

PERBANDINGAN RESPONS TUMOR MENURUT RECIST DAN RANO PADA PASIEN *HIGH GRADE GLIOMA* SETELAH RADIOTERAPI

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INTISARI

PENDAHULUAN : Glioma merupakan tumor intrakranial primer dengan tingkat mortalitas dan morbiditas tinggi dan mewakili 81% dari tumor ganas otak. Radioterapi merupakan tatalaksana pada pasien glioma sebagai terapi definitif, adjuvan maupun paliatif. Penilaian repons tumor menurut kriteria RECIST telah dibatasi sedangkan RANO melakukan pengukuran dua dimensi dan menilai lesi progresif *non enhancing* pada sekuens T2W/FLAIR.^{1,2,3,4,5}

METODE PENELITIAN : Penelitian uji analitik komparatif, *cross sectional*, retrospektif, menilai perbandingan respons tumor setelah radioterapi pada pasien *high grade glioma* menurut RECIST dan RANO. Data citra dari instalasi Radiologi RSUP DR. Sardjito pada bulan Juli 2017- Oktober 2021. Pembacaan ulang hasil pemeriksaan MRI kepala dengan kontras sebelum dan sesudah radioterapi pada pasien HGG menurut RECIST dan RANO.

HASIL : Uji *McNemar* menunjukkan bahwa tidak ada perbedaan dalam klasifikasi respons dan non respons menurut RECIST dan RANO ($p = 1,000$). Dan tidak ada perbedaan signifikan dalam klasifikasi *progressive disease* dan non *progressive disease* antara RECIST dan RANO ($p = 0.180$)

PEMBAHASAN : Pada penelitian tak dapat perbedaan dalam evaluasi respons tumor setelah radioterapi disebabkan belum adanya panduan yang tegas dalam membedakan PR dan SD, dan belum adanya ambang standar dalam menilai lesi *non enhancing* pada pencitraan T2W/FLAIR dalam penentuan PR maupun PD pada kriteria RANO.

KESIMPULAN & SARAN : Pada penelitian ini tidak terdapat perbedaan respon terapi antara RECIST dan RANO, karena tidak dikonfirmasi dengan penilaian volumetrik dan belum adanya *baseline* waktu paska radiasi untuk penilaian respons tumor pasien glioblastoma. Untuk penelitian selanjutnya dapat menggunakan rancangan penelitian prospektif, penggunaan waktu paska radiasi sebagai *baseline* dan penilaian volumetrik.

Kata kunci : *High grade glioma*, MRI, Radioterapi, RECIST, RANO.

COMPARISON OF TUMOR RESPONSE ACCORDING TO RECIST AND RANO IN HIGH-GRADE GLIOMA PATIENTS AFTER RADIOTHERAPY

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ABSTRACT

BACKGROUND: Glioma is a primary intracranial tumor with high mortality and morbidity and represents 81% of malignant brain tumors. Radiotherapy is a treatment for glioma patients as definitive, adjuvant or palliative therapy. Assessment of tumor response according to RECIST criteria was limited whereas RANO performed a two-dimensional measurement and assessed non-enhancing progressive lesions on the T2W/FLAIR sequence.^{1,2,3,4,5}

METHOD : A comparative, cross-sectional, retrospective analytic study, assessing the comparative of tumor response after radiotherapy in patients with high grade glioma according to RECIST and RANO. Image data from the Radiology Installation of RSUP DR. Sardjito in July 2017-October 202. Re-reading of the results of head MRI examination with contrast before and after radiotherapy in HGG patients according to RECIST and RANO

RESULT : McNemar's test showed that there was no difference in the classification of response and non-response according to RECIST and RANO ($p = 1,000$). And there is no significant difference in the classification of progressive and non-progressive diseases between RECIST and RANO ($p = 0.180$).

DISCUSSION : In this study, there was no difference in the evaluation of tumor response after radiotherapy due to the absence of clear guidelines for differentiating PR and SD, and the absence of a standard threshold for assessing nonenhancing lesions on T2W/FLAIR imaging in the determination of PR and PD on the RANO criteria.

CONCLUSION & SUGGESTION: In this study, there was no difference in response to therapy between RECIST and RANO, because it was not confirmed by volumetric assessment and there was no post-irradiation time baseline for assessing tumor response in patients of glioblastoma. For further research, prospective research designs can be used, the use of post radiation time as a baseline and volumetric assessment.

Keywords : *High grade glioma*, MRI, Radioterapi, RECIST, RANO