

Radial Access Sheath for Minimally Invasive Vascular Interventions

Technology Summary

This technology is a catheter adapter optimized for patient comfort during percutaneous procedures using the radial access.

Technology Overview

Coronary artery disease is the most common type of heart disease and affects over 18M adults in the US. Over 1M percutaneous coronary interventions (PCIs, also known as angioplasty) are performed annually to treat obstructive coronary artery disease by relieving the occlusion of the coronary artery and improving blood supply. Coronary arteries can be accessed through the femoral approach (artery in the groin) or the radial approach (artery in the wrist). The radial access is used in 50% of PCIs and increasing. The radial access is preferred due to a lower risk of major bleeding and other complications, and a shorter recovery time. However, the radial artery approach requires the patient to remain in an uncomfortable position lying down with the palm facing up and can result in unexpected shifts during the procedure.

This technology is a radial access sheath adapter optimized for patient comfort during radial access PCIs. The preformed curved flexible introducer sheath conforms to the patient's wrist anatomy and may be secured via a wristband attachment. Once introduced, the novel sheath system enables percutaneous radial vascular access while the patients lie comfortably with their palms facing in or down. This enhanced design improves patient comfort without compromising clinician's access during radial access procedures.

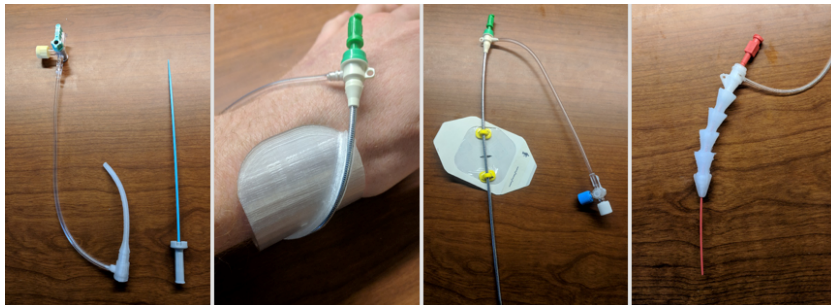


Figure 1. Prototypes of the radial access sheath, which allows the patient to remain in a comfortable position during percutaneous coronary interventions.

Potential Applications

- Adjunct device for percutaneous diagnostic and angioplasty procedures via radial artery approach

Advantages

- Improved patient (right or left radial) and clinician (especially if left radial is used) comfort during radial procedures
- The introducer sheath component is shaped to conform to the patient's anatomy
- Wristband attachment secures the device in place and protects against shifts in positioning during the procedure

Publications

- PCT Patent Application: [WO/2020/142220 A1](#). "Radial artery adaptor." Published July 9, 2020.

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