UNIVERSITAS GADJAH MADA
MIKRO RNA 150 SEBAGAI PREDIKTOR BIOMARKER KEPARAHAN FIBROSIS HATI TAHAP LANJUT PADA INFEKSI HEPATITIS B KRONIK
DAVID SIMANJUNTAK, Dr. dr. Neneng Ratnasari, SpPD, KGEH ; dr. Putut Bayupurnama, SpPD, KGEH
Universitas Gadjah Mada, 2022 | Diunduh dari http://etd.repository.ugm.ac.id/

DAFTAR PUSTAKA

Afdhal, N.H., 2012. Fibroscan (Transient Elastography) for the Measurement of Liver Fibrosis. Gastroenterology & Hepatology. 2012; 8 (9): 605-7

Albillos, A., de Gottardi, A., Rescigno, M. *The Gut-Liver Axis in Liver Disease: Pathophysiological Basis for Therapy*. Journal of Hepatology. 2020; 72: 558–77

Ambros, V. The Functions of Animal MicroRNAs. Nature. 2004; 431: 350-5

Bataller, R., Brenner, D.A. *Liver fibrosis*. J. Clin. Invest. 2005; 115: 209–18 *doi:10.1172/JCI200524282*

Bedossa, P., Poynard , T. *An Algorithm for the Grading of Activity in Chronic Hepatitis C*. Hepatology. 1996; 24 (2) : 289-93

Buck, M., Kim, D.J., Houglum, K., Hassanein, T., Chojkier, M. *c-Myb Modulates Transcription of the α-smooth Muscle Actin Gene in Activated Hepatic Stellate Cells.* Am. J. Physiol. Gastrointest. Liver Physiol. 2000; 278: G321–8. http://www.ajpgi.org

Caballería, L., Pera, G., Arteaga, I., Rodríguez, L., Alumà, A., Morillas, R.M., *et al*. *High Prevalence of Liver Fibrosis Among European Adults With Unknown Liver Disease: A Population-Based Study*. Clinical Gastroenterology and Hepatology. 2018;16:1138–45 https://doi.org/10.1016/j.cgh.2017.12.048

Cabantous, S., Hou, X., Louis, L., He, H., Mariani, O., Sastre, X., *et al*. *Evidence for an Important Role of Host MicroRNAs in Regulating Hepatic Fibrosis in Humans Infected with Schistosoma japonicum.* International Journal for Parasitology. 2017; 47 (13): 823-30. http://dx.doi.org/10.1016/j.ijpara.2017.05.007

Cahyono, S.B., Bayupurnama, P., Ratnasari, N., Maduseno, S., Nurdjanah, S. *Ultrasound-Diagnosed Non-Alcoholic Fatty Liver Disease among Medical Check Up Patients.* The Indonesian Journal of Gastroenterology, Hepatology and Digestive Endoscopy. 2013; 14 (3): 145-9

Cai, P., Mua, Y., Olveda, R.M., Ross, A.G., Olveda, D.U., McManus, D.P. *Circulating Mirnas as Footprints for Liver Fibrosis Grading in Schistosomiasis.* EbioMedicine. 2018; 37: 334–43 https://doi.org/10.1016/j.ebiom.2018.10.048

Cheah, M.C.C., McCullough, A.J., Bee Goh, G.B. *Current Modalities of Fibrosis Assessment in Non-alcoholic Fatty Liver Disease.* Journal of Clinical and Translational Hepatology. 2017; 5: 261–71

UNIVERSITAS GADJAH MADA
MIKRO RNA 150 SEBAGAI PREDIKTOR BIOMARKER KEPARAHAN FIBROSIS HATI TAHAP LANJUT PADA INFEKSI HEPATITIS B KRONIK
DAVID SIMANJUNTAK, Dr. dr. Neneng Ratnasari, SpPD, KGEH ; dr. Putut Bayupurnama, SpPD, KGEH
Universitas Gadjah Mada, 2022 | Diunduh dari http://etd.repository.ugm.ac.id/

