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DAFTAR PUSTAKA

Ahn, Y. H., & Ko, Y. H., 2020, "Diagnostic and therapeutic implications of microRNAs in non-small cell lung cancer", *International Journal of Molecular Sciences,* 21(21), 8782. https://doi.org/10.3390/ijms21228782

Aja, J., Dost, A., & Kim, C, 2020, "Alveolar progenitor cells and the origin of lung cancer", *Journal of Internal Medicine, 289(5), 629-635.* https://doi.org/10.1111/joim.13201.

Andarini, S., Syahruddin, E., Aditya, N., Zaini, J., Kurniawan, F. D., Ermayanti, S., Soeroso, N. N., Munir, S. M., Infianto, A., Rima, A., Setyawan, U. A., Wulandari, L., Haryati, Ida Ayu Jasminarti, & Santoso, A., 2023, "Indonesian Society of Respirology (ISR) Consensus Statement on Lung Cancer Screening and Early Detection in Indonesia", *Jurnal Respirologi Indonesia*, 43(2), 144–150. https://doi.org/10.36497/jri.v43i2.455

Andre, et al., 2020, "A grading system for invasive pulmonary adenocarcinoma: A proposal from the International Association for the Study of Lung Cancer Pathology Committee", *Journal of Thoracic Oncology*, *15*(10), 1599-1610. https://doi.org/10.1016/j.jtho.2020.06.001

Bao, J.-M., 2015, "AGE/RAGE/Akt pathway contributes to prostate cancer cell proliferation by promoting Rb phosphorylation and degradation", *American Journal of Cancer Research*, *5*(5), 1741-1750

Barnes, E., 2017, "Surgery for limited-stage small-cell lung cancer (Review)", *Cochrane Database of Systematic Reviews*, (4), CD011917. https://doi.org/10.1002/14651858.CD011917.pub2

Barta, J., Powell, C., & Wisnivesky, J, 2019, "Global Epidemiology of Lung Cancer", *Annals of global Health, 85(1).* https://doi.org/10.5334/aogh.2419.

Beasley, 2021, Small Cell Lung Carcinoma, dalam *Thoracic Tumor*, Diedit oleh WHO Classification of Tumours Editorial Board, Perancis: International Agency for Research on Cancer, hal. 139.

Beasley, M. B., Dembitzer, F. R., & Flores, R. M., 2016, "Surgical pathology of earlystage non-small cell lung carcinoma", *Annals of Translational Medicine*, *4*(12), 238. https://doi.org/10.21037/atm.2016.06.13

Bersimbaev, R., Pulliero, A., Bulgakova, O., Kussainova, A., Aripova, A., & Izzotti, A, 2020, "Radon Biomonitoring and microRNA in Lung Cancer", *International Journal of Molecular Sciences, 21(6), 2154*. https://doi.org/10.3390/ijms21062154.

Birchmeier, C., Birnbaum, D., Waitches, G., Fasano, O., & Wigler, M., 1987, "Expression and rearrangement of the ROS1 gene in human glioblastoma

UNIVERSITAS GADJAH MADA
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cells", *Proceedings of the National Academy of Sciences*, 84, 9270–9274. doi: 10.1073/pnas.84.24.9270

Blandin Knight S, Crosbie PA, Balata H, Chudziak J, Hussell T, Dive C., 2017, "Progress and prospects of early detection in lung cancer", *Open Biol* 7 [PMID: 28878044. DOI: 10.1098/rsob.170070]

Bommer, G. T., Gerin, I., Feng, Y., et al, 2007, "p53-mediated activation of miRNA34 candidate tumor-suppressor genes", *Current Biology*, 17(15), 1231-1237. DOI: 10.1016/j.cub.2007.06.068

Borghaei, H., Paz-Ares, L., Horn, L., Spigel, D. R., Steins, M., Ready, N. E& Reck, M, 2015, "Nivolumab versus docetaxel in previously treated patients with advanced non-squamous non-small-cell lung cancer", *N Engl J Med 2015;373:1627-1639.* DOI: 10.1056/NEJMoa1507643

Broughton, J. P., Lovci, M. T., Huang, J. L., Yeo, G. W., & Pasquinelli, A. E., 2016, "Pairing beyond the seed supports microRNA targeting specificity", *Molecular Cell*, 64(2), 123-135. doi: 10.1073/pnas.1606325113

Calin, G. A., & Croce, C. M, 2006, "MicroRNA signatures in human cancers", *Nature Reviews Cancer*, 6(10), 857–866.

Calles, A., Liao, X.,Sholl, L.M.; Rodig, S.J.; Freeman, G.J.; Butaney, M.; Lydon, C.; Dahlberg, S.E, Hodi, F., Oxnard, G.R.; et al, "Expression of PD-1 and its ligands, PD-L1 and PD-L2, in smokers and never smokers with KRAS-mutant lung cancer", *J. Thorac. Oncol* 10, 1726–1735., DOI: 10.1097/JTO.0000000000000687

Calvez, F., Mukeria, A., Hunt, J., Kelm, O., Hung, R., Tanière, P., Hainaut, P., 2005, "TP53 and kras mutation load and types in lung cancers in relation to tobacco smoke: distinct patterns in never, former, and current smokers", *cancer Research*, 65(12), 5076-5083, https://doi.org/10.1158/0008-5472.can-05-0551

Cao, S., Zheng, J., Liu, X., Liu, Y., Ruan, X., Ma, J & Xue, Y., 2019, "FXR1 promotes the malignant biological behavior of glioma cells via stabilizing MIR17HG", *Journal of Experimental & Clinical Cancer Research 2019 38:37* https://doi.org/10.1186/s13046-018-0991-0.

Carvajal, L. A., & Manfredi, J. J., 2013, "Another fork in the road—life or death decisions by the tumour suppressor p53", *EMBO Reports*, 14, 414-421. https://doi.org/10.1038/embor.2013.43

Chang, E.H.; Gonda, M.A.; Ellis, R.W.; Scolnick, E.M.; Lowy, D.R., "Human genome contains four genes homologous to transforming genes of Harvey and Kirsten murine sarcoma viruses", *Proc. Natl. Acad. Sci*. USA 1982, 79, 4848–4852

UNIVERSITAS GADJAH MADA
mi-RNA Sebagai Penanda Biologis Pendamping Diagnosis Kanker Paru : Kajian Ekspresi miRAJIAN EKSPRESI miR-425-5p PADA BERBAGAI SUBTIPE KANKER PARU
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Universitas Gadjah Mada, 2024 | Diunduh dari http://etd.repository.ugm.ac.id/

Chen, T., & Zhou, F., 2019, "Age at diagnosis is a heterogeneous factor for non-small cell lung cancer patients", *Journal of Thoracic Disease*, 11(5), 201-202. http://dx.doi.org/10.21037/jtd.201

Chen, X., Ba, Y., Ma, L., Cai, X., Yin, Y., Wang, K., Guo, J., Zhang, Y., Chen, J., 2008, "Characterization of microRNAs in serum: a novel class of biomarkers for diagnosis of cancer and other diseases", *Cell Research*, 18(10), 983-984. doi: 10.1038/cr.2008.290.

