



## DAFTAR PUSTAKA

- Al-Shurbaji, A., Al-Jubour, R., 2016. Risk Factors for Malignant and Atypical Meningiomas. *MOJ Surg.* 3, 27–30.  
<https://doi.org/10.15406/mojs.2016.03.00037>
- Alexiou, G.A., Gogou, P., Markoula, S., Kyritsis, A.P., 2010. Management of meningiomas. *Clin. Neurol. Neurosurg.* 112, 177–182.  
<https://doi.org/10.1016/j.clineuro.2009.12.011>
- Anzalone, C.L., Glasgow, A.E., Van Gompel, J.J., Carlson, M.L., 2019. Racial Differences in Disease Presentation and Management of Intracranial Meningioma. *J. Neurol. Surgery, Part B Skull Base* 80, 555–561.  
<https://doi.org/10.1055/s-0038-1676788>
- Baldi, I., Engelhardt, J., Bonnet, C., Bauchet, L., Berteaud, E., Grüber, A., et al., 2018. Epidemiology of meningiomas. *Neurochirurgie* 64, 5–14.  
<https://doi.org/10.1016/j.neuchi.2014.05.006>
- Buerki, R.A., Horbinski, C.M., Kruser, T., Horowitz, P.M., James, C.D., Lukas, R. V., 2018. An overview of meningiomas. *Futur. Oncol.* 14, 2161–2177.  
<https://doi.org/10.2217/fon-2018-0006>
- Chen, R., Aghi, M.K., 2020. Atypical meningiomas, 1 ed, *Handbook of Clinical Neurology*. Elsevier B.V. <https://doi.org/10.1016/B978-0-12-822198-3.00043-4>
- Chen, T.Y., Lai, P.H., Ho, J.T., Wang, J.S., Chen, W.L., Pan, H. Ben, et al., 2004. Magnetic resonance imaging and diffusion-weighted images of cystic meningioma: Correlating with histopathology. *Clin. Imaging* 28, 10–19.  
[https://doi.org/10.1016/S0899-7071\(03\)00032-9](https://doi.org/10.1016/S0899-7071(03)00032-9)
- Chernov, M.F., Kasuya, H., Nakaya, K., Kato, K., Ono, Y., Yoshida, S., et al., 2011. 1H-MRS of intracranial meningiomas: What it can add to known clinical and MRI predictors of the histopathological and biological characteristics of the tumor? *Clin. Neurol. Neurosurg.* 113, 202–212.  
<https://doi.org/10.1016/j.clineuro.2010.11.008>
- Chin, L.S., Szerlip, N.J., Regine, W.F., 2003. Stereotactic radiosurgery for meningiomas. *Neurosurg. Focus*. <https://doi.org/10.3171/foc.2003.14.5.7>
- Claus, E.B., Bondy, M.L., Schildkraut, J.M., Wiemels, J.L., Wrensch, M., Black, P.M., 2005. Epidemiology of intracranial meningioma. *Neurosurgery* 57, 1088–1094. <https://doi.org/10.1227/01.NEU.0000188281.91351.B9>
- Cornelius, J.F., Slotty, P.J., Steiger, H.J., Hänggi, D., Polivka, M., George, B., 2013. Malignant potential of skull base versus non-skull base meningiomas:



Clinical series of 1,663 cases. *Acta Neurochir. (Wien)*. 155, 407–413.  
<https://doi.org/10.1007/s00701-012-1611-y>

Coroller, T.P., Bi, W.L., Huynh, E., Abedalthagafi, M., Aizer, A.A., Greenwald, N.F., et al., 2017. Radiographic prediction of meningioma grade by semantic and radiomic features. *PLoS One* 12, 1–15.  
<https://doi.org/10.1371/journal.pone.0187908>

Dahlan, M.S., 2019. Besar Sampel dalam Penelitian Kedokteran dan Kesehatan, Edisi 5. ed. Epidemiologi Indonesia, Jakarta.

Dahlan, M.S., 2018. Penelitian Diagnostik, Validitas & Reliabilitas, Edisi 2. ed. Epidemiologi Indonesia, Jakarta.

