**Supplementary methods**

Diagnosis of liver cirrhosis was confirmed by histology, conclusive appearance in ultrasound or radiological imaging, endoscopic features of portal hypertension, and medical history. In particular, patients with liver cirrhosis were not allowed to participate, if they had a previous episode of OHE during the last six weeks, HE grade 1-4 at the day of inclusion, other pre-terminal comorbidities, neurological comorbidities (e.g. previous diagnosis of polyneuropathy), electrolyte disorders, ongoing chronic alcohol consumption or vitamin B12 deficiency.