Now Featuring an ALL Access Pass!
Visit http://acgmeetings.gi.org/ to Register!
Participating in the Webinar

- All attendees will be muted and will remain in Listen Only Mode.
- Type your questions here so that the moderator can see them. Not all questions will be answered but we will get to as many as possible.

How to Receive CME and MOC Points

LIVE VIRTUAL GRAND ROUNDS WEBINAR
ACG will send a link to a CME & MOC evaluation to all attendees on the live webinar.

ABIM Board Certified physicians need to complete their MOC activities by December 31, 2020 in order for the MOC points to count toward any MOC requirements that are due by the end of the year. No MOC credit may be awarded after March 1, 2021 for this activity.

ACG will submit MOC points on the first of each month. Please allow 3-5 business days for your MOC credit to appear on your ABIM account.
MOC QUESTION
If you plan to claim MOC Points for this activity, you will be asked to: Please list specific changes you will make in your practice as a result of the information you received from this activity.

Include specific strategies or changes that you plan to implement. THESE ANSWERS WILL BE REVIEWED.

ACG Virtual Grand Rounds
Join us for upcoming Virtual Grand Rounds!

Week 21: Dysphagia: A Practical Approach
Kenneth R. DeVault, MD, FACG
August 13, 2020 at Noon EDT

Week 22: Fecal Incontinence: Innovations in Clinical Assessment, Diagnosis, and Treatment
Satish S.C. Rao, MD, PhD, FACG
August 20, 2020 at Noon EDT

Weeks 23-26 are also open for registration now!
Visit gi.org/ACGVGR to Register
Disclosures:

Ashwani K. Singal, MD, MS, FACG
Dr. Singal has no relevant financial relationships.

Jessica L. Mellinger, MD
Dr. Mellinger has no relevant financial relationships.

Rationale and Underuse of Integrated Care Model for the Management of Alcohol-Associated Liver Disease (ALD)

Ashwani K. Singal, MD, MS, FACG
Associate Professor of Medicine
University of SD Sanford School of Medicine
Transplant Hepatologist and Director Clinical Research
Avera McKennan University Hospital and Transplant Institute
Sioux Falls, SD
What is integrated care model

Clinical cases

- 36-year-old female enrolled for alcohol rehabilitation treatment
  - Labs showed ALT 42 AST 85 SB 1.2 mg/dL Platelets 195 albumin 3.8 g/dL
  - Ultrasound shows steatosis and minimal hepatomegaly

- 29-year-old male with chronic active alcohol use in heavy amounts seen for rapid onset of jaundice for 1 week
  - Labs AST 195 ALT 65 SB 27 mg/dL creatinine 2.3 mg/dL
  - Ultrasound steatosis and marked hepatosplenomegaly

Identifying ALD in individuals with AUD for integrated care with hepatology

Identifying AUD in patients with ALD for integrated care with addiction team

---

Unhealthy use vs. alcohol use disorder (AUD)

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
</table>
| At risk alcohol use | Men<65 years: >4 drinks/d or >14/week  
                       | Women and men≥65 years: >3 drinks/d or >7/week                           |
| Unhealthy use    | Any use which increases risk to health                                     |
| Hazardous use    | Pattern of use that increases risk of harmful effects                     |
| Harmful use      | Pattern of use already causing health effects                             |
| Heavy use        | ≥5 drinks on one occasion on ≥5 days over last 30 days                    |
| Binge use        | ≥4 drinks in women or ≥5 in men over a period of 2 hours                  |

- Alcohol consumption
  - Amount
  - Time spent in obtaining alcohol
  - Unsuccessful attempts to cut down
  - Craving
  - Giving up activities of interest or important
  - Putting at risk of physical, interpersonal, social harms
  - Failure to fulfill social, personal, and professional duties
  - Consumption in spite of physical, social, interpersonal problems
- Tolerance
  - Increasing amount to achieve intoxication or desired effect
- Withdrawal
  - Presence of symptoms consistent with withdrawal
  - Use of anti-anxiety drugs or alcohol to relieve withdrawal
A UD identification test (AUDIT) and AUDIT-c

