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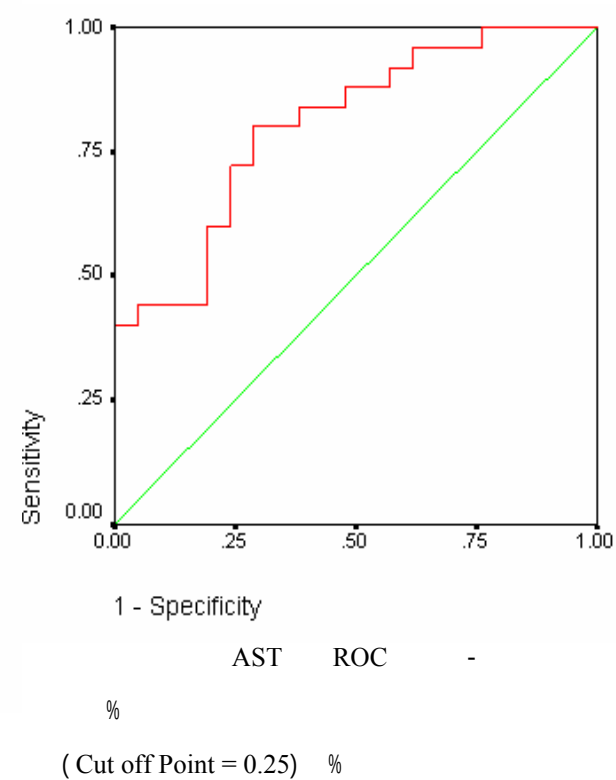
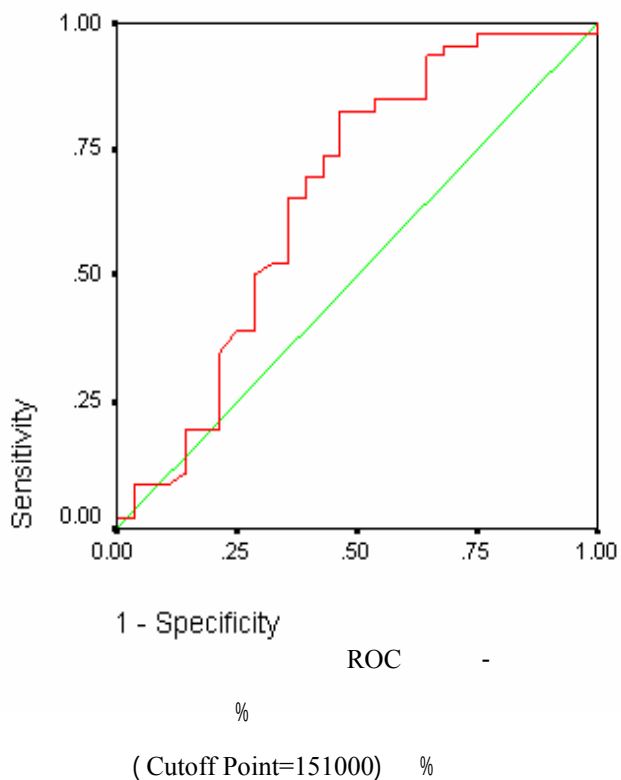
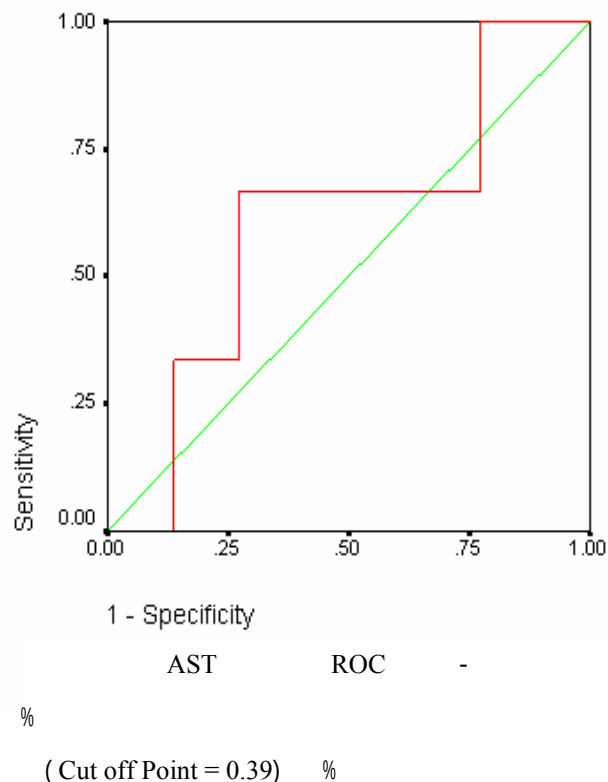
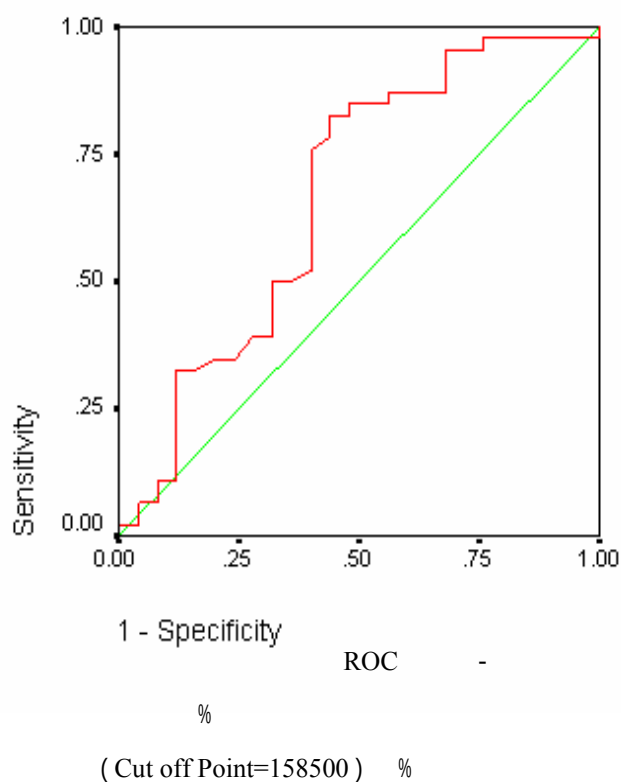
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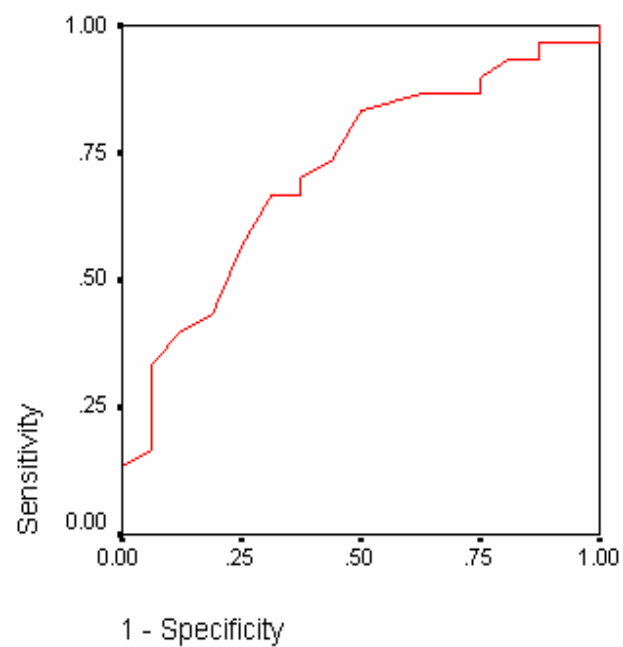
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REFERENCES

1. Pinzani M, Rombouts K, Colagrande S. Fibrosis in chronic liver disease: diagnosis and management. J Hepatol 2005; 42 supp: S22-36.

2. Bataller R, Brenner DA. Liver fibrosis. *J Clin Invest* 2005; 115: 209-18.
3. Yamada T. Text book of Gastroenterology. 4th ed. Vol 1, 2003; PP: 604-15.
4. Guechot J, Serfaty L, Bonnard AM, Chazouilleres O, Poupon RE, Poupon R. Prognostic value of serum hyaluronan in patients with compensated HCV cirrhosis. *J Hepatol* 2000; 32: 447-52.
5. Hayasaka A, Saisho H. Serum markers as tools to monitor liver fibrosis. *Digestion* 1998; 59: 381-4.
6. Ninomiya T, Yoon S, Hayashi Y, Sugano M, Kumon Y, Seo Y, et al. Clinical significance of serum hyaluronic acid as a fibrosis marker in chronic hepatitis C patients treated with interferon-alpha : histological evaluation by a modified histological activity index scoring system. *J Gastroenterol Hepatol* 1998; 13: 68-74.
