DISERTASI

HUBUNGAN EKSPRESI *NEUROFIBROMIN 2, TNF RECEPTOR ASSOCIATED FACTOR 7, PHOSPHATIDYLINOSITOL 3-KINASE CATALYTIC ALPHA, PROGESTERONE RECEPTOR* DENGAN LOKASI MENINGIOMA

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ABSTRACT

ASSOCIATION BETWEEN THE EXPRESSION OF NEUROFIBROMIN 2, TNF RECEPTOR-ASSOCIATED FACTOR 7, PHOSPHATIDYLINOSITOL 3-KINASE CATALYTIC ALPHA, PROGESTERONE RECEPTOR AND MENINGIOMA LOCATION

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Introduction : *Meningiomas are the most common intracranial tumors, with an annual incidence of 7.86 cases per 100,000 individuals. Approximately 80% of meningiomas are classified as WHO grade I, exhibiting benign histopathological characteristics, while the remaining 20% are categorized as WHO grades II and III due to their malignant features. The incidence of meningiomas peaks in young adults aged 35–39 years, accounting for 25.1% of all intracranial tumors. This study aimed to analyze the expression of NF2, TRAF7, PIK3CA, and PGR, which influence the pathogenesis of skull-base and non-skull base meningioma.*
Method : *A quantitative analysis with a cross-sectional design was conducted, where tumor paraffin tissue specimens were obtained from patients who had undergone surgical treatment at the Arifin Achmad Hospital, Riau.*
Results : *In patients with skull-base meningiomas, 85.7% were categorized as WHO grade I, compared to 62.9% in those with non-skull base meningiomas. The immunoexpression level of NF2, TRAF7, and PIK3CA between the two study groups showed significant differences ($p<0.001$). Skull-base meningiomas exhibited a higher number of NF2, TRAF7, and PIK3CA immunopositive cells. A significant positive correlation was found between TRAF7 and PIK3CA reflecting the co-activation of the PI3K/AKT/mTOR pathway as a key pathogenic mechanism at this location.*
Conclusion : *These findings indicate molecular heterogeneity according to anatomical location, reflecting distinct pathogenic pathways between skull-base and non–skull base meningiomas. Identification of these molecular expression profiles may serve as a basis for biological tumor stratification and support the development of more targeted and individualized therapeutic approaches based on tumor location-specific molecular characteristics.*

Keywords *: meningioma, NF2, TRAF7, PIK3CA, PGR, skull base, non-skull base*