<table>
<thead>
<tr>
<th>Questions</th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. How often do you have a drink containing alcohol?</td>
<td>Never</td>
<td>Monthly or less</td>
<td>2 to 4 times a month</td>
<td>2 to 3 times a weak</td>
<td>4 or more times a week</td>
</tr>
<tr>
<td>2. How many drinks containing alcohol do you have on a typical day when you are drinking?</td>
<td>1 or 2</td>
<td>3 or 4</td>
<td>5 or 6</td>
<td>7 to 9</td>
<td>10 or more</td>
</tr>
<tr>
<td>3. How often do you have 5 or more drinks on one occasion?</td>
<td>Never</td>
<td>Less than monthly</td>
<td>Monthly</td>
<td>Weekly</td>
<td>Daily or almost daily</td>
</tr>
<tr>
<td>4. How often during the last year you found that you were not able to stop drinking once you had started?</td>
<td>Never</td>
<td>Less than monthly</td>
<td>Monthly</td>
<td>Weekly</td>
<td>Daily or almost daily</td>
</tr>
<tr>
<td>5. How often during the last year have you failed to do what was normally expected of you because of drinking?</td>
<td>Never</td>
<td>Less than monthly</td>
<td>Monthly</td>
<td>Weekly</td>
<td>Daily or almost daily</td>
</tr>
<tr>
<td>6. How often during the last year have you needed a first drink in the morning to get yourself going after a heavy drinking session?</td>
<td>Never</td>
<td>Less than monthly</td>
<td>Monthly</td>
<td>Weekly</td>
<td>Daily or almost daily</td>
</tr>
<tr>
<td>7. How often during the last year have you had a feeling of guilt or remorse after drinking?</td>
<td>Never</td>
<td>Less than monthly</td>
<td>Monthly</td>
<td>Weekly</td>
<td>Daily or almost daily</td>
</tr>
<tr>
<td>8. How often during the last year have you been unable to remember what happened the night before because of your drinking?</td>
<td>Never</td>
<td>Less than monthly</td>
<td>Monthly</td>
<td>Weekly</td>
<td>Daily or almost daily</td>
</tr>
<tr>
<td>9. Have you or someone else been injured because of your drinking?</td>
<td>No</td>
<td>Yes, but not in the last year</td>
<td>Yes, during the last year</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. Has a relative, friend, doctor or other health care worker been concerned about your drinking or suggested you cut down?</td>
<td>No</td>
<td>Yes, but not in the last year</td>
<td>Yes, during the last year</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Magnitude of AUD and ALD

<table>
<thead>
<tr>
<th>Prevalence of alcohol use</th>
<th>Global</th>
<th>Worldwide distribution</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>31% (2.3 billion) people</td>
<td>Highest in Europe</td>
</tr>
<tr>
<td></td>
<td>26.5% (155 million) adolescents</td>
<td>↑ in Asia, Middle East, Africa, Eastern Europe, Britain</td>
</tr>
<tr>
<td></td>
<td>Per capita 6.4 liters in 2016*</td>
<td>↓ in Southern Europe</td>
</tr>
<tr>
<td></td>
<td>45% spirits, 34% beer, and 12% wine</td>
<td></td>
</tr>
<tr>
<td>Prevalence of alcohol use disorder</td>
<td>2.3%</td>
<td></td>
</tr>
<tr>
<td>Harmful alcohol use related healthcare burden (2016)</td>
<td>5.3% (3 million) of deaths</td>
<td></td>
</tr>
<tr>
<td></td>
<td>5.1% (132.6 million) of DALY</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Men contribute to 75% burden</td>
<td></td>
</tr>
<tr>
<td></td>
<td>10.1% of deaths in Europe and 5.5% in US</td>
<td></td>
</tr>
<tr>
<td></td>
<td>10.8% of DALY in Europe and 6.7% in US</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Age standardized burden highest in Africa</td>
<td></td>
</tr>
<tr>
<td>Alcohol-associated liver disease</td>
<td>27.3% (332,288) of cirrhosis-related deaths</td>
<td></td>
</tr>
<tr>
<td>$22.7 billion hospitalization cost (2012-16)</td>
<td>ALD proportion of cirrhosis deaths: 35% Central and South America, 28% USA, 22% high income Asia Pacific, 42% Western Europe and 37% Eastern Europe</td>
<td></td>
</tr>
<tr>
<td>Leading indication for liver transplantation</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Alcoholic hepatitis contributes significantly to mortality from ALD


American College of Gastroenterology

Presentation and disease stage of ALD

A. Steatosis or fatty liver and no fibrosis
B. Alcoholic hepatitis and fibrosis stage 2
C. Alcoholic hepatitis with fibrosis stage 3
D. Cirrhosis (stage 4 fibrosis)

