## Verifikasi Geometri Kanker Nasofaring dengan Epid pada Pesawat Linac di Unit Radioterapi Instalasi Radiologi RSUP Dr. Kariadi Semarang

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Abstract	Background: In Indonesia, nasopharyngeal cancer ranks 4th most in malignancies. As a method of treatment, the development of radiotherapy has made it possible to give high doses to tumors with little risk of healthy tissue, but still maintain accuracy by performing geometry verification procedures. The purpose of this study was to determine the geometry verification procedure of nasopharyngeal cancer with EPID on the Linac plane in RSUP Dr. Kariadi Semarang; the average geometric shift that occurs and why is only done before fractions 1 and 4 only.Methods: This type of research is qualitative with a case study approach. The data is taken from February 2019 to June 2019 by the method of observation, documentation and interviews. The data obtained were analyzed by interactive models, making transcripts of interviews then reduced and processed in the form of open coding, presented in the form of quotations and concluded.Results: The results showed that the geometry verification procedure was started by making a calendar treatment, adjusting the patient's setup at the origin point, switching to the iso center point. Take the image portal with EPID AP and Lateral projections. Match image portals with DRR images. Then the geometric shift data were obtained with a mean shift from the iso center in 5 patient samples: vertical axis 0.15 cm to superior; longitudinal -0.01 cm anteriorly and laterally 0.04 cm to the right. Tolerance limit of 0.3 cm. This verification is only done before fractions 1 and 4 because of the high service load.Conclusion: The geometry verification procedure has been going well with the results of the shift is still below the tolerance limit. Verification information before the 1st and 4th fractions was not enough to assess the accuracy of the irradiation carried out properly maintained.Ã,Â
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