

Clinical trials of ivabradine

TrialResults-center www.trialresultscenter.org

1 stable angina

| Trial | Treatments | Patients | Trials design and methods |
|---|--|---|---------------------------------|
| ivabradine 10mg vs placebo | | | |
| Borer (CL2-009) 10mg , 2003 n=91/91 follow-up: 2 weeks | Ivabradine 5 mg twice daily (10mg/d) versus placebo | | double blind |
| ivabradine 15mg vs placebo | | | |
| BEAUTIFUL , 2008 [NCT00143507] n=5479/5438 follow-up: 19 months (range 16-24) | ivabradine target dose of 75 mg twice a day versus placebo | patients with coronary artery disease and left-ventricular systolic dysfunction (LVEF <=40%) | double blind 33 countries |
| ivabradine 20mg vs placebo | | | |
| SIGNIFY , 2014 [ISRCTN61576291] n=9550/9552 follow-up: 27.8 mo (median) | ivabradine, at a dose of up to 10 mg twice daily, with the dose adjusted to achieve a target heart rate of 55 to 60 beats per minute. versus placebo | patients who had both stable coronary artery disease without clinical heart failure and a heart rate of 70 beats per minute or more | Parallel groups double-blind |
| Borer (CL2-009) 20mg , 2003 n=88/91 follow-up: 2 weeks | ivabradine 10mg twice daily (20mg/d) versus placebo | | double blind |
| ivabradine 5mg vs placebo | | | |
| Borer (CL2-009) 5mg , 2003 n=90/91 follow-up: 2 weeks | - | - | Parallel groups double blind |
| ivabradine 15mg vs placebo (on top standard treatment) | | | |

continued...

| Trial | Treatments | Patients | Trials design and methods |
|--|--|--|---|
| BEAUTIFUL (angina subgroup) n=734/773 follow-up: 19 months (range 16-24) | ivabradine target dose of 75 mg twice a day versus placebo | patients with stable coronary artery disease and left ventricular systolic dysfunction with limiting angina | double blind 33 countries |
| ivabradine 10mg vs placebo on top of amlodipine | | | |
| CL3-018 10mg , 3000 <i>unpublished</i> n=232/252 follow-up: 12 weeks | ivabradine 5mg twice daily (10mg/d) versus placebo | - | Parallel groups |
| ivabradine 15mg vs placebo on top of amlodipine | | | |
| CL3-018 15mg , 3000 <i>unpublished</i> n=244/252 | ivabradine 7.5mg twice daily (15mg/d) versus placebo | - | |
| ivabradine 15mg vs placebo on top of atenolol | | | |
| ASSOCIATE (Tardif) , 2009 [NCT00202566] n=449/440 follow-up: 4 months | ivabradine 5 mg b.i.d. for 2 months, increased to 7.5 mg b.i.d. for a further 2 months (on top atenolol 50 mg/day) versus placebo on top atenolol 50 mg/day | patients with stable angina receiving atenolol 50 mg/day or another beta-blocker at equivalent doses for at least 3 months | Parallel groups double blind 20 countries |
| ivabradine vs amlodipine | | | |
| CL3-023 (15mg) <i>unpublished</i> n=381/398 follow-up: 3 months | ivabradine 7.5mg twice daily versus amlodipine | | Parallel groups double-blind |
| CL3-023 (20mg) <i>unpublished</i> n=376/398 follow-up: 3 months | ivabradine 10mg twice daily versus amlodipine | | double-blind |
| ivabradine 15mg vs amlodipine | | | |
| Ruzylo (CL3-023) 15mg , 2007 n=400/404 follow-up: 3 months | ivabradine 7.5mg twice daily versus amlodipine 10mg once daily | Patients with a >/=3-month history of chronic, stable effort-induced angina | Parallel groups double-blind |
| ivabradine 20mg vs amlodipine | | | |

continued...

| Trial | Treatments | Patients | Trials design and methods |
|--|--|---|---------------------------------|
| Ruzylo (CL3-023) 20mg , 2007 n=391/404 follow-up: 3 months | ivabradine 10mg twice daily versus amlodipine 10mg once daily | Patients with a \geq 3-month history of chronic, stable effort-induced angina | Parallel groups double-blind |
| ivabradine 15mg vs atenolol | | | |
| INITIATIVE (CL3-017, Tardif) 15mg , 2005 n=315/307 follow-up: 16 weeks | ivabradine 5 mg bid for 4 weeks and then either 7.5 or 10 mg bid for 12 weeks versus atenolol 50 mg od for 4 weeks and then 100 mg od for 12 weeks | patients with stable angina | double-blind |
| ivabradine 20mg vs atenolol | | | |
| INITIATIVE (CL3-017, Tardif) 20mg , 2005 n=317/307 follow-up: 16 weeks | ivabradine 5 mg bid for 4 weeks and then 10 mg bid for 12 weeks versus atenolol 50 mg od for 4 weeks and then 100 mg od for 12 weeks | patients with stable angina | Parallel groups double-blind |

∞ More details and results :

- HR-slowing agents for stable angina in patients with left ventricular dysfunction at <http://www.trialresultscenter.org/go-Q118>
- HR-slowing agents for stable angina in all type of patients at <http://www.trialresultscenter.org/go-Q262>

References

Borer (CL2-009) 10mg, 2003:

Borer JS, Fox K, Jaillon P, Lerebours G Antianginal and antiischemic effects of ivabradine, an I(f) inhibitor, in stable angina: a randomized, double-blind, multicentered, placebo-controlled trial. Circulation 2003 Feb 18;107:817-23 [12591750]

BEAUTIFUL, 2008:

