

PeriBeam® Pericardial Membrane Pre-Clinical Test Result : Autopsy Findings Score



The PeriBeam® outward implantation group (animal group in which the ion beam irradiated surface was implanted facing away from the heart) was superior in that there were fewer issues with bad adhesion to organs and pericardial effusion, and the overall score was better than the other groups. This suggests PeriBeam®'s superiority as a pericardial membrane. For more details about the experiment, please contact TamaBio Co., Ltd.

Autopsy Findings Score										
Testing Group	Animal ID	Artificial Pericardial Membrane Adhesion With				Pericardial Effusion	Pleural Effusion	Infection	Total Score	Total Average Score
		Breast Bone / Pleura	Heart	Lungs	Pericardium					
T01 "PeriBeam®" Ion Beam Irradiated Side Facing Outside The Heart	53	1	0	0	0	1	1	1	4	1.8
	54	1	0	0	0	0	0	0	1	
	58	0	0	0	0	0	0	0	0	
	59	1	0	0	0	0	1	0	2	
T02 "PeriBeam®" Ion Beam Irradiated Side Facing The Heart	8	1	0	0	0	1	1	0	3	4.0
	25	1	2	2	2	1	1	0	9	
	55	0	0	0	0	1	0	0	1	
	57	0	2	0	0	1	0	0	3	
T03 Control Device	51	2	2	1	1	1	1	0	8	5.0
	52	2	0	0	0	0	0	0	2	
Scoring For Adhesion	0:	No adhesion								
	1:	Adhesion that can be easily detached by blunt dissection								
	2:	Adhesion that is difficult to detach								
Other Scoring	0:	None								
	1:	Slight								
	2:	Severe								

This information is intended for healthcare professionals and data to ensure the proper use of medical devices from TamaBio Co., Ltd,. Please note that it is not intended to provide information to the general public.

PeriBeam® Pericardial Membrane

Pre-Clinical Test Result : Pathology Score



It was suggested that when PeriBeam® is implanted with the ion beam irradiated surface facing outward (towards the pericardial membrane), the ion beam irradiated surface activates fibrosis, promoting fusion with the existing pericardial membrane, and ultimately reducing the risk of pleural effusion and adhesion to organs such as the lungs. For more details about the experiment, please contact Tama Bio Co., Ltd.

Pathology Score

Testing Group	Animal ID		exudative cell				calcinosis	bacteria	bleeding	fibroblast	Fibrosis	FibrosTotal Score	FibrosTotal Average Score	
			neutrophil	lymphocyte	macrophage	foreign body giant cell								
T01	"PeriBeam®" Ion Beam Irradiated Side Facing Outside The Heart	irradiation side pericardium side	3	3	2	2	2	2	0	3	3	6	5.0 (pericardium side)	
		non irradiation side myocardium side	1	1	1	1	0	0	0	1	1	2		
		irradiation side pericardium side	1	1	2	2	0	0	0	2	2	4		
		non irradiation side myocardium side	1	1	1	1	0	0	0	1	1	2		
		irradiation side pericardium side	1	2	2	2	0	0	1	2	2	4		
	non irradiation side myocardium side	1	1	1	1	0	0	0	1	1	2	2.0 (myocardium side)		
	T02	"PeriBeam®" Ion Beam Irradiated Side Facing The Heart	irradiation side pericardium side	2	2	2	2	0	0	1	3	3	6	4.0 (pericardium side)
			non irradiation side myocardium side	1	1	1	1	0	0	0	1	1	2	
			irradiation side myocardium side	1	1	2	2	0	0	1	2	2	4	
			non irradiation side pericardium side	1	1	0	0	0	0	0	1	1	2	
irradiation side myocardium side			1	2	2	2	0	0	1	2	2	4		
non irradiation side pericardium side	1	1	1	1	0	0	0	1	1	2	2.0 (myocardium side)			
T03	Control Device	irradiation side myocardium side	1	1	2	1	0	0	0	2	2	4	3.0 (pericardium side)	
		non irradiation side pericardium side	1	1	1	1	0	0	0	1	1	2		
		irradiation side pericardium side	1	2	2	2	0	0	0	2	2	4		
		non irradiation side myocardium side	1	1	1	1	0	0	1	1	1	2		
		irradiation side myocardium side	1	1	1	1	0	0	1	1	1	2		3.0 (myocardium side)

Pathology Score : 0 No adhesion
1 Localized or minor change
2 Moderate change
3 marked change

bacteria : 1 Found
2 None

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