# DAFTAR PUSTAKA

1.  Karimi S, Mansouri S, Nassiri F, *et al*. Clinical significance of checkpoint regulator "Programmed death ligand-1 (PD-L1)" expression in meningioma: review of the current status. J Neurooncol. 2021;151(3):443-449. doi:10.1007/s11060-020-03584-8.

2.  Louis DN, Perry A, Wesseling P, *et al*. The 2021 WHO classification of tumors of the central nervous system: A summary. Neuro Oncol. 2021;23(8):1231-1251. doi:10.1093/neuonc/noab106.

3.  Ogasawara C, Philbrick BD, Adamson DC. Meningioma: A review of epidemiology, pathology, diagnosis, treatment, and future directions. Biomedicines. 2021;9(3). doi:10.3390/biomedicines9030319.

4.  An Overview of Brain Tumor. Intech Open. https://www.intechopen.com/chapters/79979.

5.  Nugraheni HP. Direktorat Jenderal Pelayanan Kesehatan. *Kementeri Kesehat RI*. Published online 2022. https://yankes.kemkes.go.id/view_artikel/1767.

6.  Hanna C, Willman M, Cole D, *et al*. Review of meningioma diagnosis and management. Egypt J Neurosurg. 2023;38(1). doi:10.1186/s41984-023-00195-z.

7.  Sahm F, Brastianos PK, Claus EB, Mawrin C, Perry A, Santagate S, *et al*. Meningioma. In: WHO Classification of Tumours Editorial Board, editor. WHO Classification of Tumours: Central Nervous System Tumours. 5th ed. Lyon, France: International Agency for Research on Cancer; 2021. p. 284–97.

8.  Goldbrunner R, Stavrinou P, Jenkinson MD, *et al*. EANO guideline on the diagnosis and management of meningiomas. Neuro Oncol. 2021;23(11):1821-1834. doi:10.1093/neuonc/noab150.

9.  Peng W, Wu P, Yuan M, et al. Potential Molecular Mechanisms of Recurrent and Progressive Meningiomas: A Review of the Latest Literature. *Front Oncol*. 2022;12(May):1-11. doi:10.3389/fonc.2022.850463

10. Fahlström A, Dwivedi S, Drummond K. Neuro-Oncology Advances and outcomes. 2023;5(1938):35-48.

11. Jiang X, Wang J, Deng X, *et al*. Role of the tumor microenvironment in PD-L1/PD-1-mediated tumor immune escape. *Mol Cancer*. 2019;18(1):1-17. doi:10.1186/s12943-018-0928-4

12. Yunnica Y, Afiati A, Usman HA, Hernowo BS. VEGF-A and PD-L1

immunoexpression association with meningioma histopathology grade. Glob Med Heal Commun. 2019;7(3):206-212. doi:10.29313/gmhc.v7i3.4202.

13. Dunn IF, Elvin JA, Lin J ren. Mismatch Repair Deficiency in High- Grade Meningioma : A Rare but Recurrent Event Associated With Dramatic Immune Activation and Clinical Response to PD-1 Blockade case report. Published online 2020:1-12.

14. Karimi S, Mansouri S, Mamatjan Y, *et al*. Programmed death ligand-1 (PD-L1) expression in meningioma; prognostic significance and its association with hypoxia and NFKB2 expression. Sci Rep. 2020;10(1):1-13. doi:10.1038/s41598-020-70514-z.

15. Chen DS, Mellman I. Elements of cancer immunity and the cancer-immune set point. Nature. 2017;541(7637):321-330. doi:10.1038/nature21349.

16. Fabrizio FP, Trombetta D, Rossi A, Sparaneo A, Castellana S, Muscarella LA. Gene code CD274/PD-L1: from molecular basis toward cancer immunotherapy. *Ther Adv Med Oncol*. 2018;10:1-18. doi:10.1177/1758835918815598.

17. Han SJ, Reis G, Kohanbash G, *et al*. Expression and prognostic impact of immune modulatory molecule PD-L1 in meningioma. J Neurooncol. 2016;130(3):543-552. doi:10.1007/s11060-016-2256-0.

18. Brastianos PK, Kim AE, Giobbie-Hurder A, *et al*. Phase 2 study of pembrolizumab in patients with recurrent and residual high-grade meningiomas. Nat Commun. 2022;13(1). doi:10.1038/s41467-022-29052-7

19. Go KO, Kim YZ. Brain Invasion and Trends in Molecular Research on Meningioma. *Brain Tumor Res Treat*. 2023;11(1):47. doi:10.14791/btrt.2022.0044

20. Olar A, Wani KM, Sulman EP, *et al*. Mitotic index is an independent predictor of recurrence-free survival in meningioma. *Brain Pathol*. 2015;25(3):266-275. doi:10.1111/bpa.12174.