Chen, Z., Fillmore, C. M., Hammerman, P. S., Kim, C. F., & Wong, K. K., 2017, "Nonsmall-cell lung cancers: a heterogeneous set of diseases", *Nature Reviews Cancer*, 17(10), 661-673. doi: 10.1038/nrc.2017.77

Cheng, H., Liu, P., Ohlson, C., Xu, E., Symonds, L., Isabella, A., Muller, W. J., Lin, N. U., Krop, I. E., Roberts, T. M., & Arteaga, C. L., 2016, "PIK3CA(H1047R)- and Her2-initiated mammary tumors escape PI3K dependency by compensatory activation of MEK-ERK signaling", *Oncogene*, 35(29), 2961–2970. doi: 10.1038/onc.2016.33

Chevallier, M., Borgeaud, M., Addeo, A., & Friedlaender, A, 2021, "Oncogenic driver mutations in non-small cell lung cancer: Past, present and future", *World Journal of Clinical Oncology, 12(4), 217-237* https://doi.org/10.5306/wjco.v12.i4.217.

Chien, L.-H., Jiang, H., Tsai, F., et al., 2023, "Incidence of lung adenocarcinoma by age, sex, and smoking status in Taiwan", *JAMA Network Open*, 6(11), e2340704. https://doi.org/10.1001/jamanetworkopen.2023.40704

Cooper WA, Lam DC, O'Toole SA, Minna JD., 2013, "Molecular biology of lung cancer", *J Thorac Dis*,s 5 Suppl 5: S479-S490 [PMID: 24163741 DOI: 10.3978/j.issn.2072-1439.2013.08.03]. doi: 10.3978/j.issn.2072-1439.2013.08.03

Cooper, 2021, Adenocarcinoma, dalam *Thoracic Tumor*, Diedit oleh WHO Classification of Tumours Editorial Board, Perancis: International Agency for Research on Cancer, hal. 64.

Cornelius, M. E., Loretan, C. G., Wang, T. W., Jamal, A., & Homa, D. M, 2022, "Tobacco product use among adults—United States, 2020", *MMWR Morbidity and Mortality Weekly Report*, 71(11), 397–405. https://doi.org/10.15585/mmwr.mm7111a1

Couraud, S., Zalcman, G., Milleron, B., Morin, F., & Souquet, P. J., 2012, "Lung cancer in never smokers—a review", *European Journal of Cancer*, 48(9), 1299-1311. https://doi.org/10.1016/j.ejca.2012.03.007

Cutz E, Pan J, Yeger H, Domnik NJ, Fisher JT, 2013, "Recent advances and contraversies on the role of pulmonary neuroepithelial bodies as airway

UNIVERSITAS GADJAH MADA
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sensors", *Semin Cell Dev Biol*; 24: 40–50. doi: 10.1016/j.semcdb.2012.09.003.

Ding, L., Getz, G., Wheeler, D. A., Mardis, E. R., McLellan, M. D., Cibulskis, K., ... & Wilson, R. K., 2008, "Somatic mutations affect key pathways in lung adenocarcinoma", *Proceedings of the National Academy of Sciences*, *105*(36), 13442-13447. doi: 10.1038/nature07423

Dingemans, A.-M. C., Früh, M., Ardizzoni, A., Besse, B., Faivre-Finn, C., Hendriks, L. E., Lantuejoul, S., Peters, S., Reguart, N., Rudin, C. M., De Ruysscher, D., Van Schil, P. E., Vansteenkiste, J., & Reck, M., 2021, "Small-cell lung cancer: ESMO Clinical Practice Guidelines for diagnosis, treatment and follow-up", *Annals of Oncology* https://doi.org/10.1016/j.annonc.2021.03.207 839

Dovey JS, Zacharek SJ, Kim CF, Lees JA., 2008, Bmi1 is critical for lung tumorigenesis and bronchioalveolar stem cell expansion. *Proc Natl Acad Sci* 105: 11857–62.

Du, L., Schageman, J., Irnov, I., Girard, L., Hammond, S., Minna, J.& Pertsemlidis, A., 2010, "MicroRNA expression distinguishes SCLC from NSCLC lung tumor cells and suggests a possible pathological relationship between SCLCs and NSCLCs", *Journal of Experimental & Clinical Cancer Research 2010, 29:75.*

Duran *et al.*, 2021, "Small-cell lung cancer in never-smokers", *European Society for Medical Oncology* https://doi.org/10.1016/j.esmoop.2021.100059 Volume 6 - Issue 2 – 2021.

Egger G, Liang G, Aparicio A and Jones PA, "Epigenetics in human disease and prospects for epigenetic therapy", *Nature,* 429(6990), 457–463. doi: 10.1038/nature02625

Eguchi, T., Kameda, K., Lu, S., Bott, M., Tan, K. S., Montecalvo, J., Chang, J. C., Rekhtman, N., Jones, D. R., & Travis, W. D., 2020, "Lobectomy is associated with better outcomes than sublobar resection in spread through air spaces (STAS)-positive T1 lung adenocarcinoma: A propensity score-matched analysis", *American Journal of Clinical Pathology*, 143(2), 147-155. doi:10.1016/ j. jtho.2018.09.005.

Fabbri, M., Garzon, R., Cimmino, A., Liu, Z., Zanesi, N., Callegari, E & Croce, C.., 2007, "MicroRNA-29 family reverts aberrant methylation in lung cancer by targeting DNA methyltransferases 3A and 3B", *Proceedings of the National Academy of Sciences, 104(40), 15805-15810.* https://doi.org/10.1073/pnas.0707628104.

Fischer, B., Marinov, M., & Arcaro, A, 2007, "Targeting receptor tyrosine kinase signalling in small cell lung cancer (SCLC): What have we learned so far?", *Cancer Treatment Reviews,* 33, 391–406.

UNIVERSITAS GADJAH MADA
mi-RNA Sebagai Penanda Biologis Pendamping Diagnosis Kanker Paru : Kajian Ekspresi miRAJIAN EKSPRESI miR-425-5p PADA BERBAGAI SUBTIPE KANKER PARU
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Fisseler-Eckhoff A, Demes M., 2012, "Neuroendocrine tumors of the lung", Cancers 2012; 4: 777–98

Flieder, D. B. ,2003, "Screen-detected adenocarcinoma of the lung. Practical points for surgical pathologists" *American Journal of Clinical Pathology*, 119(1), 39-57. DOI: 10.1309/D736-X3HG-DX1W-00TN

Freedman, D. A., Wu, L., & Levine, A. J., 1999, "Functions of the MDM2 oncoprotein", *Cellular and Molecular Life Sciences*, 55(1), 96-107. https://doi.org/10.1007/s000180050273

Friedlaender A, Banna G, Patel S, Addeo A., 2019, "Diagnosis and Treatment of ALK Aberrations in Metastatic NSCLC", *Curr Treat Options Oncol* 20: 79 [PMID: 31482479 DOI: 10.1007/s11864-019-0675-9]

Friedlaender A, Banna GL, Buffoni L, Addeo A, 2019, "Poor-Performance Status Assessment of Patients with Non-small Cell Lung Cancer Remains Vague and Blurred in the Immunotherapy Era", *Curr Oncol Rep* 21: 107 [PMID: 31768759 DOI: 10.1007/s11912-019-0852-9]

Frisone D, Friedlaender A, Malapelle U, Banna G, Addeo A. A BRAF new world. Crit Rev Oncol

Früh M, De Ruysscher D, Popat S, et al., 2013, "Small-cell lung cancer (SCLC): ESMO Clinical Practice Guidelines for diagnosis, treatment and follow-up", *Ann Oncol*, ;24(suppl 6):vi99-vi105.