Chen, W., Yan, X., Yang, A., Xu, A., Huang, T., You, H. *MiRNA-150-5p Promotes Hepatic Stellate Cell Proliferation and Sensitizes Hepatocyte Apoptosis During Liver Fibrosis.* Epigenomics. 2020; 12(1): 53–67

Chen, Y., Li, L., Zhou, Z., Wang, N., Zhang C. Y., Zen, K.*, A Pilot Study of Serum microRNA Signatures as Novel Biomarker for Occult Hepatitis B Virus Infection*. Med. Mirobiol Immunol. 2012; 201: 389-95. *doi: 10.1007/s00430-011-0223-0*

Cheng, J.Y.K., Wong, G.L.H. *Advances in the Diagnosis and Treatment of Liver Fibrosis.* Hepatoma Res. 2017; (3): 156-69. *doi: 10.20517/2394-5079.2017.27*

Chinese Society of Hepatology, Chinese Society of Gastroenterology, Chinese Society of Infectious Diseases, Chinese Medical Association. *Consensus on the diagnosis and treatment of hepatic fibrosis 2019*. Journal Digestive Disease. 2020; 21:127–38. http://wileyonlinelibrary.com/journal/cdd

D'Amico G, Garcia-Tsao G, Pagliaro L. *Natural history and prognostic indicators of survival in cirrhosis: a systematic review of 118 studies*. J Hepatol 2006; 44:217–31.

Dahlan, M.S. Pengantar Analisis Multivariat. Statistik untuk Kedokteran dan Kesehatan. 2010; Ed 6: 243-7

de Franchis R. *Evolving consensus in portal hypertension report of the baveno IV consensus workshop on methodology of diagnosis and therapy in portal hypertension.* J Hepatol 2005;43:167–76.

del Castillo, A.L., Pineda, F.P., Cardenas, E.O., Avila, F.S., Vorackova, F.V. *AST to Platelet Ratio Index (APRI) for the Noninvasive Evaluation of Liver Fibrosis*. Annals of Hepatology. 2008; 7 (4) : 350-7

Friedman, S.L., Mechanisms of Hepatic Fibrogenesis. Gastroenterology. 2008; 134 (6): 1655–69 *doi:10.1053/j.gastro.2008.03.003*

Gan, L.T., van-Rooyen, D.M., Koina, M., McCuskey, R.S., Teoh, N.C., Farrell, G.C. *Hepatocyte free cholesterol lipotoxicity results from JNK1-mediated mitochondrial injury and is HMGB1 and TLR4-dependent*. Journal of Hepatology. 2014 http://dx.doi.org/10.1016/j.jhep.2014.07.024

Gandhi, C.R. *Hepatic Stellate Cells and Hepatocyte Survival*. In : Gandhi, C. R., Pinzani, M. (ed) : Stellate Cells in Health and Disease. 2015; pp 209-25 Academic Press https://doi.org/10.1016/B978-0-12-800134-9.00013-0

Gea, V.H., Friedman, S.L. *Pathogenesis of Liver Fibrosis*. Annu. Rev. Pathol. Mech. Dis. 2011; 6: 425–56

Gines P, Quintero E, Arroyo V. *Compensated cirrhosis: natural history and prognosis*. Hepatology 1987;7:122–128

UNIVERSITAS GADJAH MADA
MIKRO RNA 150 SEBAGAI PREDIKTOR BIOMARKER KEPARAHAN FIBROSIS HATI TAHAP LANJUT PADA INFEKSI HEPATITIS B KRONIK
DAVID SIMANJUNTAK, Dr. dr. Neneng Ratnasari, SpPD, KGEH ; dr. Putut Bayupurnama, SpPD, KGEH
Universitas Gadjah Mada, 2022 | Diunduh dari http://etd.repository.ugm.ac.id/

Global Burden of Diseases 2017 Cirrhosis Collaborators. *The Global, Regional, and National Burden of Cirrhosis By Cause in 195 Countries and Territories, 1990–2017: A Systematic Analysis for The Global Burden ff Disease Study 2017*. Lancet Gastroenterol Hepatol. 2020; 5:245–66

