

LOS ANGELES GENERAL MEDICAL CENTER POLICY

Subject: RADIATION EXPOSURE AND SKIN DOSE THRESHOLD LEVELS		Original Issue Date: 05/22/2023	Policy # 963
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Policy Owner(s): Diagnostic Services Executive Sponsor(s): Chief Operations Officer			
Departments Consulted: Diagnostic Services Radiation Safety Committee Department of Surgery Department of Medicine	Reviewed & Approved by: Attending Staff Association Executive Committee Senior Executive Officer	Approved by: Chief Operations Officer	
		Chief Executive Officer	

PURPOSE

To ensure the safe operation of fluoroscopic equipment by defining threshold levels for radiation exposure and skin dose for organizational use of fluoroscopy

POLICY

The radiation exposure and skin thresholds for exposure as reported by the National Council on Radiation Protection 168 (NCRP 168) of Reference-Air Kerma 5 Gy, Kerma-Area Product 500 Gy*cm², or Fluoroscopy Time of 60 minutes will be used.

DEFINITIONS

Fluoroscopy: Defined as an imaging technique using continuous x-ray beams through the body that are transmitted to a monitor. Departments regularly using fluoroscopy include (but are not limited to) Radiology, Orthopedic Surgery, Vascular Surgery, Plastic Surgery, Urology, Gastrointestinal Medicine, and Anesthesiology.

Radiation: Produced by x-ray equipment including fluoroscopy in order to perform many medically indicated procedures. Ionizing radiation is a well-known carcinogen and can also cause temporary or permanent skin damage.

PROCEDURE

A. Fluoroscopy Supervisor/Operator

1. In fluoroscopy units that are equipped and compatible, patient fluoroscopy dose will be sent to the organization-approved Picture Archiving and Communication System (PACS) and dose monitoring system.
2. In fluoroscopy units that do not send dose reports to PACS but have technologists assisting the Fluoroscopy Operator and Supervisor, the technologist may record fluoroscopy time on a hard copy log of patients.
3. In fluoroscopy units that do not send dose reports to PACS and do not have technologists assisting the Fluoroscopy Operator and Supervisor, the fluoroscopy time may be recorded in the patient's medical record.
4. The Fluoroscopy Supervisor and Operator is responsible for reporting to the Radiation Safety Committee (RSC) instances where the radiation exposure and skin dose threshold levels are exceeded.
 - a. The RSC will investigate each instance and report back to the department and Attending Staff Association (ASA) the findings of the

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case.

- b. The Fluoroscopy Supervisor and Operator should include a report in the Safety Intelligence (SI) reporting system to allow for tracking of these instances.

B. Radiation Safety Committee

1. The RSC and Radiation Safety Officer will monitor and verify compliance with the radiation safety practices including oversight of dose monitoring systems, recommend radiation safety improvements as needed, and intervene to stop unsafe practices.
2. The RSC will investigate reported radiation exposures exceeding the organization threshold values and report the results to the Department Chair (or representative) of the Operator and the ASA. 3.
3. The RSC will send the “Notification of substantial radiation exposure to patient” letter to patient and provider when the threshold has been exceeded within 30 days of exposure

RESPONSIBILITY

California Fluoroscopic Supervisor and Operators
Technologists
Radiation Safety Committee
Radiation Safety Officer

REFERENCES

Joint Commission Standards Revisions for Organizations Providing Fluoroscopy Services. Avoidance of serious x-ray-induced skin injuries to patients during fluoroscopically-guided procedures. FDA Public Health Advisory. Sep, 1994.
NCRP Report No. 168: Radiation dose management for fluoroscopically-guided interventional medical procedures. Jul, 2010.

ATTACHMENTS Notification of substantial radiation exposure to patient letter (Attachment A)
Radiation Dose Discharge Instructions (Attachment B)

REVISION DATES