American College of Gastroenterology
ALD compared to NAFLD presents at advanced stage and progresses faster

Long-term risk of cirrhosis after initial hospital contact for AUD

- 36,044 Danish registry cohort (1998-2002) with alcohol problems (intoxication, harmful use, dependence) followed for cirrhosis
- Overall risk is 5-6% at 15 years
- Risk is higher for:
  - Age 40-59 years
  - Harmful alcohol use or alcohol dependence
Patients with ALD have second pathology of AUD


Integrated care model with hepatology and addiction specialist

Integrated Care Model of AUD Among ALD Patients

Hepatologists and Addiction Specialists

AUC: Alcohol use disorder; ALD: Alcohol-associated liver disease; AH: Alcoholic hepatitis; ELF: Enhanced liver fibrosis; AUDIT: Alcohol use disorder identification test; DSM-V: Diagnostic and statistical manual of mental disorders; LSM: Liver stiffness measurement; kPa: Kilopascal units

ELF is a patented non-invasive serum biomarker using levels of tissue inhibitor of metalloproteinase (TIMP)-1, hyaluronic acid, and amino-terminal propeptide of type III procollagen (PISNP).

AUDIT is a validated tool with 10 questions on alcohol consumption each score from 0-4. DSM-V is a set of criteria for identification of AUD.

AUD treatment and ALD

- Benchmark of quality of care indicator
- FDA approved pharmacotherapy (Disulfiram, Naltrexone, and Acamprosate) have not been tested in ALD cirrhosis and AH
- Integrated model with psychotherapy / CBT improves abstinence rates and reduces recidivism in patients with AUD and liver disease.
- In patients with cirrhosis, behavioral and/or pharmacotherapy for AUD is associated with reduction in new hepatic decompensation, 6.5 vs. 11.6%, 0.63 (0.52-0.76) and long-term mortality, 51 vs. 58% 0.87 (0.80-0.96).
- Among survivors of index AH hospitalization, early alcohol rehabilitation was associated with reduced 30-d readmission, recidivism, and mortality.


AUD treatment is scarcely used

- In an interview of 36,309 adults, treatment of drug use disorder was used in 14% and 25% of respondents with drug use disorder over previous 1 year (4%) and over lifetime (10%).

- In a commercial dataset of 66,053 alcohol-associated cirrhosis, only 10% received behavioral therapy and <1% any medication within 12 months of AUD diagnosis despite 72% having financial coverage.

- In a cohort of 35,682 veterans with AUD diagnosis, only 14% received AUD treatment within 6 months of diagnosis (12% behavioral, 0.4% pharmacotherapy, and 1% combination).

Summary

- ALD contributes significantly to healthcare burden especially in young individuals
- Patients have dual pathology of liver disease and AUD
- Treatment of AUD is associated with improved outcomes related to liver disease
- Integrated care model is scarcely used in patients with ALD
Alcoholic cirrhosis and AUD mortality has risen in young people
Annual percent change highest in ages 25-34, Native Americans, women

Tapper E & Parikh N *BMJ* 2018(362)

Alcohol Use Disorder in the US is Rising

Data from National Epidemiologic Survey on Alcohol and Related Conditions (NESARC) Grant BF, et al *JAMA Psych* 2017
The most important factor in long-term survival for patients with ALD is alcohol cessation

