

INTERNATIONAL ATOMIC ENERGY AGENCY

TRIGGER LEVELS FOR FOLLOW-UP OF PATIENTS TO DETECT CLINICALLY RELEVANT TISSUE REACTIONS (update June 2022)

The dose indicators in this table are listed in order of their value for determining the likelihood of tissue reactions, with the most useful indicator at the top of the table. The indicators with a lower priority (air kerma-area product and fluoroscopy time) should be used to trigger follow-up only when neither of the first two (peak skin dose and reference air kerma) is available.

All reported values should be the total values, including contributions from fluoroscopy and digital radiography (cine) acquisitions.

Peak skin dose ($D_{\text{skin,max}}$)	3 Gy = 3 000 mGy	Peak skin dose is the best indicator for a potential tissue effect. For fluoroscopy systems reporting peak skin dose in mGy, the displayed value should be divided by 1 000 to convert to Gy
Reference air kerma (Cumulative dose) ($K_{a,r}$)	5 Gy	For fluoroscopy systems reporting air kerma in mGy, the displayed value should be divided by 1 000 to convert to Gy
Air kerma-area product (dose-area product) (P_{KA})	500 Gy.cm ²	Fluoroscopy systems report kerma-area product using different units. The following factors should be applied to convert to Gy.cm ² : If displayed in cGy.cm ² or μGy.m ² , divide the displayed value by 100. If displayed in mGy.cm ² , divide the displayed value by 1 000.
Fluoroscopy time	60 min	Fluoroscopy time alone is not a good indicator for skin dose but should be recorded as an additional factor along with the above dose metrics. Patient follow-up may not be necessary when fluoroscopy time exceeds 60 min but the other dose indicators from this table are below their respective trigger values.
Multiple fluoroscopy-guided interventional procedures within 1 month		Ideally, account should be taken for all fluoroscopy-guided interventional procedures performed on the patient regardless of the medical facility where they were performed