Prognostic durability of liver fibrosis tests and improvement in predictive performance for mortality by combining tests

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Résumé en anglais	Background and Aim There is currently no recommended time interval between noninvasive fibrosis measurements for monitoring chronic liver diseases. We determined how long a single liver fibrosis evaluation may accurately predict mortality, and assessed whether combining tests improves prognostic performance. Methods We included 1559 patients with chronic liver disease and available baseline liver stiffness measurement (LSM) by Fibroscan, aspartate aminotransferase to platelet ratio index (APRI), FIB-4, Hepascore, and FibroMeterV2G. Results Median follow-up was 2.8 years during which 262 (16.8%) patients died, with 115 liver-related deaths. All fibrosis tests were able to predict mortality, although APRI (and FIB-4 for liver-related mortality) showed lower overall discriminative ability than the other tests (differences in Harrell's C-index: $P < 0.050$). According to time-dependent AUROCs, the time period with optimal predictive performance was 2–3 years in patients with no/mild fibrosis, 1 year in patients with significant fibrosis, and <6 months in cirrhotic patients even in those with a model of end-stage liver disease (MELD) score <15. Patients were then randomly split in training/testing sets. In the training set, blood tests and LSM were independent predictors of all-cause mortality. The best-fit multivariate model included age, sex, LSM, and FibroMeterV2G with C-index = 0.834 (95% confidence interval, 0.803–0.862). The prognostic model for liver-related mortality included the same covariates with C-index = 0.868 (0.831–0.902). In the testing set, the multivariate models had higher prognostic accuracy than FibroMeterV2G or LSM alone for all-cause mortality and FibroMeterV2G alone for liver-related mortality. Conclusions The prognostic durability of a single baseline fibrosis evaluation depends on the liver fibrosis level. Combining LSM with a blood fibrosis test improves mortality risk assessment.
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Liens

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