Frydrychowicz, M., Kuszel, Ł., Dworacki, G., & Budna-Tukan, J, 2022, "MicroRNA in lung cancer—a novel potential way for early diagnosis and therapy", *Journal of Applied Genetics 2023 64:459–477* https://doi.org/10.1007/s13353-023-00750-2.

Fu, Y., et al., 2020, "Overexpression of miR-425-5p is associated with poor prognosis and tumor progression in non-small cell lung cancer", *Journal of Cancer*, 11(1), 147–156. https://doi.org/10.7150/jca.32737

Gedvilaitė, V., Danila, E., Cicėnas, S., & Smailytė, G., 2019, "Lung Cancer Survival in Lithuania: Changes by Histology, Age, and Sex From 2003-2007 to 2008-2012", *Cancer Control*, 10(2), 1–8. doi: 10.1177/1073274819836085

George, J., Lim, J. S., Jang, S. J., Cun, Y., Ozretić, L., Kong, G., Leenders, F., Lu, X., Fernández-Cuesta, L., Bosco, G., Müller, C., Dahmen, I., & Jahchan, N. S., 2015, "Comprehensive genomic profiles of small cell lung cancer", *Nature Communications, 6*, 1-12. doi: 10.1038/ncomms8647

Gray, N., 2006, "The consequences of the unregulated cigarette", *Tobacco Control*, 15(5), 405-408. https://doi.org/10.1136/tc.2006.017277

Guan J, Umapathy G, Yamazaki Y, Wolfstetter G, Mendoza P, Pfeifer K, Mohammed A, Hugosson F, Zhang H, Hsu AW, Halenbeck R, Hallberg B, Palmer RH, 2015, "FAM150A and FAM150B are activating ligands for

UNIVERSITAS GADJAH MADA
mi-RNA Sebagai Penanda Biologis Pendamping Diagnosis Kanker Paru : Kajian Ekspresi miRAJIAN EKSPRESI miR-425-5p PADA BERBAGAI SUBTIPE KANKER PARU
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anaplastic lymphoma kinase", *Elife 4: e09811* [PMID: 26418745 DOI:10.7554/eLife.09811]

Guerreiro, T., 2020, "Lung cancer: A nationwide study to characterize sex differences, incidence, and spatial patterns in Portugal", *Anticancer Research, 40*(9), 5007-5016. https://doi.org/10.21873/anticanres.14437

Ha, M., & Kim, V. N., 2014, "Regulation of microRNA biogenesis", *Nature Reviews Molecular Cell Biology*, 15, 509. doi: 10.1038/nrm3838

Ha, M., & Kim, V. N.,2014, "Regulation of microRNA biogenesis", *Nature Reviews Molecular Cell Biology, 15*, 509-521. doi: 10.1038/nrm3846

Hanafi, A. R., Hanif, M. A., Pangaribuan, M. T. G., Ariawan, W. P., Sutandyo, N., Kurniawati, S. A., Setiawan, L., Cahyanti, D., Rayhani, F., & Imelda, P., 2024, "Genomic features of lung cancer patients in Indonesia's national cancer center", *BMC Pulmonary Medicine*, 24(1), 43. https://doi.org/10.1186/s12890-024-02851-y

Harms, K., Nozell, S., & Chen, X., 2004, "The common and distinct target genes of the p53 family transcription factors", *Cellular and Molecular Life Sciences*, 61, 822-842. https://doi.org/10.1007/s00018-004-4012-5

Hayashita, Y., Osada, H., Tatematsu, Y., Yamada, H., Yanagisawa, K., Tomida, S.,& Takahashi, T., 2005, "A polycistronic microRNA cluster, miR-17-92, is overexpressed in human lung cancers and enhances cell proliferation", *Cancer Research , 65(21), 9628-9632* https://doi.org/10.1158/0008-5472.can-05-2352.

Hecht, S. S., & Szabo, E., 2014, "Fifty Years of Tobacco Carcinogenesis Research: From Mechanisms to Early Detection and Prevention of Lung Cancer", *Cancer Prevention Research, 7*(1), 1-8. doi: 10.1158/1940-6207.CAPR-13-0414

Hecht, S. S., 1999, "Tobacco smoke carcinogens and lung cancer", *Journal of the National Cancer Institute, 91*(14), 1194-1210. doi: 10.1093/jnci/91.14.1194

Heriyanto, D., Trisnawati, I., Kumara, E., Laiman, V., Yuliani, F., Sumpono, A., Rita Cempaka, Marcellus, Eko Budiono, 2020, "The prevalence of the EML4-ALK fusion gene in cytology specimens from patients with lung adenocarcinoma, *Pulmonary Medicine*, 1-6. https://doi.org/10.1155/2020/3578748

Horvath G, Sorscher EJ., 2008, "Luminal fluid tonicity regulates airway ciliary beating by altering membrane stretch and intracellular calcium", *Cell Motil. Cytoskeleton*, 65: 469–75. DOI: 10.1002/cm.20273

Hu, J., Wang, Y., Zhang, Y., Yu, Y., Chen, H., Liu, K., Yao, M., Wang, K., & Shou, W, 2019, "Comprehensive genomic profiling of small cell lung cancer in Chinese

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patients and the implications for therapeutic potential", *Cancer Medicine*, 8(6), 2935-2945. https://doi.org/10.1002/cam4.2199

Hu, J., Wang, Y., Zhang, Y., Yu, Y., Chen, H., Liu, K., Yao, M., Wang, K., & Shou, W, 2019, "Comprehensive genomic profiling of small cell lung cancer in Chinese patients and the implications for therapeutic potential", *Cancer Medicine*, 8(6), 2935-2945. https://doi.org/10.1002/cam4.2199

Hu, X., Chen, Q., Guo, H., Li, K., Fu, B., Chen, Y., Zhao, H., Wei, M., Li, Y., & Wu, H., 2021, "Identification of target PTEN-based miR-425 and miR-576 as potential diagnostic and immunotherapeutic biomarkers of colorectal cancer with liver metastasis", *Frontiers in Oncology*, 11, Article 813703. https://doi.org/10.3389/fonc.2021.813703

Iftikhar, H., & Carney, G. E, 2016, "Evidence and potential in vivo functions for biofluid miRNAs: From expression profiling to functional testing: Potential roles of extracellular miRNAs as indicators of physiological change and as agents of intercellular information exchange", *Bioessays*, 38(5), 367–378. DOI: 10.1002/bies.201500130

Inamura, K, 2017, "Lung Cancer: Understanding its Molecular Pathology and the 2015 WHO Classification", *Frontiers in Oncology* doi: 10.3389/fonc.2017.00193.

