



RADIATION PROTECTION

P R O D U C T S

CERTIFICATIONS & APPROVALS

Our Quality Systems are assessed and certified as per the guidelines of ISO 9001:2008 and ISO 13485:2003 / EN ISO 13485:2012

Our products conform to the stringent quantity norms of CE, as specified by European Council's Medical Device Directive (MDD) contained in 93 / 43 / ECC, as well as Personal Protection Equipment (PPE) contained in 89 /686 / EEC

Most of the Kiran Products meet or exceed EN 61331-1: 2014, EN 61331-3:2014, IEC 61331-1:2014, ASTM F 2547-06, DIN & IS Standards. Our manufacturing facilities are registered with USFDA.



Radiation Protection Products that are stylish & assure protection

Constant innovation in material science have helped Kiran develop some of the finest radiation protection products that offer the highest level of radiation attenuation, is lightweight, ergonomic and aesthetically appealing.

Kiran offers a wide range of radiology products for interventional radiology and cardiology procedures, CT labs, surgery, and general radiology.

SAFETY GUARANTEE

Medical Professionals can be assured of maximum protection against scattered radiation when using Kiran protective apparel that are ergonomically designed and lightweight, making it comfortable to wear for long durations. Our lead-free and lightweight range has the same lead equivalence as our leaded range. Available in a range of colors, our apparel adds life to any solemn hospital environment.

Patients who are occasionally exposed to radiation can use Kiran apparel and shields that are not only safe but also have a perfect fit and are comfortable to wear.

When you wear Kiran apparel, you get...

Maximum protection against scattered radiation—a key health consideration

Protection for the upper body and the sensitive thyroid gland at a lead equivalence of 0.50 mm Pb

Basic back protection required for use in CT Scans and Cath labs at a lead equivalence of 0.25 mm Pb

Solutions for the varying needs of X-ray technicians, medical professionals, and patients

Your choice of material, colors, size, and embroidered designs

Tested As per IEC Standards for 80 kV primary radiation and 80 kV scattered radiation respectively on an Alderson patient phantom with a field size of 50 X 50 cm for primary radiation.

Lead Equivalence of...	Protects Against Radiation Up To...
1.00 mm Pb	> 99%
0.50 mm Pb	99%
0.35 mm Pb	98%
0.25 mm Pb	96%

(Higher lead equivalence is available on request)

Our Testing Facilities

Kiran has its own state-of-the-art Radiographic Testing Center where we test our products during research and development as well as in-process quality control and final testing before release for sale.

R & D Facility

Kiran has its own R&D facility, approved by Department of Scientific and Industrial Research (DSIR), covering upto 100 m² of Area.

DOUBLE-SIDED APRON

Available in **ZeroLead®**,
Ultralite® & **LeadLite®**
materials

Lead equivalence
Front: 0.50 mm Pb or 0.35 mm Pb
Back: 0.25 mm Pb



Optima

Frontal overlap of 15 cm

Side slits for better mobility

Velcro panels for improved fit

Adjustable in-built elastic belt for reduced back and shoulder stress

Anti-skid shoulder pads for added comfort and weight distribution



Maxima

Complete frontal overlap for improved fit

Equal protection on both shoulder panels

Wide adjustable elastic belt for reduced back and shoulder stress

Side slit fastener to prevent accidental radiation exposure

SKIRT & VEST

Available in **ZeroLead®**,
Ultralite® & **LeadLite®**
materials

Lead equivalence:
Front : 0.50 mm Pb or 0.35 mm Pb
Back : 0.25 mm Pb



Optima

Adjustable Velcro panels for a snug fit

Fully overlapping skirt for added lower body protection

Vest overlaps skirt up to 15 cm for additional lower body protection

Equitable weight distribution on waist and shoulders to prevent fatigue



Maxima

Front opening for ease of wearing

Available in magnetic lock

Complete upper body protection with fully overlapping vest

Equitable weight distribution on waist and shoulders to prevent fatigue

COAT APRON

Available in **ZeroLead®**,
Ultralite® & **LeadLite®**
materials

Lead equivalence:
Front : 0.50 mm Pb, 0.35 mm Pb &
0.25 mm Pb



Complete frontal protection

The ideal choice for short durations

Padded shoulders for reduced shoulder stress and equitable distribution of weight

