

Clinical trials of All mechanism for heart failure with preserved LVEF in all type of patients

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1 angiotensin receptor blocker

Trial	Treatments	Patients	Trials design and methods
candesartan vs placebo			
CHARM preserved , 2003 n=1514/1509 follow-up: 36.6 months	candesartan target dose 32 mg once daily versus placebo	patients with NYHA II-IV heart failure and LVEF higher than 40%	Parallel groups double blind 26 countries
ibesartan vs placebo			
I-PRESERVE (McMurray) , 2008 [NCT00095238] n=2067/2061 follow-up: 49.5 months	ibersatan 300mg daily versus placebo	patients with NYHA II, III, or IV heart failure and an ejection fraction of at least 45%	Parallel groups double blind Western Europe, Eastern Europe, North America, South America, South Africa, and Australia

References

CHARM preserved, 2003:

Yusuf S, Pfeffer MA, Swedberg K, Granger CB, Held P, McMurray JJ, Michelson EL, Olofsson B, Ostergren J Effects of candesartan in patients with chronic heart failure and preserved left-ventricular ejection fraction: the CHARM-Preserved Trial. *Lancet* 2003 Sep 6;362:777-81 [[13678871](#)]

I-PRESERVE (McMurray), 2008:

Massie BM, Carson PE, McMurray JJ, Komajda M, McKelvie R, Zile MR, Anderson S, Donovan M, Iverson E, Staiger C, Ptaszynska A Irbesartan in patients with heart failure and preserved ejection fraction. *N Engl J Med* 2008 Dec 4;359:2456-67 [[19001508](#)] [10.1056/NEJMoa0805450](#)

McMurray JJ, Carson PE, Komajda M, McKelvie R, Zile MR, Ptaszynska A, Staiger C, Donovan JM, Massie BM Heart failure with preserved ejection fraction: clinical characteristics of 4133 patients enrolled in the I-PRESERVE trial. *Eur J Heart Fail* 2008 Feb;10:149-56 [[18279770](#)]

Massie BM, Carson PE, McMurray JJ, Komajda M, McKelvie R, Zile MR, Anderson S, Donovan M, Iverson E, Staiger C, Ptaszynska A Irbesartan in patients with heart failure and preserved ejection fraction. *N Engl J Med* 2008 Dec 4;359:2456-67 [[19001508](#)]

2 angiotensin receptor neprilysin inhibitor

Trial	Treatments	Patients	Trials design and methods
LCZ696 vs valsartan			

continued...

Trial	Treatments	Patients	Trials design and methods
PARAMOUNT , 2012 [NCT00887588] n=149/152 follow-up: 12 weeks	LCZ696 titrated to 200 mg twice daily for 36 weeks versus valsartan titrated to 160 mg twice daily,	-	double-blind
PARAGON-HF <i>ongoing</i> [NCT01920711] n=4600 follow-up:	LCZ696 target dose 200mg bid versus Valsartan target dose of 160 mg b.i.d.	patients with HF with preserved ejection fraction	d

References

PARAMOUNT, 2012:

Jhund PS, Claggett B, Packer M, Zile MR, Voors AA, Pieske B, Lefkowitz M, Shi V, Bransford T, McMurray JJ, Solomon SD Independence of the blood pressure lowering effect and efficacy of the angiotensin receptor neprilysin inhibitor, LCZ696, in patients with heart failure with preserved ejection fraction: an analysis of the PARAMOUNT trial. *Eur J Heart Fail* 2014;16:671-7 [24692284]

Solomon SD, Zile M, Pieske B, Voors A, Shah A, Kraigher-Krainer E, Shi V, Bransford T, Takeuchi M, Gong J, Lefkowitz M, Packer M, McMurray JJ The angiotensin receptor neprilysin inhibitor LCZ696 in heart failure with preserved ejection fraction: a phase 2 double-blind randomised controlled trial. *Lancet* 2012;380:1387-95 [22932717]

PARAGON-HF, :

Rossi A, Gheorghiadu M, Triposkiadis F, Solomon SD, Pieske B, Butler J Left atrium in heart failure with preserved ejection fraction: structure, function, and significance. *Circ Heart Fail* 2014 Nov;7:1042-9 [25415957] 10.1161/CIRCHEARTFAILURE.114.001276

Solomon SD, Rizkala AR, Gong J, Wang W, Anand IS, Ge J, Lam CSP, Maggioni AP, Martinez F, Packer M, Pfeffer MA, Pieske B, Redfield MM, Rouleau JL, Van Angiotensin Receptor Neprilysin Inhibition in Heart Failure With Preserved Ejection Fraction: Rationale and Design of the PARAGON-HF Trial. *JACC Heart Fail* 2017;5:471-482 [28662936]

3 Angiotensin-Converting Enzyme Inhibitors

Trial	Treatments	Patients	Trials design and methods
perindopril vs placebo			
PEP CHF , 2006 n=424/426 follow-up: 26.2 months (range 12-54.2m)	perindopril, 4 mg/day versus placebo	patients aged ≥ 70 years with a diagnosis of heart failure, treated with diuretics and an echocardiogram suggesting diastolic dysfunction and excluding substantial LV systolic dysfunction or valve disease	Parallel groups double blind Europe

References

PEP CHF, 2006:

Cleland JG, Tendera M, Adamus J, Freemantle N, Gray CS, Lye M, O'Mahony D, Polonski L, Taylor J Perindopril for elderly people with chronic heart failure: the PEP-CHF study. The PEP investigators. *Eur J Heart Fail* 1999 Aug;1:211-7 [10935667]

Cleland JG, Tendera M, Adamus J, Freemantle N, Polonski L, Taylor J The perindopril in elderly people with chronic heart failure (PEP-CHF) study. *Eur Heart J* 2006 Oct;27:2338-45 [16963472]

4 mineralocorticoid receptor antagonists

Trial	Treatments	Patients	Trials design and methods
spironolactone vs placebo			
TOPCAT , 2014 [NCT00094302] n=3445 follow-up: 3.3 years	spironolactone (15 to 45 mg daily) versus placebo	patients with heart failure and a preserved left ventricular ejection fraction of 45% or more	Parallel groups double-blind

References

TOPCAT, 2014:

Pitt B, Pfeffer MA, Assmann SF, Boineau R, Anand IS, Claggett B, Clausell N, Desai AS, Diaz R, Fleg JL, Gordeev I, Harty B, Heitner JF, Kenwood CT, Lewis EF, O'Meara E, Probstfield JL, Shaburishvili T, Shah SJ, Solomon SD, Sweitzer NK, Yang S, McKinlay SM Spironolactone for heart failure with preserved ejection fraction. *N Engl J Med* 2014;370:1383-92 [[24716680](#)] [10.1056/NEJMoa1313731](#)

5 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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