ALD patients need AUD treatment urgently

*results adjusted for Lille model

Cirrhosis Mortality Increases Dramatically with Any Drinking

<table>
<thead>
<tr>
<th>Alcohol consumption (pure alcohol g day⁻¹)</th>
<th>RR</th>
<th>P-value</th>
<th>(95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Women</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&gt;0–12⁻¹</td>
<td>1.9</td>
<td>0.013</td>
<td>(1.1, 3.1)</td>
</tr>
<tr>
<td>&gt;12–24⁻¹</td>
<td>5.6</td>
<td>&lt;0.001</td>
<td>(4.5, 6.9)</td>
</tr>
<tr>
<td>&gt;24–36⁻¹</td>
<td>7.7</td>
<td>&lt;0.001</td>
<td>(6.3, 9.5)</td>
</tr>
<tr>
<td>&gt;36–48⁻¹</td>
<td>10.1</td>
<td>&lt;0.001</td>
<td>(7.5, 13.5)</td>
</tr>
<tr>
<td>&gt;48–60⁻¹</td>
<td>14.7</td>
<td>&lt;0.001</td>
<td>(11.0, 19.6)</td>
</tr>
<tr>
<td>&gt;60⁻¹</td>
<td>22.7</td>
<td>&lt;0.001</td>
<td>(17.2, 30.1)</td>
</tr>
<tr>
<td>Men</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&gt;0–12⁻¹</td>
<td>1.0</td>
<td>0.991</td>
<td>(0.6, 1.6)</td>
</tr>
<tr>
<td>&gt;12–24⁻¹</td>
<td>1.6</td>
<td>&lt;0.001</td>
<td>(1.4, 2.0)</td>
</tr>
<tr>
<td>&gt;24–36⁻¹</td>
<td>2.8</td>
<td>&lt;0.001</td>
<td>(2.3, 3.4)</td>
</tr>
<tr>
<td>&gt;36–48⁻¹</td>
<td>5.6</td>
<td>&lt;0.001</td>
<td>(4.5, 7.0)</td>
</tr>
<tr>
<td>&gt;48–60⁻¹</td>
<td>7.0</td>
<td>&lt;0.001</td>
<td>(5.8, 8.5)</td>
</tr>
<tr>
<td>&gt;60⁻¹</td>
<td>14</td>
<td>&lt;0.001</td>
<td>(11.7, 16.7)</td>
</tr>
</tbody>
</table>


What is a standard drink?

In the United States: 1 standard drink = 14 g EtOH

<table>
<thead>
<tr>
<th>Country</th>
<th>Grams EtOH in a standard drink</th>
<th>Daily Limits for:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Men</td>
</tr>
<tr>
<td>United States</td>
<td>14</td>
<td>28 g</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>8</td>
<td>16 g</td>
</tr>
<tr>
<td>Australia</td>
<td>10</td>
<td>&lt;20 g</td>
</tr>
<tr>
<td>Mexico</td>
<td>13</td>
<td>13-26 g</td>
</tr>
<tr>
<td>Argentina</td>
<td>14</td>
<td>28 g</td>
</tr>
<tr>
<td>Japan</td>
<td>20</td>
<td>40 g</td>
</tr>
<tr>
<td>India</td>
<td>8</td>
<td>16 g</td>
</tr>
</tbody>
</table>

American College of Gastroenterology
AASLD ALD Guidance 2019: Diagnosis of Drinking with Screening & Biomarkers

- All patients receiving care in primary care and gastroenterology/hepatology outpatient clinics, emergency departments, and inpatient admissions should be routinely screened for alcohol use using validated questionnaires.
- Brief intervention, pharmacotherapy, and referral to treatment should be offered to patients engaged in hazardous drinking (AUDIT-C ≥4, AUDIT >8, binge drinkers)
- Alcohol biomarkers can be used to aid in diagnosis and support recovery. Urine and hair ethyl glucuronide, urine ethyl sulfate, and PETH are not affected by liver disease, and therefore preferable.


Available Alcohol Biomarkers

<table>
<thead>
<tr>
<th>Biomarker</th>
<th>Sample</th>
<th>Time Frame</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blood Alcohol Level</td>
<td>Blood</td>
<td>12 hours</td>
</tr>
<tr>
<td>Ethyl Glucuronide</td>
<td>Urine</td>
<td>3-5 days</td>
</tr>
<tr>
<td>Ethyl sulfate</td>
<td>Hair</td>
<td>Months</td>
</tr>
<tr>
<td>PETH</td>
<td>Blood</td>
<td>2-3 weeks</td>
</tr>
</tbody>
</table>

*GGT, LFTs alone less specific. % CDT (carbohydrate deficient transferrin) inaccurate in more advanced AALD so not preferred

Urine ethyl glucuronide (uEtG) and ethyl sulfate (uEtS)

- Direct alcohol metabolite by UDP-glucuronosyltransferase and UDP-sulfotransferase
- Found in urine, blood, and hair
- False positives can occur → reflex eEtS testing for + uEtG
- Not affected by liver disease → can be prolonged in renal failure

