

# Clinical trials of Stem cells

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## 1 acute myocardial infarction

Trial	Treatments	Patients	Trials design and methods
<b>autologous bone marrow stem cells vs control</b>			
<a href="#">ASTAMi (Lunde) , 2006</a> n=50/50 follow-up: 6 months	intracoronary injection of autologous mononuclear BMC (stem cells $0.68 \cdot 10^8$ ) <i>versus</i> <i>control(Heparanizedplasma)</i>	patients with acute ST-elevation myocardial infarction of the anterior wall treated with percutaneous coronary intervention	parallel group open
<a href="#">BOOST (Meyer) , 2004</a> n=30/30 follow-up: 6 months	stem cells mean $2.46 \cdot 10^9$ <i>versus</i> <i>control(Heparanisedplasma)</i>	successful percutaneous coronary intervention (PCI) for acute ST-segment elevation myocardial infarction	parallel group open
<a href="#">Chen , 2004</a> n=NA follow-up: 6 months	-	-	
<a href="#">Huang , 2006</a> n=20/20 follow-up: 6 months	intracoronary transplantation of autologous BM-MNC via a micro-catheter right after PCI (stem cells mean $1.8 \cdot 10^8$ ) <i>versus</i> <i>placebo(Heparanisedsaline)</i>	patients with first onset of acute inferior-wall myocardial infarction aged $< \text{or} = 75$ , treated with emergent percutaneous coronary intervention	parallel group open
<a href="#">Karpov , 2005</a> n=10/10 follow-up: 6 months	intracoronary injection of bone marrow mononuclear cells (stem cells mean $88.5 \cdot 10^6$ ) <i>versus</i> <i>control</i>	patients with acute myocardial infarction.	parallel group NA
<a href="#">Li , 2007</a> n=35/23 follow-up: 6 months	autologous peripheral blood stem cell transplantation by intracoronary infusion (stem cells mean $7.25 \cdot 10^7$ ) <i>versus</i> <i>control</i>	patients with AMI	parallel group open
<a href="#">MAGIC (cell infusion) , 2004</a> n=10/7 follow-up:	intracoronary infusion of collected peripheral blood stem-cells <i>versus</i> <i>control</i>	patients with myocardial infarction who underwent coronary stenting for the culprit lesion of infarction	

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<b>Trial</b>	<b>Treatments</b>	<b>Patients</b>	<b>Trials design and methods</b>
MAGIC Cell-3-DES (Kang) , 2006 n=25/25 follow-up: 6 months	intracoronary infusion of mobilized peripheral blood stem cells by granulocyte colony-stimulating factor (stem cells $1-2 \cdot 10^9$ ) <i>versus</i> <i>control</i>	patients with myocardial infarction who underwent coronary revascularization with DES for the culprit lesion	parallel group open
Meluzin HD , 2006 n=22/22 follow-up: 3 months	intracoronary mononuclear bone marrow cells (stem cells $10^8$ ) <i>versus</i> <i>control</i> ( <i>Cellsuspensionmedia</i> )	patients with a first acute myocardial infarction	parallel group open
Meluzin LD , 2006 n=22/22 follow-up: 3 months	intracoronary mononuclear bone marrow cells (stem cells $10^7$ ) <i>versus</i> <i>control</i> ( <i>Cellsuspensionmedia</i> )	patients with a first acute myocardial infarction	parallel group open
Penicka , 2007 n=14/10 follow-up: 4 months	Intracoronary injection of autologous bone marrow-derived mononuclear cells (stem cells $26.4 \cdot 10^8$ ) <i>versus</i> <i>control</i>	patients with large anterior acute myocardial infarction	parallel group open
Ruan , 2005 n=9/11 follow-up: 6 months	intracoronary injection of bone-marrow cell (stem cells dose NA) <i>versus</i> <i>control</i> (Diluted serum)	with acute myocardial infarction and anterior descending coronary artery occlusion proven by angiography	parallel group open
Suarez de Lezo (cell) , 2007 n=10/10 follow-up: 3 months	intracoronary infusion of autologous mononuclear bone marrow cells ( $9 \cdot 10^8$ ) <i>versus</i> <i>control</i> ( <i>Salinecontaining0.1%heparin</i> )	patients with revascularized anterior wall AMI and depressed left ventricular function (ejection fraction $<45\%$ )	parallel group open
TCT-STAMI (Ge) , 2006 n=10/10 follow-up: 6 months	emergent intracoronary autologous bone marrow cell transplantation ( $4 \cdot 10^7 SC$ ) <i>versus</i> <i>control</i>	patients admitted within 24 h after the onset of a first AMI	parallel group NA
<b>autologous bone marrow stem cells vs placebo</b>			
Janssens , 2006 n=33/34 follow-up: 4 months	stem cells mean $1.7 \cdot 10^8$ <i>versus</i> <i>placebo</i> ( <i>Salineand5%autologousserum</i> )	patientst with successful percutaneous coronary intervention for STEMI	parallel group double blind