Inamura, K., & Ishikawa, Y., 2016, "MicroRNA in lung cancer: Novel biomarkers and potential tools for treatment", *Journal of Clinical Medicine*, 5(3), E36. https://doi.org/10.3390/jcm5030036

Itani, R and Faraj, 2019, "siRNA Conjugated Nanoparticles—A Next Generation Strategy to Treat Lung Cancer", I*nternational Journal of Molecular Sciences, 20(23), 6088.* https://doi.org/10.3390/ijms20236088.

Ito, H., Matsuo, K., Tanaka, H., Koestler, D. C., Ombao, H., Fulton, J., & Shibata, A., 2011, "Nonfilter and filter cigarette consumption and the incidence of lung cancer by histological type in Japan and the United States: Analysis of 30-year data from population-based cancer registries", *International Journal of Cancer*, 128(8), 1918-1928. https://doi.org/10.1002/ijc.25531

Izumi, M., Suzumura, T., Ogawa, K., Matsumoto, Y., Sawa, K., Yoshimoto, N., Tani, Y., Watanabe, T., Kaneda, H., Mitsuoka, S., Asai, K., & Kawaguchi, T., 2019, "Differences in molecular epidemiology of lung cancer among ethnicities (Asian vs. Caucasian)", *Journal of Thoracic Disease*, 11(8), 3368-3378. https://doi.org/10.21037/jtd.2019.08.61

Izumi, M., Suzumura, T., Ogawa, K., Matsumoto, Y., Sawa, K., Yoshimoto, N., Tani, Y., Watanabe, T., Kaneda, H., Mitsuoka, S., Asai, K., & Kawaguchi, T., 2019, "Differences in molecular epidemiology of lung cancer among

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ethnicities (Asian vs. Caucasian)", *Journal of Thoracic Disease*, 11(8), 3368-3378. https://doi.org/10.21037/jtd.2019.08.61

Jemal, A., et al., 2018, "Higher lung cancer incidence in young women than young men in the United States", *New England Journal of Medicine*, 378(20), 1999–2009. https://doi.org/10.1056/NEJMoa1715907

Jian-Wei, Wei, Kai Huang, Chao Yang., 2017, "Noncoding RNAs as regulators in epigenetics", *Oncology Reports 37: 3-9, 2017*. doi: 10.3892/or.2016.5236.

Kawaguchi, T., Takada, M., Kubo, A., Matsumura, A., Fukai, S., Tamura, A., Ou, S., 2010, "Performance status and smoking status are independent favorable prognostic factors for survival in non-small cell lung cancer: a comprehensive analysis of 26,957 patients with NSCLC", *Journal of Thoracic Oncology*, 5(5), 620-630. https://doi.org/10.1097/jto.0b013e3181d2dcd9

Kawano, O., Sasaki, H., Endo, K., et al., 2006, "PIK3CA mutation status in Japanese lung cancer patients", *Lung Cancer*, 54(2), 209–215. https://doi.org/10.1016/j.lungcan.2006.07.006

Keikha, M., & Esfahani, B. N., 2018, "The relationship between tuberculosis and lung cancer", *Advances in Biomedical Research*, 7(1), 58. https://doi.org/10.4103/2277-9175.239885

Kim, Y., Hammerman, P. S., Kim, J., Getz, G., Meyerson, M., & Park, K., 2014 "Integrative and comparative genomic analysis of East-Asian lung squamous cell carcinomas. Proceedings of the 105th Annual Meeting of the American Association for Cancer Research", *Cancer Res 2014*;74(19 Suppl): Abstract nr 1526. doi:10.1158/1538-7445.AM2014-1526

Kitamura, H., Tanaka, T., Kameda, T., 2001, "Atypical adenomatous hyperplasia of the lung: A probable forerunner in the development of adenocarcinoma of the lung", *Modern Pathology*, *14*, 72–84. doi: 10.1038/modpathol.3880259

Kumar, V., Abbas A.K, Aster, J.C., 2021, *Robbins and Cotran Pathologic Basis of Disease, Tenth Edition, International Edition*, Philadelphia : Elsevier, Inc.

Lang D, Huemer F, Rinnerthaler G, Horner A, Wass R, Brehm E, Akbari K, Granitz M, Hutarew G, Kaiser B, Greil R, Lamprecht B., 2019, "Therapy Line and Associated Predictors of Response to PD-1/PD-L1-Inhibitor Monotherapy in Advanced Non-small-Cell Lung Cancer: A Retrospective Bi-centric Cohort Study", *Target Oncol* 14: 707-717 [PMID: 31654203. DOI: 10.1007/s11523-019-00679-9]

Lee, M. H., Qureshi, M. M., Suzuki, K., Everett, P., Tapan, U., & Mak, K. S., 2022, "Small cell lung cancer in young patients: trends in sociodemographic factors, diagnosis, treatment, and survival", *Journal of Thoracic Disease*, 14(8), 3021-3030. https://doi.org/10.21037/jtd-22-210

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Universitas Gadjah Mada, 2024 | Diunduh dari http://etd.repository.ugm.ac.id/

Leonetti A, Facchinetti F, Rossi G, Minari R, Conti A, Friboulet L, Tiseo M, Planchard D, 2018, "BRAF in non-small cell lung cancer (NSCLC): Pickaxing another brick in the wall", *Cancer Treat Rev* 66: 82-94 [PMID: 29729495. DOI: 10.1016/j.ctrv.2018.04.006]

Lester J. Layfield, M.D, Sinchita Roy-Chowdhuri, M.D., Ph.D, Zubair Baloch, M.D., 2017, "Utilization of Ancillary Studies in the Cytologic Diagnosis of Respiratory Lesions: The Papanicolaou Society of Cytopathology Consensus Recommendations for Respiratory Cytology", *Diagn Cytopathol*. doi:10.1002/dc.23549.

Lester J. Layfield, Zubair Baloch, Tarik Elsheikh, Leslie Litzky, Natasha Rektman, William D. Travis, Maureen Zakowski, Matthew Zarka, and Kim Geisinger, 2016, *Diagn Cytopathol*. May;44(5):399-409. doi: 10.1002/dc.23457.

Li BT, Ross DS, Aisner DL, Chaft JE, Hsu M, Kako SL., 2016, "HER2 Amplification and HER2 Mutation Are Distinct Molecular Targets in Lung Cancers", *J Thorac Oncol* 11:414–9. https://doi.org/10.1016/j.jtho.2015.10.025.

