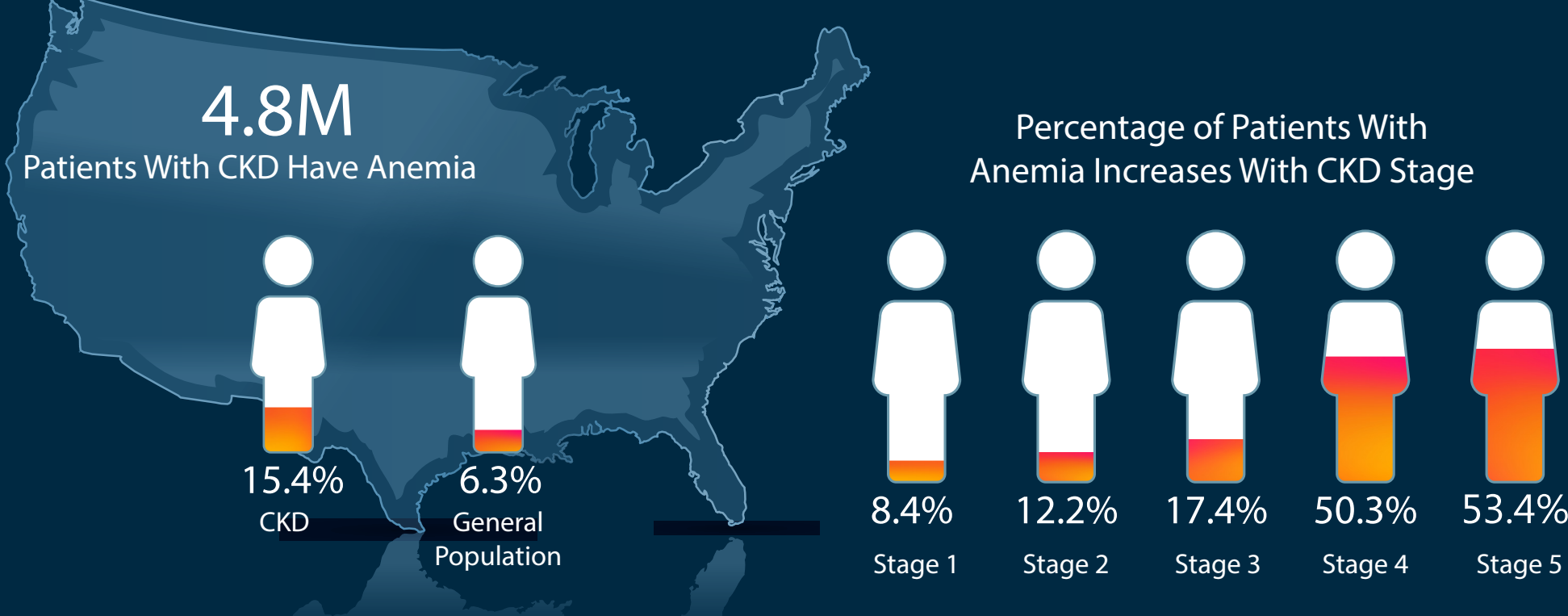


Burden of Anemia Due to Chronic Kidney Disease (CKD)

Prevalence of Anemia Due to CKD Increases With Disease Progression¹



Higher Clinical Burden Is Demonstrated in Patients With Anemia and CKD (Stages 3-4)

Mean Number of CV-Related Comorbidities Is Higher^{2,*}



With Anemia

Without Anemia

*Values represent incidence rate ratio (P<0.001)

