

SUPPLEMENTAL MATERIAL

Table S1. Japanese Ministry of Health and Welfare (JMHW) criteria for the diagnosis of CS (revised 2006).

Histological diagnosis
Endomyocardial biopsy specimen with non-caseating epithelioid granulomas with diagnosis of extra-cardiac sarcoidosis
Clinical diagnosis (if the following three criteria are present)
a) Histological or clinical diagnosis of extracardiac sarcoidosis
b) More than 1 in 6 basic diagnostic criteria are present
c) Two or more of the major criteria are satisfied OR 1 in 4 of the major criteria and 2 or more of the 5 minor criteria are satisfied
<p>Major criteria</p> <ol style="list-style-type: none"> 1. Advanced AV block 2. Basal thinning of the interventricular septum 3. Positive gallium-67 uptake in the heart 4. Depressed LVEF < 50% <p>Minor criteria</p> <ol style="list-style-type: none"> 1. Abnormal ECG findings: ventricular arrhythmias (VT or multifocal or frequent PVCs), complete RBBB, axis deviation, or abnormal Q waves 2. Abnormal echo: wall motion abnormality or morphological abnormality (aneurysm or wall thickening or ventricular dilation) 3. Perfusion defects on nuclear imaging: thallium-201, technetium 99m SPECT 4. LGE on CMR 5. Interstitial fibrosis or myocyte infiltration on cardiac biopsy

AV, atrioventricular; CMR, cardiac magnetic resonance imaging; ECG, electrocardiogram; LGE, late gadolinium enhancement; LVEF, left ventricular ejection fraction; PVC, premature ventricular contraction; RBBB, right bundle branch block; SPECT, single photon emission computed tomography; VT, ventricular tachycardia.

Table S2. Heart Rhythm Society (HRS) consensus statement for diagnosis of CS.

Histological diagnosis from myocardial tissue
Endomyocardial biopsy specimens with non-caseating granulomas and no alternative cause identified
Clinical diagnosis of probable CS (if the following three criteria are met)
a) Histological diagnosis of extracardiac sarcoidosis
b) One or more of following are present: <ol style="list-style-type: none"> 1. Steroid \pm immunosuppressant-responsive cardiomyopathy or heart block 2. Unexplained reduced LVEF (< 40%) 3. Unexplained sustained ventricular tachycardia 4. Mobitz type II second- or third-degree heart block 5. Patchy uptake on dedicated cardiac FDG-PET in a pattern consistent with CS 6. LGE on CMR in a pattern consistent with CS 7. Positive gallium uptake in a pattern consistent with CS
c) Other possible causes of the cardiac manifestation(s) have been reasonably excluded

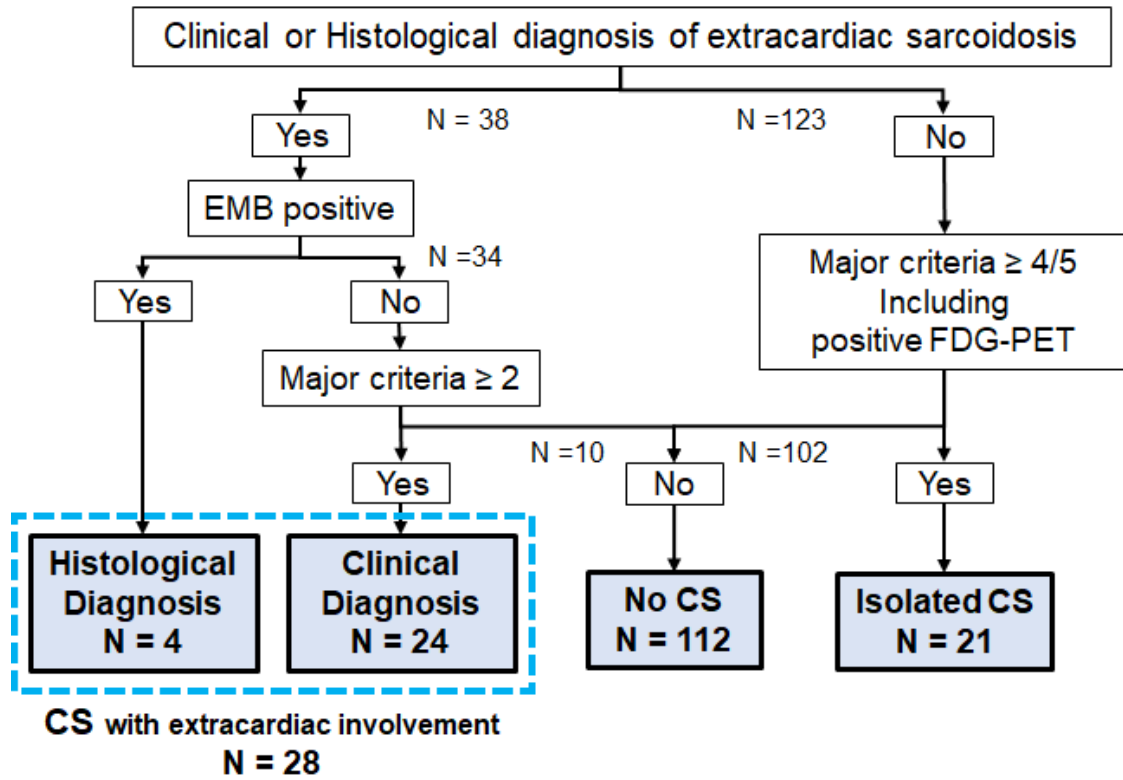
CMR, cardiac magnetic resonance imaging; CS, cardiac sarcoidosis; FDG-PET, fluorodeoxyglucose positron emission tomography; LGE, late gadolinium enhancement; LVEF, left ventricular ejection fraction.

