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Quality Control in Radiology and Mammography

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Abstract

This study evaluates the performance of radiography and mammography systems at the CLCC of Sétif and confirms compliance with international standards (IAEA/ACR). The results show excellent equipment stability and precision, particularly for tube voltage (kVp) and exposure time reproducibility. Radiation doses, including mean glandular dose in mammography, comply with the ALARA principle, ensuring diagnostic quality and patient safety.

Keywords: Quality Control, Digital Radiography, Digital Mammography, Radiation Dose, Quality Assurance, Breast Cancer.

Résumé

Cette étude évalue les performances des systèmes de radiographie et de mammographie au CLCC de Sétif et confirme leur conformité aux normes internationales (AIEA/ACR). Les résultats montrent une excellente stabilité et précision des équipements, notamment pour la tension du tube (kVp) et la reproductibilité du temps d'exposition. Les doses de rayonnement, y compris la dose glandulaire moyenne en mammographie, respectent le principe ALARA, garantissant une bonne qualité diagnostique et la sécurité des patients.

Mots-clés : Contrôle de qualité, Radiographie numérique, Mammographie numérique, Dose de rayonnement, Assurance qualité, Cancer du sein.

ملخص

تهدف هذه الدراسة إلى تقييم أداء أنظمة التصوير الشعاعي والماموغرافيا بمركز مكافحة السرطان بسطيف، مع تأكيد مطابقتها للمعايير الدولية (IAEA/ACR). أظهرت النتائج استقرارًا ودقةً عاليةً للأجهزة، خاصة فيما يتعلق بجهد الأنبوب (kVp) وقابلية تكرار زمن التعرض. كما أن الجرعات الإشعاعية، بما في ذلك الجرعة الغدية المتوسطة في الماموغرافيا، تحترم مبدأ **ALARA**، مما يضمن جودة تشخيصية عالية وسلامة المرضى.

الكلمات المفتاحية: مراقبة الجودة، التصوير الشعاعي الرقمي، التصوير الشعاعي للثدي الرقمي، الجرعة الإشعاعية،

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