

## **ABSTRACT**

*Brachytherapy is one of the radiotherapy procedures that is often used as a booster for external radiotherapy, especially for cervical cancer cases. Currently, brachytherapy with 3D techniques has been widely used because it is more representative and can describe the target and OAR volumetrically. Evaluation of the dose received by brachytherapy patients is carried out by calculating the EQD2 value. This study was conducted with the aim of analyzing the EQD2 value and determining whether the dose received by the patient was optimal. The study was conducted by collecting data on the dose received by patients at D90 HRCTV and D2cc OAR (rectum, bladder, and sigmoid). After that, the EQD2 value was calculated and the average value, standard deviation, minimum value, and maximum value of each parameter were calculated. Then, the results were compared with the dose limit values based on recommendations from ABS, ICRU 89, and GEC-ESTRO. Based on the calculations that have been carried out, it is known that the average dose received by HRCTV is still below the recommended value, which is 81,39 Gy. Meanwhile, the average dose value received by the OAR was quite good because it did not exceed the tolerance limit with a value of 72,94 Gy for the rectum, 82,60 Gy for the bladder, and 63,79 Gy for the sigmoid.*

**Keywords:** *EQD2, D90 HRCTV, D2cc OAR*