Table S3. FDG-PET change according to the JCS, HRS, and JMHW criteria for CS in patients with serial FDG-PET evaluation (n = 41).

	Simplified JCS criteria			HRS criteria		JMHW criteria	
	CS N=23	Isolated CS N=14	No CS N=4	CS N=9	No CS N=32	CS N=14	No CS N=27
PET improvement, n (%)	19 (83%)	11 (79%)	2 (50%)	8 (89%)	24 (75%)	11 (78%)	21 (78%)

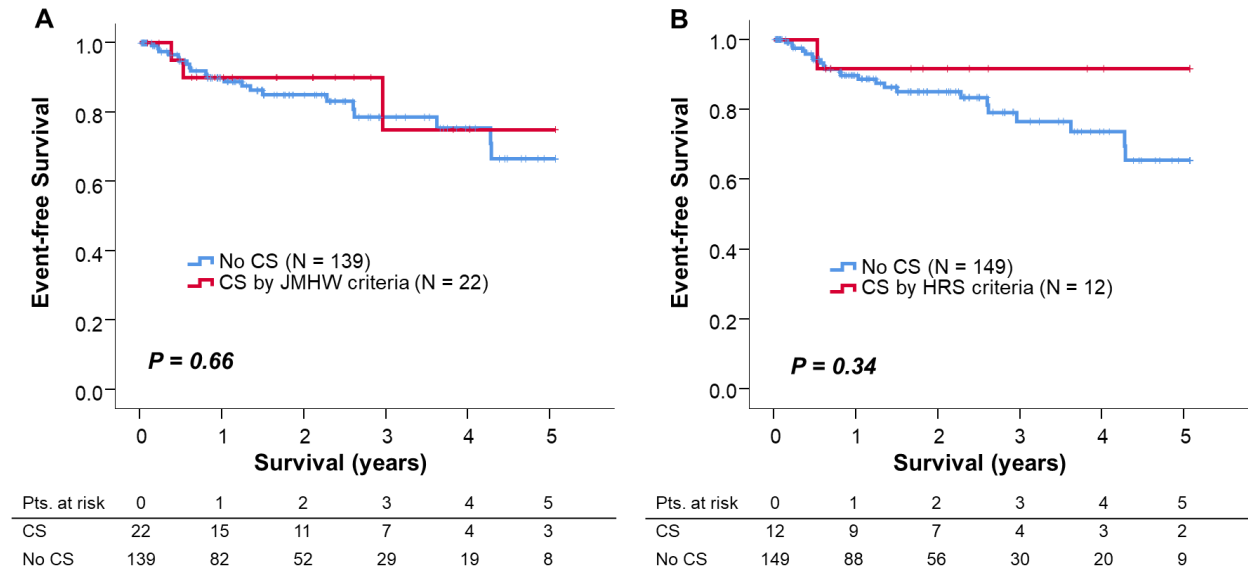
CS, cardiac sarcoidosis; FDG-PET, fluorodeoxyglucose positron emission tomography; HRS, Heart Rhythm Society; JMHW, Japanese Ministry of Health and Welfare; JCS, Japanese Circulation Society.

Figure S1. Flow diagram of diagnosis of cardiac sarcoidosis according to 2016 Japanese Circulation Society guidelines.



CS, cardiac sarcoidosis; EMB, endomyocardial biopsy; FDG-PET, 18F-fluorodeoxyglucose positron emission tomography; JCS, Japanese Circulation Society.

Figure S2. Impact of CS defined by JMHW and HRS criteria on outcomes in patients who underwent multimodality imaging evaluation for suspected cardiac sarcoidosis (n = 161).



Kaplan-Meier curves demonstrated MACE-free survival in our study population stratified by diagnosis according to the JMHW (A) and HRS (B) criteria. Patients defined as CS by JMHW and HRS criteria showed similar outcome compared with no CS groups.

CS, cardiac sarcoidosis; HRS, Heart Rhythm Society; JMHW, Japanese Ministry of Health and Welfare; MACE, major adverse cardiovascular event.