

Fluoroscopy Patient Safety

Substantial Radiation Dose Levels (SRDL) & First Notification Levels

Dose Metric	First Notification Level	Subsequent Notifications (increments)	SRDL
$K_{a,r}$ [air kerma at reference point]	3 Gy	1 Gy	5 Gy
P_{KA} [air kerma area product]	300 Gy cm ² *	100 Gy cm ² *	500 Gy cm ² *
Fluoroscopy time**	30 min	15 min	60 min

* Field size normalized to 100 cm² at patient's skin; adjust P_{KA} values proportionately to actual procedure field size (e.g. for 50 cm² field size, SRDL value is 250 Gy cm²)

**Fluoroscopy time alone does not accurately predict skin injury; if none of the other dose metrics exceeds the SRDL, the patient does not need to be notified and follow-up may not be necessary.

Prevent patient skin injury during long fluoroscopy procedures. Before any long FGI procedure begins, the fluoroscopy operator designates another person (such as a technologist or a nurse) to continuously monitor the patient's accumulated radiation dose. The person monitoring the patient's dose must notify the fluoroscopy operator if any of these four **first notification** dose metric levels are reached. They must again notify the operator at each **subsequent notification** level. If the SRDL is reached, the physician who performed the procedure is responsible for follow up with the patient.

Refer to VUMC Policy *Diagnostic Imaging X-Ray Safety* or contact VEHS Radiation Safety at radsafety@vumc.org for more information.