21. Carvalho GTC de, Silva-Martins WC da, Magalhães KCSF de, *et al*. Recurrence/Regrowth in Grade I Meningioma: How to Predict? Front Oncol. 2020;10(August):1-15. doi:10.3389/fonc.2020.01144.

22. Maggio I, Franceschi E, Tosoni A, *et al*. Meningioma: Not always a benign tumor. A review of advances in the treatment of meningiomas. *CNS Oncol*. 2021;10(2). doi:10.2217/cns-2021-0003

23. Yarabarla V, Mylarapu A, Han TJ, McGovern SL, Raza SM, Beckham TH. Intracranial meningiomas: an update of the 2021 World Health Organization classifications and review of management with a focus on radiation therapy. *Front Oncol*. 2023;13(August):1-14. doi:10.3389/fonc.2023.1137849

24. Preusser M, Brastianos PK, Mawrin C. Advances in meningioma genetics: Novel therapeutic opportunities. Nat Rev Neurol. 2018;14(2):106-115. doi:10.1038/nrneurol.2017.168.

25. Forest W, Comprehensive B. Neuro-Oncology for the Clinical Neurologist.; 2021. doi:10.1016/c2018-0-03667-1.

26. Textbook O. Oxford Textbook of Oncology. Oxford Textb Oncol. Published online 2016. doi:10.1093/med/9780199656103.001.0001.

27. Brenner A V, Sugiyama H, Preston D, et al. Study of atomic bomb survivors, 1958 – 2009. 2021;35(6):591-600. doi:10.1007/s10654-019-00599-y.Radiation.

28. Yamanaka R, Hayano A, Kanayama T. Radiation-Induced Meningiomas: An Exhaustive Review of the Literature. World Neurosurg. 2017;97:635-644.e8. doi:10.1016/j.wneu.2016.09.094.

29. Zhang D, Chen J, Wang J, et al. Body mass index and risk of brain tumors: A systematic review and dose-response meta-analysis. Eur J Clin Nutr. 2016;70(7):757-765. doi:10.1038/ejcn.2016.4.

30. Takahashi H, Cornish AJ, Sud A, et al. Mendelian randomization provides support for obesity as a risk factor for meningioma. Sci Rep. 2019;9(1):1-7. doi:10.1038/s41598-018-36186-6.

31. Bachir S, Shah S, Shapiro S, et al. Neurofibromatosis type 2 (NF2) and the implications for vestibular schwannoma and meningioma pathogenesis. Int J Mol Sci. 2021;22(2):1-12. doi:10.3390/ijms22020690.

32. Shaikh N, Dixit K, Raizer J. Recent advances in managing/understanding meningioma. F1000 Research. 2018;7(0). doi:10.12688/f1000research.13674.1.

33. Muskens IS, Wu AH, Porcel J, et al. Body mass index, comorbidities, and hormonal factors in relation to meningioma in an ethnically diverse population: The Multiethnic Cohort. Neuro Oncol. 2019;21(4):498-507. doi:10.1093/neuonc/noz005.

34. Glenn CA, Tullos HJ, Sughrue ME. Natural History of Intracranial Meningiomas. Vol 169. 1st ed. Elsevier B.V.; 2020. doi:10.1016/B978-0-12-804280-9.00014-7.

35. Nowosielski M, Galldiks N, Iglseder S, et al. Diagnostic challenges in meningioma. Neuro Oncol. 2017;19(12):1588-1598. doi:10.1093/neuonc/nox101.

36. Huang RY, Bi WL, Griffith B, et al. Imaging and diagnostic advances for intracranial meningiomas. Neuro Oncol. 2019;21:I44-I61. doi:10.1093/neuonc/noy143.

37. Bi WL, Abedalthagafi M, Horowitz P, *et al*. Genomic landscape of intracranial meningiomas. J Neurosurg. 2016;125(3):525-535. doi:10.3171/2015.6.JNS15591.

38. Zhao L, Zhao W, Hou Y, *et al*. An Overview of Managements in Meningiomas. Front Oncol. 2020;10(August): 1-12. doi:10.3389/fonc.2020.01523.

39. Moliterno J, Omuro A. Meningiomas: Comprehensive Strategies for Management. Springer Nature Switzerland AG. 2020. 11-2.

