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ORIGINAL RESEARCH | ARTICLES IN PRESS, 101184

## Radiation Exposure Using Rampart vs Standard Lead Aprons and Shields During Invasive Cardiovascular Procedures

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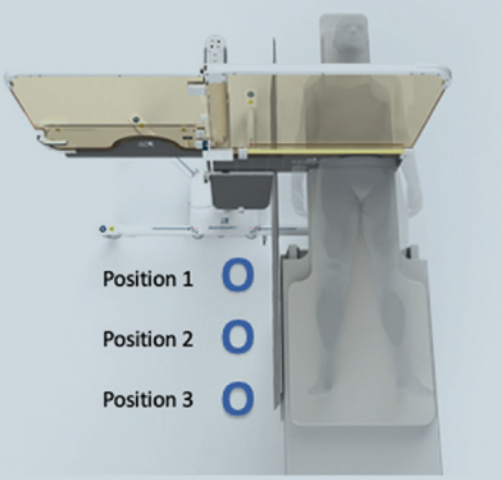
# Highlights

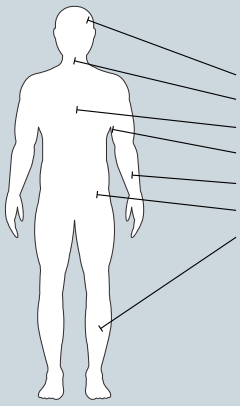
**Rampart reduces total body radiation compared to traditional lead aprons and shields.**

**Rampart significantly reduces radiation to the head and neck.**

**Rampart enables lead-free invasive cardiac procedures**




### RAMPART vs. LAS for Radiation Protection



| Badge Location | Lead Apron & Shield | Rampart | p-value |
|---|---|---|---|
| Head | 2.2 (1.3,3.9) | 0.2 (0.1,0.4) | <0.001 |
| Thyroid | 1.2 (0.5,2.3) | 0.2 (0.1,0.4) | <0.001 |
| Chest | 0.0 (0.0,0.1) | 0.2 (0.1,0.4) | <0.001 |
| Axilla | 1.9 (0.5,3.4) | 0.2 (0.1,0.4) | <0.001 |
| Forearm | 4.3 (2.3,8.9) | 0.4 (0.3,0.7) | <0.001 |
| Hip | 0.0 (0.0,0.2) | 0.2 (0.1,0.7) | <0.001 |
| Mid-tibia | 2.3 (1.3,3.9) | 0.2 (0.1,0.4) | <0.001 |
| **Total Body Radiation (mRem)** | **2.2 (1.3,3.9)** | **0.1 (0.0,0.1)** | **<0.001** |

**The Rampart significantly reduces total body radiation compared to traditional lead aprons and shields**

*The Rampart Defender significantly reduces total body radiation exposure for catheterization lab teams during invasive cardiovascular procedures compared to traditional LAS. This has important implications for the health and safety of lab teams, potentially* ***allowing procedures without the need for lead aprons.***

# 20x
## MORE PROTECTION THAN STANDARD LEAD APRONS & SHIELDS

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MKT077-REV A

RAMPART IC

**GUARDIAN**

Floor-Mounted or
Ceiling-Mounted

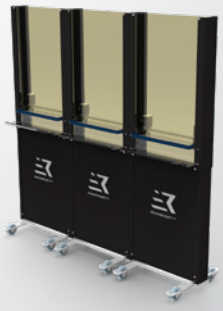
**DEFENDER**

# TOTAL TEAM PROTECTION

## Discover the Rampart Portfolio

**SHADOW**

**BUNKER**



**SENTRY**

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