**Table S1**Comparison between 3DSTE and CMR techniques

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| **Variable** | **3DSTE** | **CMR** |
| Scanning time | shorter | longer |
| Analysis time | shorter | longer |
| Image quality | moderate | good |
| Spatial resolution | lower | higher |
| Temporal resolution | lower | higher |
| Cost | less | higher |
| LV volumes  | accurate with significant underestimation *(cannot differentiate between myocardium and trabeculae)*, well correlated with CMR but cannot be used interchangeably with it | reference technique *(with potential overestimation)* |
| LV EF | -accurate with some underestimation *(low frame rates could miss the actual end-systolic frame)*-highly comparable with MRI | reference technique |
| LV mass | overestimation (difficult to delineate epicardium) | reference technique |
| LV mechanics (as strain) | -more clinically used-bigger values -different reference values however; reflects LV myocardial deformation in a very similar fashion to CMR | -negligible clinical use-smaller values  |
| Identification of myocardial scar | evaluates functional consequences of myocardial fibrosis | evaluates both functional consequences of myocardial fibrosis through strain and anatomical extent through DCE  |
| Correlation between 3DSTE strain and CMR DCE for identification of myocardial scar | moderate to poor correlations with CMR DCE | moderate to poor correlations with 3DSE strains |
| Reliability | good | excellent |

3DSTE, three-dimensional speckle tracking echocardiography. BSA, body surface area. CRT-D, cardiac resynchronization therapy-defibrillator. CMR, cardiac magnetic resonance. DCE, delayed contrast enhancement. LV, left ventricular. LVEF, left ventricular ejection fraction. LV mass, left ventricular mass.