40. Liu D. Tumors of the Cranial and Paraspinal Nerves.; 2018. doi:10.1201/9781315120522-23.

41. Fabian M. B. K. Kleinschmidt-DeMasters, TarikTihan, and Fausto Rodriguez. Diagnostic Pathology: Neuropathology (2nd edition). Neuropathol Appl Neurobiol. 2019;45(2):191-191. doi:10.1111/nan.12499.

42. Perry A, Brat DJ, editors. Practical surgical neuropathology: a diagnostic approach. Philadelphia, PA: Churchill Livingstone/Elsevier;2010.620p.

43. Gray F, Duyckaerts C, De Girolami U, Escourolle R, editors. Escourolle & Poirier's manual of basic neuropathology. 5th ed. Oxford: Oxford University Press; 2014. 406 p.

44. Love S, Perry A, Ironside J, Budka H. Greenfield's Neuropathology. Ninth Ed. CRC Press; 2015. 1803 p.

45. Meling TR, Da Broi M, Scheie D, Helseth E, Smoll NR. Meningioma Surgery–Are We Making Progress? World Neurosurg. 2019;125:e205-e213. doi:10.1016/j.wneu.2019.01.042.

46. Caruso G, Ferrarotto R, Curcio A, *et al*. Novel Advances in Treatment of Meningiomas: Prognostic and Therapeutic Implications. Cancers (Basel). 2023;15(18):1-17. doi:10.3390/cancers15184521.

47. Chen WC, Lucas CHG, Magill ST, Rogers CL, Raleigh DR. Radiotherapy and radiosurgery for meningiomas. Neuro-Oncology Adv. 2023;5:I67-I83. doi:10.1093/noajnl/vdac088.

48. Apra C, Peyre M, Kalamarides M. Current treatment options for meningioma. Expert Rev Neurother. 2018;18(3):241-249. doi:10.1080/14737175.2018.1429920.

49. Kalamarides M, Peyre M. An overview of meningiomas.Compr Strateg Manag. 2020;14(January):3-10. doi:10.1007/978-3-030-59558-6_1.

50. Karsy M, Guan J, Cohen A, Colman H, Jensen RL Medical Management of Meningiomas. Current Status, Failed Treatments, and Promising Horizons. Neurosurg Clin N Am. 2016;27(2):249-260. doi:10.1016/j.nec.2015.11.002.

51. Abbott M, Ustoyev Y. Cancer and the Immune System: The History and Background of Immunotherapy. Semin Oncol Nurs. 2019;35(5). doi:10.1016/j.soncn.2019.08.002.

52. Zoghi S, Masoumi F, Rezaei N. The immune system. In: Rezaei N, editor. Clinical Immunology. London, United Kingdom: Elsevier; 2022. p. 1–46.

53. Wahid S, Miskad UA. Imunologi lebih mudah dipahami. Diandra Primamitra.2017.

54. Lakshmi Narendra B, Eshvendar Reddy K, Shantikumar S, Ramakrishna S. Immune system: A double-edged sword in cancer. Inflamm Res. 2013;62(9):823-834. doi:10.1007/s00011-013-0645-9.

55. Abbas, abul k andrew H litchman. Cellular and molecular immunology. Cohen's Pathw Pulp. Published online 2021:1680.

56. Meng X, Lei Y, Zhang X, Sun K, Zhang L, Wang Z. Cancer immunotherapy: Classification, therapeutic mechanisms, and nanomaterial-based synergistic therapy. Appl Mater Today. 2021;24:101149. doi:10.1016/j.apmt.2021.101149.

57. Rosenblatt JD, Podack ER, Barber GN. Current Cancer Research Advances in Tumor Immunology and Immunotherapy. http://www.springer.com/series/7892.

58. Riley RS, June CH, Langer R, Mitchell MJ. Delivery technologies for cancer immunotherapy. Nat Rev Drug Discov. 2019;18(3):175-196. doi:10.1038/s41573-018-0006-z.

59. Tie Y, Tang F, Wei Y quan, Wei X wei. *Immunosuppressive Cells in Cancer: Mechanisms and Potential Therapeutic Targets*. Vol 15. BioMed Central; 2022. doi:10.1186/s13045-022-01282-8

60. Dorak MT. Basic Immunology: Functions and Disorders of the Immune System. Am J Epidemiol. 2002;155(2):185-a-186. doi:10.1093/aje/155.2.185-a.

61. Mendelsohns J, Powis G. Molecular Basis of Cancer. Philadelphia. Elsevier; 2008.

62. Ju X, Zhang H, Zhou Z, Wang Q. Regulation of PD-L1 expression in cancer and clinical implications in immunotherapy. Am J Cancer Res. 2020;10(1):1-11.

