**Meta-analysis of blood scores for liver fibrosis in chronic hepatitis C**

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Blood scores of liver fibrosis are alternative tools to liver biopsy or imaging. The aims of this meta-analysis with individual data were to evaluate the diagnostic accuracy, the center effect (reproducibility) of scores and to compare them. Methods. The populations from 4 independent centers (dosages, liver interpretation) included 300, 217, 159, and 149 patients with chronic hepatitis C, i.e. 825 patients. Blood scores included Fibrotest (FT), FibroMeter (FM), Hepascore (HS) and APRI. Results. The global characteristics were the following: 44±12 yr, males: 59.5%, Metavir stages: F0: 4.8%, F1: 46.7%, F2: 25.0%, F3: 12.5%, F4: 11.0%. The 4 populations were significantly different for: age, sex, Metavir score and prevalence of clinically significant fibrosis (≥F2), severe fibrosis (≥F3), and cirrhosis (F4). AUROC are listed in the table 1.
FM AUROC for ≥F2 was superior to that of FT (p=0.049), APRI (p=0.001) and HS (p<10-3). AUROC were different according to center, e.g. for FM from 0.773±0.042 to 0.883±0.026. The score profile significantly varied as shown by the comparison of disagreement rate between blood score and liver biopsy (misclassified patients) as a function of Metavir stage: this rate was significantly superior for FM vs FT in F1 (22.9 vs 14.7%, p<10-3) but significantly inferior for FM vs FT in F2 (40.8 vs 62.8%, p<10-3), F3 (13.3 vs 27.6%, p=0.003) and F4 (1.3 vs 9.0%, p=0.07). This disagreement rate blood vs liver significantly varied according to center, e.g. for ≥F2 and FM from 18.3 to 28.6% (ANOVA, p=0.02). By logistic regression, the center had an independent role for this disagreement. Likewise, the disagreement rate between blood scores significantly varied according to center, e.g. for ≥F2, FT vs FM from 16.9 to 26.3% (ANOVA, p=0.05). By contrast, Metavir stage, but not center, had an independent role for this disagreement. Conclusion. This meta-analysis with individual data validates the published data of accuracy for blood scores of liver fibrosis (except for HS) and shows significant differences between blood scores for global accuracy and even more as a function of Metavir stage which explains a population effect.

Table 1

| | ≥F2 | ≥F3 | F4 |
|---|---|---|---|
| FibroMeter | 0.831±0.014 | 0.887±0.014 | 0.923±0.013 |
| Fibrotest | 0.803±0.016 | 0.853±0.016 | 0.892±0.015 |
| APRI | 0.784±0.017 | 0.836±0.017 | 0.874±0.019 |
| Hepascore | 0.775±0.017 | 0.834±0.017 | 0.886±0.019 |