

Assessment of Dose: Area Product of Common Radiographic Examinations in Selected Southern Nigerian Hospitals

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Abstract : Over the years, radiographic examinations are the most used diagnostic tools in the Nigerian health care system, but most diagnostic examinations carried out do not have records of patient doses. Lack of adequate information on patient doses has been a major hindrance in quantifying the radiological risk associated with radiographic examinations. This study aimed at estimating dose-area product (DAP) of patient examined in X-Ray units in selected hospitals in Southern Nigeria. The standard projections selected are chest posterior-anterior (PA), abdomen anterior-posterior (AP), pelvis AP, pelvis lateral (LAT), skull AP/PA, skull LAT, lumbar spine AP, lumbar spine, LAT. Measurement of entrance surface dose (ESD) was carried out using thermoluminescent dosimeter (TLD). Measured ESDs were converted into DAP using the beam area of patients. The results show that the mean DAP ranged from 0.17 to 18.35 Gycm². The results obtained in this study when compared with those of NRPB-HPE were found to be higher. These are an indication of non optimization of operational conditions.

Keywords : dose-area product, radiographic examinations, patient doses, optimization

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