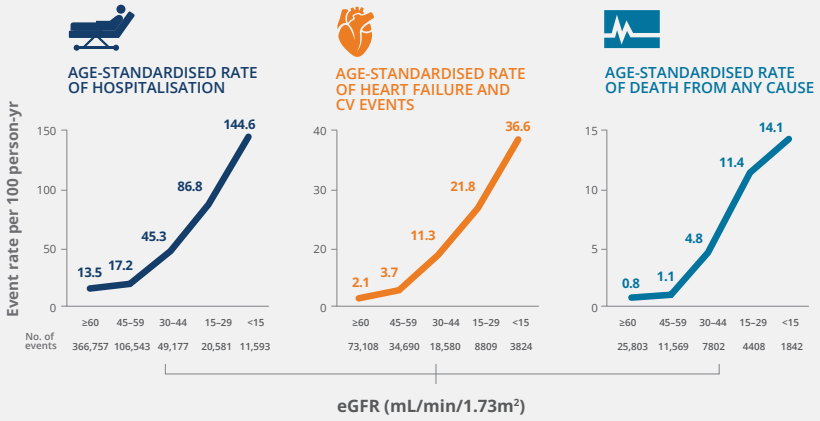
EARLY INTERVENTION DELAYS KIDNEY FAILURE[6]



Data from 2001

Adapted from Alabama Public Department of Health, 2007, and Brenner BM et al, 2001.

PROGRESSION OF CKD INCREASES THE RISK FOR ADVERSE OUTCOMES[13]



Adapted from Go AS et al, 2004.

CKD, chronic kidney disease; CV, cardiovascular; eGFR, estimated glomerular filtration rate.

"It's a silent disease at the beginning."

-CKD Patient

INSIDE THE KIDNEY, THE **PRESSURE** IS ON— AND THAT CAN LEAD TO POOR OUTCOMES.

While patients may feel no early symptoms of CKD, inside their kidneys, intraglomerular pressure is building.[1,6,14] If left unchecked, this pressure can cause irreversible damage to nephrons, leading to reduced kidney function, poor outcomes, and, ultimately, a lower quality of life.[1,2,15]

CKD is considered a "disease multiplier", because it increases the risk of other common associated comorbidities.[16] For example, in one US study, older adults with CKD were 13x more likely to die before progressing to ESKD and 6x more likely to die from cardiovascular causes.[14]

CKD, chronic kidney disease; ESKD, end-stage kidney disease; US, United States.
Patient image for illustrative purposes only, not an actual patient.

“No one had ever talked to me about CKD.”

-CKD Patient

THE **PRESSURE** IS ON TO DIAGNOSE CKD

DON’T WAIT TO **TALK TO PATIENTS ABOUT CKD**.

It is never easy to deliver a “bad” diagnosis to a patient. CKD is no exception, and it is complicated by the fact that many patients barely understand what the kidneys do, let alone what having CKD means. The only thing they may know about kidney disease is the threat of dialysis. You can offer your patients the hope that comes with early intervention: slowing disease progression and prolonging dialysis-free living.

CKD, chronic kidney disease.

Patient image for illustrative purposes only, not an actual patient.

KNOW YOUR PATIENTS' NUMBERS: eGFR.

Early diagnosis is essential. The tools you need to diagnose are readily available. The eGFR calculations in your patients' metabolic panel can help you conveniently track kidney function.

Check to see if your labs are calculating eGFR for you. Test results can be easily conveyed to your patients in terms of percentage of kidney function remaining.

