

## LEARN WHY THE PRESSURE IS ON TO DIAGNOSE CKD

TAKE THE PRESSURE OFF BY DIAGNOSING EARLY.





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**HIGH PREVALENCE.** LOW DIAGNOSIS.



Chronic kidney disease (CKD) is a life-threatening condition that is vastly underdiagnosed.<sup>1</sup> 9 out of 10 people with CKD don't know they have it – in both developed and developing countries.<sup>1</sup> Even at stage 3, as few as 10% are diagnosed.<sup>2,3</sup>

Contributing to its underdiagnosis, CKD is a "silent disease," with most patients experiencing no symptoms until the disease has progressed.<sup>4</sup>



Be vigilant, for your patients' sakes. 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's high risk, screening guidelines, and why early intervention can help slow the progression of their disease.

"Highlighting the risk would have been a wake-up call."

-CKD 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.<sup>2,5</sup>



Pay particular attention to your high-risk patients. Hypertension and diabetes are the most common causes of CKD and kidney failure in adults.<sup>1,6,7</sup> Other common risk factors include cardiovascular disease.<sup>7</sup>

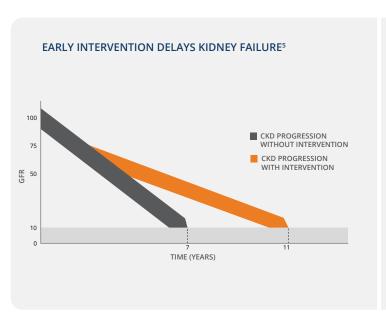
Regularly check the eGFR on your patients' metabolic panel. Knowing their numbers can inform early diagnoses, allowing for appropriate interventions. Help your patients continue living the lives they know and love longer.<sup>2,5</sup>

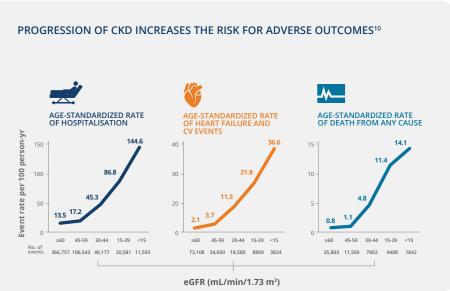




#### **EARLIER INTERVENTION: SIGNIFICANT IMPACT**

Early intervention has been shown to slow disease progression in CKD patients and reduce the risk of complications, while declines in kidney function have been shown to produce widespread effects leading to poorer outcomes, including CV events, hospitalisation, and mortality.<sup>2,5,8</sup>





Adapted from Alabama Public Department of Health, 2007.

Adapted from Go AS et al, 2004.



# "It's a silent disease at the beginning." -CKD Patient

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



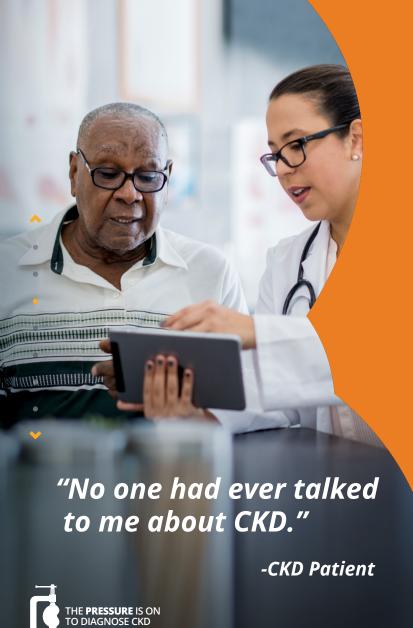
While patients may feel no early symptoms of CKD, inside their kidneys, intraglomerular pressure is building. 1,6,11 If left unchecked, this pressure can cause irreversible damage to nephrons, leading to reduced kidney function, poor outcomes and, ultimately, a lower quality of life. 1,2,9



CKD is considered a "disease multiplier" and often presents with other progressive diseases.4 For example, in a US study, older adults with CKD are 13x more likely to die before progressing to end-stage kidney disease (ESKD) and 6x more likely to die from cardiovascular causes. 10,11







#### DON'T WAIT TO TALK TO **PATIENTS ABOUT CKD.**



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

#### **RELIEVE THE PRESSURE.** DIAGNOSE AND DISCUSS.

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 patient's in terms of declining kidney function.

This table illustrates the 5 Stages of CKD, ranging from mild kidney damage in Stages 1 and 2, to moderate damage in Stages 3A and 3B, severe loss of kidney function in Stage 4, and kidney failure in Stage 5.<sup>12</sup>

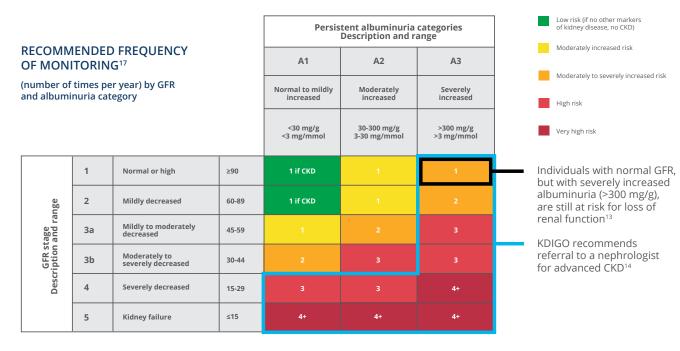
GFR	% OF KIDNEY FUNCTION
90 or higher	90%-100%
60 to 89	60 to 89
45 to 59	45 to 59
30 to 44	30 to 44
15 to 29	15 to 29
<15	<15%
	90 or higher 60 to 89 45 to 59 30 to 44

Adapted from the National Kidney Foundation.



