

A Comparison of TLD Measurements to MIRD Estimates of the Dose to the Ovaries and Uterus from Tc-99m in Liver

Authors : Karim Adinehvand, Bakhtiar Azadbakht, Amin Sahebnaasagh

Abstract : Relation to high absorption fraction of Tc SESTAMIBI by internal organs in heart scan, and these organs are near to generation organs (Ovaries and uterus). In this study, Liver is specified as source organ. Method: we have set amount of absorbed fraction radiopharmaceutical in position of Liver in RANDO-phantom in form of elliptical surfaces, then absorbed dose to ovaries and uterus measured by TLD-100 that had set at position of these organs in RANDO-phantom. Calculation had done by MIRD method. Results from direct measurement and MIRD method are too similar. The absorbed dose to uterus and ovaries for Rest are 26.05 μ GyMBq⁻¹, 17.23 μ GyMBq⁻¹ and for Stress are 2.04 μ GyMBq⁻¹, 1.35 μ GyMBq⁻¹ respectively.

Keywords : absorbed dose, TLD, MIRD, RANDO-phantom, Tc-99m

Conference Title : ICBBE 2015 : International Conference on Biomechanics and Biomedical Engineering

Conference Location : Kuala Lumpur, Malaysia

Conference Dates : February 12-13, 2015