

COMPARATIVE MEDICINE
LABORATORY ANIMAL FACILITIES

STANDARD OPERATING PROCEDURES
for
CMLAF RADIOGRAPHIC PROCEDURES

- 1.0 Purpose: This procedure details safety requirements when being involved in radiographic procedures in CMLAF or TSRC.
- 2.0 Scope:
This procedure applies to CMLAF and TSRC personnel involved with procedure.
- 3.0 Procedure:
- 3.1 Overexposure of radiation can lead to serious health problems.
- A. It is important to minimize the amount of exposure when performing procedures involving radiation.
- B. Personnel who are pregnant (or think they may be pregnant) should relay this to their supervisor so they are NOT exposed to any radiation in the workplace.
- 3.2 CMLAF personnel may participate in radiographic studies and fluoroscopic procedures.
- 3.3 The radiographic studies are performed in the Special Procedure Suite, 310 BEB.
- 3.4 Fluoroscopic procedures are performed in the Toshiba Stroke Research Center (TSRC) on the 4th floor of the BRB.
- 3.5 The regulations that need to be followed are contained in this procedure and the TSRC Fluoroscopic Safety procedure.
- A. More specific information can be found in the Campus Radiation Producing Equipment Safety Manual and 10 NYCRR Part 16.54
- 3.6 Personnel dosimetry is issued and monitored by Radiation Safety to CMLAF personnel who routinely work with radiation producing devices.
- 3.7 Procedures:
- A. Use of X-ray equipment is scheduled through the CMLAF veterinary technicians.
1. Only trained veterinary technicians will be allowed to operate equipment.
- B. Personal dosimetry (badge and ring) must be worn during fluoroscopic procedures in the TSRC and during X-rays of animals in 310 /BEB.
1. Badges measure whole body exposure and rings measure extremity exposure.
2. CMLAF personnel's badges and rings are stored in 204 BEB.
3. Notify Radiation Safety when there is an addition in personnel by sending a completed "Request for Personnel Dosimetry" (RMA2A) or notify the department of the need to delete an account.

4. Wear only the most current badge specifically assigned to each user.
 5. Wear the body badge OUTSIDE the lead apron at the mid trunk area.
 6. Wear the extremity ring UNDER the leaded gloves when holding.
 7. Personnel exposed to radiation outside of these designated areas must complete a “Radiation Exposure History Request” form (Appendix 2). Radiation Safety will contact the second source to confirm readings of exposure with those at CMLAF to determine an accumulative annual reading.
- 3.8 Decrease exposure time: 10 NYCRR 16.54 (b)(2)(i), 16.54 (a)(3)(ii)
Reduce the need to repeat exposures by using proper radiographic exposure techniques. Hold animals if it is the only way to perform the radiograph. Do not use the same person to hold animals. Rotate personnel if subsequent exposures are required. Animals will either be tranquilized, anesthetized or mechanically restrained. Under special circumstances animals may need to be held. In this case, lead gloves must be worn.
- 3.9 Increase your distance from the radiation. Only essential personnel shall be in the radiographic suite. If holding, be as far away from the beam as possible. With this exception, no one is allowed outside the control booth and past the yellow safety line when a radiographic exposure is being made.
- 3.10 Use shielding: 10 NYCRR 16.54 (a)(3)(ii)
- A. **Observe Yellow Safety Line:** This line indicates where personnel will be exposed to scatter radiation. Keep behind this line during a radiographic exposure.
 - B. **Use leaded walls:** Step behind the control panel shield during radiographic exposures. This will protect workers from scatter radiation. Never point the beam directly at these shields.
 - C. **Wear lead aprons, lead gloves and thyroid shields:** If it is necessary to hold animals during a radiographic exposure, leaded aprons reduce whole body exposure to scatter radiation but not to the direct beam. Personnel are never allowed in the path of the radiographic beam.
 - D. **Wear lead impregnated glasses when required:** Reduces eye exposure to scatter radiation and tube leakage.
- 3.11 Use Collimation: Collimation must be shown on all radiographic films. This is especially important if animal is being held. Collimation also improves radiographic quality by reducing scatter radiation. Excess scatter radiation causes general fogging of the film and reduces image contrast.
- 3.12 Never hold a film during exposure.
- 3.13 Report unsafe conditions/accidents to both the:

CMLAF Clinical Veterinarian:	829-2919
Radiation Safety Officer:	829-3281