# Boston Scientific Launches the HeartLogic™* Heart Failure Diagnostic in Europe

**The HeartLogic™ Diagnostic is the first and only heart failure diagnostic tool proven to detect 70% of heart failure events several weeks in advance, potentially reducing further hospitalisation for patients with heart failure**

Boston Scientific Europe today announced the launch of the HeartLogic™ Heart Failure Diagnostic in Europe. With this launch, the first and only diagnostic tool that enables proactive heart failure (HF) care is now available for patients in select countries across Europe including Italy, Spain, UK, Germany, Austria and Switzerland, with more to follow in the coming months.

At present, heart failure affects more than 15 million people in Europe and accounts for approximately 3 million hospitalisations and numerous deaths each year.[1] The HeartLogic diagnostic provides continuous measurement of early worsening signs of heart failure by combining data from sensors evaluating heart sounds, respiration rate and volume, thoracic impedance, heart rate and activity. HeartLogic's unique algorithm is built into the Resonate™ and next generation Cardiac Resynchronization Therapy Defibrillators (CRT-Ds) and implantable cardiac defibrillators (ICDs).

"Today, heart failure is the leading cause of hospitalisation in people over the age of 65 and carries a tremendous economic burden on healthcare systems. In fact, after initial hospitalisation, 24 percent of heart failure patients are readmitted to hospital within 30 days.[2,3,4] Utilising HeartLogic, physicians may be able to predict heart failure events weeks before they happen and can intervene earlier and help reduce patient hospitalisations," said Professor John Morgan, Chief Medical Officer and Medical Director for Rhythm Management at Boston Scientific in Europe.

The Multisensor Chronic Evaluation in Ambulatory Heart Failure Patients (MultiSENSE) study evaluated the performance of the HeartLogic™ Diagnostic to predict impending heart failure (HF) decompensation. In the MultiSENSE study, HeartLogic proved to successfully detect 70% of heart failure events in advance, providing physicians with several weeks of notice in most cases.[5]

"Using the HeartLogic Heart Failure Diagnostic, physicians can detect early warning signs of heart failure symptoms worsening, which gives them valuable time to address the different pathophysiological aspects of heart failure, adjust treatment, avoid potential re-hospitalisations and ultimately improve overall patient care and outcomes," said John P. Boehmer, M.D., principal investigator and director of the Heart Failure Program at Penn State Health Milton S. Hershey Medical Centre and professor of medicine, Penn State College of Medicine.

At the Heart Failure Congress 2018 in Vienna (May 26-29), several new analyses from the MultiSENSE Study have been presented. The data revealed that HeartLogic may detect changes in rapid shallow breathing patterns and may thus enable better outcomes for HF patients:

- Changes in the Rapid Shallow Breathing Index (RSBI) correlated with changes in patients' dyspnoeic status. For example, increased rapid shallow breathing resulted in a worsening dyspnoea status whereas minute ventilation (MV), a common marker known to be elevated in HF patients, did not.[6]

- The device-measured RSBI showed to be significantly elevated in the three-day period preceding HF events, whereas MV did not show significant differences.[7]

- Readmissions or death were more likely when the device-measured RSBI worsened during heart failure hospitalisation.[8]

In addition:

- HeartLogic has proven robust to various patient demographics. The algorithm works effectively across different patient body types and for patients of different ethnicities.

- Analysis of heart sound recording during echo evaluation in a patient with atrial fibrillation (AF) confirmed the presence of the third heart sound (S3). A device-based objective measure may thus provide more consistent assessment of S3 than auscultation in the midst of an arrhythmic rumble of AF.

Heart failure is a chronic, progressive condition in which the heart muscle is unable to pump enough blood through to the cells of the body. This can result in symptoms including fatigue, breathing problems or coughing. Managing HF can involve multiple hospitalisations, which can have an adverse impact on patient outcomes and quality of life. Nearly half of patients (46%) are re-hospitalised for heart failure within 60 days.[7]
For more information, please visit: https://www.bostonscientific.com/en-EU/medical-specialties/electrophysiology/heart-logic.html

About the HeartLogic™ Heart Failure Diagnostic
The HeartLogic™ Heart Failure Diagnostic is a validated diagnostic tool to detect gradual worsening of heart failure (HF) over

days or weeks. HeartLogic incorporates multiple sensors and combines trend data into one composite index, sending clinicians a single actionable alert and detailed report when it crosses a clinician-set threshold. This index allows physicians to detect early warning signs of HF symptoms worsening, giving them time to address the pathophysiological aspects of HF, adjust the treatment and avoid potential re-hospitalisations.

About Boston Scientific
Boston Scientific transforms lives through innovative medical solutions that improve the health of patients around the world. As a global medical technology leader for more than 35 years, we advance science for life by providing a broad range of high performance solutions that address unmet patient needs and reduce the cost of healthcare. For more information, visit www.bostonscientific.eu and connect on Twitter and Facebook.

*** The HeartLogic™ Heart Failure Diagnostic is a validated diagnostic tool to detect gradual worsening of heart failure (HF) over days or weeks using multiple physiologic measurements.**


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**6. Boehmer, J et al., Device Measured Rapid Shallow Breathing Index and Not Minute Ventilation Reflects Changes in Dyspnea Status in Ambulatory Heart Failure Patients [abstract]. At: Heart Failure 2018 & World Congress on Acute Heart Failure 2018; May 26-29; Vienna.**
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**8. Lindenfeld, j et al. Readmissions or Death are More Likely When Device-Derived Rapid Shallow Breathing Index Worsens During Heart Failure Hospitalization [abstract]. At: Heart Failure 2018 & World Congress on Acute Heart Failure 2018; May 26-29; Vienna.**


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Additional assets available online: Photos (1)

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