The study is designed as a prospective, randomized, controlled, multi-center trial. Patients will be enrolled during an index hospitalization for ADHF and will be followed for a minimum of 3 months or a maximum of 9 months (until the last patient has completed the 3-month follow-up). Patients will be blinded to ReDSTM readings values. Patients who satisfy all inclusion/exclusion criteria will be randomized within 48h from planned discharge to treatment or control groups through a secure, web based application. Adjudication committee will review all clinical events.

**Primary Efficacy Endpoint:** The rate of recurrent events of HF readmissions during entire follow-up period.

**Secondary Efficacy Endpoints:**
- Time from discharge until the first event of HF readmissions through the entire follow-up period.
- Proportions of total days lost to hospitalization due to HF events.
- Time from discharge until all-cause mortality through entire follow-up period.

**Main Inclusion Criteria**
- Older than 21 years of age.
- Patient’s physical condition enables him to sit up and lay down with minimal assistance.
- Patient’s residence has adequate cellular data coverage.
- Diagnosis of HF, with preserved or reduced LVEF, was made at least 90 days prior to enrollment.
- Patient is hospitalized for ADHF.
- BNP > 350 pg/ml (NT pro BNP > 1400 pg/ml) at enrollment (within 24h) and/or >750 pg/ml any time during the hospital stay (NT pro BNP >3000 pg/ml).

**Main Exclusion Criteria**
- HF patient with Class D objective assessment.
- Admission to hospital within 24h of discharge for HF.
- History of pulmonary embolism or Severe Pulmonary Hypertension or Severe COPD.
- CRF with CrCl<25mL/min.
- Tobacco use within the past 6 months.
- Impaired cognitive ability or any other state that may prevent full compliance with the study protocol, according to investigator’s assessment.
- Illness/Condition which may be aggravated or cause significant discomfort by the application of the vest (Rib fractures, with or without flail chest, Severe Osteoporosis).
- BMI of less than 22 or more than 36.

**ReDSTM - What Does it Measure?**
- Lung fluid content* of right mid-lobe, incl. hilum
- Averages the whole distance chest-to-back (Fresnel)
- Normal lung measures 20-35% (default target range)

**Study Status**
- Timeline: September 2015 – December 2017
- Number of sites: 31
- Number of patients: 84

The study is designed to drive guideline and market adoption. ReDS™ technology may change the way HF patients are managed.