

INTERNATIONAL ATOMIC ENERGY AGENCY

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

Peak skin dose ($D_{\text{skin,max}}$)	3 Gy	Peak skin dose is the best indicator for a potential tissue effect. For systems not displaying this metric, the other trigger levels should be used. 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) ($K_{\text{a,r}}$)	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	For fluoroscopy systems reporting 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 and should be recorded as an additional factor along with the above dose metrics
Multiple fluoroscopy-guided interventional procedures within 1 month		Ideally, account should be taken for all fluoroscopy-guided interventional procedures performed to the patient regardless of the medical facility they have been performed

All reported values should be the total values from the procedure including contribution from fluoroscopy and digital radiography (cine) acquisition.

The trigger values have been chosen so that not too many patients have to be recalled. Depending on the effects discovered upon the effective follow-up of patients having exceeded these trigger levels, these values might be adjusted.