63. Zhou YJ, Li G, Wang J, *et al*. PD-L1: expression regulation. Blood Sci. 2023;5(2):77-91. doi:10.1097/BS9.0000000000000149.

64. Alsaab HO, Sau S, Alzhrani R, *et al*. PD-1 and PD-L1 checkpoint signaling inhibition for cancer immunotherapy: mechanism, combinations, and

clinical outcome. Front Pharmacol. 2017;8(AUG):1-15. doi:10.3389/fphar.2017.00561.

65. Zerdes I, Matikas A, Bergh J, Rassidakis GZ, Foukakis T. Genetic, transcriptional and post-translational regulation of the programmed death protein ligand 1 in cancer: biology and clinical correlations. Oncogene. 2018;37(34):4639-4661. doi:10.1038/s41388-018-0303-3.

66. Kythreotou A, Siddique A, Mauri FA, Bower M, Pinato DJ. PD-L1. J Clin Pathol. 2018;71(3):189-194. doi:10.1136/jclinpath-2017-204853.

67. Dermani FK, Samadi P, Rahmani G, Kohlan AK, Najafi R. PD-1/PD-L1 immune checkpoint: Potential target for cancer therapy. J Cell Physiol. 2019;234(2):1313-1325. doi:10.1002/jcp.27172.

68. Gelerstein E, Berger A, Jonas-Kimchi T, *et al*. Regression of intracranial meningioma following treatment with nivolumab: Case report and review of the literature. J Clin Neurosci. 2017;37:51-53. doi:10.1016/j.jocn.2016.11.011.

69. Vranic S, Gatalica Z. PD-L1 testing by immunohistochemistry in immuno-oncology. Biomol Biomed. 2023;23(1) : 15-25. doi:10.17305/bjbms.2022.7953.

70. Zhang Y, Wang X, Shi M, Song Y, Yu J, Han S. Programmed death ligand 1 and tumor-infiltrating CD8+ T lymphocytes are associated with the clinical features in meningioma. BMC Cancer. 2022;22(1):1-11. doi:10.1186/s12885-022-10249-4.

71. Du Z, Abedalthagafi M, Aizer AA, *et al*. Increased expression of the immune modulatory molecule PDL1 (CD274) in anaplastic meningioma. Oncotarget. 2015;6(7):4704-4716. doi:10.18632/oncotarget.3082.

72. Akhtar M, Rashid S, Al-Bozom IA. PD−L1 immunostaining: what pathologists need to know. Diagn Pathol. 2021;16(1):1-11. doi:10.1186/s13000-021-01151-x.

73. Buttner R, Gosney JR, Skov BG, *et al*. Programmed death-ligand 1 immunohistochemistry testing: A review of analytical assays and clinical implementation in non-small-cell lung cancer. J Clin Oncol. 2017;35(34):3867-3876. doi:10.1200/JCO.2017.74.7642.

74. Udall M, Rizzo M, Kenny J, *et al*. PD-L1 diagnostic tests: A systematic literature review of scoring algorithms and test-validation metrics. Diagn Pathol. 2018;13(1):1-11. doi:10.1186/s13000-018-0689-9.

75. Küçükosmanoğlu İ, Karanis MİE, Ünlü Y, Çöven İ. Evaluation of P57, P53 and Ki67 Expression in Meningiomas. J Korean Neurosurg Soc. 2022;65(4):499-506. doi:10.3340/jkns.2021.0197.

76. Maier AD, Brøchner CB, Bartek J, *et al*. Mitotic and proliferative indices in who grade III meningioma. Cancers (Basel). 2020;12(11):1-10. doi:10.3390/cancers12113351.

77. Miller I, Min M, Yang C, *et al*. Ki67 is a Graded Rather than a Binary Marker of Proliferation versus Quiescence. Cell Rep. 2018;24(5):1105-1112.e5. doi:10.1016/j.celrep.2018.06.110

78. Lee SH, Lee EH, Sung KS, Kim DC, Kim YZ, Song YJ. Ki67 Index Is the Most Powerful Factor for Predicting the Recurrence in Atypical Meningioma: Retrospective Analysis of 99 Patients in Two Institutes. J Korean Neurosurg Soc. 2022;65(4):558-571. doi:10.3340/jkns.2021.0196

79. Solanke G, Monappa V, Kudva R. Histopathological spectrum of meningiomas with emphasis on prognostic role of ki67 labelling index. *Iran J Pathol*. 2020;15(3):197-204. doi:10.30699/ijp.2020.107195.2119

