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## **ADD002**

### **Diagnostic Reference Level (DRL) of Cardiac Angiography: A Single Centre Study**

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**Introduction:** Coronary arteriography is the gold standard for diagnosing coronary artery disease. This procedure involves the utilisation of continuous X-radiation exposure to provide visual aid for an accurate localisation of the coronary vasculature stenosis. As the X-ray imposed stochastic and non-stochastic effects, the dose delivered to the patient should be scrutinised. The Diagnostic Reference Level (DRL) is a regulatory guideline in radiation dose optimisation, where Malaysia has its reference for the Malaysian population. In angiography, kerma-area product (KAP) is the dosimetry quantity measured to indicate the total amount of radiation delivered to the patient. Therefore, this study was conducted to establish a local DRL for a teaching hospital in Selangor to ensure the dose delivered to patients is within the limit. **Methods:** A retrospective cross-sectional study was conducted to establish a local DRL (LDRL) for a teaching hospital in Selangor. 355 adult coronary angiography data were retrieved, dated from January to December 2024. The KAP value generated by the system was recorded. The reference level is set at the 75<sup>th</sup> percentile value of the distribution, defining the value that should not be routinely exceeded in standard practice. **Results:** The study quantified an LDRL for adult coronary angiography of 2.88 mGy.m<sup>2</sup>, which is lower than the national DRL of 5.44 mGy.m<sup>2</sup>. **Conclusions:** The establishment of LDRL helped align the patient dose with the national guideline, upholding best practices and care of the patient.

**Keywords:** Air Kerma-Area Product (KAP), Diagnostic Reference Levels (DRLs), angiography, coronary arteriography.