

### **IMPROVED CARDIAC LEFT VENTRICLE IMAGING USING MULTIPARAMETRIC STRAIN ANALYSIS (MPS)**

This invention yields the most accurate and clinically useful predictor of myocardial viability – with no ionizing radiation or radioactive agents. The system is a software add-on to MRI systems that gives clear and clinically significant evaluations of left ventricle (LV) function. MPS uses p-vector finite element analysis to evaluate over 15,000 discrete points in the left ventricle in three axes; it compares the variance in the movement against a “normal” database to display variations from a standard deviation from normal. It compares the function of each of the points in the LV against a normal database.

The resulting images are unique in that LV function is quickly and clearly displayed. These pictures are, for clinicians and surgeons, clinically superior to existing imaging modalities. They are easily understood by the layperson. Further, where existing tests (PET, Thallium SPECT, CT) are expensive, invasive and add radiation, MPS is inexpensive and non-invasive with no radiation. MPS is more accurate in regional, transmural viability determination. It quantitates what other modalities describe qualitatively.

#### **POTENTIAL AREAS OF APPLICATIONS:**

- Agnostic to all existing MR machines
- Gives crystal clear and easily understood pictorial views of LV function
- Very inexpensive
- Added on to an already scheduled MR scan
- Displaces more expensive and less useful tests
- Strong IP position – US and foreign applications
- Three month adaptation time to commercial MR systems

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