Easy to wear and remove

Available with thyroid attached option

Wide stretchable insert with Velcro fastening for a snug fit

SURGICAL APRON

Available in **ZeroLead®**,
Ultralite® & **LeadLite®**
materials

Lead equivalence:
Front : 0.50 mm Pb, 0.35 mm Pb &
0.25 mm Pb



The exclusive design for surgeons

Specially designed for the surgical theater

Easily slides out from under a surgeon's scrubs when discarding

Maximum frontal protection

Adjustable Velcro panels for improved fit

Ergonomic design equitably distributes weight

THYROID SHIELD



Classic

All-time popular design
Wide coverage area
One size fits all



Elegant

Adjustable fastener
Easily attaches to our Double Sided Apron and Vest

PROTECTIVE SHIELDS



Head Shield

Complete protection to head and ears
Flexible and supple
Designed for ease of wear and removal
Size : Adult & Child
Lead equivalence: 0.25 mm Pb, 0.35 mm Pb, 0.50 mm Pb, 1.00 mm Pb



Slimline

Provides perfect fit and protection
Easily attaches to all Aprons



Harmony

Collar design perfectly fits thyroid gland
Wide coverage



Ovarian Shield

Ideal to protect the female reproductive organ
Available in one-size-fits-all size and child size
Designed for ease of wear and removal
Adjustable belt for good fit
Size : Adult & Child
Lead equivalence: 1.00 mm Pb



Gonad Shield

Ideal to protect the male reproductive organ
Available in one-size-fits-all size and child size
Designed for ease of wear and removal
Adjustable Velcro panels for good fit
Lead equivalence: 0.50 mm Pb, 1.00 mm Pb

PROTECTIVE SHIELDS



Patient Apron

A colorful range of aprons for patients of all size

Universal-use as gonad and ovarian shields

Complete lower body protection

Designed for ease of wearing

Adjustable back strap for a snug fit

Available with & without belt

Available in **ZeroLead®**,
Ultralite® & **LeadLite®**
materials

Lead equivalence:
Front : 1.00 mm Pb, 0.50 mm Pb or
0.35 mm Pb



Aprons for Children

Getting an X-ray is comfortable and friendly even for children with just a little bit of help from us

Our children's range of aprons feature colorful prints, lightweight materials, and ergonomic designs in various child sizes

PROTECTIVE SHIELDS



Panoramic Design

Designed for being X-rayed at the Panoramic X-ray machine

Provides Optimum Protection

Available in **ZeroLead®**,
Ultralite® & **LeadLite®**
materials

Lead equivalence:
Front : 0.50 mm Pb, 0.35 mm Pb &
0.25 mm Pb



Dental Apron

Designed for complete protection while being X-rayed in a dentist's chair.

THE SECRET INGREDIENTS

With Kiran apparel, there is never any compromise on quality. Our range is made from proprietary materials, each designed for specialized purposes. Ask for apparel in the material that best suits your needs.

Zero Lead®: An eco-friendly technological breakthrough

Kiran fulfills its promise of being a socially responsible company with the development of Zero Lead®, an eco-friendly apparel that replaces lead with a combination of tungsten, bismuth and antimony. This sheeting not only provides the same protection as leaded sheeting but is also significantly lighter. This masterpiece of Kiran's innovation has been extensively documented in European and American scientific journals.

Ultralite®: An Optimised weight sheeting

Our most popular sheeting brand, Ultralite® is a weight-optimized sheeting that replaces a large part of lead with a combination of antimony. Ultralite® sheeting provides the same level of protection as leaded sheeting, but at a significantly lower weight. Ultralite® sheeting is ideal for cath labs and intensive surgeries requiring protection apparel to be worn for long periods of time.

Leadlite®: The industry standard redefined

Our latest innovation, Leadlite® is a proprietary leaded sheeting that is the lightest leaded material. This breakthrough in weight optimization is a result of the purest and finest lead particles used together with mineral oils and minimum bonding materials instead of artificial plasticizers. Our special formulation ensures that the material remains supple for several years and is resistant to humidity.

Hygiena : The ultimate health fabric

Kiran's range of apparel has a longer shelf life thanks to our proprietary Hygiena covering material that prevents fading and wrinkles. Hygiena is a health fabric that is resistant to blood stains and is both water and stain resistant. Hygiena is carefully crafted in Italy and is completely breathable.