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Trial	Treatments	Patients	Trials design and methods
<b>REPAIR-AMI</b> (Schachinger) , 2006 [NCT00279175] n=95/92 follow-up: 4 months	intracoronary infusion of progenitor cells derived from bone marrow (stem cells mean $2.36 \cdot 10^8$ ) <i>versus</i> <i>placebo</i> (X – <i>vivomedia</i> and20% <i>autologous</i> serum)	patients with acute myocardial infarction	double blind
<b>TIME</b> <i>ongoing</i> n=NA follow-up:	autologous bone marrow-derived mononuclear cells (BMMNCs) <i>versus</i> <i>placebo</i>	patients with moderate-to-large anterior AMIs who have undergone successful percutaneous coronary intervention of the left anterior descending coronary artery and have a left ventricular (LV) ejection fraction $\leq 45\%$ by echocardiography.	Parallel groups double blind
<b>cardiosphere-derived stem cells vs control</b>			
<b>CADUCEUS</b> <i>ongoing</i> [NCT00893360] n=NA follow-up: 12 months	Autologous cardiosphere-derived stem cell intra-coronary infusion <i>versus</i> <i>control</i>	patients with ischemic left ventricular dysfunction and a recent myocardial infarction	Parallel groups open

More details and results :

- cell-based therapies for acute myocardial infarction in PCI at <http://www.trialresultscenter.org/go-Q313>

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#### **TIME, :**

ongoing trial

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#### **CADUCEUS, :**

ongoing trial NCT00893360

## **2 heart failure**

<b>Trial</b>	<b>Treatments</b>	<b>Patients</b>	<b>Trials design and methods</b>
<b>Mesenchymal stem cells vs allogeneic mesenchymal stem cells</b>			

continued...

Trial	Treatments	Patients	Trials design and methods
<b>POSEIDON , 2012</b> [NCT01087996] n=NA follow-up:	allogeneic MSCs versus autologous bone marrowderived mesenchymal stem cells delivered by transendocardial injection	patients with LV dysfunction due to ICM	
<b>Cardiac stem cells vs control</b>			
<b>SCIPIO , 2011</b> [NCT00474461] n=NA follow-up:	-	Patients With Ischemic Cardiomyopathy	
<b>Stem cells vs control</b>			
<b>TAC-HFT , 2014</b> [NCT00768066] n=NA follow-up:	transendocardial injection of bone marrow-derived progenitor cells versus placebo	Patients With Chronic Ischemic Left Ventricular Dysfunction and Heart Failure Secondary to Myocardial Infarction	

More details and results :

- cell-based therapies for heart failure in all types of patients at <http://www.trialresultscenter.org/go-Q515>
- regenerative therapy for heart failure in all type of patients at <http://www.trialresultscenter.org/go-Q649>

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### 3 coronary artery disease

Trial	Treatments	Patients	Trials design and methods
<b>stem cells CD34+ vs placebo</b>			
Losordo , 2007 [NCT00081913] n=NA follow-up:	Injection of Autologous CD34-Positive Cells versus placebo	Patients with Canadian Cardiovascular Society class 3 or 4 angina who were undergoing optimal medical treatment and who were not candidates for mechanical revascularization	Parallel groups double blind
<b>mesenchymal stem cells vs placebo</b>			
Kumar ongoing [NCT00883727] n=NA follow-up: 6 months	Intravenous ex Vivo Cultured Adult Allogenic Mesenchymal Stem Cells versus placebo	in patients with ST elevated acute myocardial infarction (STEMI)	Parallel groups double blind India

More details and results :

- cell-based therapies for coronary artery disease in untractable angina at <http://www.trialresultscenter.org/go-Q299>
- cell-based therapies for coronary artery disease in all type of patients at <http://www.trialresultscenter.org/go-Q300>

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#### Kumar, :

ongoing trial NCT00883727