Henderson, N.C., Iredale, J.P. *Liver fibrosis: cellular mechanisms of progression and resolution.* Clinical Science. 2007; 112:265–80 *doi:10.1042/CS20060-242*

Hirode, G., Saab, S., Wong, R.J. *Trends in the Burden of Chronic Liver Disease Among Hospitalized US Adults.* JAMA Network Open. 2020; 3(4)

Huang, J., Yu, X., Fries, J.W.U., Zhang, L., Odenthal, *M. MicroRNA Function in the Profibrogenic Interplay upon Chronic Liver Disease*. Int. J. Mol. Sci. 2014; 15: 9360-71 *doi:10.3390/ijms15069360*

Instalasi Catatan Medik (ICM) RSUP dr Sardjito, 2019

Ioannou, G.N. *The Role of Cholesterol in the Pathogenesis of NASH*. Trends in Endocrinology & Metabolism. 2015 http://dx.doi.org/10.1016/j.tem.2015.11.008

Ishak', K., Baptista, A., Bianchi, L., Callea, F., Grootes, J.D., Gudat, F., *et al*. *Histological grading and staging of chronic hepatitis*. Journal of Hepatology. 1995; 22: 69-99

Kim, B.K., Kim, D.Y., Park, J.Y., Ahn, S.H., Chon, C.Y., Kim, J.K., *et al*. *Validation of FIB-4 and comparisonwith other simple noninvasive indices for predicting liver fibrosis and cirrhosis in hepatitis B virus-infected patients*. Liver International. 2010; 546-53

Kisseleva, T., Brenner, D. Reviews : *Molecular and Cellular Mechanisms of Liver Fibrosis and Its Regression*. Nature Reviews Gastroenterology & Hepatology. 2020 *https://doi.org/10.1038/s41575-020-00372-7*

Kitada, T., Seki, S., Nakatani, K., Kawada, N., Kuroki, T., Monna, T. *Hepatic Expression of c-Myb in Chronic Human Liver Disease*. Hepatology. 1997; 26 (6):1506-12

Kopecki Z., Adams D., Cowin A.J. c-myb proto-oncogene is up-regulated in hypertrophic scars and correlates with increased collagen I. Wound Practice and Research. 2008. 16 (3):32-7

Krauskopf, J., de Kok, T.M., Schomaker, S.J., Gosink, M., Burt, D.A., Chandler, P., *et al*. *Serum microRNA signatures as "liquid biopsies" for interrogating hepatotoxic mechanisms and liver pathogenesis in human*. Plos One. 2017 https://doi.org/10.1371/journal.pone.0177928

UNIVERSITAS GADJAH MADA
MIKRO RNA 150 SEBAGAI PREDIKTOR BIOMARKER KEPARAHAN FIBROSIS HATI TAHAP LANJUT PADA INFEKSI HEPATITIS B KRONIK
DAVID SIMANJUNTAK, Dr. dr. Neneng Ratnasari, SpPD, KGEH ; dr. Putut Bayupurnama, SpPD, KGEH
Universitas Gadjah Mada, 2022 | Diunduh dari http://etd.repository.ugm.ac.id/

Kusumobroto, H.O Sirosi Hati dalam Buku Ajar Penyakit Hati Edisi I. 2012 Jakarta CV Sagung Seto Hal. 347-8

Lee, K.S. Buck, M., Houglum, K., Chojkier. *Activation of Hepatic Stellate Cells by TGFα and Collagen Type I is Mediated by Oxidative Stress Through c-myb Epression*. The Journal of Clinical Invertigation, Inc. 1995; 96:2461-8

Li, J., Zeng, C., Zheng, B., Liu, C., Tang, M., Jiang, Y., *et al*. HMGB1 - Induced Autophagy Facilitates Hepaticstellate Cells Activation: A New Pathway in Liver Fibrosis. Clinical Science. 2018; 132: 1645–67 https://doi.org/10.1042/CS20180177