SatinTouch : A Brand new Innovation

Advanced fabric that incorporates all the benefits of the Hygenia fabric while offering a super smooth satin like feel, making it extremely comfortable to wear over long durations.

Dimensions

Standard Size		Letter Symbol	Dimensions		
			A	B	C
Small	Very Short	SV	90	60	100
	Short	SS	100		
	Medium	SM	110		
	Long	SL	120		
	Extra Long	SE	130		
Medium	Very Short	MV	90	60	110
	Short	MS	100		
	Medium	MM	110		
	Long	ML	120		
	Extra Long	ME	130		
Large	Short	LS	100	75	120
	Medium	LM	110		
	Long	LL	120		
	Extra Long	LE	130		

Dimension A is Length from the middle of shoulder to the lower edge.

Dimension B is the Width of the front panel and the width of back panel of closed Protective aprons with fasteners at the sides.

Dimensions C is the girth of closed Protective aprons with a fastener in the middle of the front or the back.

Dimensions A, B and C are minimum dimensions.

KIRAN BESPOKE

Most of our products can be customized in terms of size, color, and embroidery patterns.

Sizes

All apparel is available in made-to-order sizes for that perfect fit. Follow the measurement guidelines below when sending us your orders.

How To Measure:

Apron

<Chest Waist Hips Length>

Length of the apron is measured from the mid-point of the shoulder to the knees

Skirt & Vest:

<Chest Waist Hips Length of Vest Length of Skirt>

Length of the vest is measured from the mid-point of the shoulder to the waist

Length of the skirt is measured from waist to knees
Chest measurement is the distance between the two underarms

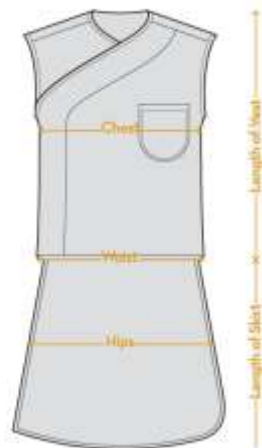
Girth is the circumference of the chest measured by wrapping the tape around the torso just below the arm pits

For custom orders, please provide measurements of the chest, waist, hips, length, and girth.

Apron



Skirt & Vest



Embroidery

Embroider the name of a medical professional, department, or hospital on a detachable strip that snaps onto all our apparel.

You can also choose from our range of embroidery designs, which can be added to the front or to the pockets of your apparel, to add that personal touch to your healthcare facility.

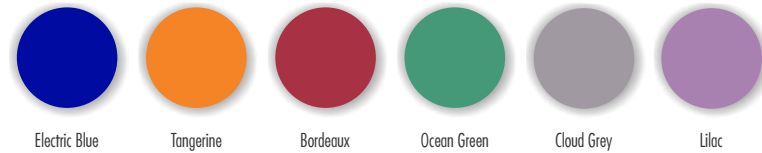
you work in a pediatric facility, you can opt for an embroidery pattern to be added to your apparel. These are just some examples from our vast library of designs.

Colors

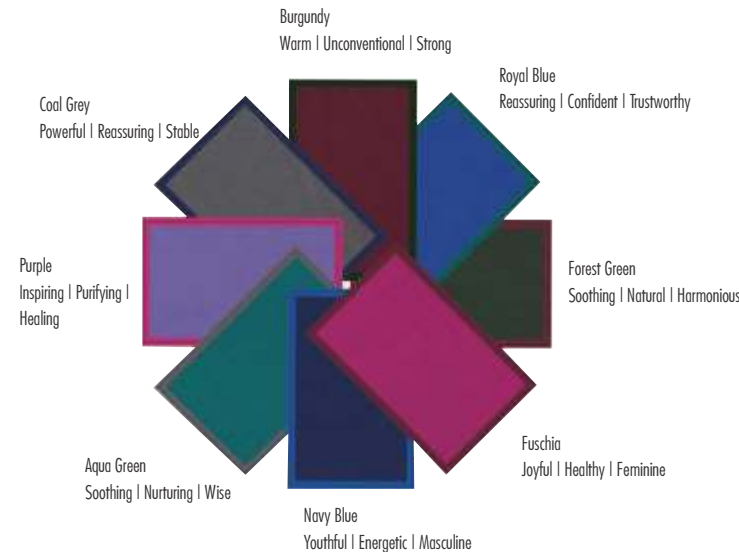
All Kiran apparel can be ordered in any of our wide range of colors. Choose one that best represents the personality of your medical facility!