Furtner, J., Oth, I., Schöpf, V., Nenning, K.H., Asenbaum, U., Wöhrer, A., et al., 2020. Noninvasive Differentiation of Meningiomas and Dural Metastases Using Intratumoral Vascularity Obtained by Arterial Spin Labeling. *Clin. Neuroradiol.* 30, 599–605. <https://doi.org/10.1007/s00062-019-00808-x>

Garcia-Segura, M.E., Erickson, A.W., Jairath, R., Munoz, D.G., Das, S., 2021. Necrosis and brain invasion predict radio-resistance and tumor recurrence in atypical meningioma: A retrospective cohort study. *Neurosurgery* 88, E42–E48. <https://doi.org/10.1093/neuros/nyaa348>

Góes, P., Santos, B.F.O., Suzuki, F.S., Salles, D., Stávale, J.N., Cavalheiro, S., et al., 2018. Necrosis is a consistent factor to recurrence of meningiomas: should it be a stand-alone grading criterion for grade II meningioma? *J. Neurooncol.* 137, 331–336. <https://doi.org/10.1007/s11060-017-2721-4>

Gogtay, N.J., Deshpande, S., Thatte, U.M., 2016. Measures of Association. *J. Assoc. Physicians India* 64, 70–73.

Gogtay, N.J., Thatte, U.M., 2017. Principles of correlation analysis. *J. Assoc. Physicians India* 65, 78–81.

Goldbrunner, R., Minniti, G., Preusser, M., Jenkinson, M.D., Sallabanda, K., Houdart, E., et al., 2016. EANO guidelines for the diagnosis and treatment of meningiomas. *Lancet Oncol.* [https://doi.org/10.1016/S1470-2045\(16\)30321-7](https://doi.org/10.1016/S1470-2045(16)30321-7)

Hale, A.T., Wang, L., Strother, M.K., Chambliss, L.B., 2018. Differentiating meningioma grade by imaging features on magnetic resonance imaging. *J. Clin. Neurosci.* 48, 71–75. <https://doi.org/10.1016/j.jocn.2017.11.013>

Hijiya, N., Hudson, M.M., Lensing, S., Zacher, M., Onciu, M., Behm, F.G., et al., 2007. Cumulative incidence of secondary neoplasms as a first event after childhood acute lymphoblastic leukemia. *J. Am. Med. Assoc.* 297, 1207–1215. <https://doi.org/10.1001/jama.297.11.1207>



Huang, R.Y., Bi, W.L., Griffith, B., Kaufmann, T.J., La Fougère, C., Schmidt, N.O., et al., 2019. Imaging and diagnostic advances for intracranial meningiomas. *Neuro. Oncol.* 21, I44–I61.  
<https://doi.org/10.1093/neuonc/noy143>

Kamenova, M., Guzman, R., Soleman, J., 2019. Demographics and outcome of histologically confirmed intracranial meningiomas. *Clin. Transl. Neurosci.* 3, 2514183X1989494. <https://doi.org/10.1177/2514183x19894945>

Kane, A.J., Sughrue, M.E., Rutkowski, M.J., Shangari, G., Fang, S., McDermott, M.W., et al., 2011. Anatomic location is a risk factor for atypical and malignant meningiomas. *Cancer* 117, 1272–1278.  
<https://doi.org/10.1002/cncr.25591>

Liang, R.F., Xiu, Y.J., Wang, X., Li, M., Yang, Y., Mao, Q., et al., 2014. The potential risk factors for atypical and anaplastic meningiomas clinical series of 1,239 cases. *Int. J. Clin. Exp. Med.* 7, 5696–5700.

Lin, M.C., Li, C.Z., Hsieh, C.C., Hong, K.T., Lin, B.J., Lin, C., et al., 2018. Preoperative grading of intracranial meningioma by magnetic resonance spectroscopy (1H-MRS). *PLoS One* 13, 1–8.  
<https://doi.org/10.1371/journal.pone.0207612>

Louis, D.N., Perry, A., Reifenberger, G., von Deimling, A., Figarella-Branger, D., Cavenee, W.K., et al., 2016. The 2016 World Health Organization Classification of Tumors of the Central Nervous System: a summary. *Acta Neuropathol.* <https://doi.org/10.1007/s00401-016-1545-1>

Lu, Y., Liu, L., Luan, S., Xiong, J., Geng, D., Yin, B., 2019. The diagnostic value of texture analysis in predicting WHO grades of meningiomas based on ADC maps: an attempt using decision tree and decision forest. *Eur. Radiol.* 29, 1318–1328. <https://doi.org/10.1007/s00330-018-5632-7>

