





高雄市左營區明誠二路332號4樓之3 TEL: (07)5582188 FAX: (07)5569943 https://www.cosmomed.com.tw

91% Overall Radiation Reduction

Protection for the entire Cath Lab Team



Radiation Exposure Causes Health Risk for the Cath Lab Team

Longer more complex procedures, lead to more radiation exposure for Cath Lab Teams

• The number of structural heart, CTO's, Multi-Vessel, Peripheral and Endovascular procedures are increasing and require longer exposure to ionizing radiation than PCI alone.

Cath lab team scatter radiation exposure is significant and causes long term health risk. Mounting evidence shows a link to a series of significant health effects:

HEALTH EFFECT	ODDS RATIO (95% CI)
CANCER	3.0 (1.5 - 6.2)
CATARACTS	6.3 (1.5 - 27.6)
HYPERTENSION	1.5 (0.9 - 2.6)
SKIN LESSIONS	2.8 (1.3 - 6.1)

The Odds ratio is the multiple or the normal occurrence of each condition in healthcare personnel not working in x-rays labs. Reference: Andreassi MG, Piccaluga E, Guagliumi G, et al. Occupational health risks in cardiac catheterization laboratory workers. Circ Cardiovasc Interv. 2016,9:003273.

Interventional Physicians Have the Highest Radiation Exposure of All Professions

INTERVENTIONAL PHYSICIANS

3 MSV PER YEAR

NUCLEAR POWER PLANT WORKERS

1.23 MSV PER YEAR

OCCUPATIONAL RISK FROM SCATTER RADIATION



1 IN 25 HIGH VOLUME OPERATORS WILL ACQUIRE A RADIATION CAUSED CANCER



1 IN 50 HIGH VOLUME OPERATORS WILL DIE AS A RESULT OF RADIATION ACQUIRED DISEASE



THE POSITIONS NEAR THE HEAD AND CHEST RECEIVE THE MOST SCATTER RADIATION

^{*} International Atomic Energy Agency: Occup Med (Lond). 2010;60(6):464-9. Zakeri F, Hirobe T, Akbari Noghabi K. Biological effects of low-dose ionizing radiation exposure on interventional cardiologists.

Breakthrough Personal Protection Made Simple

The EGGNEST™ is a comprehensive, scatter radiation protection system fully integrated into the workflow of the modern Cath Lab.

It provides protection for the entire medical team regardless of location, dramatically reducing radiation exposure.



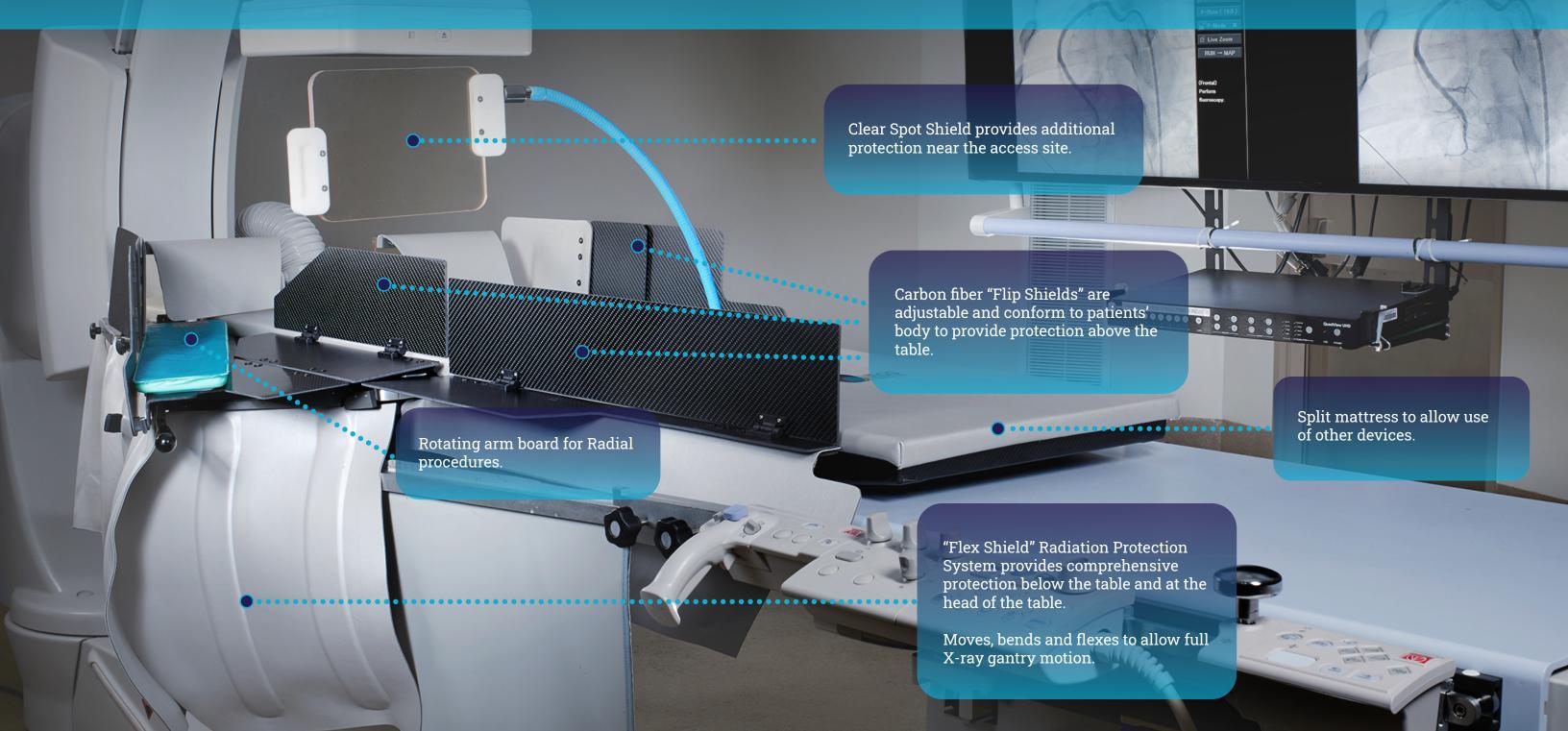
Carbon Fiber Platform with Internal Shielding Replaces Patient Mattress On X-ray Table



