**Supplementary table 1.** The overall and heart response of ECD patients using BRAF inhibitor or not.

Response	Regimen	CR	PR	SD	PD	P value
PER	BRAFi	6	1	0	0	0.009
	No BRAFi	4	10	2	2	
CMAR	BRAFi	0	6	12	2	0.882
	No BRAFi	0	1	5	0	
CMER	BRAFi	4	3	0	0	0.048
	No BRAFi	5	9	5	3	
HR	<i>BRAF</i> i	4	3	0	0	0.037
	No BRAFi	4	12	4	3	
LVR	BRAFi	0	1	5	0	0.798
	No BRAFi	0	6	14	1	
OR	BRAFi	2	5	0	0	0.245
	No BRAFi	4	13	2	4	

Abbreviations: *BRAF*i. *BRAF* inhibitors. CMAR, cardiac mass response. CMER, cardiac metabolic response. CR, complete response; HR, heart response; LVR, large vessel response; OR, overall response; PD, progressive disease; PER, pericardial effusion response; PR, partial response; SD, stable disease.

**Supplementary figure 1.** The treatment correlation between pericardial perfusion response and cardiac metabolic response of the first line treatment, second line treatment and overall treatment.