Magill, S.T., Young, J.S., Chae, R., Aghi, M.K., Theodosopoulos, P. V., McDermott, M.W., 2018. Relationship between tumor location, size, and WHO grade in meningioma. *Neurosurg. Focus* 44, 4.  
<https://doi.org/10.3171/2018.1.FOCUS17752>

Mascarenhas, L., Fonseca, M., Honavar, M., Romão, H., Resende, M., Rocha Vaz, A., 2005. Analysis of the influence of the variable size on the characteristics and behavior of meningiomas. *Neurocirurgia* 16, 486–491.  
[https://doi.org/10.1016/S1130-1473\(05\)70376-6](https://doi.org/10.1016/S1130-1473(05)70376-6)

Moliterno, J., Omuro, A., 2020. Meningiomas: Comprehensive Strategies for Management. Springer Nature, Switzerland.

Monleon, D., 2012. Meningiomas – Management and Surgery. InTech, Rijeka.



- Moradi, A., Semnani, V., Djam, H., Tajodini, A., Zali, A.R., Ghaemi, K., et al., 2008. Pathodiagnostic parameters for meningioma grading. *J. Clin. Neurosci.* 15, 1370–1375. <https://doi.org/10.1016/j.jocn.2007.12.005>
- Murase, M., Tamura, R., Kuranari, Y., Sato, M., Ohara, K., Morimoto, Y., et al., 2020. Novel histopathological classification of meningiomas based on dural invasion. *J. Clin. Pathol.* 1–6. <https://doi.org/10.1136/jclinpath-2020-206592>
- Ostrom, Q.T., Gittleman, H., Liao, P., Vecchione-Koval, T., Wolinsky, Y., Kruchko, C., et al., 2017. CBTRUS Statistical Report: Primary brain and other central nervous system tumors diagnosed in the United States in 2010–2014. *Neuro. Oncol.* 19, v1–v88. <https://doi.org/10.1093/neuonc/nox158>
- Ressel, A., Fichte, S., Brodhun, M., Rosahl, S.K., Gerlach, R., 2019. WHO grade of intracranial meningiomas differs with respect to patient's age, location, tumor size and peritumoral edema. *J. Neurooncol.* 145, 277–286. <https://doi.org/10.1007/s11060-019-03293-x>
- Rogers, L., Barani, I., Chamberlain, M., Kaley, T.J., McDermott, M., Raizer, J., et al., 2015. Meningiomas: Knowledge base, treatment outcomes, and uncertainties. A RANO review. *J. Neurosurg.* 122, 4–23. <https://doi.org/10.3171/2014.7.JNS131644>
- Sade, B., Chahlavi, A., Krishnaney, A., Nagel, S., Choi, E., Lee, J.H., 2007. World health organization grades II and III meningiomas are rare in the cranial base and spine. *Neurosurgery* 61, 1194–1198. <https://doi.org/10.1227/01.neu.0000306097.38141.65>
- Salah, F., Tabbarah, A., ALArab y, N., Asmar, K., Tamim, H., Makki, M., et al., 2019. Can CT and MRI features differentiate benign from malignant meningiomas? *Clin. Radiol.* 74, 898.e15–898.e23. <https://doi.org/10.1016/j.crad.2019.07.020>
- Sastroasmoro, S., Ismael, S., 2014. Dasar-dasar Metodologi Penelitian Klinis, Edisi ke-5. ed. CV. Sagung Seto, Jakarta.
- Sergentanis, T.N., Tsivgoulis, G., Perlepe, C., Ntanasis-Stathopoulos, I., Tzanninis, I.G., Sergentanis, I.N., et al., 2015. Obesity and risk for brain/CNS tumors, gliomas and meningiomas: A meta-analysis. *PLoS One* 10, 1–29. <https://doi.org/10.1371/journal.pone.0136974>
- Simis, A., Pires de Aguiar, P.H., Leite, C.C., Santana, P.A., Rosemberg, S., Teixeira, M.J., 2008. Peritumoral brain edema in benign meningiomas: correlation with clinical, radiologic, and surgical factors and possible role on recurrence. *Surg. Neurol.* 70, 471–477. <https://doi.org/10.1016/j.surneu.2008.03.006>