Li, L.M., Hu, Z.B., Zhou, Z.X., Chen. X., Liu, F.Y., Zhang, J.F., *et al*. *Serum microRNA Profiles Serve as Novel Biomarkers for HBV Infection and Diagnosis of HBV-Positive Hepatocarcinoma*. Cancer Res. 2010; 70 (23): 9798-807

Lin, Z.H., Xin, Y.N., Dong, Q.J., Wang, Q., Jiang, X.J., Zhan, S.H., Sun, Y., *et al*. *Performance of the Aspartate Aminotransferase-to-Platelet Ratio Index for the Staging of Hepatitis C-Related Fibrosis: An Updated Meta-Analysis*. Hepatology. 2011; 53 (3): 726-36

Liu, K., Qin, M., Tao, K., Liang, Z., Cai, F., Zhao, L., *et al*. *Identification and external validation of the optimal FIB-4 and APRI thresholds for ruling in chronic hepatitis B related liver fibrosis in tertiary care settings*. J Clin Lab Anal. 2021; 35:e23640 https://doi.org/10.1002/jcla.23640

Livak, K.J., Schmittgen, T.D. *Analysis of Relative Gene Expression Data Using Real-Time Quantitative PCR and the* $2^{-\Delta\Delta Cq}$ *Method*. Methods. 2001; 25**:** 402–8 *doi:10.1006/meth.2001.1262* http://www.idealibrary.com

Martini, A., Ceranto, E., Gatta, A., Angeli, P., Pontisso, P. *Occult Liver Disease Burden: Analysis From A Large General Practitioners' Database*. United European Gastroenterology Journal 2017; 5 (7):982–6

Mitchell, P.S., Parkin, R.K., Kroh, E.M., Fritz, B.R., Wyman, S.K., Agadjanyan, E.L.P., et al. Circulating microRNAs as stable blood-based markers for cancer detection. PNAS. 2008. 105(30):10513–18 www.pnas.orgcgidoi10.-1073pnas. 0804549105

Moon, A.M., Singal, A.G., Tapper, E.B. *Contemporary Epidemiology of Chronic Liver Disease and Cirrhosis.* Clinical Gastroenterology and Hepatology. 2020; 18:2650–66 https://doi.org/10.1016/j.cgh.2019.07.060

Nah, E.H., Cho, S., Kim, S., Chu, J., Kwon, E., Cho, H.I. *Prevalence of Liver Fibrosis and Associated Risk Factors in the Korean General Population: a Retrospective Cross-Sectional Study*. BMJ Open, 2021;11: e046529. *doi:10.1136/bmjopen-2020-046529*

UNIVERSITAS GADJAH MADA
MIKRO RNA 150 SEBAGAI PREDIKTOR BIOMARKER KEPARAHAN FIBROSIS HATI TAHAP LANJUT PADA INFEKSI HEPATITIS B KRONIK
DAVID SIMANJUNTAK, Dr. dr. Neneng Ratnasari, SpPD, KGEH ; dr. Putut Bayupurnama, SpPD, KGEH
Universitas Gadjah Mada, 2022 | Diunduh dari http://etd.repository.ugm.ac.id/

O'Brien, J., Hayder, H., Zayed, Y., Peng, C. *Overview of MicroRNA Biogenesis, Mechanisms of Actions, and Circulation*. Front. Endocrinol. 2018; 9:402

Ozougwu, J.C. *Physiology of the Liver*. International Journal of Research in Pharmacy and Biosciences. 2017; 4 (8):13-24

Parsons, C.J., Takashima, M., Rippe, R.A. *Oxidative Stress and Cytokine Response in Hepatic Fibrogenesis Molecular Mechanisms of Hepatic Fibrogenesis*. Journal of Gastroenterology and Hepatology. 2007; 22 (1):S79–84

