Dose distribution of stray radiation for Interventional Radiology

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The applications of interventional radiology（IVR）are increasing in clinical examination, but they tend to extend examination time. In addition, risk of occupational exposure necessarily increases with this method. It is important to optimize radiation protection for medical staff in each IVR. In this study, the dose distributions of the stray radiation at each IVR（head, chest and abdomen）were simulated using the EGS4 Monte Carlo Code. The values were compared with the dosimetry to verify the suitability of each value. The results using the EGS4 Code were consequently similar to the results using the dosimetry. In each examination region, the positions from the floor, where the intensity of stray radiation is strongest, are different. The dose calculated by EGS4 changed according to various factors, such as inspection tables, the form and the quality of material of the phantom, the beam limiting system and the additional filter.