Estimation of annual occupational effective doses from external ionizing radiation at medical institutions in Kenya

GEOFFREY KORIR, Department of Physics and Applied Physics, University of Massachusetts Lowell, JESKA WAMBANI, Radiology Department, Kenyatta National Hospital Kenya, IAN KORIR, National Nuclear Regulator, South Africa — This study details the distribution and trends of doses due to occupational radiation exposure among radiation workers from participating medical institutions in Kenya, where monthly dose measurements were collected for a period of one year ranging from January to December in 2007. A total of 367 medical radiation workers were monitored using thermoluminescent dosemeters. They included radiologists (27%), oncologists (2%), dentists (4%), Physicists (5%), technologists (45%), nurses (4%), film processor technicians (3%), auxiliary staff (4%), and radiology office staff (5%). The average annual effective dose of all categories of staff was found to range from 1.19 to 2.52 mSv. This study formed the initiation stage of wider, comprehensive and more frequent monitoring of occupational radiation exposures and long-term investigations into its accumulation patterns in our country.

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