

**Supplementary Table I.** Characteristics of included studies

Study/yr (reference)	Design	Setting/inclusion criteria/ sampling method	Intervention (n)	Comparator (n)	Patient characteristics	Therapy dose/ timing/duration	Outcomes reported	Results
Addolorato <i>et al</i> <sup>24</sup> , 2007 Italy Funding: Supported by the Italian Ministry for University, Scientific and Technological Research and the European Research Advisory Board	RCT	All 18-75 yr AUD with Cirrhosis; Dependence (DSM-IV TR); Active alcohol use (>21 M and >14 F – drinks per week); family supervision; Craving – OCDS Consecutive sampling	Oral Baclofen with psychosocial treatment (n=42)	Placebo with psychosocial treatment (n=42)	69% male; mean age 16 yr; Alcohol use and lab confirmed cirrhosis; Predominantly Child B (48%) and C (38%) with mean OCDS 25 in Bc and 28 in placebo group All participants had liver cirrhosis; specific Child-Pugh classifications were not detailed	Bc or Pl with routine psychological counselling 12 weeks (pill count method) 10 mg TDS Self report with Urine or blood alcohol	Abstinence Abstinent days Adherence Hepatic side effects	Abstinence: 71% Bc and 29 % Pl with OR=6.3 [95% CI 2.4–16.1]; <i>P</i> =0.0001); Abstinent days: n 62.8 (Bc) vs 30.8 (Pl) days; <i>P</i> =0.001; Better in Child B and C; Craving: Bc>Pl; Adherence Bc 79% vs 82% Pl ( <i>P</i> =0.17); Dropouts – 14% Bc vs 31% Pl ( <i>P</i> =0.12); No hepatic side effects
Yamini <i>et al</i> <sup>22</sup> , 2014 USA	Retrospective cohort study	Alcohol dependence or abuse (DSM IV); alcoholic hepatitis with or without cirrhosis on physical exam, laboratory values, or imaging; desire to abstain from alcohol	Oral Baclofen (n=35)	TAU	Mean age = 50.5 yr; Alcohol related cirrhosis with AUD; Mean MELD = 19.07	Baclofen 10 mg TDS; Mean 5.8 months (1-12 months); 63% adherence to Bc at 12 weeks; Self report	Abstinence Major side effects	Abstinence: 97% on Bc At 12 months: 67.30% reduction in total bilirubin, 42.10% in MELD score, 17.96% INR, 75.05% AST and 47.02% in ALT No major side effect
Owens <i>et al</i> <sup>21</sup> , 2016 UK	Prospective cohort study	Patients with AUD with biochemically confirmed liver disease	Oral Baclofen (n=219)	Not defined	37.5% had cirrhosis, rest other biochemical derangements in LFT	Bc 10 mg TDS to begin up-titrated up to 30 mg TDS	Abstinence	Complete abstinence at 3 and 12 months: 55% and 53%; significant reduction in SADQ and alcohol use; Sig red in GGT, ALT and bilirubin
Rogal <i>et al</i> <sup>20</sup> , 2019 USA Funding: Supported by the VA Health Services Research and Development (HSR&D) Service and NIH.	Retrospective cohort study	Veterans with Cirrhosis (AH, bleed) and AUD (ICD-9) with no prior treatment of AUD; Included patients with past decompensation; AUDIT-C scores for comparison	Medicine for AUD (Oral disulfiram, acamprostate, naltrexone) alone or with BT (n= 468)	BT only or No treatment for AUD (n=159)	Age 58 (mean), 98% Males; Mean MELD: 10.7; out of total AUD and cirrhosis cohort 1% received combined BT+Med (0.4% Med alone)	Ds (15%)/ Ac (26%)/ Nx (59%); 180 days Bc (for chronic pain)	Decompensation Mortality	Any treatment vs No trt: New Decmpn: 11.6% vs 6.5 %; 180 day mortality: 3.9 % vs 2.6%; Long term mortality 58% vs 51% (All <i>P</i> <0.01); Bc group most reduction in AUDIT-C
Mellinger <i>et al</i> <sup>19</sup> , 2019 USA Funding: NIH (National Institute on Alcohol Abuse and Alcoholism).	Retrospective cohort study	Privately insured patients with Alcohol associated cirrhosis-AC (2009-16); 18-64 yr; Diagnosis of Cirrhosis and AUD (ICD-9/10); Decompensated included	Disulfiram, Nalrexone, Acamprostate, Baclofen, Gabapentin, Topiramate (indication not given) (n=275)	TAU	32% Females with mean age 53.5 yr; 53% having decompensation and 28% with Psychiatric comorbidity	Gb (69%), Tm (12%), Ac/Bc/ Ds:5% each; Nx: 4%: At least 90 days	Decompensation at 1 yr Hospital visits	AC patients with AUD treatment with Nx/Ds/Ac: decreased risk of decompensation at 1 yr (HR 0.65, <i>P</i> <0.001); reduction in hospital visits (HR 0.89, <i>P</i> <0.001); Gb> other meds

