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UTILITY OF SGOT (AST) MEASUREMENT IN DETECTING HEPATITIS C INFECTION IN HEMODIALYSIS PATIENTS

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The clinical & laboratory correlates of hepatitis C virus (HCV) infection in maintenance hemodialysis (MHD) patients (pts) are not well studied. Among approximately 40,000 MHD pts who had undergone MHD for at least 3 months in DaVita dialysis units across the USA in July 2001, enzyme immunoassay (EIA) for HCV was tested in 2,778 pts. Using logistic regression analyses after adjusting for case-mix and other laboratory measures, the SGOT (AST) was found as the laboratory test with the strongest association with the HCV antibody positivity with the highest receiver operating characteristic (ROC) area:

SGOT cutoff	Odds ratio of HCV antibody +	ROC area	Sensitivity	Specificity	PPV	NPV
≥20 u/L	4.33 (3.32-5.65)	0.70	66%	75%	28%	94%
≥25 u/L	4.96 (3.75-6.57)	0.69	50%	87%	37%	92%
≥30 u/L	4.86 (3.54-6.67)	0.65	37%	93%	44%	91%
≥35 u/L	3.90 (2.70-5.61)	0.61	27%	95%	46%	90%
≥40 u/L	4.04 (2.63-6.20)	0.58	20%	97%	48%	89%
≥45 u/L	3.20 (1.98-5.16)	0.56	15%	98%	48%	88%
≥50 u/L	3.26 (1.91-5.55)	0.55	17%	99%	61%	89%

Hence, although SGOT is the best non-specific screening test for HCV in MHD pts, it fails to identify many HCV+ pts. Specific HCV tests such as EIA and/or molecular diagnostics are essential when evaluating for HCV in MHD pts.

