PHILIPS

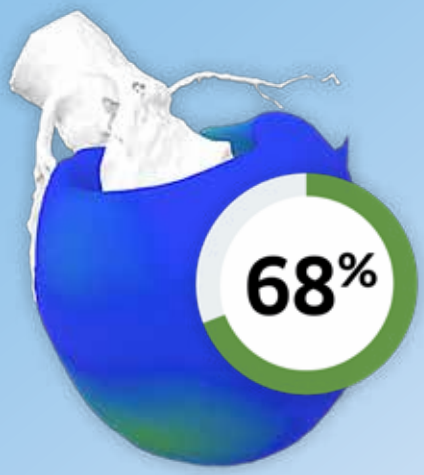
SENC & MyoStrain

MR Clinical applications

# Rapidly identifying asymptomatic **patients at risk of heart failure**[1]

Traditional diagnostics lack the visibility needed to see the effects of cardiac treatment or detect dysfunction before symptoms occur. By combining the Philips MRI acquisition sequence Fast-SENC with the analysis tool MyoStrain by Myocardial Solutions, early and subtle changes in the heart function can be directly measured.

The Fast-SENC sequence uses through-plane spatial modulation of magnetization and therefore enables pixel-wise strain measurement inside the heart muscle. The data is then being processed and analyzed with MyoStrain software which generates a clinical report.
The clinical report provides a health score, an accurate and reliable measure of heart function, identifying patients suffering from heart dysfunction. Healthy LV myocardium is quantified in a single percentage number1. This helps physicians detect heart dysfunction early and individualize treatment to prevent and manage heart failure. Philips provides strain-encoded (Fast-SENC) time resolved images from which the quantitative strain information per voxel can be extracted[2]. With the combination of Philips Fast-SENC and MyoStrain early dysfunction of heart failure can be detected across 48 segments of the heart[3] in 10 minutes.



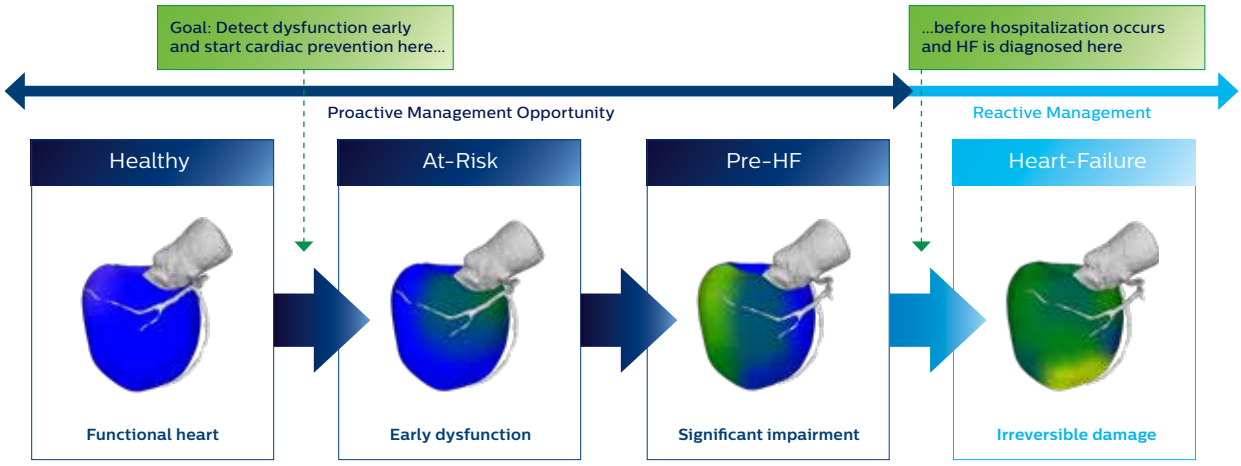

MyoStrain directly quantifies intramyocardial subclinical segmental dysfunction[4]
**MyoHealth™ Risk Score**
(Percent of Normal Segments to Total LV Segments)

1 Montenbruck M, et al. ESC Congress 2019. nr P600
2 Using third party Myocardial Solutions (MyoStrain) software
3 Korosoglou G, et al. ESC Heart Failure. 2019 Aug;6(4):548-602
4 Korosoglou G, et al. JACC Cardiovasc Imaging. 2021;Jan 4: S1936-878X(20)31004-4. DOI: (10.1016/j.jcmg.2020.10.024)

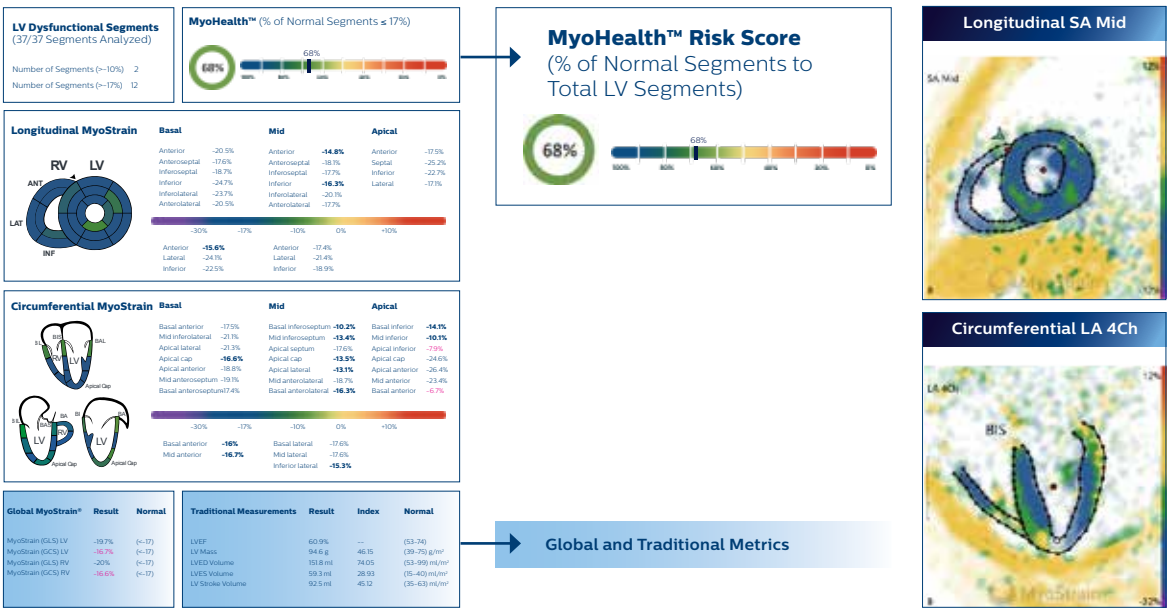
# SENC & MyoStrain

| | |
|---|---|
| Field strength | Digital 1.5T and 3.0T systems |
| Prerequisite | SW level R5.6 and DDAS operating system |
| Main applications | Cardiac |
| Speed | 12-heartbeat MRI scan[1]<br>< 10-minute exam time[1]<br>< 5-minute analysis time[1] |
| Sequence | SENC - uses through-plane spatial modulation of magnetization |
| Output | Data format compatible with MyoStrain® software[2] for generation of clinical report |

1 © Myocardial Solutions, Inc. 2021. All rights reserved.
2 Using third party Myocardial Solutions (MyoStrain) software, currently available for UK and US only




Healthy segment are indicated in **blue**, while dysfunctional segments are indicated in **green** or **yellow**



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