Each color is accompanied with piping in a complementary color.

SatinTouch Shades



Hygiene Shades



PROTECTIVE GLOVES

Kiran protective gloves are a must when hands are in the active beam field, for instance, during radioscopy procedures.

Made of soft, pliable material, Kiran gloves are non-sterile, protective, comfortable, and usable.

DUO

Our dual-layered gloves have a seamless external covering and an internal lining, all of which can be dismantled and cleaned.

Lead equivalence: 0.50 mm Pb

Lead Equivalent thickness in mm Pb	Available Size	length of the glove in cm	Half circumference of the glove on cuff / palm in cm	Half circumference of the hand of the user in cm
0.50	L	38	18.5 / 14	9



MITTENS

One of our best-sellers, this model allows wearers the mobility of using their bare hands directly in the beam field, thanks to the protective mitten design and snug internal strap.

Lead equivalence: 0.25 mm Pb, 0.35 mm Pb, and 0.50 mm Pb

Lead Equivalent thickness in mm Pb	Available Size	length of the glove in cm	Half circumference of the glove on cuff / palm in cm	Half circumference of the hand of the user in cm
0.25	L	38	18.5 / 14	9
0.35	L	38	18.5 / 14	9
0.50	L	38	18.5 / 14	9

Available in **ZeroLead®**, **Ultralite®** & **LeadLite®** materials



LEAD-FREE Radiation Protection HI-GRIP GLOVE

360-Degree Lead-Free Protection

Elite designing apparel for intervention radiological and cardiological procedures, surgery, CT scans, and general radiology.

The hands usually find themselves exposed to scattered radiation and under a direct beam during surgical procedures.

Our latest innovation is an unmatched range of sterile lead-free and disposable radiation protection gloves that provide the highest possible protection and are easy to dispose off in an eco-friendly manner.



CATHLAB PRO



MAX



LATEX-FREE



Specifications

Size	Minimum Length (mm/inches)	Palm Width (mm/inches)
6	280/11.0	78/3.1
6.5	280/11.0	80/3.1
7	280/11.0	85/3.3
7.5	280/11.0	94/3.7
8	280/11.0	100/3.9
8.5	280/11.0	107/4.2
9	280/11.0	114/4.5

Attenuation measurement at broad beam according to EN 61331-1 : 2014 / ASTM-2547-06.
Setting for lead equivalence: 60 kV, 2.5 Al filter, narrow beam.

Radiation Beam Energy Level	Skin Dose Reduction				
	Max NXP35	Thin NXP25	Ultrathin NXP20	Cathlab Pro CNXP20	Latex-free SXP20
60 kV	63%	52%	46%	40%	46%
80 kV	52%	43%	40%	35%	40%
90 kV	48%	40%	38%	32%	38%
100 kV	44%	36%	31%	27%	31%
120 kV	38%	27%	26%	25%	26%
Lead Equivalence at 60 kV	0.04	0.025	0.02	0.02	0.02

Characteristics

Technical Parameters	Max NXP35	Thin NXP25	Ultrathin NXP20	Cathlab Pro CNXP20	Latex-free SXP20
Finger tip thickness (mm/mils)	Min. 0.35	Min. 0.25	Min. 0.2	Min. 0.35	Min. 0.25
Palm thickness (mm/mils)	Min. 0.32	Min. 0.24	Min. 0.19	Min. 0.32	Min. 0.24
Cuff thickness (mm/mils)	Min. 0.30	Min. 0.22	Min. 0.18	Min. 0.30	Min. 0.22
Lead equivalence (mm Pb)	Min. 0.04	Min. 0.025	Min. 0.02	Min. 0.02	Min. 0.025
Color	Khaki	Khaki	Khaki	Yellow	Light Brown
Material	Natural Latex with hypoallergenic inner coating				Synthetic Latex
Tensile strength (MPa)	Min 14				
Minimum elongation (%)	700				
Protective material	Mixture of lead-free elements				
Donning agent	Powder free				
Azo dyes	None				
Residual powder	≤ 2mg/glove				
Protein content	Less than 50 micrograms/gram				
Sterilization	ETO/Gamma sterilization				
Packing	One sterile pair per pouch				
Storage	Store in cool, dry place away from Ozone (Below 25°C) 40-50% RH				

EYE PROTECTION

The Kiran range of eyewear is specially designed to protect the sensitive human eye from the harmful effects of radiation. With complete protection to the entire eye, we ensure that our eyewear never exposes Surgeons, Doctors and X-ray technicians to accidental radiation.

