

ABSTRAK

Penggunaan teknologi *Digital Radiography* (DR) dalam pemeriksaan radiologi telah membawa banyak keunggulan, seperti efisiensi waktu dan kualitas citra yang lebih baik. Namun, praktik di lapangan masih menunjukkan adanya pengulangan citra (*repeat*) yang berdampak pada peningkatan dosis radiasi pasien, penurunan efisiensi kerja, dan beban tambahan bagi radiografer. Penelitian ini bertujuan untuk menganalisis penyebab pengulangan citra radiografi pada sistem *digital radiography* (DR) di Instalasi Radiologi Rumah Sakit Umum Daerah Jombang selama periode bulan Oktober-Desember tahun 2024.

Metode yang digunakan adalah deskriptif kuantitatif dengan pendekatan survei. Data dikumpulkan melalui observasi langsung dan dokumentasi terhadap pemeriksaan yang mengalami pengulangan. Dari total 12.074 pemeriksaan, ditemukan 217 pengulangan citra dengan rata-rata persentase 1,79%, yang masih berada di bawah ambang batas maksimal ≤ 2 % sesuai standar Kementerian Kesehatan.

Hasil penelitian menunjukkan bahwa faktor utama penyebab pengulangan (*repeat*) adalah kesalahan memposisikan pasien (40,09 %), kemudian artefak (32,72 %), pergerakan pasien (20,28 %), dan gangguan teknis alat (6,91 %). Temuan ini menunjukkan perlunya peningkatan ketelitian radiografer, edukasi pasien, serta perawatan alat secara berkala guna menjaga mutu layanan dan keselamatan pasien.

Untuk pengulangan berdasarkan jenis pemeriksaan *repeat rate* tertinggi terdapat pada extremitas bawah sebesar 1,83 %, diikuti oleh cranium 1,81 %, kemudian pemeriksaan thorax, vertebrae, dan extremitas atas yang masing-masing memiliki *repeat rate* sebesar 1,80 %. Pemeriksaan abdomen memiliki *repeat rate* 1,76 % dan pemeriksaan pelvis yaitu 1,72 %. Angka ini masih berada di bawah batas standar maksimal yang ditetapkan oleh Keputusan Menteri Kesehatan Nomor 129/Menkes/SK/II/2008 tentang standar pelayanan minimal yaitu ≤ 2 %.

Kata kunci: Pengulangan (*Repeat*) Citra, *Digital Radiography* (DR), Instalasi Radiologi, RSUD Jombang.

ABSTRACT

The use of Digital Radiography (DR) technology in radiology examinations has brought many advantages, such as time efficiency and better image quality. However, field practices still show image repetition (repeat) which has an impact on increasing patient radiation doses, decreasing work efficiency, and additional burden on radiographers. This study aims to analyze the causes of radiographic image repetition in the digital radiography (DR) system at the Radiology Installation of Jombang Regional General Hospital during the period October-December 2024.

The method used is quantitative descriptive with a survey approach. Data were collected through direct observation and documentation of examinations that experienced repetition. Of the total 12,074 examinations, 217 image repetitions were found with an average percentage of 1.79%, which is still below the maximum threshold of $\leq 2\%$ according to the Ministry of Health standards. The results of the study showed that the main factors causing repetition were errors in patient positioning (40.09%), then artifacts (32.72%), patient movement (20.28%), and technical equipment problems (6.91%). These findings indicate the need for increased radiographer accuracy, patient education, and regular equipment maintenance to maintain service quality and patient safety.

For repeats based on the type of examination, the highest repeat rate was in the lower extremities at 1.83%, followed by the cranium at 1.81%, then the thorax, vertebrae, and upper extremities examinations, each of which had a repeat rate of 1.80%. Abdominal examinations had a repeat rate of 1.76% and pelvic examinations were 1.72%. This figure is still below the maximum standard limit set by the Decree of the Minister of Health Number 129/Menkes/SK/II/2008 concerning minimum service standards, which is $\leq 2\%$.

Keywords: *Image Repeat, Digital Radiography (DR), Radiology Installation, Jombang Regional Hospital.*