**Supplementary Table 2. Included studies for this meta-analysis**

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| **No.** | **Citation** |
| 1 | Lai M, Hyatt BJ, Nasser I, Curry M, Afdhal NH. The clinical significance of persistently normal ALT in chronic hepatitis B infection. J Hepatol 2007;47(6):760-767. doi: 10.1016/j.jhep.2007.07.022. |
| 2 | Kumar M, Sarin SK, Hissar S, Pande C, Sakhuja P, Sharma BC, *et al*. Virologic and histologic features of chronic hepatitis B virus-infected asymptomatic patients with persistently normal ALT. Gastroenterology 2008;134(5):1376-1384. doi: 10.1053/j.gastro.2008.02.075. |
| 3 | Papatheodoridis GV, Manesis EK, Manolakopoulos S, Elefsiniotis IS, Goulis J, Giannousis J, *et al*. Is there a meaningful serum hepatitis B virus DNA cutoff level for therapeutic decisions in hepatitis B e antigen-negative chronic hepatitis B virus infection? Hepatology 2008;48(5):1451-1459. doi: 10.1002/hep.22518. |
| 4 | Nguyen MH, Garcia RT, Trinh HN, Lam KD, Weiss G, Nguyen HA, *et al*. Histological disease in Asian-Americans with chronic hepatitis B, high hepatitis B virus DNA, and normal alanine aminotransferase levels. Am J Gastroenterol 2009;104(9):2206-2213. doi: 10.1038/ajg.2009.248. |
| 5 | Chen EQ, Huang FJ, He LL, Bai L, Wang LC, Zhou TY, *et al*. Histological changes in chinese chronic hepatitis B patients with ALT lower than two times upper limits of normal. Dig Dis Sci 2010;55(2):432-437. doi: 10.1007/s10620-009-0724-5. |
| 6 | Gui HL, Wang H, Yang YH, Wu YW, Zhou HJ, Guo SM, *et al*. Significant histopathology in Chinese chronic hepatitis B patients with persistently high-normal alanine aminotransferase. J Viral Hepat 2010;17 Suppl 1:44-50. doi: 10.1111/j.1365-2893.2010.01270.x. |
| 7 | Montazeri G, Rahban M, Mohamadnejad M, Zamani F, Hooshyar A, Fazlolahi A, *et al*. Liver histology and HBV DNA levels in chronically HBV infected patients with persistently normal alanine aminotransferase. Arch Iran Med 2010;13(3):193-202. |
| 8 | Lesmana CR, Gani RA, Hasan I, Simadibrata M, Sulaiman AS, Pakasi LS, *et al*. Significant hepatic histopathology in chronic hepatitis B patients with serum ALT less than twice ULN and high HBV-DNA levels in Indonesia. J Dig Dis 2011;12(6):476-480. doi: 10.1111/j.1751-2980.2011.00540.x. |
| 9 | Alam S, Ahmad N, Mustafa G, Shrestha A, Alam AK, Khan M. Evaluation of normal or minimally elevated alanine transaminase, age and DNA level in predicting liver histological changes in chronic hepatitis B. Liver Int 2011;31(6):824-830. doi: 10.1111/j.1478-3231.2011.02491.x. |
| 10 | Sarin SK, Kumar M, Lau GK, Abbas Z, Chan HL, Chen CJ, *et al*. Asian-Pacific clinical practice guidelines on the management of hepatitis B: a 2015 update. Hepatol Int 2016;10(1):1-98. doi: 10.1007/s12072-015-9675-4. |
| 11 | Liao B, Wang Z, Lin S, Xu Y, Yi J, Xu M, *et al*. Significant fibrosis is not rare in Chinese chronic hepatitis B patients with persistent normal ALT. PLoS One 2013;8(10):e78672. doi: 10.1371/journal.pone.0078672. |
| 12 | Gong X, Yang J, Tang J, Gu C, Huang L, Zheng Y, *et al*. A mechanistic assessment of the discordance between normal serum alanine aminotransferase levels and altered liver histology in chronic hepatitis B. PLoS One 2015;10(7):e0134532. doi: 10.1371/journal.pone.0134532. |
| 13 | Tan Y, Ye Y, Zhou X, Chen L, Wen D. Age as a predictor of significant fibrosis features in HBeAg-negative chronic hepatitis B virus infection with persistently normal alanine aminotransferase. PLoS One 2015;10(4):e0123452. doi: 10.1371/journal.pone.0123452. |
| 14 | Wan R, Liu H, Wang X, Wan G, Wang X, Zhou G, *et al*. Noninvasive predictive models of liver fibrosis in patients with chronic hepatitis B. Int J Clin Exp Med 2015;8(1):961-971. |

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|  | with chronic hepatitis B. International Journal of Clinical and Experimental  Medicine, 2015. 8(1): p. 961-971. |
| 15 | Ormeci, A., *et al*., Predictors of treatment requirement in HBeAg-negative chronic hepatitis B patients with persistently normal alanine  aminotransferase and high serum HBV DNA levels. International Journal of  Infectious Diseases, 2016. 52: p. 68-73. |
| 16 | Tan, Y.-W., *et al*., Diagnostic value of FIB-4, aspartate aminotransferase-to- platelet ratio index and liver stiffness measurement in hepatitis B virus-  infected patients with persistently normal alanine aminotransferase. World  journal of gastroenterology, 2017. 23(31): p. 5746-5754. |
| 17 | Zhou, J., *et al*., Serum hepatitis B core antibody as a biomarker of hepatic inflammation in chronic hepatitis B patients with normal alanine  aminotransferase. Scientific reports, 2017. 7(1): p. 2747. |
| 18 | Xing, Y.-F., *et al*., Clinical and histopathological features of chronic hepatitis B virus infected patients with high HBV DNA viral load and normal alanine aminotransferase level: A multicentre-based study in China. PloS one, 2018.  13(9): p. e0203220-e0203220. |
| 19 | Xu, Z., *et al*., Predictive value of serum Golgi protein 73 for prominent hepatic necroinflammation in chronic HBV infection. Journal of Medical  Virology, 2018. 90(6): p. 1053-1062. |