Mortality Rate Is Higher³

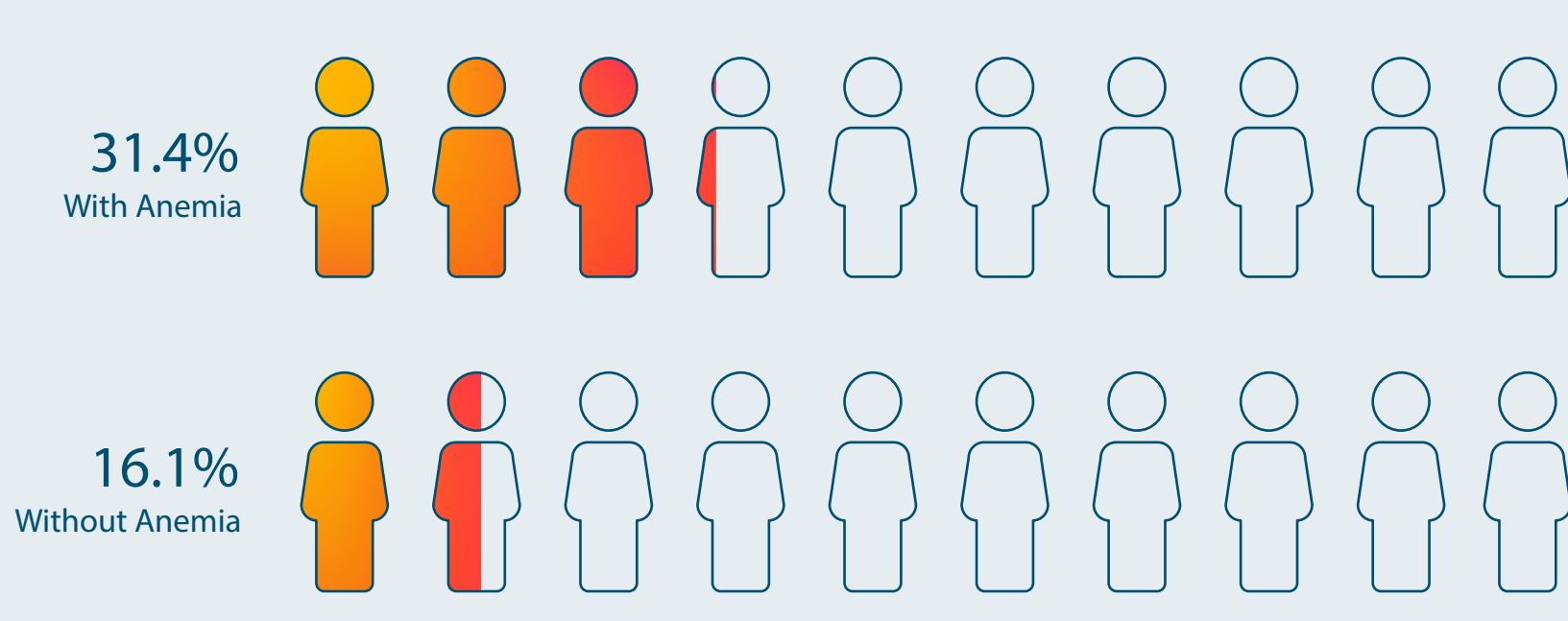


With Anemia

Without Anemia

P<0.005

Annual Hospitalization Rate Is Significantly Higher³



Reduced Quality of Life Is Associated With Anemia in Patients With CKD (Stages 3-5D)