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Tyson <i>et al</i> <sup>18</sup> , 2022 UK	Retrospective cohort study	Hospital record based; Ac or Bc prescribed with for abstinence; Cirrhosis based on clinical, biochemical or histological features; Confirmation of taking medication on at least one follow up visit	Oral Acamprosate or Baclofen prescribed during 2017-2020 (n=189)	Counselling by specialist nurse	Male (Ac:71%, Bc: 59%); Active alcohol use; Child B/C Cirrhosis: 39% Ac & 43% Bc group (Median CP score: 6 in both, MELD-11 Ac & 12 Bc); Recent Decompensation: 39% Ac and 59% Bc; Psychiatric comorbidity: 38%Ac & 30%Bc	Median Bc (30 mg: 111 (2–524) days; Ac (1998 mg-196 (18–910) days	Abstinence Discontinuation rate	Abstinence: 42% Ac & 39% Bc; Reduced use: 27% Ac and 32% Bc; Side effects: Ac-6%, Bc-18%; Discontinuation rate: Bc (18%) > Ac (4%)
Barrault <i>et al</i> <sup>17</sup> , 2022 France	Prospective cohort study	All consecutive in or outpatients in participating centres receiving Bc for AUD (DSM-IV) with cirrhosis (2013-16); Bc for AUD	Oral Baclofen with psychosocial intervention (71)	TAU	Cirrhosis patients (LSM>15) with mean age 55 (56% Males); Child-Pugh grade A–B–C, n (%) 47 (66.6)–16 (22.5)–8 (11.2); Decompensated included; Metabolic syndrome in 38%	Bc 15-210 mg At 1 yr, 41/52 on Bc, at a mean dose of 75.2 mg; 10: low dose-30mg 18 medium dose 30-90 13 high dose (up to 210 mg	Abstinence; Improvement in AST, GGT, MCV Side effects	Consumption reduced from 100.2 to 14.7 g/day ( $P < 0.0001$ ), and 29 patients (40.8%) reached abstinence; Significant improvement in AST, GGT, MCV & INR); 22% minor side effects
Ayyala <i>et al</i> <sup>16</sup> , 2022 USA	Retrospective cohort study	Naltrexone for AUD (DSM-5) with (N=100) or without Liver disease (N=60); Hepatitis and other CLD excluded	Oral Naltrexone and Naltrexone depot (n=100)	TAU	Fibrosis-4 score $\geq 3.25$ ; N=22 with hepatic decompensation (Child B/C) included; Mean age 51 with 86% Males; 39% Psychiatric comorbidity; both OPD and IPD	90 % Oral Nx (50 mg/ day) for 63 days- 10 month follow up; Depot (380 mg / month) at 11 months	Significant reduction in AST, ALT on Hospitalizations	Significant reduction in AST, ALT on Nx; 2 yr survival: 90.8%; lesser duration of Nx predicted more alcohol related hospitalizations; Nx in LD vs non LD: 28% vs 8%. Nx safe in all groups
Vannier <i>et al</i> <sup>15</sup> , 2022 France	Retrospective cohort study	Biobank data, with 9.2 yr follow up (2010-21); All alcohol related LD except fatty liver; moderate to heavy alcohol use; at least 3 prescriptions for AUD med	Disulfiram, Naltrexone, Disulfiram, Acamprosate, Baclofen, Gabapentin, Topiramate (n=1135)	TAU	Mean age 54.8 with 60% males; 105 with cirrhosis given med for AUD; 85% had psychiatric co morbidity	Ds/Nx/Ac/ Bc/Gb/Tm: Exact duration of individual medicine not given	Progression to ALD Delayed decompensation	Med for AUD associated with reduced odds of progression to ALD (HR, 0.76; 95% CI, 0.64-0.89; $P < 0.001$ ); more years for AUD treatment: less odds of ALD development (HR 0.97); Delayed decompensation (aOR 0.35, $P < 0.01$ ); Gb and Nx lowest odds; Least with Ds and Ac; Any medicine longer retention (9.8 yr vs 8.8 yr, $P < 0.001$ )

