

Supplementary Table S1. Characteristics of Studies Included in the Meta-Analysis

Source	N (SCs vs. control)	Age,yrs		Cell type	Number of injected cells(10 ⁶)	Route of injection	Time From AMI to injection (days)	Imaging modalities	Follow-up (months)	
		SCs	Control							
Assmus B (2010)	204(1:1)	56(11)		BMCs	236(174)	IC	3-7 [#]	Echo/ cMRI	6,24	
Cao F (2009)	86(1:1)	50.7(1.1)	51.0(1.0)	BMMNCs	50(12)	IC	7	Echo/SPECT	6,12	
Colombo A (2011)	10(1:1)	54(47-60) ^Δ	56 (44–58) ^Δ	CD133+ cells	5.9[4.9-13.5] ^Δ	IC	10-14 [#]	Echo/SPECT	12	
Castellani M (2010)	10(1:1)	30-64 [#]		CD133+ cells	5.9 (4.9 6- 13.5) ^Δ	IC	11-15 [#]	Echo/SPECT/cMRI	3,6,12	
Chen SL (2004)	69(1:1)	58(7)	57(5)	MSCs	48000-60000 [#]	IC	18.4(0.5)	Echo	3,6	
Ge J (2006)	20(1:1)	58(11)	59(8)	BMMNCs	40	IC	< 1	Echo/SPECT	6	
GrajeK S (2010)	45(1:1)	49.9 (8.4)	50.9 (9.3)	BMCs	410(180)	IC	4-6 [#]	Echo/SPECT/cMRI	6,12	
Gao LR (2013)	43(1:1)	55.0 (1.6) ⁺	58.6 (2.5) ⁺	MSCs	3.08(0.52) ⁺	IC	17.1(0.6) ⁺	Echo/SPECT	6,12,24	
Hirsch A (2011)	134(1:1)	56(9)	55(10)	BMMNCs	296(164)	IC	3-8 [#]	Echo/cMRI	4	
Herbots L (2009)	67(1:1)	55(11)	58(10)	BMCs	172(72)	IC	<1	Echo/cMRI	4	
Huang RC (2006)	40(1:1)	57.3 (10.1)	56.7 (9.2)	BMCs	420(180)	IC	<1	Echo	6	
Huikuri HV (2008)	80(1:1)	60(10)	59(10)	BMMNCs	360	IC	2-6 [#]	Echo/ LV Angio	6	
Janssens S (2006)	67(1:1)	55.8(11)	57.9(10)	BMCs	172(72)	IC	< 1	Echo/cMRI	4	
Lee JM (2014)	58 (1:1)	53.9 (10.5)	54.2 (7.7)	MSCs	72(9)	IC	25(2.4)	Echo/SPECT	6	
Meyer GP (2006)	60(1:1)	53.4(14.8)	59.2(13.5)	BMCs	2460(940)	IC	4.8(1.3)	cMRI	6,18	
Meluzín, J (2008)	60(1:1:1)	54 (2) ⁺	54 (2) ⁺	55 (2) ⁺	BMMNCs	10 100	IC	5-9 [#]	Echo/ SPECT	6,12
Nogueira FB (2009)	20(2:1)	59.7 (14.3)	57.2 (10.8)	BMMNCs	100 100	IC	5.5 (1.28)	Echo	3,6	
Piepoli MF (2010)	38(1:1)	63.1 (2.4) ⁺	67.0 (2.7) ⁺	BMMNCs	418	IC	4-8 [#]	Echo/ SPECT	3,6,12	