7. George DK, Ramm GA, Walker NI, Powell LW, Crawford DH. Elevated serum type IV collagen: a sensitive indicator of the presence of cirrhosis in haemochromatosis. *J Hepatol* 1999; 31: 47-52.
8. Murawaki Y, Koda M, Okamoto K, Mimura K, Kawasaki H. Diagnostic value of serum type IV collagen test in comparison with platelet count for predicting the fibrotic stage in with chronic hepatitis C. *J Gastroenterol Hepatol* 2001; 16: 777-81.
9. Wang T, Wang B, Liu X. Correlation of serum marker with fibrosis staging in chronic viral hepatitis. *Zhonghua Binglixue Zazhi* 1998; 27: 185-90.
10. Zheng M, Cai W, Weng H, Liu R. Determination of serum fibrosis indexes in patients with chronic hepatitis and its significance. *Chin Med J* 2003; 116: 346-9.
11. McHutchison JG, Blatt LM, de Medina M, Craig JR, Conrad A, Schiff ER, et al. Measurement of serum hyaluronic acid in patients with chronic hepatitis C and its relationship to liver histology. Consensus Interferon Study Group. *J Gastroenterol Hepatol* 2000; 15: 945-51.
12. James CH, Lindor KD. Outcome of patients admitted with complications after outpatient liver biopsies. *Ann Intern Med* 1993; 118: 96-8.
