## **ONTARGET**







**Participants:** Mean age of 66 years, type 2 diabetes (38%), cardiovascular disease (85%)

Baseline BP (mean): 141.8/82.1 mm Hg

**Methods:** Participants received 10 mg of the angiotensin-converting enzyme inhibitor (ACEi) ramipril daily, 80 mg of the angiotensin-receptor blocker telmisartan daily, or a combination of both drugs daily. The primary outcome was death from cardiovascular causes, myocardial infarction, stroke, or hospitalization for heart failure.

**Results:** After a median of 56 months, there was no significant difference in the rate of the primary outcome across groups. However, there was a trend toward a 7% higher death rate in participants taking ramipril and telmisartan combined, and hypotensive symptoms, syncope, and renal dysfunction were all significantly more likely to occur in those receiving combination therapy than monotherapy.

This is the reason combination therapy with ACEis and ARBs was not expressly recommended by the JNC 8 panel.



Average BP reduction: -6.4/4.3 mm Hg

16.5% experienced primary outcome



Average BP reduction: -7.4/5 mm Hg

16.7% experienced primary outcome



Average BP reduction: -9.8/6.3 mm Hg

16.3% experienced primary outcome

**Reference:** ONTARGET Investigators, Yusuf S, Teo KK, et al. Telmisartan, ramipril, or both in patients at high risk for vascular events. *N Engl J Med*. 2008;358(15):1547-1559. http://www.nejm.org/doi/full/10.1056/NEJMoa0801317.