Fatigue Is More Common⁴

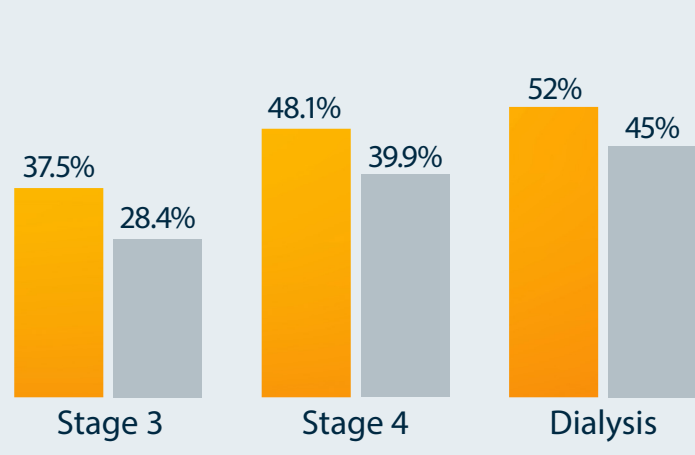


With Anemia

Without Anemia

P<0.0001

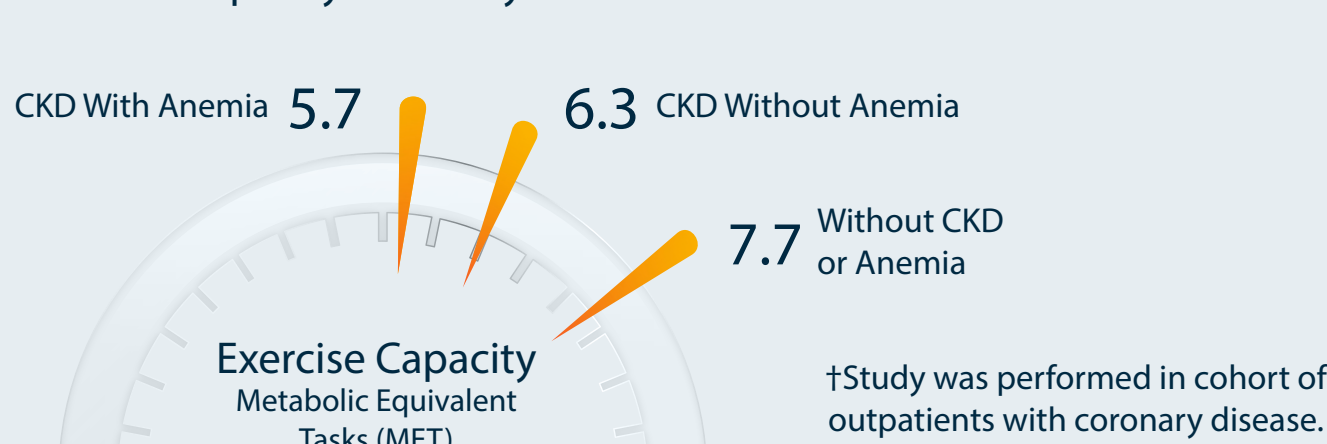
Activity Impairment Increases With Disease Progression⁴



