

# Clinical trials of inhibition of the renin-angiotensin system (ACEI or ARB) 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>telmisartan vs placebo</b>			
TRANSCEND , 2008 [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>telmisartan vs ramipril</b>			
ONTARGET (telmisartan alone) , 2008 [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
<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

### TRANSCEND, 2008:

### 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, Probstfield 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 angiotensin-converting enzyme inhibitors

Trial	Treatments	Patients	Trials design and methods
<b>enalapril vs placebo</b>			
<b>CAMELOT (enalapril) , 2004</b> n=673/655 follow-up: 24 months	Enalapril 20mg daily versus Placebo	patients with angiographically documented CAD (>20% stenosis by coronary angiography) and diastolic blood pressure <100 mm Hg	Parallel groups double blind
<b>perindopril vs placebo</b>			
<b>EUROPA , 2003</b> n=6110/6108 follow-up: 4.2y	perindopril 8 mg once daily versus placebo	low-risk patients with stable coronary heart disease and no apparent heart failure	Parallel groups double blind
<b>quinapril vs placebo</b>			
<b>QUIET , 2001</b> n=878/872 follow-up: 27 months	Quinapril 20mg one daily versus Placebo	patients with angiographic evidence of coronary artery disease without systolic leftventricular dysfunction	Parallel groups double blind United States, Canada, Europe
<b>ramipril vs placebo</b>			
<b>HOPE , 2000</b> n=4645/4652 follow-up: 5 y	ramipril 10 mg once per day orally versus placebo	high-risk patients (55 years of age or older) with evidence of vascular disease or diabetes plus one other cardiovascular risk factor and who were not known to have a low ejection fraction or heart failure	Parallel groups double blind
<b>trandolapril vs placebo</b>			
<b>PEACE , 2004</b> [NCT00000558] n=4158/4132 follow-up: median 4.8 y	Trandolapril at a target dose of 4 mg per day versus Placebo	patients with stable coronary artery disease and normal or slightly reduced left ventricular function	Parallel groups Double blind United States, Canada, Italy

## References

### CAMELOT (enalapril), 2004:

Nissen SE, Tuzcu EM, Libby P, Thompson PD, Ghali M, Garza D, Berman L, Shi H, Buebendorf E, Topol EJ Effect of antihypertensive agents on cardiovascular events in patients with coronary disease and normal blood pressure: the CAMELOT study: a randomized controlled trial. JAMA 2004 Nov 10;292:2217-25 [15536108]

### EUROPA, 2003:

Fox KM Efficacy of perindopril in reduction of cardiovascular events among patients with stable coronary artery disease: randomised, double-blind, placebo-controlled, multicentre trial (the EUROPA study). Lancet 2003;362:782-8 [13678872]

**QUIET, 2001:**

Pitt B, O'Neill B, Feldman R, Ferrari R, Schwartz L, Mudra H, Bass T, Pepine C, Texter M, Haber H, Uprichard A, Cashin-Hemphill L, Lees RS The QUinapril Ischemic Event Trial (QUIET): evaluation of chronic ACE inhibitor therapy in patients with ischemic heart disease and preserved left ventricular function. *Am J Cardiol* 2001;87:1058-63 [[11348602](#)]

**HOPE, 2000:**

Yusuf S, Sleight P, Pogue J, Bosch J, Davies R, Dagenais G Effects of an angiotensin-converting-enzyme inhibitor, ramipril, on cardiovascular events in high-risk patients. The Heart Outcomes Prevention Evaluation Study Investigators. *N Engl J Med* 2000;342:145-53 [[10639539](#)]

Yusuf S, Sleight P, Pogue J, Bosch J, Davies R, Dagenais G Effects of an angiotensin-converting-enzyme inhibitor, ramipril, on cardiovascular events in high-risk patients. The Heart Outcomes Prevention Evaluation Study Investigators. *N Engl J Med* 2000 Jan 20;342:145-53 [[10639539](#)]

**PEACE, 2004:**

Braunwald E, Domanski MJ, Fowler SE, Geller NL, Gersh BJ, Hsia J, Pfeffer MA, Rice MM, Rosenberg YD, Rouleau JL Angiotensin-converting-enzyme inhibition in stable coronary artery disease. *N Engl J Med* 2004;351:2058-68 [[15531767](#)] [10.1056/NEJMoa042739](#)

### 3 About TrialResults-center.org

TrialResults-center is an innovative knowledge database that collects the results of RCTs and provides dynamic interactive systematic reviews and meta-analysis in the field of all major heart and vessels diseases.

The TrialResults-center database provides a unique view of the treatment efficacy based on all data provided directly from clinical trial results, offering a valuable alternative to personal bibliographic search, published meta-analysis, etc. Furthermore, it would allow comparing easily the various concurrent therapeutic for the same clinical condition.

Rigorous meta-analysis method is used to populate TrialResults-center: widespread search of published and non published trials, study selection using pre-specified criteria, data extraction using standard form.

TrialResults-center is continually updated on a weekly basis. We continually search all new results (whatever their publication channel) and these news results are immediately added to the database with a maximum of 1 week.

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