

# Clinical trials of angiotensin-receptor blockers for patients at high risk for cardiovascular events in all type of patients

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## 1 angiotensin receptor blocker

Trial	Treatments	Patients	Trials design and methods
<b>candesartan vs placebo</b>			
<b>SCOPE , 2003</b> n=2477/2460 follow-up: 3.7 y (mean)	candesartan, 816 mg once daily (target 160/90) versus placebo	patients aged 70-89 years, with systolic blood pressure 160-179 mmHg, and/or diastolic blood pressure 90-99 mmHg, and a Mini Mental State Examination (MMSE) test score >24	Parallel groups double-blind 15 countries
<b>losartan vs placebo</b>			
<b>RENAAL , 2001</b> n=751/762 follow-up: 3.4 years	Losartan 50 to 100 mg once daily versus placebo	patients with type 2 diabetes and nephropathy	Parallel groups double-blind
<b>telmisartan vs placebo</b>			
<b>TRANSCEND , 2008</b> [NCT00153101] n=2954/2972 follow-up: median 56 months (IQR 51-64)	telmisartan 80 mg/day versus placebo	high-risk patients intolerant to angiotensin-converting enzyme inhibitors	Parallel groups double blind 40 countries
<b>PROPHESSE , 2008</b> [NCT00153062] n=10146/10186 follow-up: 2.5 y	telmisartan 80 mg daily versus placebo	patients who recently had an ischemic stroke	Factorial plan double blind 35 countries
<b>valsartan vs amlodipine</b>			
<b>VALUE , 2004</b> [NCT00129233] n=7649/7596 follow-up: 4.2 y (mean)	valsartan based regimen versus amlodipine based regimen	patients, aged 50 years or older with treated or untreated hypertension and high risk of cardiac events	Parallel groups Double blind 31 countries
<b>losartan vs atenolol</b>			
<b>LIFE , 2002</b> n=4605/4588 follow-up: 4.8 y (mean)	losartan versus atenolol	patients aged 55-80 years, with previously treated or untreated hypertension (sitting blood pressure 160/200/95/115 mm Hg) and ECG signs of LVH.	Parallel groups Double blind USA, Europe
<b>telmisartan vs ramipril</b>			
<b>ONTARGET (telmisartan alone) , 2008</b> [NCT00153101] n=8542/8576 follow-up: 4.7y	telmisartan 80mg daily versus ramipril 10 mg daily	patients patients with coronary, peripheral, or cerebrovascular disease or diabetes with end-organ damage	Parallel groups double blind 40 countries

continued...

Trial	Treatments	Patients	Trials design and methods
<b>telmisartan + ramipril vs ramipril</b>			
ONTARGET (association vs ramipril), 2008 [NCT00153101] n=8502/8576 follow-up: 4.7y	telmisartan 80mg + ramipril 10mg daily versus ramipril 10 mg daily	patients patients with coronary, peripheral, or cerebrovascular disease or diabetes with end-organ damage	Parallel groups double blind 40 countries
<b>telmisartan + ramipril vs telmisartan</b>			
ONTARGET (association vs telmisartan), 2008 [NCT00153101] n=8502/8542 follow-up: 4.7y	telmisartan 80mg + ramipril 10mg daily versus telmisartan 80 mg daily	patients patients with coronary, peripheral, or cerebrovascular disease or diabetes with end-organ damage	Parallel groups double blind 40 countries

## References

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Saxby BK, Harrington F, Wesnes KA, McKeith IG, Ford GA Candesartan and cognitive decline in older patients with hypertension: a substudy of the SCOPE trial. *Neurology* 2008;70:1858-66 [[18458219](#)] [10.1212/01.wnl.0000311447.85948.78](#)

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### TRANSCEND, 2008:

### PROPHESSE, 2008:

Yusuf S, Diener HC, Sacco RL, Cotton D, Ounpuu S, Lawton WA, Palesch Y, Martin RH, Albers GW, Bath P, Bornstein N, Chan BP, Chen ST, Cunha L, Dahlf B, De Keyser J, Donnan GA, Estol C, Gorelick P, Gu V, Hermansson K, Hilbrich L, Kaste M, Lu C, Machnig T, — *N Engl J Med* 2008;359:1225-37 [[18753639](#)] [10.1056/NEJMoa0804593](#)

### VALUE, 2004:

Julius S, Kjeldsen SE, Weber M, Brunner HR, Ekman S, Hansson L, Hua T, Laragh J, McInnes GT, Mitchell L, Plat F, Schork A, Smith B, Zanchetti A Outcomes in hypertensive patients at high cardiovascular risk treated with regimens based on valsartan or amlodipine: the VALUE randomised trial. *Lancet* 2004 Jun 19;363:2022-31 [[15207952](#)]

### LIFE, 2002:

Dahlof B, Devereux RB, Kjeldsen SE, Julius S, Beevers G, de Faire U, Fyhrquist F, Ibsen H, Kristiansson K, Lederballe-Pedersen O, Lindholm LH, Nieminen MS, Omvik P, Oparil S, Wedel H Cardiovascular morbidity and mortality in the Losartan Intervention For Endpoint reduction in hypertension study (LIFE): a randomised trial against atenolol. *Lancet* 2002 Mar 23;359:995-1003 [[11937178](#)]

### ONTARGET (telmisartan alone), 2008:

Yusuf S, Teo KK, Pogue J, Dyal L, Copland I, Schumacher H, Dagenais G, Sleight P, Anderson C Telmisartan, ramipril, or both in patients at high risk for vascular events. *N Engl J Med* 2008 Apr 10;358:1547-59 [[18378520](#)] [10.1056/NEJMoa0801317](#)

Verdecchia P, Sleight P, Mancia G, Fagard R, Trimarco B, Schmieder RE, Kim JH, Jennings G, Jansky P, Chen JH, Liu L, Gao P, Probstfeld J, Teo K, Yusuf S Effects of telmisartan, ramipril, and their combination on left ventricular hypertrophy in individuals at high vascular risk in the Ongoing Telmisartan Alone and in Combination With Ramipril Global End Point Trial and the Telmisartan Randomized Assessment Study in ACE Intolerant Subjects With Cardiovascular Disease. *Circulation* 2009;120:1380-9 [[19770395](#)]

### ONTARGET (association vs ramipril), 2008:

Yusuf S, Teo KK, Pogue J, Dyal L, Copland I, Schumacher H, Dagenais G, Sleight P, Anderson C Telmisartan, ramipril, or both in patients at high risk for vascular events. N Engl J Med 2008 Apr 10;358:1547-59 [[18378520](#)]

#### **ONTARGET (association vs telmisartan), 2008:**

Yusuf S, Teo KK, Pogue J, Dyal L, Copland I, Schumacher H, Dagenais G, Sleight P, Anderson C Telmisartan, ramipril, or both in patients at high risk for vascular events. N Engl J Med 2008 Apr 10;358:1547-59 [[18378520](#)]

## 2 endopeptidase inhibitors

Trial	Treatments	Patients	Trials design and methods
<b>LCZ696 vs placebo</b>			
<b>Ruilope , 2010</b> n=NA follow-up: 8 weeks	LCZ696 for 8 weeks versus placebo	patients with mild to moderate hypertension	Parallel groups double blind 18 countries

## References

#### **Ruilope, 2010:**

Ruilope LM, Dukat A, Bhm M, Lacourcire Y, Gong J, Lefkowitz MP Blood-pressure reduction with LCZ696, a novel dual-acting inhibitor of the angiotensin II receptor and neprilysin: a randomised, double-blind, placebo-controlled, active comparator study. Lancet 2010 Mar 15;: [[20236700](#)] [10.1016/S0140-6736\(09\)61966-8](#)

## 3 About TrialResults-center.org

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