Li, C., Lei, S., Ding, L., Xu, Y., Wu, X., Wang, H., Zhang, Z., Gao, T., Zhang, Y., & Li, L. (2023). Global burden and trends of lung cancer incidence and mortality. *Chinese Medical Journal*, 136(13), 1532-1541. https://doi.org/10.1097/CM9.0000000000002529

Lim JH, Ryu J-S, Kim JH, Kim H-J, Lee D, 2018, "Gender as an independent prognostic factor in small-cell lung cancer: Inha Lung Cancer Cohort study using propensity score matching", *PLoS ONE* 13(12): e0208492. https://doi.org/10.1371/journal. pone.0208492

Lin Mong-Wei, Huang Yen-Lin, Yang Ching-Yao, Kuo Shuenn-Wen, Wu Chen-Tu, Chang Yih-Leong, 2018, "The Differences in Clinicopathologic and Prognostic Characteristics Between Surgically Resected Peripheral and Central Lung Squamous Cell Carcinoma", *Ann Surg Oncol*. DOI: 10.1245/s10434-018-6993-5

Lindeman NI, Cagle PT, Beasley MB, Chitale DA, Dacic S, Giaccone G, Jenkins RB, Kwiatkowski DJ, Saldivar JS, Squire J, Thunnissen E, Ladanyi M., 2013, "Molecular testing guideline for selection of lung cancer patients for EGFR and ALK tyrosine kinase inhibitors: guideline from the College of American Pathologists, International Association for the Study of Lung Cancer, and Association for Molecular Pathology", *Journal of Thoracic Oncology*; 8: 823-859 [PMID: 23552377 DOI:10.1097/JTO.0b013e318290868f]

Liu, X., Sempere, L., Galimberti, F., Freemantle, S., Black, C., Dragnev, K., & Dmitrovsky, E., 2009, "Uncovering Growth-Suppressive MicroRNAs in Lung Cancer", *Clinical cancer Research, 15(4), 1177-1183.* https://doi.org/10.1158/1078-0432.ccr-08-1355.

UNIVERSITAS GADJAH MADA
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Universitas Gadjah Mada, 2024 | Diunduh dari http://etd.repository.ugm.ac.id/

Liu, X., Sempere, L., Ouyang, H., Memoli, V., Andrew, A., Luo, Y., & Dmitrovsky, E.., 2010, "MicroRNA-31 functions as an oncogenic microRNA in mouse and human lung cancer cells by repressing specific tumor suppressors", *Journal of Clinical Investigation, 120(4), 1298-1309.* https://doi.org/10.1172/jci39566.

Lü, L., Liang, Q., Shen, S., Feng, L., Jin, L., & Zhao, L., 2020, "Tobacco Smoke Plays an Important Role in Initiation and Development of Lung Cancer by Promoting the Characteristics of Cancer Stem Cells", *Cancer Management and Research Volume 12, 9735-9739* https://doi.org/10.2147/cmar.s272277.

Lu, S., Kong, H., Hou, Y., Ge, D., Huang, W., Ou, J., Yang, D., Zhang, L., Wu, G., Song, Y., Zhang, X., Zhang, C., Wang, Q., Zhu, H., Wu, Y., & Bai, C, 2018, "Two plasma microRNA panels for diagnosis and subtype discrimination of lung cancer", *Journal of Clinical Oncology, 36*(15), 1738-1746. doi: 10.1200/JCO.2017.75.2137

Mainardi S, Mijimolle N, Francoz S, Vicente-Duenas C, Sanchez-Garcia I, Barbacid M., 2014, "Identification of cancer initiating cells in K-Ras driven lung adenocarcinoma", *Proc Natl Acad Sci* USA 111: 255–60

Makarova, J. A., Shkurnikov, M. U., Wicklein, D., Lange, T., Samatov, T. R., Turchinovich, A. A., & Tonevitsky, A. G, 2016, "Intracellular and extracellular microRNA: An update on localization and biological role", *Progress in Histochemistry and Cytochemistry*, 51, 33–49. https://doi.org/10.3892/mmr.2020.11466

Makarova, J. A., Shkurnikov, M. U., Wicklein, D., Lange, T., Samatov, T. R., Turchinovich, A. A., et al., 2016, "Intracellular and extracellular microRNA: an update on localization and biological role", *Prog Histochem Cytochem*, 51(3-4), 33-49. Doi:10.1016/ j.molcel. 2016.09.004

Malhotra, J., Malvezzi, M., Negri, E., La Vecchia, C., & Boffetta, P, 2016, "Risk factors for lung cancer worldwide", *European Respiratory Journal*, 48(3), 889-903. https://doi.org/10.1183/13993003.00359-2016

Marino, F., Bianco, R., Accardo, M., Ronchi, A., Cozzolino, I., Morgillo, Franco, R, 2019, "Molecular heterogeneity in lung cancer: from mechanisms of origin to clinical implications", *International Journal of Medical Sciences 2019* 16(7): 981-989. doi: 10.7150/ijms.34739.

Mass RD., 2004, "The HER receptor family: a rich target for therapeutic development", *Int J Radiat Oncol Biol Phys* 58: 932-940 [PMID: 14967453 DOI: 10.1016/j.ijrobp.2003.09.093]

Mayo, L. D., & Donner, D. B., 2001, "A phosphatidylinositol 3-kinase/Akt pathway promotes translocation of Mdm2 from the cytoplasm to the nucleus", *Proceedings of the National Academy of Sciences of the United States of America*, 98(20), 11598-115603. https://doi.org/10.1073/pnas.181181198

UNIVERSITAS GADJAH MADA
mi-RNA Sebagai Penanda Biologis Pendamping Diagnosis Kanker Paru : Kajian Ekspresi miRAJIAN EKSPRESI miR-425-5p PADA BERBAGAI SUBTIPE KANKER PARU
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Universitas Gadjah Mada, 2024 | Diunduh dari http://etd.repository.ugm.ac.id/

McLaughlin, J., Berkman, J., & Nana-Sinkam, P, 2023, "Targeted therapies in non-small cell lung cancer: present and future", Faculty Reviews 12:(22) https://doi.org/10.12703/r/12-22.

Mehta, A., Sriramanakoppa, N. N., Agarwal, P., Viswakarma, G., Vasudevan, S., Panigrahi, M.,Doval, D. C., 2019, "Predictive biomarkers in nonsmall cell carcinoma and their clinico-pathological association", *Journal of Clinical and Diagnostic Research, 14*(9), JC01-JC06. DOI: 10.4103/sajc.sajc_373_18

Mehta, A., Sriramanakoppa, N., Agarwal, P., Viswakarma, G., Vasudevan, S., Panigrahi, M., Suryavanshi, M., 2019, "Predictive biomarkers in nonsmall cell carcinoma and their clinico-pathological association", *South Asian Journal of Cancer,* 08(04), 250-254. https://doi.org/10.4103/sajc.sajc_373_18

Michot, J., Lazarovici, J., Tieu, A., Champiat, S., Voisin, A., Ebbo, M., Godeau, B., Michel, M., Ribrag, V., & Lambotte, O., 2019, "Haematological immune-related adverse events with immune checkpoint inhibitors, how to manage?", *Eur. J. Cancer, 122*, 72–90. DOI: 10.1016/j.ejca.2019.07.014