#### **RELIEVE THE PRESSURE.** DIAGNOSE AND DISCUSS.

In addition to eGFR, the urine albumin-to-creatinine ratio (UACR) provides another means of diagnosing, or confirming a diagnosis of CKD; and is necessary to support a Stage 2 diagnosis. The KDIGO guidelines can help you track and assess your patients' numbers so you can better determine how frequently (in times per year) specific patients need to be screened.<sup>13,14</sup>



Adapted from Levin A et al, 2013.



#### **RISK FACTORS** FOR CKD

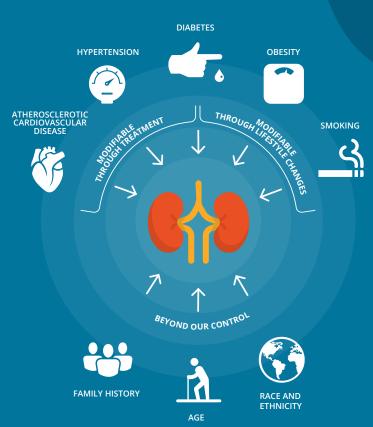
While hypertension, diabetes, and cardiovascular disease are the most common risk factors for CKD, there are others—some within our control, and some beyond it.<sup>6-8</sup> Patients who meet one or more of these criteria are at higher risk; they should be screened regularly.<sup>4,8</sup>

Certain socioeconomic factors, comorbidities, and ethnicities can impact a patient's risk of developing CKD.<sup>7,8,15,16</sup>

For example, Southeast Asians and African Americans are known to be at higher risk of CKD.<sup>4,16,17</sup> Reasons are not fully understood, but T2D and hypertension play a role.<sup>1,7,16,17</sup> And IgA nephropathy, an autoimmune disease, is more common in Asian patients.<sup>16,18</sup> In this patient population, UACR screening is recommended in addition to eGFR.<sup>17</sup>

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.<sup>19</sup> In the US, Black Americans have roughly 3x the risk of developing end-stage kidney disease as White Americans, partially as a result of comorbidities and socioeconomic factors.<sup>8</sup>

The adjacent chart categorizes risk factors: Some cannot be modified while others can be managed through treatment and lifestyle changes.<sup>20</sup>







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.<sup>1,5</sup>

Since CKD is a progressive disease that often causes no symptoms until it is advanced, many patients don't realize they have it until they're approaching kidney failure.<sup>4</sup>

But with timely intervention, you can help delay disease progression, preserving kidney function and quality of life. 1,2,5 And with advancing science, you may be able to do even more, early on, for this underdiagnosed disease.

So screen your patients regularly, especially those who are high risk. Track their kidney numbers – it could make all the difference.





#### REFERENCES

- 1. GBD Chronic Kidney Disease Collaboration, Lancet, 2020;395(10225);709-733.
- Ravera M, Noberasco G, Weiss U, et al. CKD awareness and blood pressure control in the primary care hypertensive population. Am J Kidney Dis. 2011;57(1):71–77.
- 3. Ryan TP, Sloand JA, Winters PC, Corsetti JP, Fisher SG. Chronic kidney disease prevalence and rate of diagnosis. Am J Med. 2007;120(11):981–986.
- NIH NIDDK. Kidney Disease Stats. December 2016. Accessed 20 April 2021. https://www.niddk.nih.gov/health-information/health-statistics/kidney-disease
- Alabama Department of Public Health. Special Task Force on Chronic Kidney Disease report. Published April 2007. Accessed 20 April 2021. https://www.alabamapublichealth.gov/publications/assets/ kidneydiseasereport.pdf
- 6. Ghaderian SB et al. J Renal Inj Prev. 2014;3(4):109-110.
- 7. Courser WG et al. Kidney Int. 2011;80(12):1258-1270.
- National Kidney Foundation. Kidney disease: the basics. Factsheet. Published 14 May 2020. Accessed 20 April 2021. https://www.news/newsroom/factsheets/KidneyDiseaseBasics
- 9. Schnaper HW. Pediatr Nephrol. 2014;29(2):193-202.
- 10. Go Alan S et al.N Engl J Med 23 September 2004; 351:1296–1305.

- 11. Dalrymple LS et al. J Gen Intern Med. 2011;26(4):379–385.
- National Kidney Foundation. Estimated glomerular filtration rate (eGFR). Published 14 September 2020. Accessed 20 April 2021. https://www.kidney.org/atoz/content/gfr
- 13. National Kidney Foundation. Kidney failure risk factor: urine albumin-to-creatinine ratio (UACR). Accessed 20 April 2021. https://www.kidney.org/content/kidney-failure-risk-factor-urine-albumin-to-creatinine-ration-uacr
- 14. Levin A et al. Summary of KDIGO 2012 CKD Guideline. Kidney Int. 2014;85(1):49-61.
- 15. National Institutes of Health. National Institute of Diabetes and Digestive and Kidney Diseases. Race, ethnicity, & kidney disease. March 2014. Accessed 20 April 2021. https://www.niddk.nih.gov/health-information/kidney-disease/race-ethnicity
- 16. National Kidney Foundation. IgA Nephropathy. Published 15 June 2020. Accessed 20 April 2021. https://www.kidney.org/atoz/content/iganeph
- 17. Kataoka-Yahiro M et al. BMC Nephrol. 2019;20(1):10.
- 18. Prakash S et al. Clin Nephrol. 2008;70(5):377-384.
- 19. Dummer Patric D et al. APOL1 kidney disease risk variants an evolving landscape. Semin Nephrol 2015 May; 35(3):222–236. Accessed 20 April 2021. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4562465/
- 20. Brück K et al. CKD Prevalence Varies across the European General Population. J Am Soc Nephrol. 2016;27(7):2135–2147. 2016 July 27(7). Accessed 20 April 2021. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4926978/#s1title



