

Blood Pressure and Mortality in Older Patients with Kidney Disease

In an observational study, systolic BP <130 mm Hg was associated with higher 5-year mortality.

Although guidelines recommend a target blood pressure of <130/80 mm Hg for patients with chronic kidney disease ([Am J Kidney Dis 2003; 42 \(Suppl 3\):S1](#)), robust evidence supporting this recommendation is lacking. In this retrospective cohort study, researchers identified 8000 older community-dwelling people (age, ≥ 75) with estimated glomerular filtration rates (eGFRs) <60 mL/min/1.73 m²; 5-year outcomes were calculated as a function of baseline blood pressure (BP). Most patients were taking at least one BP-lowering medication.

In comorbidity-adjusted analyses, baseline BP predicted 5-year mortality in a J-shaped fashion: Mortality was significantly higher among people with systolic BP <130 mm Hg than among those with systolic BP of 131 to 160 mm Hg (hazard ratio, 1.22). In contrast, those with systolic BP >160 did not experience excess mortality (HR, 1.06) but were more likely to be hospitalized for cardiovascular complications (HR, 1.26).

Comment: In itself, this observational study cannot settle the issue of appropriate BP targets for older patients with chronic kidney disease. But its findings are consistent with those of previous observational studies showing J-shaped or U-shaped relations between BP and adverse outcomes in older adults and with those of recent randomized trials, in which intensive BP lowering did not lead to better outcomes in older diabetic patients ([JW Cardiol Mar 14 2010](#)) or middle-aged nondiabetic patients with nonproteinuric hypertensive renal disease ([JW Gen Med Sep 7 2010](#)).

Finally, note that a traditionally "normal" serum creatinine level doesn't exclude chronic kidney disease, as currently defined by nephrologists: According to the Modification of Diet in Renal Disease equation (used by an [online eGFR calculator](#)), an 80-year-old white woman with a stable serum creatinine level of 1.0 mg/dL would have an eGFR of 57 mL/min/1.73 m² and thus would have qualified for this study.

— [Allan S. Brett, MD](#)

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