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Rabiee <i>et al</i> <sup>22</sup> , 2023 USA Funding: Supported by the VA Health Services Research and Development.	Retrospective cohort study	Veterans Outcomes and Costs Associated with Liver Disease (VOCAL) database. Included patients with alcohol-associated cirrhosis and high-risk alcohol use disorder (AUD) with an AUDIT-C score $\geq 8$ , diagnosed with cirrhosis, and had not used MAUD in the year before diagnosis	886 patients received medications for alcohol use disorder (MAUD) (naltrexone: 520, acamprostate: 307, both medications: 59)	8245 patients who did not receive MAUD	Predominantly male (98%) and White (65%), mean age 58.5 yr. Included patients had hazardous/ high-risk drinking, with an AUDIT-C score $\geq 8$ and a diagnosis of AUD and alcohol-associated cirrhosis. Comorbid conditions included depression and substance use disorder	Patients were considered exposed to MAUD if they received at least 7 days of medication in each 30-day window following cirrhosis diagnosis. The duration of exposure was categorized as $\leq 3$ months or $>3$ months within the first year after diagnosis.	All-cause mortality	MAUD exposure was associated with improved survival, with an HR of 0.80 relative to no MAUD exposure (95% CI: 0.67–0.97, $P = 0.024$ ). After propensity score matching, MAUD exposure showed a reduced hazard of all-cause mortality. Longer duration of MAUD exposure ( $>3$ months) was associated with further improved survival (HR: 0.73 for 3–12 months vs no MAUD, 95% CI: 0.56–0.96, $P = 0.022$ ). Factors positively associated with MAUD prescription included an inpatient diagnosis code for AUD and a concurrent diagnosis of depression, while a history of cirrhosis decompensation was negatively associated.
Barrault <i>et al</i> <sup>23</sup> , 2017 France	Prospective, observational study	Consecutive patients from two liver and alcohol units in non academic hospitals near Paris (Creil and Créteil) recruited over a 3-yr period. Patients were alcohol-dependent with or without liver cirrhosis, aged over 18 yr, and had normal renal function. Exclusion criteria included uncontrolled epilepsy, patent hepatic encephalopathy, renal failure, and unstable psychiatric conditions	Baclofen treatment in 100 patients	None	65 patients had cirrhosis (CP grade A in 43 cases, B in 12, and C in 10). Median daily alcohol consumption was 80 g/day, with cirrhotic patients consuming a median of 93 g/day. 75% had prior addiction specialist consultations, 36% had outpatient withdrawal, 43% hospital withdrawal, and 42% long-term hospitalization for addiction.	Baclofen was initiated at 15 mg/day and increased by 10 mg every 3 days until alcohol indifference was achieved. The mean dosage was 40 mg/day, with a range of 30–210 mg/day. The study duration was 12 months	Abstinence, Improvement in alcohol-related biological markers (GGT, AST, MCV, Improvement in liver function tests (bilirubinemia, prothrombin time, albuminemia), Adverse events	Median daily alcohol consumption reduced from 80 g/day to 0 g/day. 44 patients were completely abstinent, and 20 had low alcohol consumption (up to 30 g/day). Significant improvement in biological markers in the 'low-consumption' group: GGT, AST, and MCV decreased significantly. In cirrhotic patients, bilirubinemia decreased, prothrombin time and albuminemia increased significantly, 20 patients reported grades 1–2 adverse events, with no liver or renal function deterioration in cirrhotic patients.

TAU: treatment as usual, Ac: Acamprostate, Bc: Baclofen, Tm: Topiramate, Nx: Naltrexone, Pl: placebo