

# **EFEK RADIOTERAPI TERHADAP PRODUKSI SEL DARAH PADA PENDERITA CA MAMMAE DAN CA CERVIX**

## **ABSTRAK**

Penyinaran teleterapi Cobalt 60 pada kasus Ca Mammae dan Ca Cervix akan mengenai sumsum tulang yang sensitif terhadap radiasi dan berfungsi dalam sistem hemopoetik. Penurunan jumlah sel darah akan berdampak serius jika tidak segera ditangani karena darah mempunyai peranan penting terhadap fungsi tubuh manusia seperti imunitas, oksigenasi, hemostasis dan peran-peran lainnya. Penelitian dilakukan dengan mengobservasi data rekam medik pasien radioterapi dengan kasus Ca Mammae dan Ca Cervix. Hasil penelitian menunjukkan sel trombosit dan leukosit mengalami perubahan signifikan setelah terpapar radiasi, sedangkan sel eritrosit dan hemoglobin tidak menunjukkan respon yang signifikan. Pada penderita Ca Mammae, produksi leukosit turun 38,93 %, sel trombosit turun 29,96 %, eritrosit naik 4,72 % dan Hb naik 4,24 % . Pada penderita Ca Cervix, leukosit turun 38,3 %, trombosit turun 22,53 %, eritrosit turun 4,66 % dan Hb turun 4,07 % . Efek radiasi yang ditimbulkan tersebut dapat digunakan sebagai bahan pertimbangan dalam perencanaan penyinaran sehingga rasio keberhasilan radioterapi meningkat.

**Kata kunci :** Teleterapi Cobalt 60, sistem hemopoetik, Ca Cervix, Ca Mammae, dosis radiasi, efek radiasi

# THE EFFECT OF RADIOTHERAPY ON BLOOD CELL PRODUCTION IN PATIENTS WITH BREAST CARCINOMA AND CERVIX CARCINOMA

## ABSTRACT

Cobalt 60 teletherapy irradiation in patients at breast carcinoma and cervix carcinoma will impact on the bone marrow, which sensitive to radiation and have an important function in haemopoetic system. The decrease in blood cell level will be seriously affected if not treated immediately, because the blood has an important role to the human body functions such as immunity, oxygenation, homeostasis, and other roles. The study of “The Effect Of Radiotherapy On Blood Cell Production In Patients With Breast Carcinoma And Cervix Carcinoma” was conducted by observing the patient's medical record with cases breast carcinoma and cervix carcinoma. The results showed that trombocyte and leukocyte cells have a significant changes after radiation exposure, whereas erythrocytes and haemoglobin showed not significant response. In patients with breast carcinioma, leukocyte production decrease to 38.93%, trombocyte decrease to 29.96%, erythrocytes increase to 4.72% and haemoglobin increase to 4.24%. In patients with cervix carcinoma, leukocytes decrease to 38.3%, trombocyte decrease to 22.53%, erythrocytes decrease to 4.66% and haemoglobin decrease to 4.07%. The effects of Cobalt 60 teletherapy irradiation can be used as a material consideration in the planning of radiotherapy irradiation thus increasing the success ratio of radiotherapy.

Keywords: Cobalt 60 teletherapy, haemopoetic system, cervix carcinoma, mammae carcinoma, radiation dose, radiation effects