- Sohu, D.M., Sohail, S., Shaikh, R., 2019. Diagnostic accuracy of diffusion weighted MRI in differentiating benign and malignant meningiomas. *Pakistan J. Med. Sci.* 35, 726–730. <https://doi.org/10.12669/pjms.35.3.1011>
- Surov, A., Ginat, D.T., Sanverdi, E., Lim, C.C.T., Hakyemez, B., Yogi, A., et al., 2016. Use of Diffusion Weighted Imaging in Differentiating between Malignant and Benign Meningiomas. A Multicenter Analysis. *World Neurosurg.* 88, 598–602. <https://doi.org/10.1016/j.wneu.2015.10.049>
- United Nations, Department of Economic and Social Affairs, P.D., 2019. World Population Prospects 2019, Volume II: Demographic Profiles.
- Utomo, S., Andriani, F., 2019. Does tumor size, peritumoral edema, location and necrosis can be used to predict grading of meningioma? *Int. J. Radiol. Radiat. Ther.* 6, 195–198. <https://doi.org/10.15406/ijrrt.2019.06.00246>
- Vries, J. De, Wakhloo, A.K., 1993. Cerebral Oedema Associated with WHO-I , WHO-II , and WHO-III-Meningiomas : Correlation of Clinical , Computed Tomographic , Operative and Histological Findings 34–40.
- Vučković, N., Kozić, D., Vuleković, P., Vučković, D., Ostojić, J., Semnic, R., 2010. MR and MRS characteristics of intraventricular meningioma. *J. Neuroimaging* 20, 294–296. <https://doi.org/10.1111/j.1552-6569.2008.00345.x>
- Wang, J., Takashima, S., Takayama, F., Kawakami, S., Saito, A., Matsushita, T., et al., 2001. Head and neck lesions: Characterization with diffusion-weighted echo-planar MR imaging. *Radiology* 220, 621–630. <https://doi.org/10.1148/radiol.2202010063>
- Watts, J., Box, G., Galvin, A., Brotchie, P., Trost, N., Sutherland, T., 2014. Magnetic resonance imaging of meningiomas: A pictorial review. *Insights Imaging*. <https://doi.org/10.1007/s13244-013-0302-4>
- Wiemels, J., Wrensch, M., Claus, E.B., 2010. Epidemiology and etiology of meningioma. *J. Neurooncol.* 99, 307–314. <https://doi.org/10.1007/s11060-010-0386-3>
- Wigertz, A., Lönn, S., Hall, P., Auvinen, A., Christensen, H.C., Johansen, C., et al., 2008. Reproductive Factors and Risk of Meningioma and Glioma. *Cancer Epidemiol. Prev. Biomarkers* 17, 2663–2670. <https://doi.org/10.1158/1055-9965.EPI-08-0406>
- Wilson, T.A., Huang, L., Ramanathan, D., Lopez-Gonzalez, M., Pillai, P., De Los Reyes, K., et al., 2020. Review of Atypical and Anaplastic Meningiomas: Classification, Molecular Biology, and Management. *Front. Oncol.* 10. <https://doi.org/10.3389/fonc.2020.565582>



UNIVERSITAS  
GADJAH MADA

Hubungan Antara Lokasi Serta Karakteristik Radiologis Meningioma Intrakranial Pada MRI Kepala Dengan

Derajat Keganasan Menurut WHO

ALVIN TIMOTHY, Prof. dr. Arif Faisal, Sp.Rad(K), DHSM; dr. Sri Retna Dwidianarti, Sp.Rad(K)-Onk

Universitas Gadjah Mada, 2021 | Diunduh dari <http://etd.repository.ugm.ac.id/>

Yan, P.F., Yan, L., Zhang, Z., Salim, A., Wang, L., Hu, T.T., et al., 2016.

Accuracy of conventional MRI for preoperative diagnosis of intracranial tumors: A single center report of 762 cases. *Int. J. Surg.* 36, 109–117.

<https://doi.org/10.1016/j.ijsu.2016.10.023>

Yano, S., Kuratsu, J.I., 2006. Indications for surgery in patients with asymptomatic meningiomas based on an extensive experience. *J. Neurosurg.* 105, 538–543. <https://doi.org/10.3171/jns.2006.105.4.538>

Zhang, T., Yu, J. min, Wang, Y. qi, Yin, D. dan, Fang, L. jiang, 2018. WHO grade I meningioma subtypes: MRI features and pathological analysis. *Life Sci.* 213, 50–56. <https://doi.org/10.1016/j.lfs.2018.08.061>

Zhou, P., Ma, W., Yin, S., Li, Y., Jiang, S., 2013. Three risk factors for WHO grade II and III meningiomas: A study of 1737 cases from a single center. *Neurol. India* 61, 40–44. <https://doi.org/10.4103/0028-3886.107928>