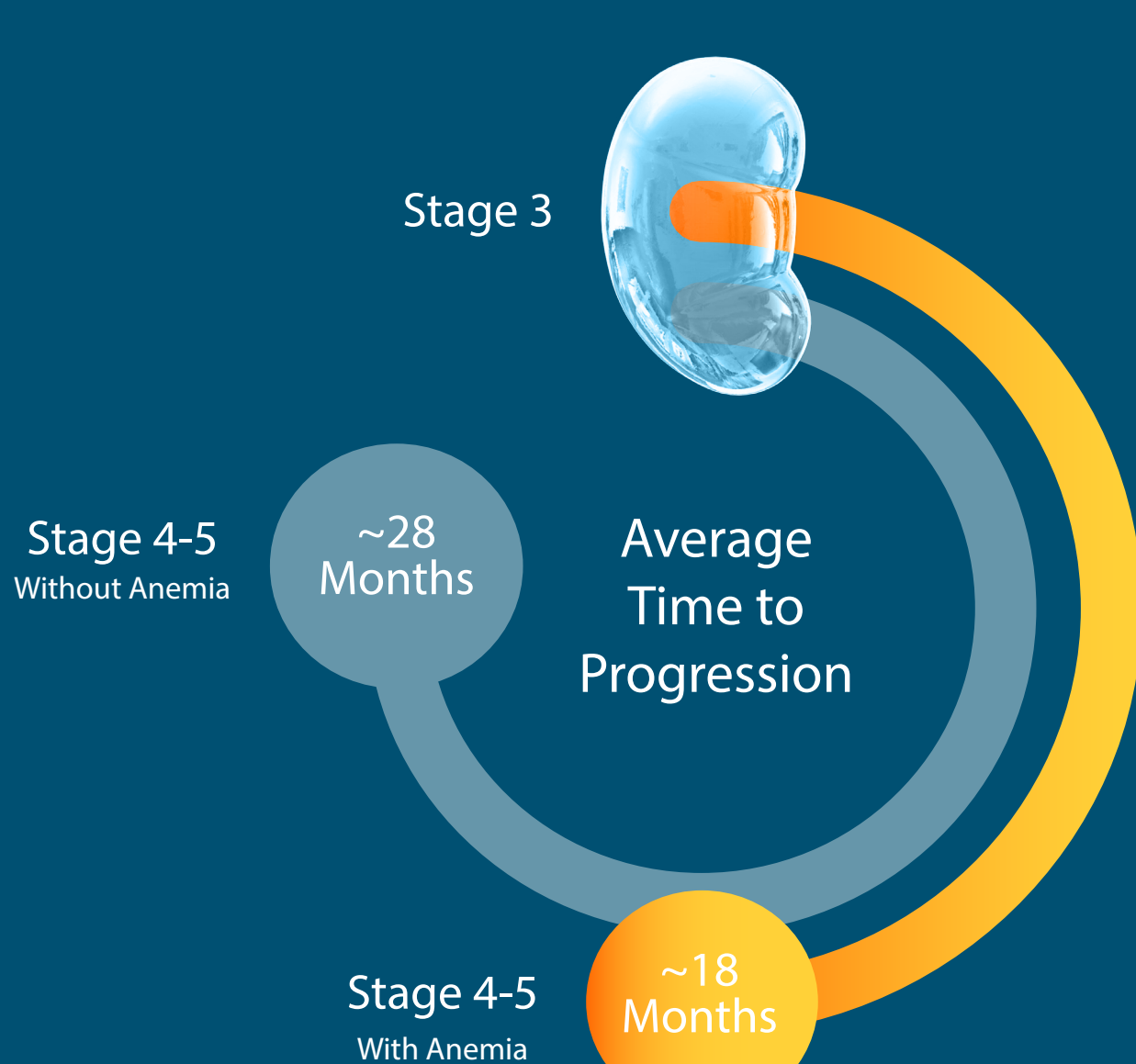
With Anemia

Without Anemia

Exercise Capacity Is Greatly Reduced^{5,†}



Anemia Is Correlated With Accelerated CKD Progression³



Trends in the Treatment of Anemia Due to CKD

Current therapies available include iron supplementation, ESAs, and RBC transfusion. These treatments improve clinical measures, and clinical practice guidelines recommend balancing their potential benefits with associated risks.⁶

The introduction of ESAs represented a breakthrough in therapy.^{6,7} They have remained a mainstay for the treatment of anemia due to CKD for the past 30 years by increasing Hb levels and decreasing the need for RBC transfusions.⁶

Several randomized clinical trials have demonstrated that higher hemoglobin targets (≥ 13.0 to 14.0 g/dL) with ESA use are associated with increased cardiovascular risk, leading to changes in regulatory and clinical practice guidance.^{6,8,9}

Abbreviations List: CKD, chronic kidney disease; CV, cardiovascular; DD, dialysis-dependent; EPO, erythropoietin; ESA, erythropoiesis-stimulating agent; FDA, Food and Drug Administration; Hb, hemoglobin; KDIGO, Kidney Disease Improving Global Outcomes; MET, metabolic equivalent task; NDD, non-dialysis-dependent; pts, patients; RCT, randomized controlled trial; USRDS, United States Renal Data System

References:

1. Stauffer ME, Fan T. PLoS One. 2014;9:e84943. 2. Covic A, et al. Adv Ther. 2017;34:1662-1672. 3. Portolés J, et al. BMC Nephrol. 2013;14:2. 4. Eriksson D, et al. BMC Nephrol. 2016;17:97. 5. Odden MC, et al. J Am Soc Nephrol. 2004;15(11):2908-2915. 6. KDIGO Clinical Practice Guideline for Anemia in Chronic Kidney Disease. Kidney Int Suppl. 2012;2:279-335. 7. Hung SC, et al. J Formos Med Assoc. 2014;113:3-10. 8. Drüeke TB, et al. N Engl J Med. 2006;355:2071-2084. 9. Singh AK, et al. N Engl J Med. 2006;16;355:2085-2098.

The information provided through NephU is intended for the educational benefit of health care professionals and others who support care for those with kidney disease and other related conditions. It is not intended as, nor is it a substitute for, medical care, advice, or professional diagnosis. Health care professionals should use their independent judgement when reviewing NephU's educational resources. Users seeking medical advice should consult with a health care professional. This information was developed in collaboration with Akebia Therapeutics, Inc.

MED-D5-US-0059