

## Evaluasi Fasilitas Radioterapi di Yogyakarta Berdasarkan Regulasi Nasional dan Internasional = Evaluation of Radiotherapy Facilities in Yogyakarta Based on National and International Regulations

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### Abstrak

Radioterapi merupakan salah satu bidang ilmu kedokteran yang memanfaatkan radiasi untuk terapi pada penyakit kanker. Jumlah pelayanan radioterapi yang berada di Yogyakarta sampai saat ini berjumlah 3 rumah sakit yang aktif beroperasi melakukan kegiatan pelayanan terapi. Peraturan mengenai standar pelayanan radioterapi di Indonesia diatur oleh Kementerian Kesehatan dan Badan Pengawas Tenaga Nuklir, namun belum melampirkan mengenai syarat konstruksi dan desain bangunan secara spesifik dan lengkap. Untuk itu penulis melakukan penelitian dengan melakukan studi literatur mengenai persyaratan fasilitas radioterapi di Indonesia. Hasil dari tinjauan persyaratan radioterapi adalah peraturan radioterapi di Indonesia sudah sesuai dengan pedoman radioterapi internasional, namun belum mengatur detail mengenai persyaratan konstruksi yang berkaitan dengan *layout desain*. Berdasarkan uji hasil statistik *Kruskall – Wallis* untuk ruangan terdapat perbedaan dengan pedoman dengan nilai p value 0.0009 sedangkan pada konstruksi, utilitas dan equipment tidak terdapat perbedaan dengan hasil p value lebih besar dari 0.05 sehingga hasil hipotesis dapat diterima tanpa adanya perbedaan dengan regulasi. Hasil rekomendasi persyaratan dan perancangan fasilitas radioterapi berupa *room layout*, *mechanical electrical* dan equipment di rancang berdasarkan hasil literatur dan observasi survey di 3 fasilitas radioterapi. Hasil perancangan *room layout* radioterapi dinyatakan valid dengan *expert judgement* kepada 4 *expert* di bidang radioterapi

.....Radiotherapy is a medical field that utilizes radiation for cancer treatment. Currently, there are three active hospitals in Yogyakarta providing radiotherapy services. The standards for radiotherapy services in Indonesia are regulated by the Ministry of Health and the Nuclear Energy Regulatory Agency. However, specific and comprehensive requirements regarding construction and building design have not yet been included in these regulations. To address this gap, the author conducted a literature review on the requirements for radiotherapy facilities in Indonesia. The findings indicate that while Indonesia's radiotherapy regulations align with international guidelines, they lack detailed provisions concerning construction requirements related to *layout* design. Based on the statistical test using *Kruskall-Wallis* for the rooms, there is a difference from the guidelines with a p-value of 0.0009. However, in construction, utilities, and equipment, there is no difference with p-values greater than 0.05. Hence, the hypothesis results can be accepted without any deviation from regulations. Based on recommendations derived from the literature review and observations made at the three radiotherapy facilities, the proposed requirements and design elements for radiotherapy facilities include room *layout*, mechanical and electrical aspects, and equipment specifications. The room *layout* design for radiotherapy was validated through expert judgment by consulting four experts in the field of radiotherapy