Lead equivalence: Minimum 0.75 mm Pb at 150 kVp according to standard Narrow Beam Geometry EN 61331-1 : 2014 & EN 61331-3 : 2014

LIGHT AND COMFORTABLE
Ease of wearing for long durations

EUROPEAN LEAD GLASS
Absorbs 99% radiation

WIDE RANGE OF MODELS
Designed for differing applications

CE
0120



EYE PROTECTION

Front

Perfect frontal protection



Front & Side

Protection from frontal as well as lateral radiation



Fit Over

Fits perfectly over the wearer's existing eyeglasses



Max 10

Protection and comfort with padding for the temples and bridge of the nose



Aviators

Wraparound style eyeglasses with Protection and stylish design



Max 30

Unisex Model that fits all faces and shapes



STORAGE SYSTEMS

Poor storage reduces the shelf life of protective apparel and also takes up excessive space. Our perfectly crafted range of storage systems can help safely store multiple pairs of apparel and accessories in a compact unit that is space efficient and easy to install and comes in stainless steel grade.



Mobile Storage System with Hangers

Convenient mobile storage system with brakes
Stainless steel hangers for hygienic storage
Compact unit for storing apparel, gloves, and shields
Detachable hooks for more storage options

Available models:

5 Hangers & Glove Holder: Stores up to 5 pairs of apparel
10 Hangers & Glove Holder: Stores up to 10 pairs of apparel

Glove holder and hooks are available for fixing on the mobile system



Mounted Wall Racks

Swivel hangers for ease of hanging and removing
Stainless steel hangers for hygienic storage
Space-saving racks store apparel close to a wall
Wall bracket can be right or left sided for optimum use of space

Available models:

Wall Racks with One, Two, Three and Five hangers

Hooks are available for fixing on all wall racks.



CT SHIELD

It has been found that radiation doses equivalent to those received during CT scans lead to an increased incidence of cancer. The Kiran CT Shield is designed to protect from radiation doses emitted during CT scans, without any compromise to image quality

Lead Equivalence: Minimum 0.07 mm Pb at 150kV, 2.5 mm Al filter at Narrow Beam condition according to EN 61331-1: 2014



CT Breast Shield

Today, cancer is affecting younger and younger populations of women, with the highest risk being to women under the age of 35. CT scans and similar doses of radiation increase cancer risk, making it essential to conduct research on new radiation protection methods. Kiran applied its expertise in radiation protection to develop the Breast Shield that uses in-plane breast shielding to reduce cancer risk.

Offers 67% protection to the sensitive tissues of the breasts
Helps prevent breast cancer
Various sizes available



CT Eye Shield

Designed to protect the eye, which becomes especially sensitive to radiation after repeated CT procedures.

70% protection to the complete eye
Designed to mould to the eye's shape
One size fits all



CT Pediatric Shield

It has been found that radiation doses equivalent to those received during CT scans lead to an increased incidence of cancer. Infants are ten times more susceptible to carcinogenesis caused by radiation exposure than adults. The Kiran Pediatric Shield is designed to protect infants and children from radiation doses emitted during CT scans, without any compromise to image quality.

Offers 67% protection
Available with foam pad
Available in 3 sizes



CT Thyroid Shield:

Designed to provide special protection to the sensitive thyroid gland.

