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QUALITY CONTROL ANALYSIS OF DIAGNOSTIC RADIOLOGY EQUIPMENT IN 44 NIGERIAN ARMY REFERENCE HOSPITAL KADUNA, KADUNA STATE, NIGERIA

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In this study, quality control analysis of radiographic equipment used in the Radiology unit of 44 Nigerian Army Reference Hospital Kaduna was carried out in order to ensure that both workers and patients were within the minimum recommended radiation exposure level. The dose rate at the operator stand, X-ray table, corridor, change cubicle, offices, and reception were measured with survey meter (RADOS, model, RDS-120). Generally, the result obtained indicated that both parameters assessed showed a good level of compliance, with only digital radiography that was found to have failed Half Value Layer (HVL) test. The exposure reproducibility, kVp test, beam alignment, and HVL could not be assessed for Mammographic equipment because of its non-availability in the QA/QC kit. Visual inspection showed that the X-ray Machines and rooms dimensions are adequate, with exception of personal monitoring badges (TLD) that were not available. The background radiation dose level was found to be safe for the patient, staff, and general public. The measured leakage radiation and entrance skin dose also showed a very good level of compliance with both National and International regulations.

Keywords: radiographic equipment; X-ray; QA/QC kit; exposure reproducibility

Primary author: Mr MUHAMMAD NURUDDEEN ABDULKAREEM, Muhammad

Co-author: Mr ABDULKAREEM, Muhammad Nuruddeen (Federal University of Kashere)

Presenter: Mr ABDULKAREEM, Muhammad Nuruddeen (Federal University of Kashere)

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