STAGE		GFR	% OF KIDNEY FUNCTION
STAGE 1	Minimal kidney damage with normal kidney function	90 or higher	90%–100%
STAGE 2	Kidney damage with mild loss of kidney function	60 to 89	60 to 89
STAGE 3a	Mild to moderate loss of kidney function	45 to 59	45 to 59
STAGE 3b	Moderate to severe loss of kidney function	30 to 44	30 to 44
STAGE 4	Severe loss of kidney function	15 to 29	15 to 29
STAGE 5	Kidney failure	<15	<15

This table illustrates the 5 Stages of CKD, demonstrating mild kidney damage in Stages 1 and 2, moderate damage in Stages 3a and 3b, severe loss of kidney function in Stage 4, and kidney failure in Stage 5.[11]

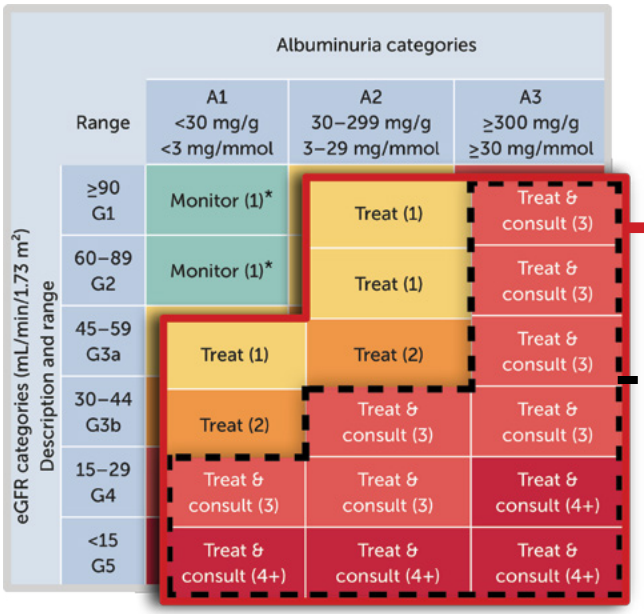
Adapted from the National Kidney Foundation and Kidney Disease: Improving Global Outcomes (KDIGO).

CKD, chronic kidney disease; eGFR, estimated glomerular filtration rate.

KNOW YOUR PATIENTS' NUMBERS: UACR.

In addition to eGFR, early intervention guidelines suggest also using the UACR test, which assesses albuminuria using a urine test.[17] When present, albuminuria indicates an increased risk of CKD progressing to kidney failure.[10] The KDIGO Heat Map was created to show how eGFR and UACR can be used together to help understand risk of worsening outcomes, frequency of monitoring, when to initiate appropriate management, and when to refer to a nephrologist.[17]

Risk categories for CKD progression, morbidity, and mortality; monitoring frequency (number of check-ups per year in parentheses); and nephrology consultation categories[18]



Treat
eGFR <60 mL/min/1.73 m²
and/or UACR ≥30 mg/g

Treat and Consult a nephrologist
eGFR <30 mL/min/1.73 m²
and/or UACR ≥300 mg/g
(or if eGFR 30–44 mL/min/1.73 m²
and UACR ≥30 mg/g)

Adapted from de Boer et al 2022**

*Low risk: stable disease OR NO CKD in absence of other markers of kidney damage, such as urine sediment abnormalities, electrolyte abnormalities due to tubular disorders, renal histological abnormalities, structural abnormalities detected by imaging (e.g. polycystic kidneys, reflux nephropathy), or a history of kidney transplantation.[18] Requires measurements once a year or earlier in case of new symptoms/risk factors. Taken and adapted from ISN-KDIGO CKD Early Identification & Intervention in Primary Care Document. Commissioned and funded by AZ. Accessed April 20, 2023. https://www.theisn.org/initiatives/ckd-early-screening-intervention/#PrimaryCare

**Adapted from de Boer IH et al. *Diabetes Care* 2022;45(12):3075–3090. Refer to guidelines for more information on treatment, monitoring and additional considerations for nephrology consultation.