Built-in Railing System To Support Radiation Protection Components



Quad Layer Memory Foam With Support For Chest Compressions

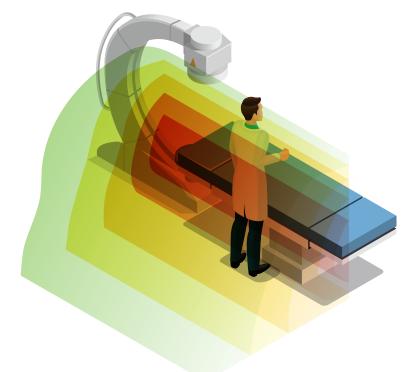


Compromising on Radiation Protection is not an Option

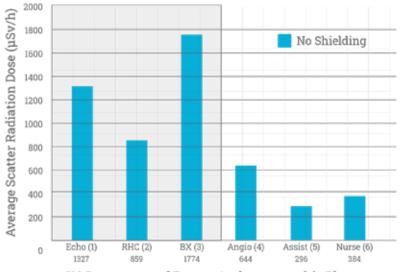
There has not been a radiation protection approach that protects the entire cath lab team.

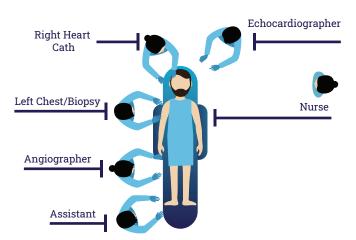
Any radiation protection solution needs to block scatter radiation below the table, at the head and side.

70%
Of Scatter Radiation comes from below the table



The Volume of Scatter Radiation Dose Around The Cath Lab Table



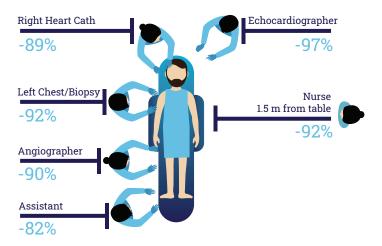


US Department of Energy Anthropomorphic Phantom

 Protection needs to be developed to account for additional staff locations around the table.

91% Overall Radiation Reduction vs. Standard Shielding

Average Scatter X-Ray Dose Reduction with the EGGNEST™



This illustration shows scatter radiation measurement positions from typical positions occupied by medical staff during cath lab procedures.

Measurements were taken from 20-200 cm above the floor, in 20 cm increments for each position.

EGGNEST™ vs. Standard Shielding

- Average scatter radiation was measured in 5 common X-ray views.
- 6 positions around the table with no shielding, standard shielding and Eggnest™ shielding.
- Average scatter radiation was measured from 20 to 200cm at each position.
- * A ceiling-mounted upper shield and a table side rail-mounted lower shield.

