

## First Implant in Japan of Reply CRT-P, the World's Smallest Cardiac Resynchronization Pacemaker

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### Reply CRT-P is equipped with Sleep Apnea Monitoring and Dual Sensor Rate Response technology to better support heart failure (HF) patients

Tokyo, JAPAN, March 17, 2016 – Japan Lifeline, LivaNova’s established partner in Japan, has announced the first implant of Reply CRT-P, a new cardiac resynchronization pacemaker.

The REPLY CRT-P, with a volume of just 11.3 cc, is the smallest cardiac resynchronization pacemaker in the world.

Dr. Kikuya Uno, Director of the Heart Rhythm Center at the Sapporo Cardio Vascular Clinic, performed the first implant in Japan of Reply CRT-P in an 85-year-old woman with dilated cardiomyopathy, NYHA class III and a reduced ejection fraction.

“The size of Reply CRT-P is truly amazing and the patient feels very comfortable with the device.” commented Dr. Uno. “What’s even more impressive is that the tiny size does not reduce battery longevity.”

The Reply CRT-P is powered by proprietary algorithms aimed at better supporting heart failure management and ultimately improving patient outcome<sup>1</sup>.

The Sleep Apnea Monitoring (SAM) algorithm is a clinically validated tool to efficiently screen and monitor patients for severe sleep apnea<sup>2</sup>. Data from heart failure (HF) population studies suggest that both obstructive sleep apnea as well as central sleep apnea may be present in 30 to 50 percent of heart failure patients. If left untreated, sleep apnea increases the risk of death and HF hospitalization<sup>3,4,5</sup>.

Reply CRT-P also features dual-sensor technology designed to enable a physiologic adaptation of the heart rate during exercise<sup>1</sup> which is recommended for HF patients<sup>6,7</sup>. Unlike single-sensor devices, the dual sensor responds to the metabolic demand of the body via the minute ventilation sensor and avoids any inappropriate reaction from the accelerometer as a result of its cross-checking technology.

For further information, please click here: [Reply CRT-P](#)

<sup>1</sup>. Sorin REPLY CRT-P implant manual

<sup>2</sup>. Defaye P et al. A pacemaker transthoracic impedance sensor with an advanced algorithm to identify severe sleep apnea: The DREAM European study. Heart Rhythm. 2014; 11: 842-8

<sup>3</sup>. Lee W et al. Epidemiology of Obstructive Sleep Apnea: a Population-based Perspective. Expert Rev Respir Med. 2008; 2(3): 349–364.

<sup>4</sup>. Gottlieb DJ et al. Prospective study of obstructive sleep apnea and incident coronary heart disease and heart failure: the sleep heart health study. Circulation. 2010; 122(4): 352-60.

<sup>5</sup>. Costanzo MR et al. Mechanisms and Clinical Consequences of Untreated Central Sleep Apnea in Heart Failure JACC 2015; 65(1):72-84.

<sup>6</sup>. Patwala AY et al. Maximizing patient benefit from cardiac resynchronization therapy with the addition of structured exercise training: a randomized controlled study. JACC 2009, 53(25):2332-9.

<sup>7</sup>. Tse et al. The incremental benefit of rate-adaptive pacing on exercise performance during cardiac resynchronization therapy. JACC 2005;46(12):2292-7.