Offers 65% protection to the thyroid gland
Prevents tissue damage
One size fits all



RADSHIELD

Sterile Incise Drape with Radiation Protection

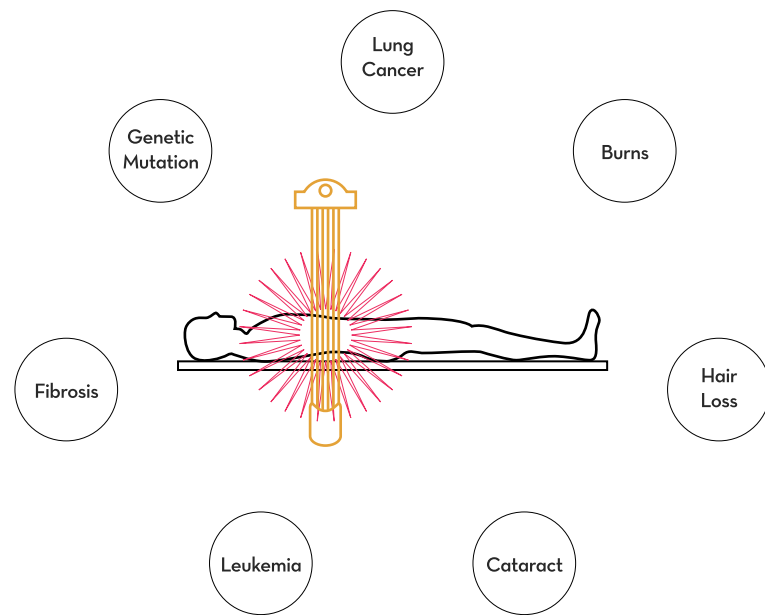
Perfect Scatter Protection

An Interventional Physician is exposed to radiation 15-20 times a day and X-ray radiation is known to be a Carcinogenic. Research and studies have shown continuous exposure can result in Cancer of the lung, brain, thyroid, breast, fibrosis and hair loss.

Our latest inclusion, Radiation Protection Shields (Rad Shields) are made from proprietary mix of several Lead-free elements, which help prevent cancer risks and radiation damage.

Why Rad Shield?

Continuous X-Ray radiation exposure eventually affects the physician



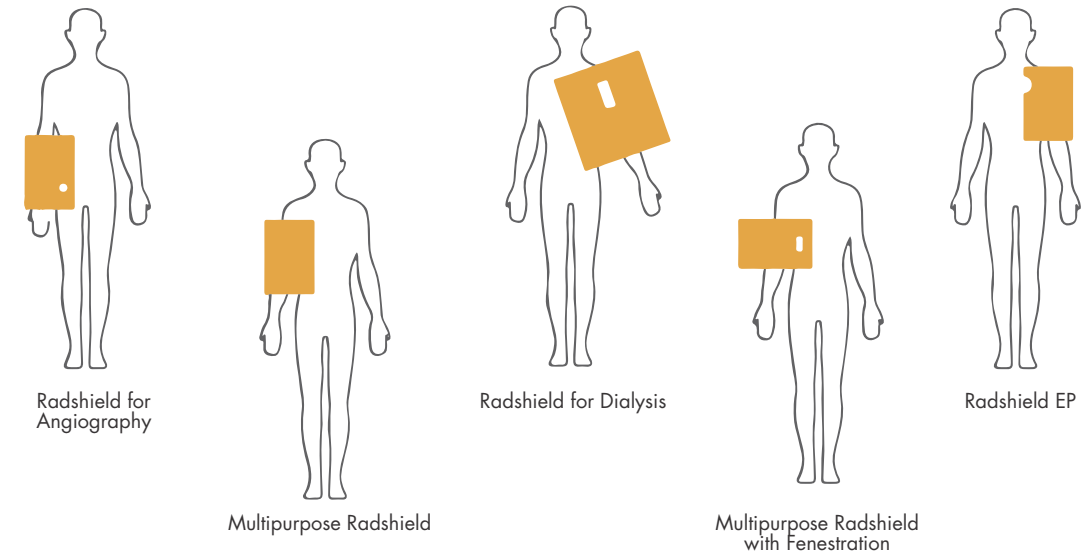
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Equivalence (mm Pb)	Type	Attenuation 90 kVp
0.125	LOW (L)	75.3%
0.250	MEDIUM (M)	90.8%
0.350	HIGH (H)	95.3%

How & Where?

Rad Shields are placed on the patient, in such a way that, the Physician gets protection from X-ray scatter radiation. Rad Shields are designed to allow the Physician to Conduct his surgery without any hindrance but at the same time provide protection to him. Rad Shields are used for general as well as interventional procedures such as biopsy, femoral entry angiography and many others.

The Rad Shield Solution



Typical Scatter Radiation Exposure Levels