80. Perepechaeva ML, Klyushova LS, Grishanova AY. AhR and HIF-1 α Signaling Pathways in Benign Meningioma under Hypoxia. Int J Cell Biol. 2023;2023. doi:10.1155/2023/6840271

81. Johnson MD. PD-L1 expression in meningiomas. *J Clin Neurosci*. 2018;57:149-151. doi:10.1016/j.jocn.2018.08.023

82. Bhat AR, Wani MA, Kirmani AR, Ramzan AU. Histological-subtypes and anatomical location correlated in meningeal brain tumors (meningiomas). *J Neurosci Rural Pract*. 2014;5(3):244-249. doi:10.4103/0976-3147.133568

83. Lin DD, Lin JL, Deng XY, *et al*. Trends in intracranial meningioma incidence in the United States, 2004-2015. *Cancer Med*. 2019;8(14):6458-6467. doi:10.1002/cam4.2516

84. Rodríguez-Hernández LA, Uribe-Pacheco R, Mondragon-Soto M, *et al*. Assessing the Malignancy Risk of a Meningioma by Its Location. *Cureus*. 2022;14(11):7-11. doi:10.7759/cureus.31213

85. Haddad AF, Young JS, Kanungo I, *et al*. WHO Grade I Meningioma Recurrence: Identifying High Risk Patients Using Histopathological Features and the MIB-1 Index. *Front Oncol*. 2020;10(August):1-10. doi:10.3389/fonc.2020.01522

86. Sun C, Dou Z, Wu J, *et al*. The Preferred Locations of Meningioma According to Different Biological Characteristics Based on Voxel-Wise Analysis. *Front Oncol*. 2020;10:1412. doi:10.3389/fonc.2020.01412

87. Amoo M, Henry J, Farrell M, *et al*. Neuro-Oncology Advances Meningioma in the elderly. 2023;5:13-25.

88. Ihwan A, Rafika R, Cangara MH, Sjukur KJ, Faruk M. Correlation between Radiological Images and Histopathological Type of Meningioma: A Cohort

Study. *Ethiop J Health Sci*. 2022;32(3):597-604. doi:10.4314/ejhs.v32i3.16

89.  Traylor JI, Plitt AR, Hicks WH, Mian TM, Mickey BE, Barnett SL. Evaluating risk of recurrence in patients with meningioma. *J Neurosurg*. 2023;138(3):621-628. doi:10.3171/2022.6.JNS221162

90.  Richardson GE, Gillespie CS, Mustafa MA, *et al*. Clinical outcomes following re-operations for intracranial meningioma. *Cancers (Basel)*. 2021;13(19):1-14. doi:10.3390/cancers13194792

91.  Al-Rashed M, Foshay K, Abedalthagafi M. Recent Advances in Meningioma Immunogenetics. *Front Oncol*. 2020;9(January):1-11. doi:10.3389/fonc.2019.01472

92.  Giles AJ, Hao S, Padget M, *et al*. Efficient ADCC killing of meningioma by avelumab and a high-Affinity natural killer cell line, haNK. *JCI Insight*. 2019;4(20). doi:10.1172/jci.insight.130688

93.  Matias JG, Jusue-Torres I, Martin B, *et al*. Value of Ki-67 Labeling Index in Predicting Recurrence of WHO Grade i Cranial Base Meningiomas. *J Neurol Surgery, Part B Skull Base*. 2019;80(3):287-294. doi:10.1055/s-0038- 1669387

94.  Aung TM, Ngamjarus C, Proungvitaya T, Saengboonmee C, Proungvitaya S. *Biomarkers for Prognosis of Meningioma Patients: A Systematic Review and Meta-Analysis*. Vol 19.; 2024. doi:10.1371/journal.pone.0303337

95.  Rubino S, Kim Y, Zhou J, *et al*. Positive Ki-67 and PD-L1 expression in post-neoadjuvant chemotherapy muscle-invasive bladder cancer is associated with shorter overall survival: a retrospective study. *World J Urol*. 2021;39(5):1539-1547. doi:10.1007/s00345-020-03342-5

96.  Garzon-Muvdi T, Bailey DD, Pernik MN, Pan E. Basis for Immunotherapy for Treatment of Meningiomas. *Front Neurol*. 2020;11(August):1-11. doi:10.3389/fneur.2020.00945

97.  Spiliotaki M, Neophytou CM, Vogazianos P, *et al*. Dynamic monitoring of PD-L1 and Ki67 in circulating tumor cells of metastatic non-small cell lung cancer patients treated with pembrolizumab. *Mol Oncol*. 2023;17(5):792- 809. doi:10.1002/1878-0261.13317