AGREEMENT AND DISAGREEMENT BETWEEN TWO MOST VALIDATED NONINVASIVE FIBROSIS EVALUATION METHODS

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Introduction: Because liver biopsy is an imperfect gold standard, and noninvasive methods for fibrosis evaluation are made based on it, disagreement can be quite significant between two such methods. Fibroscan and Fibrotest are the most validated two methods. In this study we tried to identify what other controllable factors influence their concordance rate.

Methods: 128 patients with proven chronic HCV infection, naive, were included in this study. In every patient, Fibroscan and Fibromax were performed the same day. Only valid results (as recommended by their manufacturers) were analyzed. For Fibroscan we used the following cut-offs: F1 - 5.5 Kpa, F2 - 7.1 Kpa, F3 - 9.5 Kpa, F4 - 14.5 Kpa.

The patients: 63 women and 65 men, aged between 18 and 76 years, with a mean of 47.72 years. Their BMI ranged from 18.02 to 36.88.

Results: The liver stiffness varied between 2.4 and 59.3 KPa, with a mean of 8.74 Kpa. Fibrotest ranged from 0.05 to 0.93, mean 0.38.

An overall 74.21% (95/128, rho=0.360, p<0.0001) agreement between FT and FS (Metavir correspondent) was found if one degree difference was considered acceptable.

For Castera algorithm 88 of 128 liver biopsies would be avoided (68.75%). The best prediction of fibroscan grade by fibrotest is as expected for cirrhosis (AUROC=0.846, CI 0.76-0.93), while for stages 0 and 1, AUROC is very low. The prediction of fibrotest by fibroscan follows the same pattern.

Conclusions: Liver stiffness and fibrotest have a good correlation and using an algorithm like the one proposed by Castera would significantly reduce the need of a liver biopsy.

Liver stiffness is an objective measurement of a liver characteristic and is composed of more factors as fibrosis, inflammation and steatosis. Splitting into this components by using a mixed score may enhance Fibroscan’s accuracy.