Millis, S. Z., Jardim, D. L., Albacker, L., et al., 2019, "Phosphatidylinositol 3-kinase pathway genomic alterations in 60,991 diverse solid tumors informs targeted therapy opportunities", *Cancer*, 125(7), 1185–1199. https://doi.org/10.1002/cncr.31921

Molina, J., Yang, P., Cassivi, S., Schild, S., & Adjei, A., 2008, "Nonsmall cell lung cancer: epidemiology, risk factors, treatment, and survivorship", *Mayo Clinic Proceedings,* 83(5), 584-594. https://doi.org/10.4065/83.5.584

Moreira AL, Ocampo PSS, Xia Y, et al, 2020, "A grading system for invasive pulmonary adenocarcinoma: a proposal from the International Association for the Study of Lung Cancer Pathology Committee", *J Thorac Oncol* ;15: 1599–1610

Naderali, E., 2019, "Positive effects of PI3K/Akt signaling inhibition on PTEN and P53 in prevention of acute lymphoblastic leukemia tumor cells", *PubMed*. https://pubmed.ncbi.nlm.nih.gov/31592121/

Nguyen P.T., Katanoda K., Saito E., Hori M., Nakayama T.M., Matsuda T., 2022, "Trends in lung cancer incidence by gender, histological type and stage at diagnosis in Japan, 1993 to 2015: A multiple imputation approach", *International Journal of Cancer*, 150(10), 1921-1933. https://doi.org/10.1002/ijc.33962

Nguyen, G.K. dan Smith, B., 2014, Atlas & Text of Lung Cytology Second edition. *Library and Archives Canada*: University of British Columbia (UBC) Pathology.

UNIVERSITAS GADJAH MADA
mi-RNA Sebagai Penanda Biologis Pendamping Diagnosis Kanker Paru : Kajian Ekspresi miRAJIAN EKSPRESI miR-425-5p PADA BERBAGAI SUBTIPE KANKER PARU
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Universitas Gadjah Mada, 2024 | Diunduh dari http://etd.repository.ugm.ac.id/

Nicholson *et al.*, 2021, "**The 2021 WHO Classification of Lung Tumors: Impact of Advances Since 2015**", *Journal of Thoracic Oncology* Vol. 17 No. 3: 362–387.

O'Brien, J., Hayder, H., Zayed, Y., & Peng C., 2018, "Overview of MicroRNA Biogenesis, Mechanisms of Actions, and Circulation", *Frontiers in Endocrinology,* https://doi.org/10.3389/fendo.2018.00402.

O'Sullivan, E., Keogh, A., Henderson, B., Finn, S., Gray, S., & Gately, K., 2023, "Treatment Strategies for KRAS-Mutated Non-Small-Cell Lung Cancer. *Cancers 2023*", 15, 1635. https://doi.org/10.3390/cancers15061635 https://www.mdpi.com/journal/cancers.

Organ SL, Tsao MS., 2011, "An overview of the c-MET signaling pathway", *Ther Adv Med Oncol*; 3(1 Suppl): S7–SS19, doi: 10.1177/1758834011422556,

Pahuja KB, Nguyen TT, Jaiswal BS, Prabhash K, Thaker TM, Senger K, et al. Actionable activating oncogenic ERRB2/HER2 transmembrane and juxtamembrane domain mutations. Cancer Cell 2018; 34:792–806.e5. https://doi. org/10.1016/j.ccell.2018.09.010.

Paliogiannis, P., Colombino, M., Sini, M. C., Manca, A., Casula, M., Palomba, G., Pisano, M., Doneddu, V., Zinellu, A., Santeufemia, D., Sotgiu, G., & Cossu, A, 2022, "Global prognostic impact of driver genetic alterations in patients with lung adenocarcinoma: a real-life study", *BMC Pulmonary Medicine*, 22(1), Article number: 32. https://doi.org/10.1186/s12890-021-01803-0

Pesch, B., et al., 2012, "Cigarette smoking and lung cancer—Relative risk estimates for the major histological types from a pooled analysis of case-control studies", *International Journal of Cancer*, 131(6), 1210–1219. https://doi.org/10.1002/ijc.27339

Peschansky, V. J., & Wahlestedt, C., 2014, "Noncoding RNAs as direct and indirect modulators of epigenetic regulation", *Epigenetics*, 9(3), 3-12. DOI: 10.4161/epi.27473

Piotrowska, Z., Gainor, J. F., Zhu, V. W., et al, 2018, "Landscape of acquired resistance to osimertinib in EGFR-mutant NSCLC and clinical validation of combined EGFR and RET inhibition with osimertinib and BLU-667 for acquired RET fusion", *Journal of Clinical Oncology*, *36*(15), 1494–1495. doi: 10.1200/JCO.2018.78.1771

Planchard D, Smit EF, Groen HJM, Mazieres J, Besse B, Helland Å, Giannone V, D'Amelio AM Jr, Zhang P, Mookerjee B, Johnson BE, 2017, "Dabrafenib plus trametinib in patients with previously untreated BRAFV600E-mutant metastatic non-small-cell lung cancer: an open-label, phase 2 trial", *Lancet Oncol* 18: 1307-1316 [PMID: 28919011 DOI: 10.1016/S1470-2045(17)30679-4]

Popper, 2017, *Pathology of Lung Disease*, Graz: Springer Nature

UNIVERSITAS GADJAH MADA
mi-RNA Sebagai Penanda Biologis Pendamping Diagnosis Kanker Paru : Kajian Ekspresi miRAJIAN EKSPRESI miR-425-5p PADA BERBAGAI SUBTIPE KANKER PARU
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Universitas Gadjah Mada, 2024 | Diunduh dari http://etd.repository.ugm.ac.id/

Rami–Porta, R., Bolejack, V., Giroux, D., Chansky, K., Crowley, J., Asamura, H., & Goldstraw, P. (2014). The IASLC lung cancer staging project: the new database to inform the eighth edition of the TNM classification of lung cancer. Journal of Thoracic Oncology, 9(11), 1618-1624. https://doi.org/10.1097/jto.0000000000000334

Rami-Porta, R., Call, S., Dooms, C., Obiols, C., Sánchez, M., Travis, W. D., et al., 2018, "Lung cancer staging: A concise update", *European Respiratory Journal*, 51(5), 1800190. https://doi.org/10.1183/13993003.00190-2018

Remon *et al.*, 2021, "Early and locally advanced non-small-cell lung cancer: ESMO Clinical Practice Guidelines for diagnosis, treatment and follow-up", *Annals of Oncology* Volume 32 - Issue 12 – 2021.

Rikova, K.; Guo, A.; Zeng, Q.; Possemato, A.; Yu, J.; Kaack, H.; Nardone, J.; Lee, K.; Reeves, C.; Li, Y.; et al, 2007, "Global survey of phosphotyrosine signaling identifies oncogenic kinases in lung cancer", *Cell*, 131, 1190–1203.