Fox K, Ford I, Steg PG, Tendera M, Ferrari R Ivabradine for patients with stable coronary artery disease and left-ventricular systolic dysfunction (BEAUTIFUL): a randomised, double-blind, placebo-controlled trial. Lancet 2008 Sep 6;372:807-16 [18757088]

SIGNIFY, 2014:

Fox K, Ford I, Steg PG, Tardif JC, Tendera M, Ferrari R Ivabradine in Stable Coronary Artery Disease without Clinical Heart Failure. N Engl J Med 2014 Aug 31; [25176136] 10.1056/NEJMoa1406430

Borer (CL2-009) 20mg, 2003:

Borer (CL2-009) 5mg, 2003:

Borer JS, Fox K, Jaillon P, Lerebours G Circulation 2003 Feb 18;107:817-23 [12591750]

BEAUTIFUL (angina subgroup), :

Fox K, Ford I, Steg PG, Tendera M, Robertson M, Ferrari R Relationship between ivabradine treatment and cardiovascular outcomes in patients with stable coronary artery disease and left ventricular systolic dysfunction with limiting angina: a subgroup analysis of the randomized, controlled BEAUTIFUL trial. Eur Heart J 2009 Oct;30:2337-45 [[19720635](#)]

CL3-018 10mg, 3000:

unpublished

CL3-018 15mg, 3000:

unpublished

ASSOCIATE (Tardif), 2009:

Tardif JC, Ponikowski P, Kahan T Efficacy of the I(f) current inhibitor ivabradine in patients with chronic stable angina receiving beta-blocker therapy: a 4-month, randomized, placebo-controlled trial. Eur Heart J 2009 Mar;30:540-8 [[19136486](#)]

CL3-023 (15mg), 0:

unpublished

CL3-023 (20mg), 0:

unpublished

Ruzylo (CL3-023) 15mg, 2007:

Ruzylo W, Tendera M, Ford I, Fox KM Antianginal efficacy and safety of ivabradine compared with amlodipine in patients with stable effort angina pectoris: a 3-month randomised, double-blind, multicentre, noninferiority trial. Drugs 2007;67:393-405 [[17335297](#)]

Ruzylo (CL3-023) 20mg, 2007:

Ruzylo W, Tendera M, Ford I, Fox KM Antianginal efficacy and safety of ivabradine compared with amlodipine in patients with stable effort angina pectoris: a 3-month randomised, double-blind, multicentre, noninferiority trial. Drugs 2007;67:393-405 [[17335297](#)]

INITIATIVE (CL3-017, Tardif) 15mg, 2005:

Tardif JC, Ford I, Tendera M, Bourassa MG, Fox K Efficacy of ivabradine, a new selective I(f) inhibitor, compared with atenolol in patients with chronic stable angina. Eur Heart J 2005 Dec;26:2529-36 [[16214830](#)]

INITIATIVE (CL3-017, Tardif) 20mg, 2005:

Tardif JC, Ford I, Tendera M, Bourassa MG, Fox K Efficacy of ivabradine, a new selective I(f) inhibitor, compared with atenolol in patients with chronic stable angina. Eur Heart J 2005 Dec;26:2529-36 [[16214830](#)]

2 heart failure

| Trial | Treatments | Patients | Trials design and methods |
|------------------------------|-------------------|-----------------|----------------------------------|
| ivabradine vs placebo | | | |

continued...

| Trial | Treatments | Patients | Trials design and methods |
|--|--|---|---|
| SHIFT , 2010 [ISRCTN70429960] n=3241/3264 follow-up: 23 months | ivabradine versus placebo | patients with NYHA class 2-4 heart failure, an LVEF <35% , a resting heart rate >70 bpm, and a heart-failure hospitalization within the previous year | Parallel groups double-blind 37 countries |
| ivabradine 15mg vs placebo | | | |
| BEAUTIFUL , 2008 [NCT00143507] n=5479/5438 follow-up: 19 months (range 16-24) | ivabradine target dose of 75 mg twice a day versus placebo | patients with coronary artery disease and left-ventricular systolic dysfunction (LVEF <=40%) | double blind 33 countries |

More details and results :

- HR-slowing agents for heart failure in all type of patients at <http://www.trialresultscenter.org/go-Q456>

References

SHIFT, 2010:

Swedberg K, Komajda M, Bhm M, Borer JS, Ford I, Tavazzi L Rationale and design of a randomized, double-blind, placebo-controlled outcome trial of ivabradine in chronic heart failure: the Systolic Heart Failure Treatment with the I(f) Inhibitor Ivabradine Trial (SHIFT). Eur J Heart Fail 2010;12:75-81 [19892778] [10.1093/eur-jhf/hfp154](https://doi.org/10.1093/eur-jhf/hfp154)

Swedberg K, Komajda M, Bhm M, Borer JS, Ford I, Dubost-Brama A, Lerebours G, Tavazzi L Ivabradine and outcomes in chronic heart failure (SHIFT): a randomised placebo-controlled study. Lancet 2010 Aug 27;: [20801500] [10.1016/S0140-6736\(10\)61198-1](https://doi.org/10.1016/S0140-6736(10)61198-1)

BEAUTIFUL, 2008:

Fox K, Ford I, Steg PG, Tendera M, Ferrari R Ivabradine for patients with stable coronary artery disease and left-ventricular systolic dysfunction (BEAUTIFUL): a randomised, double-blind, placebo-controlled trial. Lancet 2008 Sep 6;372:807-16 [18757088]

Entry terms: ivabradine, Corlanor, Procorolan, S 16257-2, S-16257-2, S-16260-2, S 16260-2, S 16257, S-16257,