<table>
<thead>
<tr>
<th>Study</th>
<th>Patients</th>
<th>Cut-Off</th>
<th>Sensitivity (%)</th>
<th>Specificity (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stewart 2013</td>
<td>N=120 CLD</td>
<td>uEtG: 3 day drinking, 7 day drinking</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>EtS: 3 day drinking, 7 day drinking</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>76 (62-91)</td>
<td>93 (88-98)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>70 (57-84)</td>
<td>99 (96-100)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>82 (70-95)</td>
<td>86 (78-93)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>73 (60-86)</td>
<td>89 (83-96)</td>
</tr>
<tr>
<td>Andresen-Streichert 2017</td>
<td>N=112 (51 pre-liv txp 61 post-liv txp)</td>
<td>&gt;0.5 mg/L</td>
<td>71 (41-91)</td>
<td>98 (94-100)</td>
</tr>
<tr>
<td>Staufer 2011</td>
<td>N=141 Pre/post liv txp with ALD</td>
<td>&gt;0.5 mg/L</td>
<td>89</td>
<td>99</td>
</tr>
</tbody>
</table>

Phosphatidylethanol (PETH)

- Phospholipid produced in red blood cell membranes
- Catalyzed by phospholipase D (PLD 1 and PLD 2)
- Direct alcohol biomarker
- Some validation in ALD patients in a “YES/NO” fashion
- Not influenced by liver disease

<table>
<thead>
<tr>
<th>Study</th>
<th>Patients</th>
<th>Cut-Off</th>
<th>Sensitivity</th>
<th>Specificity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stewart 2014</td>
<td>N=222, all ALD No post-liv txp 55% cirrhosis</td>
<td>Any: &gt;8 ng/mL, &gt;20 ng/mL, &gt;4 drinks/d: &gt;20 ng/mL, &gt;4 drinks/d: &gt;80 ng/mL</td>
<td>79 (71-88)</td>
<td>90 (81-98)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>73 (65-80)</td>
<td>96 (92-100)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>97 (92-100)</td>
<td>66 (59-73)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>91 (82-100)</td>
<td>77 (70-83)</td>
</tr>
<tr>
<td>Andresen-Streichert 2017</td>
<td>N=112 (51 pre-liv txp 61 post-liv txp)</td>
<td>20 ng/mL</td>
<td>100 (79-100)</td>
<td>96 (91-99)</td>
</tr>
</tbody>
</table>
**PETH Pharmacokinetics**

- PK models show detection ability for chronic alcohol consumption at varying levels
- Cutoffs of 20 ng/mL vs 200 ng/ml (green dashed line: excessive drinking)
- Men and women vary in peak PETH and duration (men: blue, women: pink)

Simon TW et al *Reg Toxicology & Pharmac* 2018 (94)

---

**AASLD ALD Guidance 2019: What to Do About Drinking in ALD**

- Referral to AUD treatment professionals is recommended for patients with advanced ALD and/or AUD in order to ensure access to the full range of AUD treatment options.
- Multidisciplinary, integrated management of ALD and AUD is recommended and improves rates of alcohol abstinence amongst ALD patients.
- Based on limited data, the use of acamprosate or baclofen can be considered for the treatment of AUD in patients with ALD

• Associated drug and nicotine use disorders are common
• Mood disorders (depression, anxiety, bipolar disorder) less common
• Important implications for maintenance of abstinence, improving long-term outcomes, and potential transplant in ALD patients

Grant BF, et al JAMA 2015 (72) 5:757-766
Mental Health Access: A Major US Challenge

Lack of Insurance Coverage
- Limited MHSA coverage
- Medicaid restrictions
- Limits on duration
- High Copays

Logistics
- Not enough MHSA providers
- Transportation
- Childcare
- Lack of time off for appointments

Attitudinal
- Don’t feel need for treatment
- Stigma
- Concerns about privacy
- Social anxiety

• For all substance-use disordered patients, access to SUD treatment rates are low at 11%
• Comorbid mental health and SUD require expert treatment

SAMSHA 2014; Mellinger et al JSAT 2018; Heyes CM et al Transplant Direct 2016

AUD Treatment Access Rates are Low in ALD Patients

Table 1: Population Characteristics at Index Alcoholic Cirrhosis Diagnosis

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Total AC patients n = 66,093</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>21,442 (32%)</td>
</tr>
<tr>
<td>Mean age (years)</td>
<td>53.5</td>
</tr>
<tr>
<td>Mental health/substance abuse</td>
<td>47,905 (72%)</td>
</tr>
<tr>
<td>Prescription drug coverage</td>
<td>57,632 (87%)</td>
</tr>
<tr>
<td>Anxity</td>
<td>7,642 (12%)</td>
</tr>
<tr>
<td>Depression</td>
<td>16,662 (25%)</td>
</tr>
</tbody>
</table>