Rock JR, Onaitis MW, Rawlins, 2009, "Basal cells as stem cells of the mouse trachea and human airway epithelium", *Proc Natl Acad Sci* USA 106: 12771–5.

Rogers DF, 1994, "Airway goblet cells: Responsive and adaptable front-line defenders", *Eur Respir J* ;7:1690–706

Roh, 2014, "Molecular Pathology of Lung Cancer: Current Status and Future Directions", *Tuberculosis and Respiratory Diseases 77(2), 49.* https://doi.org/10.4046/trd.2014.77.2.49.

Rokicki W, Rokicki M, Wojtacha J, D_zeljijli A., 2016, "The role and importance of club cells (Clara cells) in the pathogenesis of some respiratory diseases", *Pol J Cardio-Thorac Surg* 1:26–30. DOI: 10.5114/kitp.2016.58961

Romeo, H. and Arcos, M., 2023, "Clinical relevance of stem cells in lung cancer", *World Journal of stem cells,* 15(6), 576-588. https://doi.org/10.4252/wjsc.v15.i6.576.

Russell PA, Barnett SA, Walkiewicz M, et al., 2013, "Correlation of mutation status and survival with predominant histologic subtype according to the new IASLC/ATS/ERS lung adenocarcinoma classification in stage III (N2) patients", *J Thorac Oncol*; 8:461–468.

Sabbula *et al.*, 2023, "Squamous Cell Lung Cancer", *National Center for Biotechnology Information- StatPearls Publishing; 2024 Jan.* (diakses 23 Juli 2024).

Schwartz AG, Cote ML., 2016, "Epidemiology of Lung Cancer*", Adv Exp Med Biol*; 893: 21-41 [PMID: 26667337 DOI: 10.1007/978-3-319-24223-1_2]

UNIVERSITAS GADJAH MADA
mi-RNA Sebagai Penanda Biologis Pendamping Diagnosis Kanker Paru : Kajian Ekspresi miRAJIAN EKSPRESI miR-425-5p PADA BERBAGAI SUBTIPE KANKER PARU
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Universitas Gadjah Mada, 2024 | Diunduh dari http://etd.repository.ugm.ac.id/

Sekido, Y., Fong, K. M., & Minna, J. D., 2003, "Molecular genetics of lung cancer", *Annual Review of Medicine*, 54, 73-87. https://doi.org/10.1146/annurev.med.54.101501.103013

Shen, J., Liao, J., Guarnera, M., Fang, H., Cai, L., Stass & Jiang, F., 2014, "Analysis of MicroRNAs in Sputum to Improve Computed Tomography for Lung Cancer Diagnosis", *Journal of Thoracic Oncology, 9(1), 33-40.* https://doi.org/10.1097/jto.0000000000000025.

Sherr, C. J., & McCormick, F., 2002, "The RB and p53 pathways in cancer", *Cancer Cell*, 2, 103-112. https://doi.org/10.1016/S1535-6108(02)00203-2

Spella, M., Lilis, I., Pepe, M. A. A., Chen, Y., Armaka, M., Lamort, A.-S., Zazara, D. E., Roumelioti, F., Vreka, M., Kanellakis, N. I., 2019, "Club cells form lung adenocarcinomas and maintain the alveoli of adult mice", *Cell Reports*, 29(11), 3311–3323.e4. doi: 10.7554/eLife.45571

Stanaway, et al., 2018, "Global, regional, and national comparative risk assessment of 84 behavioural, environmental and occupational, and metabolic risks or clusters of risks for 195 countries and territories, 1990-2017: a systematic analysis for the Global Burden of Disease Study 2017", The Lancet, 392(10159), 2287-2323. DOI:https://doi.org/10.1016/S0140-6736(18)32225-6

Suda, Mitsudomi, 2022, "Current Status and Future Perspective of Molecular Targeted Therapies for Lung Cancer", *Kyobu Geka 2022 Jan;75(1):53-66*

Sun, L., Jiang, R., Li, J., Wang, B., Ma, C., Lv, Y., & Mu, N, 2016, "micorna-425-5p is a potential prognostic *biomarker* for cervical cancer", *International Journal of Laboratory Medicine*, 54(1), 127-133. https://doi.org/10.1177/0004563216649377.

Suryoadji, *et al.* 2021. Obesity, Lung Cancer, The Paradox of Its Association: A Narrative Review. *J Asian Med Stud Assoc. 2020;* Volume 9.

Reitsma, M. B., Fullman, N., Ng, M., et al., 2017, "Smoking prevalence and attributable disease burden in 195 countries and territories, 1990-2015: A systematic analysis from the Global Burden of Disease Study 2015", *The Lancet*, 389(10082), 1885–1906. https://doi.org/10.1016/S0140-6736(17)30819-X

Taeger D, Johnen G, Wiethege T, Tapio S, Mohner M, Wesch H, Tannapfel A, Muller KM, Bruning T, Pesch B., 2009, "Major histopathological patterns of lung cancer related to arsenic exposure in German uranium miners", *Int Arch Occup Environ Health* ;82:867–75. doi: 10.1007/s00420-008-0386-1.

UNIVERSITAS GADJAH MADA
mi-RNA Sebagai Penanda Biologis Pendamping Diagnosis Kanker Paru : Kajian Ekspresi miRAJIAN EKSPRESI miR-425-5p PADA BERBAGAI SUBTIPE KANKER PARU
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Universitas Gadjah Mada, 2024 | Diunduh dari http://etd.repository.ugm.ac.id/

Testa *et al.*, 2023, "ROS1-Rearranged Lung Adenocarcinoma: From Molecular Genetics to Target Therapy", *Onco 2023, 3, 189–204* https://doi.org/10.3390/onco3030014 https://www.mdpi.com/journal/onco.

Torre LA, Bray F, Siegel RL, Ferlay J, Lortet-Tieulent J, Jemal A., 2012, "Global cancer statistics", 2012, *CA Cancer J Clin*. ;65(2):87-108.

Travis WD, Brambilla E, Burke AP, et al., editors. WHO classification of tumours of the lung, pleura, thymus and heart. Lyon (France): International Agency for Research on Cancer; 2015. (WHO classification of tumours series, 4th ed.; vol. 7). https://publications.iarc.fr/17.]].

Tzouvelekis A, Karampitsakos T, Gomatou G, Bouros E, Tzilas V, Manali E, Tomos I, Trachalaki A, Kolilekas L, Korbila I, Tomos P, Chrysikos S, Gaga M. M, Daniil Z, Bardaka F, Papanikolaou I. C., Euthymiou C., Papakosta D., Steiropoulos P., Ntolios P., Tringidou R., Papiris S., Antoniou K., Bouros D., 2019, "Lung cancer in patients with Idiopathic Pulmonary Fibrosis. A retrospective multicenter study in Greece", Pulmonary *Pharmacology & Therapeutics* DOI: 10.1016/j.pupt.2019.101880

VandenBussche, C., & Schmitt, F., 2017, *Atlas of Pulmonary Cytopathology*. Philadelphia, Springer Publishing Company

Varghese, A. M., Zakowski, M. F., Yu, H. A., Won, H. H., Riely, G. J., Krug, L. M., Kris, M. G., Rekhtman, N., Ladanyi, M., Wang, L., Berger, M. F., & Pietanza, M. C., 2014, "Small-cell lung cancers in patients who never smoked cigarettes", *Brief Reports*, 1-10. DOI: 10.1097/JTO.0000000000000142

Vasudevan, S., 2019, "Posttranscriptional upregulation by microRNAs", *Wiley Interdisciplinary Reviews*: RNA, 10(3), 1-13. doi: 10.1002/wrna.121.

