## Long-term clinical effects of ventricular pacing reduction with a changeover mode to minimize ventricular pacing in a general pacemaker population.

RESULTS FROM THE ANSWER STUDY

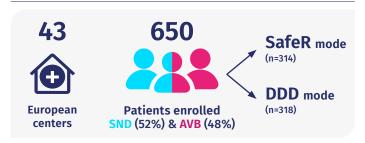
Stockburger M. et al; Long-term clinical effects of ventricular pacing reduction with a changeover mode to minimize ventricular pacing in a general pacemaker population; Eur Heart J. 2015 Jan 14; 36(3): 151–157.

## **Background & objective**

- → Several studies have shown that unnecessary right ventricular pacing (Vp) has detrimental effects.
- → Right ventricular pacing (VP) has been hypothesized to increase the risk of heart failure (HF) and atrial fibrillation (AF)
- → Supposedly, spontaneous ventricular electrical activation leads to better hemodynamics than ventricular pacing.

**Objective**: **The ANSWER study** evaluated, whether an AAI-DDD changeover mode to minimize VP (**SafeR™**) improves outcomes compared with DDD in a general dual-chamber pacemaker population implanted for sinus node disease (SND) or for atrioventricular block (AVB).

### Methodology

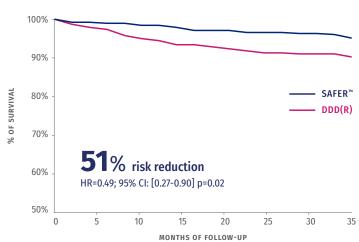


> ANSWER was a randomized controlled multicentre trial assessing SafeR™ vs. standard DDD in SND or AVB patients. After a 1-month run-in period, they were randomized (1:1) and followed for 3 years.

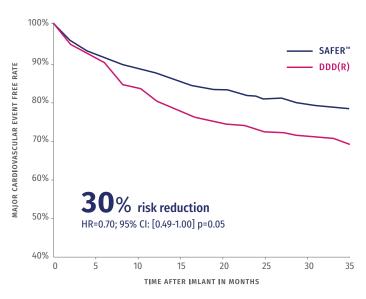
### Results

# 51% Risk reduction of cardiovascular hospitalizations with SafeR™

#### FREEDOM FROM CARDIAC DEATH OR HF HOSPITALIZATION



# 30% Risk reduction of cardiovascular hospitalizations with SafeR™



> Duration of cardiovascular hospitalization for patients was shorter in the SafeR™ vs. the DDD group

SafeR™ significantly reduces V pacing compared to DDD after 3 years (P<0.0001)

#### % OF VENTRICULAR PACING DDD VS SAFER™



### **Conclusion**

- → The effectiveness of the SafeR<sup>™</sup> pacing mode in reducing VP that was reported after 1 year follow-up has been confirmed after 3 years of follow-up.
- → The ANSWER study showed that the SafeR™ pacing mode significantly reduced cardiac deaths or HF hospitalizations vs. DDD mode, up to 3 years after implant.

