Supplemental Methods Table 1. Quantitative Histological Grading Scale

	Myocardial infarct	Ventricular myocardial anisokaryosis	Left ventricular subepicardial fibrosis	Left ventricular myocardial fibrosis
Assessed on	Trichrome, 4X	H&E, 10X	Trichrome, 4X	Trichrome, 4X
Grade 0	0-5% of tissue	Minimal	0-5% of subepicardium	None
Grade 1	6-34% of tissue	Mild	6-34% of subepicardium	Focal
Grade 2	35-66% of tissue	Moderate	35-66% of subepicardium	Multifocal
Grade 3	67-95% of tissue	Marked	67-95% of subepicardium	Multifocal coalescing
Grade 4	96-100% of tissue	Severe	96-100% of subepicardium	Diffuse

	Left ventricular subendocardial fibrosis	Hemosiderophage foci (#)	Myocardial mineralization	Lymphocyte foci (#)
Assessed on	Trichrome, 4X	H&E, 10X	H&E, 4X	H&E, 20X
Grade 0	0-5% of subendocardium		None	
Grade 1	6-34% of subendocardium		Focal	
Grade 2	35-66% of subendocardium		Multifocal	
Grade 3	67-95% of subendocardium		Multifocal coalescing	
Grade 4	96-100% of subendocardium		Diffuse	

	Myocardial hemorrhage	Epicardial fibrovascular tissue	Fatty infiltration	Granulomatous/histiocytic foci (#)
Assessed on	H&E, 10X	Trichrome, 4X	H&E, 4X	H&E, 20X
Grade 0	None	None	None	
Grade 1	Focal	Focal	Focal	
Grade 2	Multifocal	Multifocal	Multifocal	
Grade 3	Multifocal coalescing	Multifocal coalescing	Multifocal coalescing	
Grade 4	Diffuse	Diffuse	Diffuse	

Journal of Cardiovascular Translational Research

Intravenous followed by Xray Fused with MRI Guided Transendocardial Mesenchymal Stem Cell Injection Improves Contractility Reserve in a Swine Model of Myocardial Infarction

Eric G. Schmuck PhD, Jill M. Koch PhD, Timothy A. Hacker PhD, Charles R. Hatt PhD, Michael T. Tomkowiak PhD, Karl K. Vigen PhD, Nicholas Hendren MD, Cathlyn Leitzke MS, Ying-qi Zhao PhD, Zhanhai Li PhD, John M. Centanni MS, Derek J. Hei PhD, Denise Schwahn DVM, PhD, Jaehyup Kim MD, Peiman Hematti MD, Amish N. Raval MD*

*Division of Cardiovascular Medicine, Department of Medicine, University of Wisconsin School of Medicine and Public Health, Madison, WI, USA, anr@medicine.wisc.edu