

# ReDS™ – YOUR DECISION SUPPORT TOOL IN THE EMERGENCY DEPARTMENT



## The Emergency Department - Where Every Second Counts

In the emergency department (ED), every second counts. ED providers must provide accurate, actionable assessments quickly and confidently, to keep patients safe and to improve the speed and efficiency of patient flow. When Heart Failure patients arrive at the ED presenting with shortness of breath, ED providers must determine if their symptoms relate to Heart Failure. After confirming that a patient is suffering from Heart Failure, ED providers must determine which patients require admission and which can be safely treated in the ED and released.

## ReDS™ - Triage Support Tool

ReDS™ is a noninvasive, easy-to-use system for the monitoring and management of lung fluid in patients with Heart Failure. ReDS™ provides on-the-spot, 90-second readings of a patient's lung fluid that help physicians and advanced practice providers quickly assess the patient's condition, in conjunction with other relevant parameters. By providing an accurate, fast, and absolute measurement, ReDS™ helps improve triage and decision support in the emergency department, and can help avoid unnecessary hospitalizations.

*"Unlike a chest x-ray or BNP level, a ReDS™ reading quantifies for you how much fluid a patient has in his or her lungs,"* says Dan Bensimhon MD, Medical Director of the Advanced Heart Failure and Mechanical Circulatory Support Program at Cone Health System in Greensboro, NC. *"Armed with this information, the ED provider can then make a more educated decision about who needs to be admitted versus who can be safely treated in the ED and discharged home to follow-up with us in the Heart Failure clinic."*

## ReDS™ in the ED - Your Decision Support Tool

- Accurate, actionable, and absolute lung fluid measurements
- On-the-spot readings of patient lung fluid levels
- Improved triage and decision support
- Enhanced ED efficiency and Heart Failure program engagement



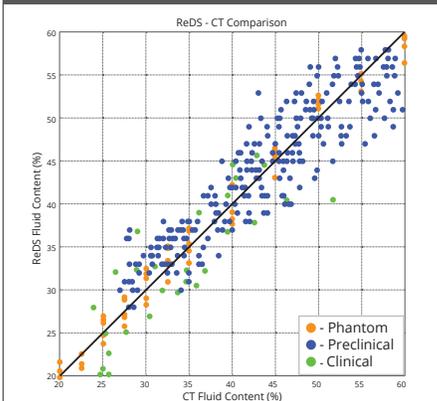
**SENSIBLE  
MEDICAL**  
Seeing through walls



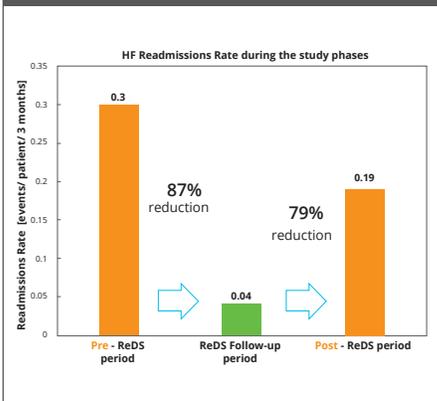
## ReDS™ - Striving to lead a new standard of care in heart failure

The ReDS™ system measures lung fluid in Heart Failure patients. It is intended for the measurement of lung fluid in patients living with Heart Failure, patients taking diuretic medication or patients recovering from a coronary artery disease-related event. Adapted for medical use from the military's 'see-through-wall' technology, ReDS™ is a miniature radar system employing low-power electromagnetic energy that provides accurate lung fluid measurements in just 90 seconds, using a noninvasive vest worn by the patient.

### Accuracy - ReDS vs. CT - 0.94 Correlation



### ReDS-HF Readmission Reduction - Economic Benefit Feasibility Study



## Technology Validation

ReDS™ medical radar technology has been validated in several bench, pre-clinical and clinical studies. When comparing the accuracy of ReDS™ technology to that of CT-assessed lung fluid quantification, based on commercially available software, the combined intra-class correlation between modalities is 0.94 (385 Data points). The bench test performed on a phantom model showed a correlation of 0.99. The pre-clinical study resulted in a correlation of 0.89 [0.86-0.93] over 294 points. The clinical study included 31 patients and demonstrated a correlation of 0.9 [0.8-0.95]<sup>1</sup>.



<sup>1</sup> O. Amir et al., Validation of remote dielectric sensing (ReDS™) technology for quantification of lung fluid status: Comparison to high resolution chest computed tomography in patients with and without acute heart failure, International Journal of Cardiology 221 (2016) 841-846