



Study of Personal Dosimetry Efficiency in Procedures of Abdominal Aortic Aneurism in Interventional Radiology

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- **INTRODUCTION:**

- Interventional Radiology provides unquestionable benefits and replaces extremely invasive and difficult recovery procedures for the patient;
- However, excessive exposure to radiation can cause severe damage to patients and requires health care for professionals.

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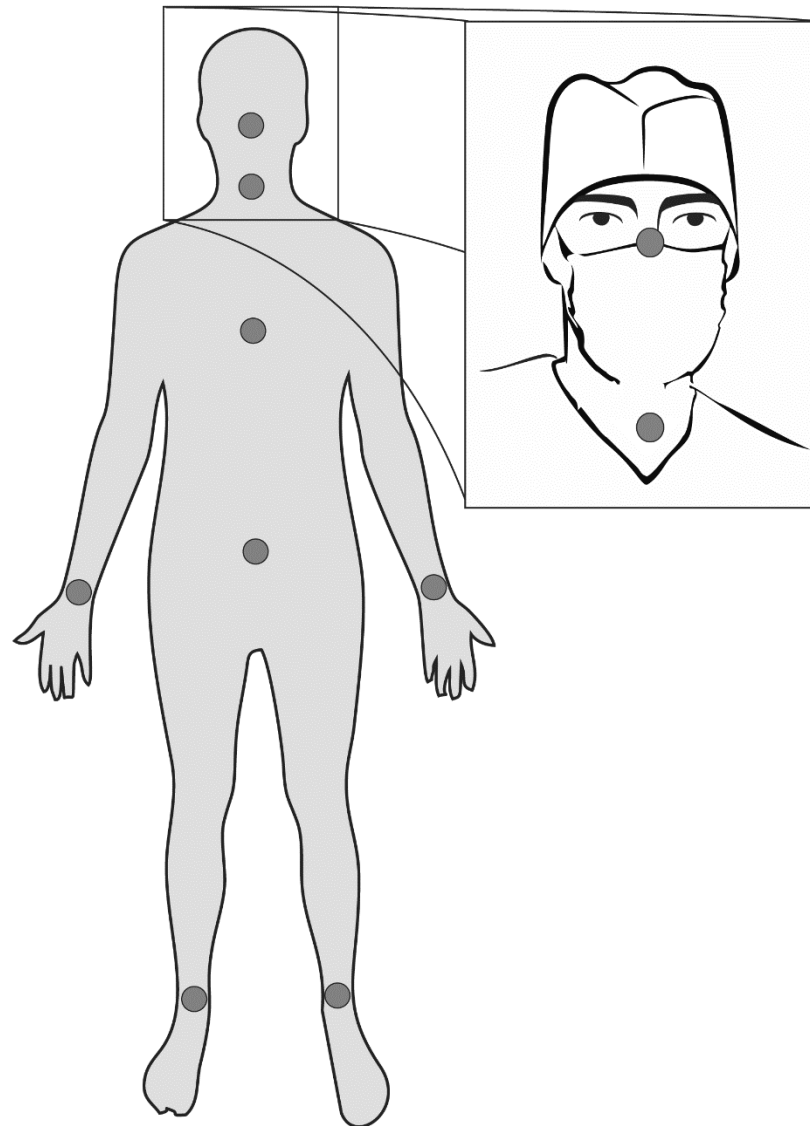


- **PURPOSE:**

- The objective of this paper is to evaluate the currently dosimetry technique employed in medical staff during interventional radiology procedures.

- **METHODS:**

- 20 procedures were evaluated;
- In each evaluated procedures, dosimeters were fixed at the following locations: a few inches below the eye lens (on top of the surgical mask), thyroid, chest, gonads, hand (bottom of the pulse) and foot, above the radiological protection vests as lead apron and thyroid shield.