Plewka M (2011)	56(2:1)	56 (9)		BMMNCs	144 (49)		IC	7		Echo	6
Penicka M (2007)	27(2:1)	59 (12)		BMMNCs	2640(1960-3300) ^Δ		IC	9 (4-11) ^Δ		Echo	4
Quyyumi AA (2011)	31(1:1)	52.0 (47.5-63.5) ^Δ	52.0 (47.0-57.0) ^Δ	CD34+ cells	9.7 (4.1)		IC	8.3		Echo/SPECT/cMRI	3, 6
Suárezde Lezo J (2007)	20(1:1)	52(12) 55(11)		BMMNCs	900(300)		IC	7(5-12) ^Δ		Echo	3
Sürder D (2013)	195(1:1:1)	55(15) [*]	62 (15) [*]	56 (14.5) [*]	BMMNCs	153 153	IC	5 -7 [#] 21 -28 [#]		cMRI	4
Tendera M (2009)	200(2:2:1)	55 (37-74) ^Δ	58 (30-75) ^Δ	59 (37-73) ^Δ	BMMN Cs CD34+ CXCR4+ cells	178 1.90	IC	3-12 [#]		cMRI	6
Traverse JH ^{&} (2012)	67(2:1)	55.6 (10.8)	57.0 (12.4)	BMMNCs	146(22.3)		IC	3		cMRI	6
Traverse JH ^{&} (2012)	53(2:1)	58.2 (11.3)	57.0 (8.0)	BMMNCs	146(12)		IC	7		cMRI	6
Traverse JH (2010)	40(3:1)	52.5 (43-64) ^Δ	57.5 (54-59) ^Δ	BMMNCs	100		IC	3-10 [#]		Echo/cMRI	3,6
Traverse JH (2011)	87(2:1)	57 (11) 54.6(11)		BMMNCs	150		IC	14-21 [#]		Echo/cMRI	6
Turan RG (2012)	62(2:1)	61(15) 60(11)		BMMNCs	96(32)		IC	7		Echo	6,12
Wöhrle J (2013)	42(2:1)	61.0 (8.1)	61.1 (9.3)	BMMNCs	381		IC	5-7 [#]		Echo/ cMRI	6
Wen R (2005)	20(1:1)	58(7)		BMCs	NR		IC	<1		Echo	6
Yao K (2009)	24(1:1)	52.1 (6.3)	52.7 (7.8)	BMCs	190(120)		IC	3-7 [#]		Echo/ SPECT/cMRI	6, 12

