

CVWorks

Innovative Applications

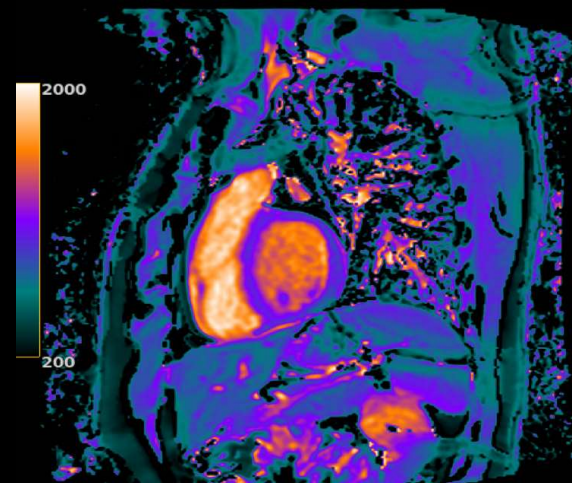
CardioMaps

CardioMaps consists of T1 and T2 mapping sequences. SMART1Map, as a GE-exclusive, is based on a saturation recovery sequence and is independent of heart rate and scan parameters. MOLLI is based on an inversion recovery sequence with apparent T1 values that can be affected by heart rate or imaging parameter variability. T2 mapping is a multi-echo FSE used for the quantitative assessment of myocardium and other tissues.

Clinical benefits:

- Primary application used in most cardiomyopathies
- SMART1Map offers in-line motion correction to compensate for cardiac and/or respiratory motion, providing reliable results
- Mapping can provide objective, quantitative measurement of T1 tissue characteristics

SMART1Map



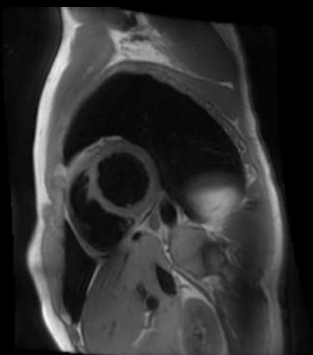
case study

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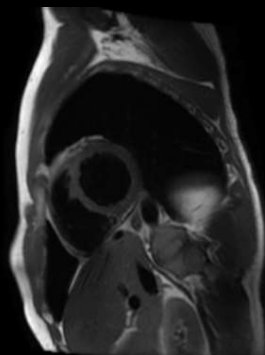
CardioMaps

T2 Map FSE Black Blood

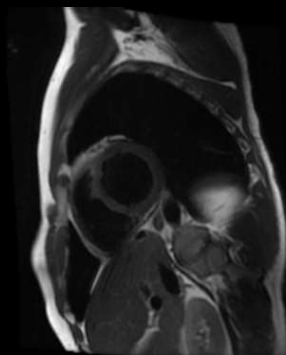
TE 1 = 10.9ms



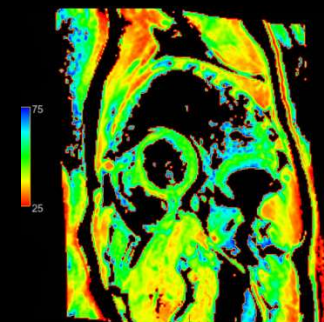
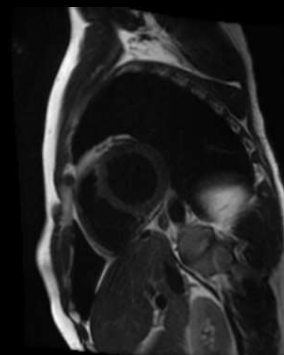
TE 2 = 32.8ms



TE 3 = 54.7ms



TE 4 = 76.6ms



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Case Study: Assessing Hypertrophic Cardiomyopathy with T1 mapping

Clinical solutions

System: SIGNA™ Architect

Coil used: Large AA coil

Protocols used:

Short Axis (SA) FIESTA Cine, SA MOLLI FIESTA, Cine IR 2RR, SS PS MDE SPGR

Patient history

A 51-year-old patient with a clinical history of hypertrophic cardiomyopathy was referred to MR based on echocardiography results.

Procedure

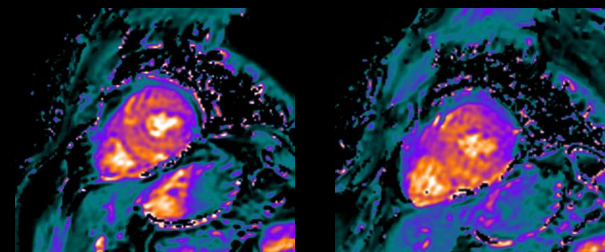
Patient positioned in the supine, feet-first position with vector gating leads applied in longitudinal and latitudinal directions. A large AA coil was positioned over the patient's chest and contrast was administered into the antecubital vein.

MR findings

Exam concluded an asymmetric thickening of the interventricular septum measuring up to 24mm. No subaortic jet or anterior motion of the anterior mitral leaflet. There was extensive myocardial delay enhancement anteriorly at the base, and subendocardial delayed enhancement inferoseptally in the mid-myocardium.

T1 mapping correlates to delayed enhancement

Short Axis MOLLI FIESTA



SS PS MDE

