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Titel des Beitrags:              Association of IFNL3 rs12979860 and rs8099917 with Biochemical Predictors of Interferon Responsiveness in Chronic Hepatitis C Virus Infection.

Abstract:                       Genetic variations near the interferon lambda 3 gene (IFNL3, IL28B) are the most powerful predictors for sustained virologic response (SVR) in patients with chronic hepatitis C virus (HCV) infection, compared to other biochemical or histological baseline parameters. We evaluated whether the interplay of both IFNL3 polymorphisms rs12979860 and rs8099917 together with non-genetic clinical factors contributes to the predictive role of these genetic variants. The cohort comprised 1,402 patients of European descent with chronic HCV type 1 infection. 1,298 patients received interferon-based antiviral therapy, and 719 (55%) achieved SVR. The IFNL3 polymorphisms were genotyped by polymerase chain reaction and melting curve analysis. A significant correlation was found between the IFNL3 polymorphisms and biochemical as well as virologic predictors of treatment outcome such as ALT, GGT, cholesterol, and HCV RNA levels. In multivariate regression analysis, IFNL3 SNPs, HCV RNA levels, and the GGT/ALT ratio were independent predictors of SVR. Dependent on the GGT/ALT ratio and on the HCV RNA concentration, significant variations in the likelihood for achieving SVR were observed in both, carriers of the responder as well
as non-responder alleles. Our data support a clear association between IFNL3 genotypes and baseline parameters known to impact interferon responsiveness. Improved treatment outcome prediction was achieved when these predictors were considered in combination with the IFNL3 genotype.

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