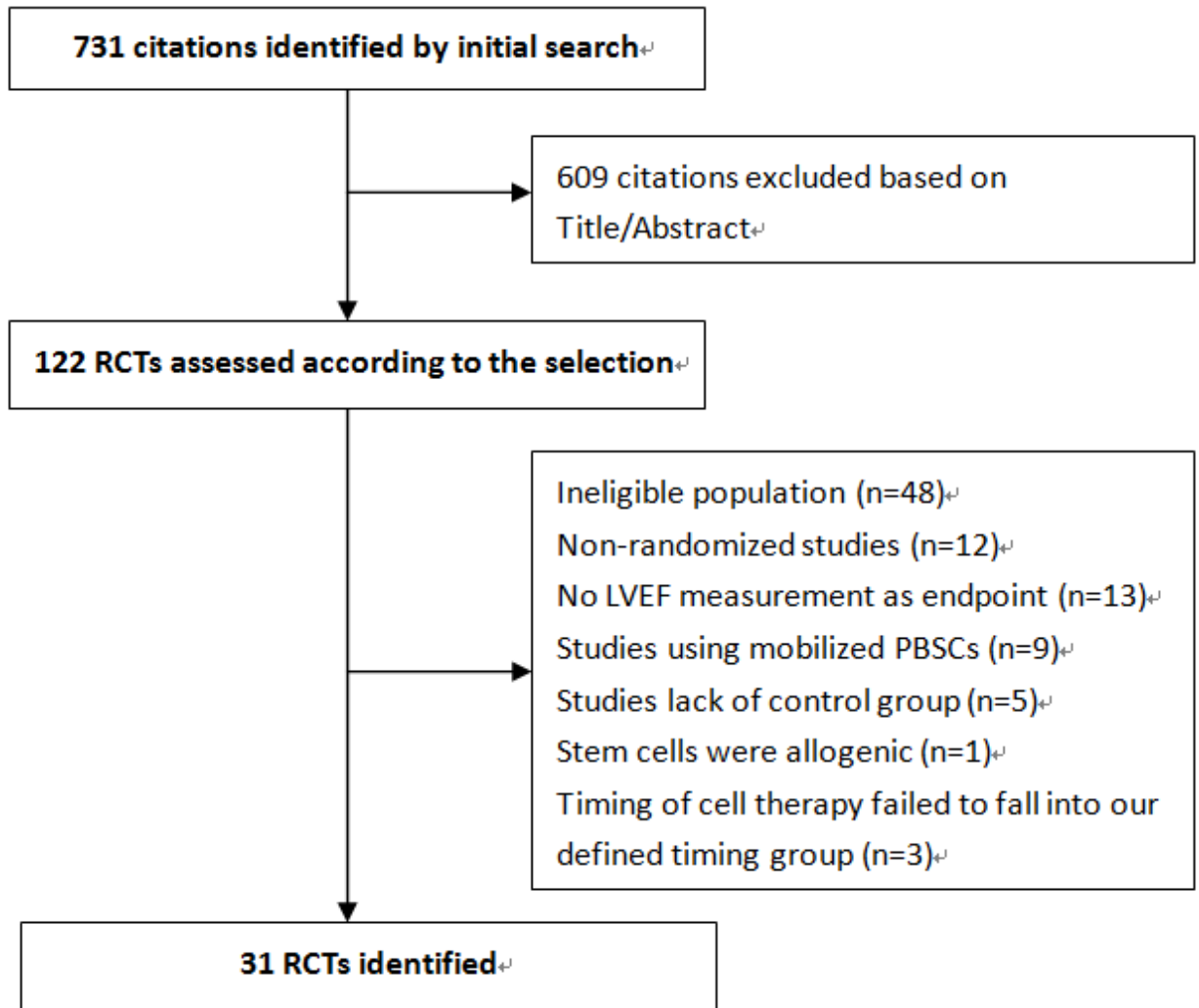
Note: Values are presented as mean (SD) or mean. N: number of subjects. SC: stem cells. AMI: Acute Myocardial Infarction. BMCs: Bone Marrow Cells. IC: Intracoronary. Echo: Echocardiography. cMRI: Cardiac Magnetic Resonance Imagine. BMMNCs: Bone Marrow Mononuclear Cells. SPECT: Single-Photon Emission Computed Tomography. NR: Not Record. MSCs: Mesenchymal Stem Cells. LV Angio: Left Ventricular Angiography.^Δ: Median (ranges). [#]: range. ^{*}: mean (SE). [&]: from same study

Supplementary Table S2. Quality Assessment Scale for the Randomized Controlled Trials Included in the Meta-Analysis