Mellinger J et al ACER 2019

Fig. 1. Proportion of alcohol relapse prevention medication prescriptions at index diagnosis, by type of prescription.
AUD Treatment Access Rates are Low in ALD Patients

But in those who received AUD treatment,
15% decrease in decompensation at 1 year

Mellinger J et al ACER 2019

How ALD Patients Differ from General AUD Patients

- Decision to stop drinking thrust upon them by medical event
- Medical health a priority (not psych health)
- Don’t perceive need for treatment
- Preoccupied with medical/transplant management
- Don’t think they have an addiction problem
- Are not addiction treatment seeking

*Courtesy of Andrea DiMartini MD (U Pittsburgh)
Virtual Grand Rounds

The New Model: Treat Both AUD and ALD Across the Life of the Liver

ALD patients who do not need or are not immediate candidates for transplant should have the same access to high-quality AUD treatment and mental health care as listed patients

Alcohol Use Disorder

Alcohol-related Liver Disease

Transplant

Continued Alcohol Surveillance

Literature on integrated SUD care

<table>
<thead>
<tr>
<th>Authors</th>
<th>Patient population</th>
<th>Providers</th>
<th>Intervention</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Addolorato et al 2013</td>
<td>83 ALDOLT recipients between 1995-2010</td>
<td>AAU: psychotherapy, Rx, inpatient and outpatient, weekly-monthly</td>
<td>↓ post-OLT relapse (16.4 vs. 35.1%; p = 0.04)</td>
<td>↓ mortality (14.5 vs. 37.8%; p = 0.01)</td>
</tr>
<tr>
<td>Willenbring et al 1999</td>
<td>105 veterans with EtOH sequelae</td>
<td>Randomized to integrated (IOT) or standard treatment followed for 2 years</td>
<td>Similar hospital usage. 74% of IOT patients vs. 47% were abstinent (p=0.02)</td>
<td>2x mortality in controls (not significant)</td>
</tr>
<tr>
<td>Proeschold-Bell et al 2011</td>
<td>53 HCV pts provided integrated EtOH and hepatology care</td>
<td>Addictions specialist embedded in hepatology clinic, psychiatrist available as-needed</td>
<td>42% reduction in addiction severity index (ASI) at 3 months and 51% reduction by 6 months</td>
<td>Abstinence rates 40% at 3 months and 44% at 6 months</td>
</tr>
</tbody>
</table>

Multidisciplinary, integrated SUD treatment models in:
- Hepatitis C
- HIV/AIDS
- Primary care
- Organ transplant
- SUD clinics

Multidisciplinary ALD Clinic:
Filling the Gap for ALD Patients not Listed for Transplant

Anne Fernandez PhD- Clinical Psychology
Scott Winder, MD MSc- Psychiatry
Kristin Klevering, LMSW- Social work
Amanda Johnson, RN- Nursing
Jack Buchanan- Medical Student Apprentice
Haila Asefah- Clinical Research Coordinator
Jessica Mellinger, MD MSc- Hepatology

MAIN ALD Clinic Structure

- Every other Monday
- 3 NPs + RVs
- Pre-clinic phone call (SW)
- In-clinic ALD Education Packet with RN review
- See hepatology, psychiatry, either psychology or SW
- Tox screens each visit and in-between
- Commitment to 3 MET/CBT sessions with clinic staff

1st Year: 50 patients  Outcomes: Liver, AUD, Cost/Value

American College of Gastroenterology
ALD patients who do not need or are not immediate candidates for transplant should have the same access to high-quality AUD treatment and mental health care as listed patients.

Thank you
Questions?

Ashwani K. Singal, MD, MS, FACG

Jessica L. Mellinger, MD

American College of Gastroenterology
CONNECT AND COLLABORATE IN GI

ACG & CCF IBD Circle
ACG Hepatology Circle
ACG Functional GI Health and Nutrition Circle
ACG Women in GI Circle

ACG GI Circle
Connect and collaborate within GI

ACG’s Online Professional Networking Communities
LOGIN OR SIGN-UP NOW AT: acg-gi-circle.within3.com