Wakelee, H., Chang, E., Gomez, S., Keegan, T., Feskanich, D., Clarke, C.,West, D., 2007, "Lung cancer incidence in never smokers", *Journal of Clinical Oncology*, 25(5), 472-478. https://doi.org/10.1200/jco.2006.07.2983

Wang, Q., et al., 2023, "SCLC: Epidemiology, risk factors, genetic susceptibility, molecular pathology, screening, and early detection", *Journal of Thoracic Oncology*, 18(1), 31–46. https://doi.org/10.1016/j.jtho.2022.10.002

Warth, 2021, Squamous Cell Carcinoma of the Lung, dalam *Thoracic Tumor*, Diedit oleh WHO Classification of Tumours Editorial Board, Perancis: International Agency for Research on Cancer, hal. 89.

WHO Team, Cancer Indonesia 2020 country profile, <https://www.who.int/publications/m/item/cancer-idn-2020> (diakses 23 Juli 2024).

Wojtalla, A., Fischer, B., Kotelevets, N., et al., 2013, "Targeting the phosphoinositide 3-kinase p110-α isoform impairs cell proliferation, survival,

UNIVERSITAS GADJAH MADA
mi-RNA Sebagai Penanda Biologis Pendamping Diagnosis Kanker Paru : Kajian Ekspresi miRAJIAN EKSPRESI miR-425-5p PADA BERBAGAI SUBTIPE KANKER PARU
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Universitas Gadjah Mada, 2024 | Diunduh dari http://etd.repository.ugm.ac.id/

and tumor growth in small cell lung cancer", *Clinical Cancer Research*, 19, 96–105.

Wolf J, Seto T, Han JY, 2020, "Capmatinib in Exon 14-Mutated or -Amplified Non-Small-Cell Lung Cancer", *N Engl J Med*; 383(10): 944–957, doi: 10.1056/NEJMoa2002787, indexed in Pubmed: 32877583.

Wu, H., Shang, J., Zhan, W., Liu, J., Ning, H., & Chen, N, 2019, "miR-425-5p promotes cell proliferation, migration and invasion by directly targeting FOXD3 in hepatocellular carcinoma cells", *Molecular Medicine Reports* https://doi.org/10.3892/mmr.2019.10427.

Wu, K. L., Tsai, Y. M., Lien, C. T., & et al. , 2019, "The roles of microRNA in lung cancer", *Molecules*, 20(7), E1611. https://doi.org/10.3390/ijms20071611

Wu, Z., Guo, J., Zhang, Y., Liu, J., Ma, H., & Tang, Y, 2021, "*MiR-425-5p* accelerated the proliferation, migration, and invasion of ovarian cancer cells via targeting *AFF4*", *Journal of ovarian Research, 14(1).* https://doi.org/10.1186/s13048-021-00894-x.

Yanaihara, N., Caplen, N., Bowman, E., et al., 2006, "Unique microRNA molecular profiles in lung cancer diagnosis and prognosis", *Cancer Cell*, 9, 1-10. DOI: 10.1016/j.ccr.2006.01.025

Yu *et al.,* 2020, "MicroRNA-425-5p Inhibits Lung Cancer Cell Growth in Vitro and in Vivo by Downregulating TFIIB-Related Factor 2", *Technology in Cancer Research & Treatment* Volume 19: 1-7.

Yu, Y., Yang, Y., Li, H., & Fan, Y, 2023, "Targeting HER2 alterations in non-small cell lung cancer: Therapeutic breakthrough and challenges", *Cancer Treatment Reviews, 114, 102520* https://doi.org/10.1016/j.ctrv.2023.102520.

Yuwen, D., Ma, Y., Wang, D., Gao, J., Li, X., Xue, W., & Shu, Y, 2019, "Prognostic Role of Circulating Exosomal miR-425-3p for the Response of KPBSK to Platinum-Based Chemotherapy", *Cancer Epidemiology Biomarkers & Prevention, 28(1), 163-173.* https://doi.org/10.1158/1055-9965.epi-18-0569.

Zaratiegui, M., Irvine, D. V., & Martienssen, R. A., 2007, "Noncoding RNAs and gene silencing", *Cell*, 128(4), 763-776.

Zhang, Q.; Wu, C.; Ding, W.; Zhang, Z.; Qiu, X.; Mu, D.; Zhang, H.; Xi, Y.; Zhou, J.; Ma, L., 2019, "Prevalence of ROS1 fusion in Chinese patients with non-small cell lung cancer", *Thorac. Cancer*, 10, 47–53. doi: 10.1111/1759-7714.12899

Zhang, Y., Yuan, J., Wang, K., Fu, X., Han, X., Threapleton, D.,Tang, J., 2016, "The prevalence of EGFR mutation in patients with non-small cell lung cancer: a systematic review and meta-analysis", *Oncotarget*, 7(48), 78985-78993. https://doi.org/10.18632/oncotarget.12587

Zhang, Z., Li, Y., Fan, L., Zhao, Q., Tan, B., Zhong, L., Zang, 2015, "microRNA-425-5p is upregulated in human gastric cancer and contributes to invasion and

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**mi-RNA Sebagai Penanda Biologis Pendamping Diagnosis Kanker Paru : Kajian Ekspresi miRAJIAN EKSPRESI
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metastasis in vitro and in vivo", *Experimental and Therapeutic Medicine,* 9(5), 1617-1622 https://doi.org/10.3892/etm.2015.2318.

Zhou, J., Yang, Z., Cheng, S., Yu, J., Huang, C., & Feng, Q., 2020, "miRNA-425-5p Enhances lung cancer growth via the PTEN/PI3K/AKT signaling axis", *BMC Pulmonary Medicine* 2020 20:223 https://doi.org/10.1186/s12890-020-01261-0.

Zhou, Y.; Hancock, J.F., 2015, "Ras nanoclusters: Versatile lipid-based signaling platforms", *Biochim. Biophys. Acta*, 1853, 841–849. https://doi.org/10.3389/fmolb.2021.686338

Zhuoqi Zhang, Ming Wen, Jian Guo, Jianwei Shi, Zhiyu Wang, Bibo Tan, Gang Zhang, Xiangkui Zheng, Aimin Zhang, 2017, "Clinical value of miR-425-5p detection and its association with cell proliferation and apoptosis of gastric cancer", *Journal of Clinical Oncology* 35, no. 15 1970-01-01. doi: 10.1245/s10434-009-0725-9.