ABSTRACT

Ionizing radiation has many benefits in radiology, radiotherapy, and nuclear medicine. In radiology, it is used for diagnosis, and its use has increased annually. While providing benefits, ionizing radiation also carries risks. BAPETEN sets the maximum dose allowed to be received by radiation workers without causing significant genetic and somatic effects (dose limits), which is 20 mSv/year. This study evaluated radiation worker doses at the Radiology Installation of RS Otak DR. Drs. M. Hatta Bukittinggi from 2020 to 2025 using TLD badge evaluation data. Dose constraint was calculated from the third quartile of the annual dose distribution. The average doses for 2020-2025 were 0,154, 0,072, 0,055, 0,209, 0,188, and 0,184 mSv, respectively. The maximum annual dose was 0,412 mSv. The calculated dose constraint was 0,259 mSv/year. Based on the result, the radiation worker doses remain below the dose limits, and the dose constraint can be set at 1 mSv/year according to BAPETEN recommendations.

Keywords : TLD, radiation worker dose, dose limit, dose constraint