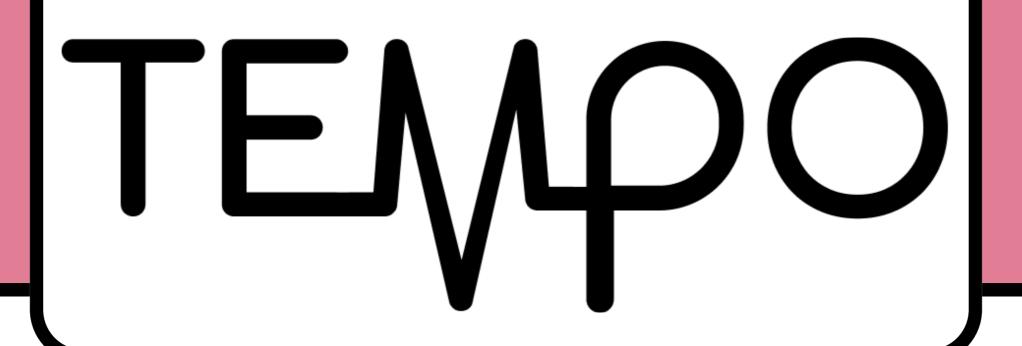
Miles Lee, Kathy Liu, Sun Moon, Rebecca Mosier, Eileen Stiles, Matt Vergel, Emma Whitehead, Dylan Zhu

Dr. Elizabeth Logsdon, Jennifer Schultz



Dr. James Gammie, Dr. Glenn Whitman, Dr. Youseph Yazdi, Dr. Hannah Rando, Dr. Rachael Quinn, Kim Cosetti

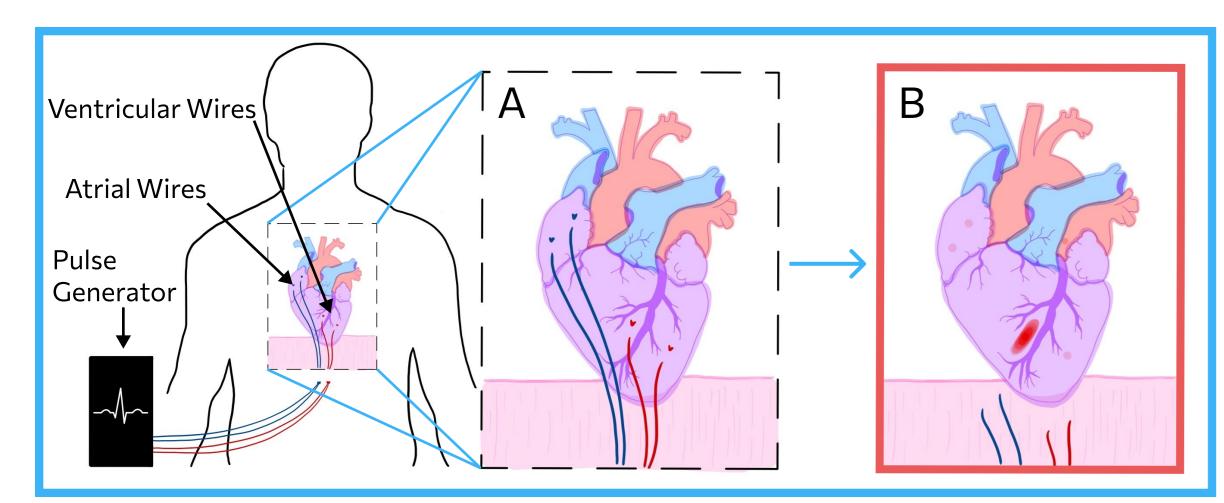
Johns Hopkins Hospital, Cardiac Surgery

BACKGROUND

- 765,000 cardiac surgery patients undergo temporary pacing in the US annually
- Temporary epicardial pacing wires (TEPW) are used to prevent or normalize postoperative dysrhythmias
- TEPWs are directly pulled from the body during removal
- 1% of wire removals produce critical complications such as cardiac perforation and tamponade
- Preventative measures against complications unnecessarily exacerbate hospital workflow congestion

SOLUTION

- Similar to standard TEPW
- Easily integrates into surgeon and nurse workflow
- Low cost with minimal changes to materials used



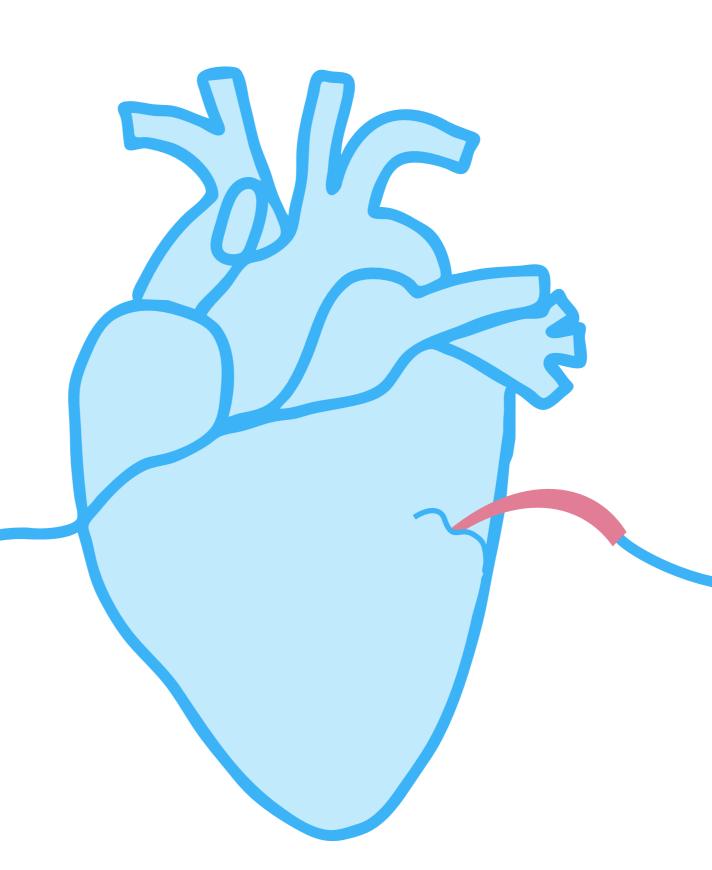


Fig. 1 (Left) Standard TEPW placement

A. Placement of ventricular and atrial pacing wires

B. Complications during pacing wire removal

BENEFITS



Negligible Force on Heart



Paces Heart at Current Standard



Optimized Workflow



Shorter Patient Stay



Reduced Risk of Tamponade



Lower Hospital Expenses

NEXT STEPS

- Reiterative testing
- In-vivo testing
- Patient studies
- Standardization of manufacturing process
- Intellectual Property