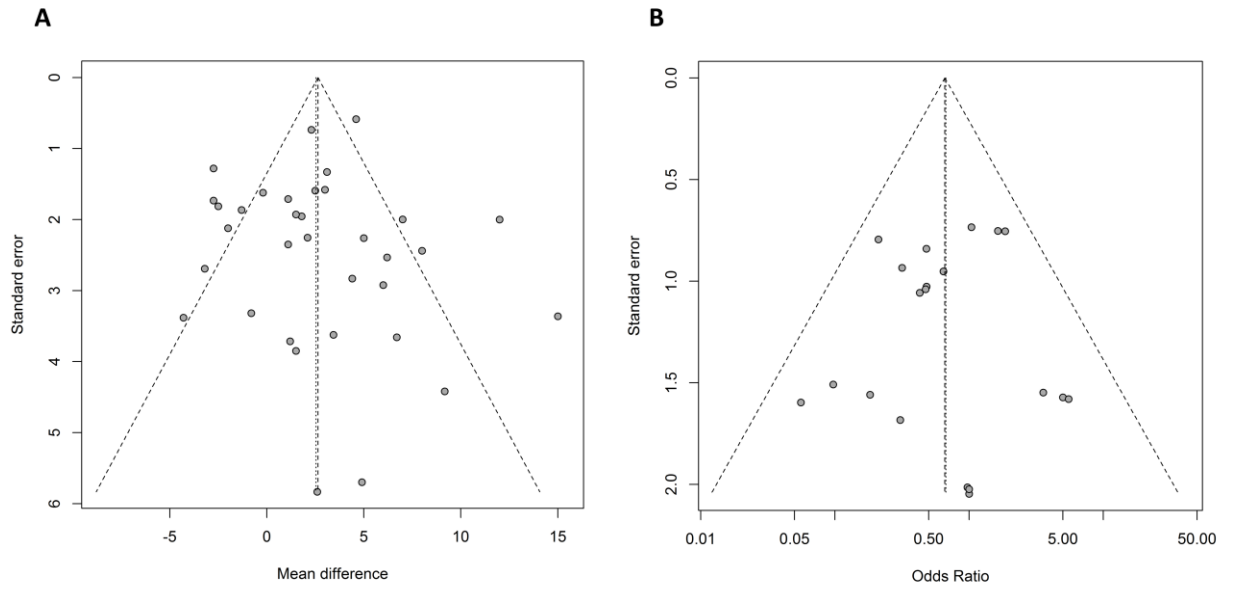
	Selection			Performance were	Detection	attrition	
	Was allocation adequate? *	Was an adequate method of randomization described	Were groups similar at the start of the study	the patients/caregivers blinded to the intervention	was the outcome ascertained blindly	What percent was lost to follow-up	Were all patient analyzed in the group to which they were assigned (intention-to-treat analysis)?
Assmus B,2010	Y	Y	Y	Y	Y	1.5	N
Cao F,2009	Y	Y	Y	NR	Y	0	Y
Colombo A,2011	Y	Y	Y	Y	Y	0	Y
Castellani M,2010	N	N	Y	N	N	0	N
Chen SL,2004	Y	N	Y	Y	Y	0	Y
Gao LR,2013	Y	Y	Y	N	Y	4.7	N
Ge J(2006)	Y	Y	Y	N	Y	0	Y
Grajek S(2010)	Y	Y	Y	N	Y	0	N
Huikuri HV(2008)	Y	Y	Y	Y	Y	3.7	Y
Herbots L(2009)	Y	Y	Y	Y	Y	1	Y
Hirsch A (2011)	Y	Y	Y	N	Y	2	Y
Huang RC(2006)	Na	Na	Na	Na	Na	Na	Na
Janssens S(2006)	Y	Y	Y	Y	Y	10	Y
Lee JW(2014)	NR	N	Y	N	Y	27.5	N
Meluzín J(2008)	Nr	N	Y	N	Y	0	Y
Meyer GP(2006)	Y	Y	Y	Y	Y	0	Y
Nogueira FB(2009)	Y	Y	Y	N	Y	0	Y
Piepoli MF(2010)	Y	Y	Y	NR	NR	0	Y
Plewka M(2011)	N	N	Y	N	N	13.3	N
Penicka M(2007)	Y	Y	NR	NR	NR	11	N
Quyyumi AA (2011)	Y	N	Y	N	Y	3.2	N
Sürder D (2013)	Y	Y	Y	N	Y	16.5	N
Suárezde Lezo J (2007)	Y	Y	Y	NR	Y	0	Y
Tendera M (2009)	Y	Y	Y	N	Y	0	Y
Traverse JH (2012)	Y	Y	Y	Y	Y	6.7	N
Traverse JH (2011)	Y	N	Y	N	Y	1.1	Y
Traverse JH (2010)	Y	Y	Y	Y	Y	0	Y
Turan RG (2012)	NR	N	Y	N	Y	0	Y
Wen R (2005)	Y	N	Y	Y	Y	0	Y
Wöhrle J (2013)	Y	Y	Y	Y	Y	4.7	Y
Yao K (2009)	Y	Y	Y	NR	Y	13	N

NA indicates not available; NR, not reported.

*Adequate means the use of central site, numeric code, opaque envelopes, drugs prepared by pharmacy, and other appropriate procedures as described by Juni et al.⁵⁰



Supplementary Figure S1. Flow Diagram of Eligible Studies of Bone Marrow Stem Cells Therapy in Patients with Acute Myocardial Infarction. RCTs, randomized clinical trials. LVEF, left ventricular ejection fraction.



Supplementary Figure S2. Funnel Plot. (A) Funnel Plot of Left Ventricular Ejection Friction, and (B) Funnel Plot of Major Adverse Cardiac Events