Pichard, A.V., Mallet,V., Nalpas, B., Verkarre, V., Nalpas, A., Venier, V.D., *et al*. *FIB-4: an Inexpensive and Accurate Marker of Fibrosis in HCV Infection. Comparison with Liver Biopsy and FibroTest.* Hepatology. 2007; 46(1):32-6

Roehlen, N., Crouchet, E., Baumert, T.F. Liver Fibrosis: Mechanistic Concepts and Therapeutic Perspectives. Cells. 2020; 9: 875 *doi:10.3390/cells9040875*

Roy, S., Benz, F., Luedde, T., Roderburg, C. *The Role of Mirnas in the Regulation of Inflammatory Processes During Hepatofibrogenesis*. HepatoBiliary Surg Nutr. 2015; 4(1):24-33 http://dx.doi.org/10.3978/j

Shaheen, N.M.H., Zayed, N., Riad, N.M., Tamim, H.H.T., Shahin, R.M.H., Labib, D.A., *et al. Role of circulating miR-182 and miR-150 as biomarkers for Cirrhosis and Hepatocellular carcinoma post HCV infection in Egyptian patients.* Virus Research. 2018. *https://doi.org/10.1016/j.virusres.2018.07.04*

Scheuer, P.J. *Classification of Chronic Viral Hepatitis : A Need for Reassessment : Review*. Journal of Hepatology. 1991; (13) : 372-4

Schueller, F., Roy, S., Vucur, M., Trautwein, C., Luedde, T., Roderburg, C. *The Role of miRNAs in the Pathophysiology of Liver Diseases and Toxicity*. Int. J. Mol. Sci. 2018; (19) 261 *doi:10.3390/ijms19010261*

Shen, S., Lin, Y., Yuan, X., Shen, L., Chen, J., Chen, L., *et al*. *Biomarker MicroRNAs for Diagnosis, Prognosis and Treatment of Hepatocellular Carcinoma : A Functional Survey and Comparison*. 2016. *doi: 10.1038/srep38311*

Shipley, L.C., Axley, P.D., Singal, A.K. *Liver Fibrosis: A Clinical Update*. EMJ Hepatol. 2019;7(1):105 – 17

Suk, K.T., Kim, D.J. *Staging of liver fibrosis or cirrhosis: The role of hepatic venous pressure gradient measurement*. World J Hepatol. 2015. 7(3): 607-15 DOI: 10.4254/wjh.v7.i3.607

Sterling, R.K., Lissen, E., Clumeck, N., Sola, R., Correa, M.C., Montaner, J., *et al*. *Development of a Simple Noninvasive Index to Predict Significant Fibrosis in Patients With HIV/HCV Coinfection*. Hepatology. 2006; 1317-25

UNIVERSITAS GADJAH MADA
MIKRO RNA 150 SEBAGAI PREDIKTOR BIOMARKER KEPARAHAN FIBROSIS HATI TAHAP LANJUT PADA INFEKSI HEPATITIS B KRONIK
DAVID SIMANJUNTAK, Dr. dr. Neneng Ratnasari, SpPD, KGEH ; dr. Putut Bayupurnama, SpPD, KGEH
Universitas Gadjah Mada, 2022 | Diunduh dari http://etd.repository.ugm.ac.id/

Szabo, G., Bala, S. *MicroRNAs in Liver Disease*. Nat Rev Gastroenterol Hepatol. 2013; 10(9): 542–52. *doi:10.1038/nrgastro.2013.87*

Tapper, E.B., Aberasturi, D., Zhao, Z., Hsu, C.Y., Parikh, N.D. *Outcomes after hepatic encephalopathy in population-based cohorts of patients with cirrhosis*. Aliment Pharmacol Ther. 2020. 00:1–9 DOI: 10.1111/apt.15749

Tsuchida, T., Friedman, S.L. *Mechanisms of Hepatic Stellate Cell Activation*. Nature Reviews Gastroenterology & Hepatology. 2017; 14: 397-411 *doi:10.1038/nrgastro.2017.38*