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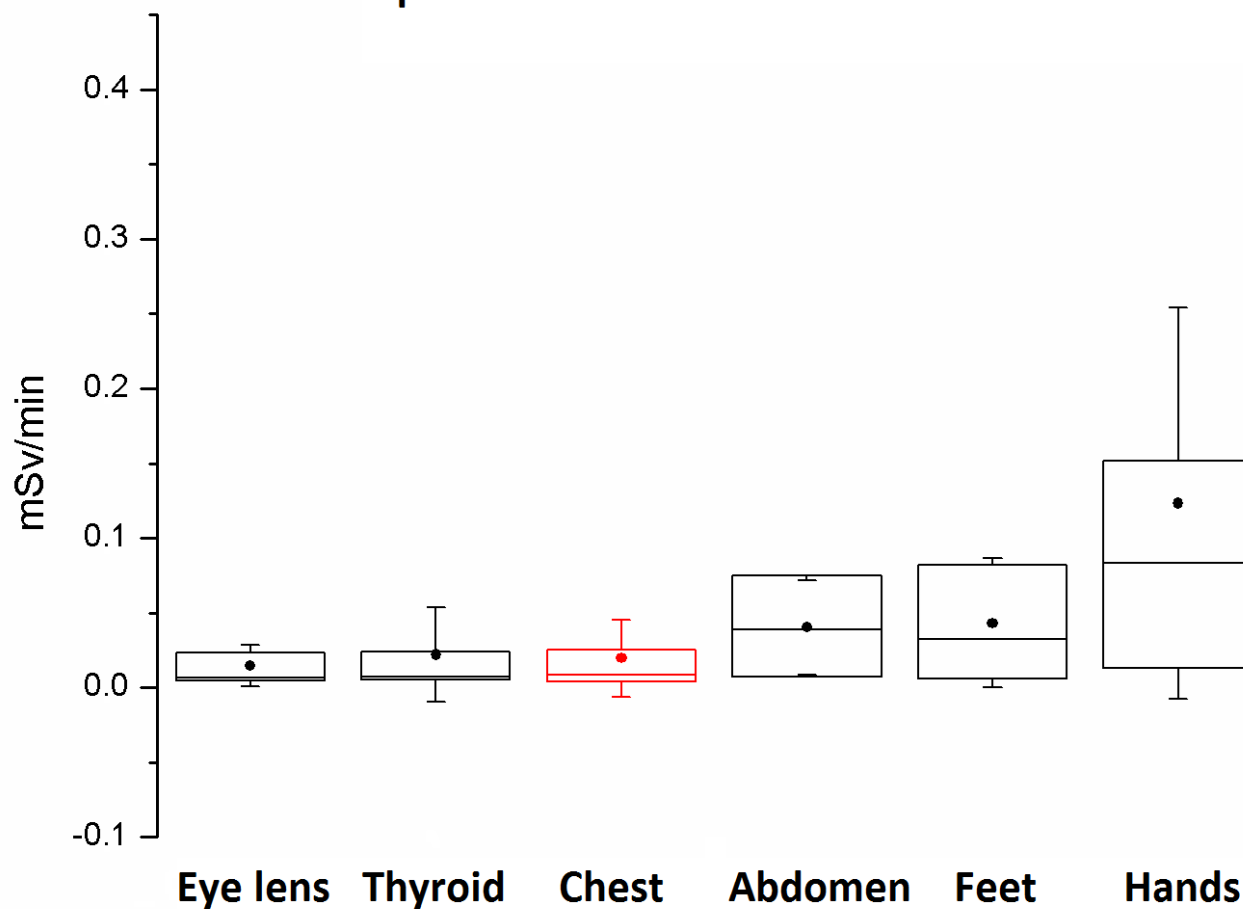


- **METHODS:**

- Doses and exposure times of each procedure were evaluated;
- Equivalent doses rate profiles were estimated based on TLD readings related to the duration of each procedure.

- RESULTS:

Equivalent Doses Rate Profiles



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- **RESULTS:**

- The equivalent dose rate profile shows a tendency of difference between dose rate found in the chest in relation to the abdomen, hands and feet;
- Statistically, dose rates found in the hands differ from those found in the chest with $p=0.05$.

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- **CONCLUSIONS:**

- These results suggest that only a dosimeter placed on the chest does not describe faithfully the radiation doses in these professionals;
- Two dosimeters placed at the height of the abdomen of professionals, one inside the lead protections and other outside, may indicate more accurately the effective dose.