RISK FACTORS FOR CKD

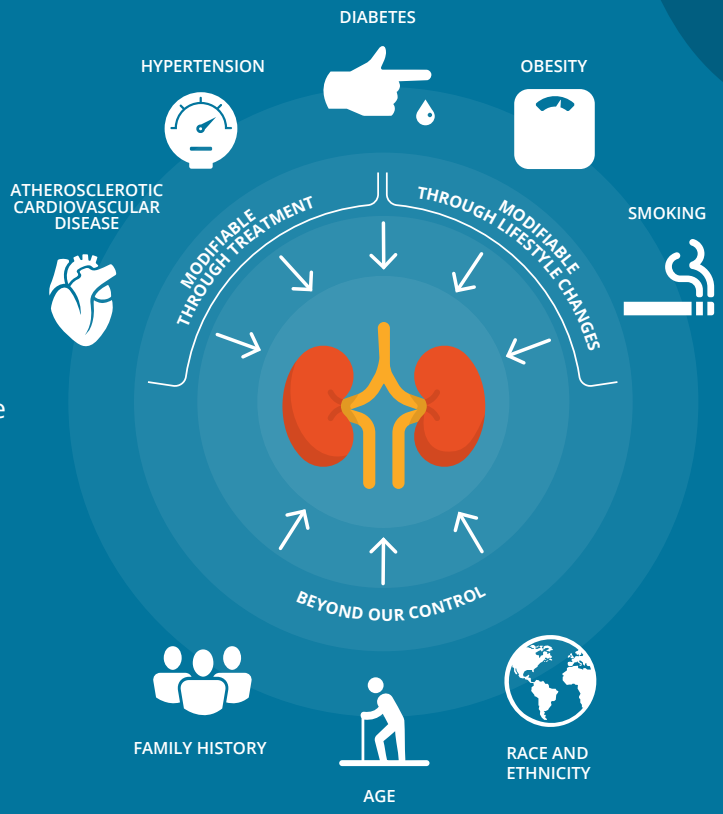
While hypertension, diabetes, and cardiovascular disease are the most common risk factors for CKD, there are others—some within our control, and some beyond it.[7-9] Patients who meet one or more of these criteria are at higher risk; they should be screened regularly.[4,9]

Certain socioeconomic factors, comorbidities, and ethnicities can impact a patient's risk of developing CKD.[8,9,19,20]

For example, Southeast Asians and African Americans are known to be at higher risk for CKD.[4,20,21] Reasons are not fully understood, but T2D and hypertension play a role.[1,8,20,21] Similarly, IgA nephropathy, an autoimmune disease, is more common in Asian patients.[20,22]

For people of recent African ancestry in both American and sub-Saharan populations, APOL1 genetic variants account for an estimated 15% increased lifetime risk of CKD.[23] In the US, Black Americans are more than 4 times as likely to develop kidney failure as compared to White Americans, partially as a result of comorbidities and socioeconomic factors.[9]

The adjacent visual categorises risk factors; some cannot be modified, while others can be managed through treatment and lifestyle changes.[24]



APOL1, apolipoprotein L1; CKD, chronic kidney disease; IgA, immunoglobulin A; T2D, Type 2 diabetes; US, United States.

YOUR PATIENTS DEPEND ON YOU. **DIAGNOSE CKD EARLY.**

You're already checking your patients' blood pressure, glucose, and cholesterol numbers. **Why not keep their kidney function a high priority as well?** CKD is an equally urgent concern, and diagnosing it in its earlier stages is essential.[1,6]

Since CKD is a progressive disease that often causes no symptoms until it is advanced, many patients, especially those who are older, don't realize they have it until they're approaching kidney failure.[4]

But with timely intervention, you can help delay disease progression, preserving kidney function and quality of life.[1,2,6] And with advancing science, you may be able to do even more, early on, for this underdiagnosed disease.

So screen your patients regularly by utilizing eGFR and UACR—they can enhance screening accuracy so you can confidently diagnose the right patients and improve long-term prognosis.

CKD, chronic kidney disease; eGFR, estimated glomerular filtration rate; UACR, urine albumin-to-creatinine ratio.

Patient image for illustrative purposes only, not an actual patient.

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