

# Clinical trials of HR-slowing agents for stable angina in all type of patients

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## 1 ivabradine

Trial	Treatments	Patients	Trials design and methods
<b>ivabradine 10mg vs placebo</b>			
Borer (CL2-009) 10mg , 2003 n=91/91 follow-up: 2 weeks	Ivabradine 5 mg twice daily (10mg/d) versus placebo		double blind
<b>ivabradine 20mg vs placebo</b>			
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
<b>ivabradine 5mg vs placebo</b>			
Borer (CL2-009) 5mg , 2003 n=90/91 follow-up: 2 weeks	-	-	Parallel groups double blind
<b>ivabradine 15mg vs placebo (on top standard treatment)</b>			
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
<b>ivabradine vs amlodipine</b>			
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unpublished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unpublished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
<b>ivabradine 15mg vs amlodipine</b>			

continued...

<b>Trial</b>	<b>Treatments</b>	<b>Patients</b>	<b>Trials design and methods</b>
Ruzyllo (CL3-023) 15mg , 2007 n=400/404 follow-up: 3 months	ivabradine 7.5mg twice daily versus amlodipine 10mg once daily	Patients with a $\geq$ 3-month history of chronic, stable effort-induced angina	Parallel groups double-blind
<b>ivabradine 20mg vs amlodipine</b>			
Ruzyllo (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
<b>ivabradine 15mg vs atenolol</b>			
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
<b>ivabradine 20mg vs atenolol</b>			
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

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## 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](#)]

### **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:**

### **BEAUTIFUL (angina subgroup), :**

### **CL3-023 (15mg), 0:**

### **CL3-023 (20mg), 0:**

### **Ruzyllo (CL3-023) 15mg, 2007:**

### **Ruzyllo (CL3-023) 20mg, 2007:**

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

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

## 2 ivabradine + beta-blockers

Trial	Treatments	Patients	Trials design and methods
<b>ivabradine 15mg vs placebo on top of atenolol</b>			
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

### References

ASSOCIATE (Tardif), 2009:

## 3 ivabradine + calcium blocker

Trial	Treatments	Patients	Trials design and methods
<b>ivabradine 10mg vs placebo on top of amlodipine</b>			
CL3-018 10mg , 3000 <i>unpublished</i> n=232/252 follow-up: 12 weeks	ivabradine 5mg twice daily (10mg/d) versus placebo	-	Parallel groups
<b>ivabradine 15mg vs placebo on top of amlodipine</b>			
CL3-018 15mg , 3000 <i>unpublished</i> n=244/252	ivabradine 7.5mg twice daily (15mg/d) versus placebo	-	

### References

CL3-018 10mg, 3000:

CL3-018 15mg, 3000:

## 4 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.

TrialResults-center is non-profit and self-funded.