13. McGill DB, Rakela J, Zinsmeister AR. A 21-year experience with major hemorrhage after percutaneous liver biopsy. *Gastroenterology* 1990; 99: 1396-400.
14. Forns X, Ampurdanes S, Llovet JM. Identification of chronic hepatitis C patients without hepatic fibrosis by a simple predictive model. *Hepatology* 2002; 36: 986-92.
15. Afdhal NH. Diagnosing fibrosis in hepatitis C: is the pendulum swinging from biopsy to blood tests? *Hepatology* 2003; 37: 972-4.
16. Poordad FF. FIBROSpect II: a potential noninvasive test to assess hepatic fibrosis. *Expert Rev Mol Diagn* 2004; 4(5): 593-7.
17. Thuluvath PJ, Krok KL. Noninvasive marker of fibrosis for longitudinal assessment of fibrosis in chronic liver disease: are they ready for prime time? *Am J Gastroenterol* 2006; 101(7): 1497-9.
18. Yamada T. Text book of Gastroenterology. 4th ed. Vol 2, 2003; PP: 2963.
19. Pilette C, Rousselet MC, Bedosa P, Chapard D, Oberti F, Rifflet H, et al. Histopathological evaluation of liver fibrosis: quantitative image analysis vs semi-quantitative scores, comparison with serum markers. *J Hepatol* 1998; 28: 439-46.

20. Thabut D, Simon M, Meyers RP, Messous D, Thibault V, Imbert-Bismut F, et al. Noninvasive prediction of fibrosis in patients with chronic hepatitis C. *Hepatology* 2003; 37: 1220-1.
21. Meyers RP, Ratzu V, Imbert –Bismut F, Charlotte F, Poynard T. Biochemical markers of liver fibrosis: a comparison with historical features in patients with chronic hepatitis C. *Am J Gastroenterol* 2002; 97: 2419-25.
22. Lu LG, Zeng MD, Wan MB, Li CZ, Mao YM, Li JQ, et al. Grading and staging of hepatic fibrosis ,and its relationship with noninvasive diagnostic parameters. *World J Gastroenterol* 2003; 9(11): 2574-6.
23. Kawamoto M, Mizuguchi T, Katsuramaki T, Nagayama M, Oshima H, Kawasaki H, et al. Assessment of liver fibrosis by a noninvasive method of transient elastography and biochemical marker. *Word J Gasrroenterol* 2006; 12(27): 4325-30.
24. Forns X, Ampurdanes S, Llovet JM. Identification of chronic hepatitis C patients without hepatic fibrosis by a simple predictive model. *Hepatology* 2002; 36: 986-92.
25. Lackner C, Struber G, Liegl B, Leibl S, Ofner P , Bankuti C, et al. Comparison and validation of simple noninvasive tests for prediction of fibrosis in chronic hepatitis C. *Hepatology* 2005; 41: 1376-82.
26. Dev A, White I, Symonds W, Patel K, Griffin P, Tsokanas N, et al. A serum proteomic analysis in hepatitis C fibrosis. *J Hepatol* 2005; 42(supp2): 117A.
27. Kellerb TB, Mehta SH, Bhaskar R, Sulkowski M, Astemborski J, Thomas DL, et al. Prediction of hepatic fibrosis in HIV/HCV co-infected patients using serum fibrosis markers : The SHASTA index. *J Hepatol* 2005; 43: 78-84.
28. Park GJ, Lin BP, Ngu MC, Jones DB, Katelaris PH, Aspartate aminotrasferase ratio in chronic hepatitis C infection:is it a useful predictor of cirrhosis ? *J Gastroenterol Hepatol* 2000; 15: 386-90.
29. Giannini E, Risso D, Botta F, Chiarbonello B, Fasoli A, Malfatti F, et al. Validity and clinical utility of the aspartate aminotrasferase-alanine aminotrasferase ratio in assessing disease severity and prognosis in patients with hepatitis C virus-related chronic liver disease. *Arch Intern Med* 2003; 163: 218-24.
30. Sheth SG, Flamm SL, Gordon FD, Chopra S. AST/ALT ratio predicts cirrhosis in patients with chronic hepatitis C virus infection. *Am J Gastroenterol* 1998; 93: 44-8.
31. Imbert-Bismut F, Ratzu V, Pieroni L, Charlotte F, Benhamou Y, Poynard T. Biochemical markers of liver fibrosis in patients with hepatitis C virus infection: a prospective study. *Lancet* 2001; 357: 1069-75.
32. Rosenberg WM, Voelker M, Thiel R, Becka M, Burt A, Schuppan D, et al. Serum markers detect the presence of liver fibrosis ; a cohort study. *Gastroenterology* 2004; 127: 1704-13.
33. Bora R, Ratzu V, Bedssa P, Munteanu M, Poynard T. Diagnostic value of biochemical markers, fibrotest-actitest-HCV-fibrosure compared with serum protein profiling by seldi-TOF, for the diagnosis of bridging fibrosis in patient with chronic hepatitis C. *Hepatology* 2004; 40: 517A.