Tsukada, S., Parsons, C.J., Rippe, R.A. *Mechanisms of Liver Fibrosis*. Clinica Chimica Acta. 2006; 364;33– 60 *doi:10.1016/j.cca.2005.06.014*

Venugopal, S.K., Jiang, J., Kim, T.H., Li, L., Wang, S.S., Torok, N.J., *et al*. *Liver Fibrosis Causes Downregulation of Mirna-150 and Mirna-194 in Hepatic Stellate Cells, and Their Overexpression Causes Decreased Stellate Cell Activation*. Am J Physiol Gastrointest Liver Physiol. 2010; 298:G101– 6 *doi:10.1152/ajpgi.00220.2009*

Wang, G., Dong, F., Xu, Z., Sharma, S., Hu, X., Chen, D., et al. MicroRNA profile in HBV-induced infection and hepatocellular carcinoma. BMC Cancer. 2017; 17:805 DOI 10.1186/s12885-017-3816-1

Wai, C.T., Greenson, J.K., Fontana., R.J., Kalbtleisch, J.D., Marrero, J.A., Conjeevaram, H.S. *et al*. *A Simple Noninvasive Index Can Predict Both Significant Fibrosis and Cirrhosis in Patients with Chronic Hepatitis C.* Hepatology 2003; 38 (2):518-26. *doi:10.1053/jhep.2003.50346*

Wang, F., Ren, X., Zhang, X. *Role of Microrna-150 in Solid Tumors (Review).* Oncology Letters. 2015; 10:11-16 *doi: 10.3892/ol.2015.3170*

Wang, S., Li, J., Wu, S., Cheng, L., Shen, Y., Ma, W., *et al*. *Type 3 Innate Lymphoid Cell: A New Player in Liver Fibrosis Progression.* Clinical Science. 2018; 132;2565‑82 https://doi.org/10.1042/CS20180482

Wang, Y., Zhang, C. *The Roles of Liver-Resident Lymphocytes in Liver Diseases*. Frontiers in Immunology. 2019. 10: Article 1582 *doi: 10.3389/fimmu.2019. 01582*

Winter, J., Jung, S., Keller, S., Gregory, R.I., Diederichs, S. *Many roads to maturity: microRNA biogenesis pathways and their regulation*. nature cell biology. 2009; 11 (3);228-34

Xiao, G., Yang, J Yan L. *Comparison of diagnostic accuracy of aspartate aminotransferase to platelet ratio index and fibrosis-4 index for detecting liver fibrosis in adult patients with chronic hepatitis B virus infection: A systemic*

MIKRO RNA 150 SEBAGAI PREDIKTOR BIOMARKER KEPARAHAN FIBROSIS HATI TAHAP LANJUT PADA INFEKSI
HEPATITIS B KRONIK
DAVID SIMANJUNTAK, Dr. dr. Neneng Ratnasari, SpPD, KGEH ; dr. Putut Bayupurnama, SpPD, KGEH
Universitas Gadjah Mada, 2022 | Diunduh dari http://etd.repository.ugm.ac.id/

review and meta-analysis. Hepatology 2015; 61:292–302 https://doi.org/10.1002/hep.27382

Yu, F., Lu, Z., Chen, B., Dong, P., Zheng, J. *MicroRNA-150: a promising novel biomarker for hepatitis B virus-related hepatocellular carcinoma*. Diagnostic Pathology. 2015; 10:129 *doi 10.1186/s13000-015-0369-y*

Zain, S.M., Tan, H.L., Mohamed, Z., Chan, W.K., Mahadeva, S., Basu, R.M., *et al*. *Use of Simple Scoring Systems for A Public Health Approach in the Management of Non-Alcoholic Fatty Liver Disease Patients.* Journal of gastroenterology and hepatology. 2020; 1155–61

Zheng, J., Lin, Z., Dong, P., Lu, Z., Gao, S., Chen, X *et al. Activation of Hepatic Stellate Cells is Suppressed by microRNA-150*. International Journal of Molecular Medicine. 2013; 32; 17-24. *doi: 10.3892/ijmm.2013.1356*