

AASLD Nov. 12-15, 2021

The Liver Meeting[®]



DIGITAL EXPERIENCE

The Best of The Liver Meeting[®]

LIVER TRANSPLANT



About the program:

Best of The Liver Meeting 2021 was created by the Scientific Program Committee for the benefit of AASLD members, attendees of the annual conference, and other clinicians involved in the treatment of liver diseases. The program is intended to highlight some of the key oral and poster presentations from the meeting and to provide insights from the authors themselves regarding implications for patient care and ongoing research.

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Donor simvastatin treatment is safe and might improve outcomes after liver transplantation: a randomized double-blind clinical trial

Objective

- Is simvastatin donor treatment safe in preventing ischemia/reperfusion injury and effective to reduce graft loss at 180 days after liver transplantation?

Methods

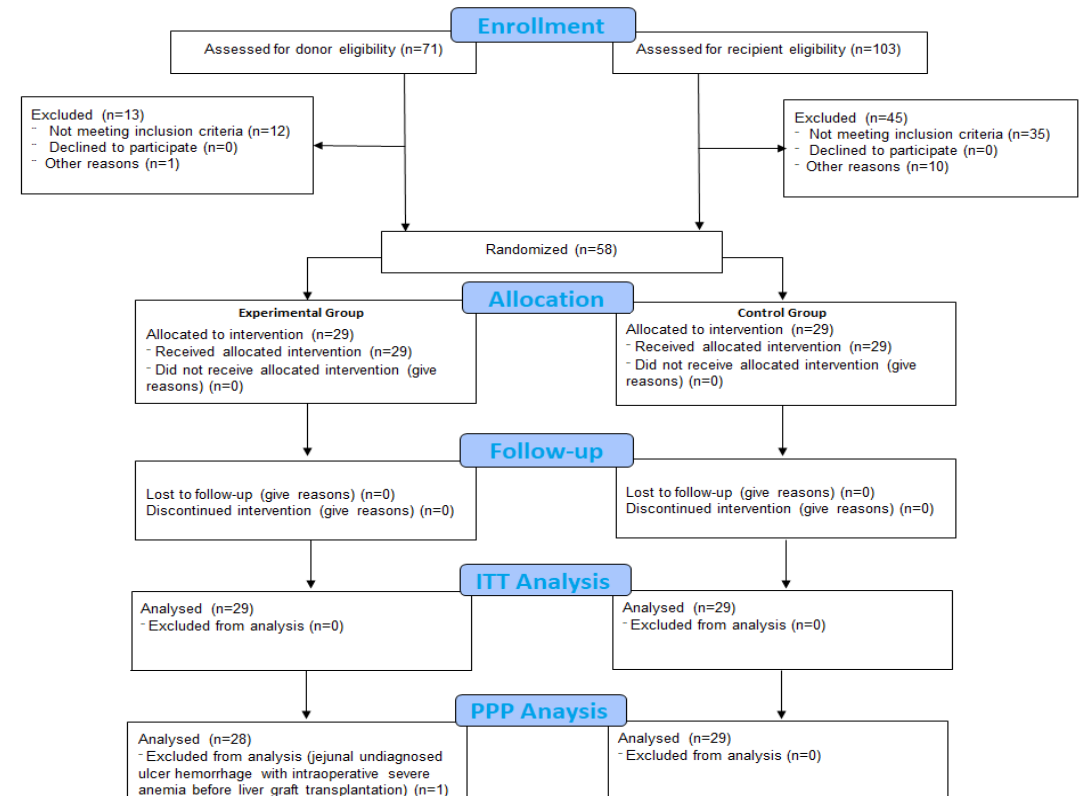
- Double-blind, randomized, prospective trial comparing the safety and efficacy of preoperative deceased brain donors' treatment with the administration of simvastatin on liver transplant recipient outcomes in a real-life setting.
- Patient population studied: 58 liver transplant recipients.

Main Findings

- In the per-protocol population, patient and graft survival rates at 90-day and 180-day were 100% in the Experimental Group (n=28). In the Control Group (n=29), the 90-day and 180-day graft and patient survivals were significantly lower, being respectively, 89.66% (p=0.0804) and 86.21% (p=0.0415), and 93.1% (p=0.1572) and 86.21% (p=0.0415).

Conclusions

- Donor simvastatin treatment before LT is safe and might significantly improve early graft and patient survival after liver transplantation. Trial Registry number: ISRCTN27083228.



Impact of acuity circle policy on liver allocation: 1-year report

Aim

- Increase broader sharing of livers, with a decrease in variation in median MELD score at transplant and no adverse effect to waiting list mortality

Methods

- Retrospective cohort study of OPTN waiting list and transplant data one-year pre- (2/3/2019-2/3/2020) versus post- (2/4/2020-2/3/2021) policy

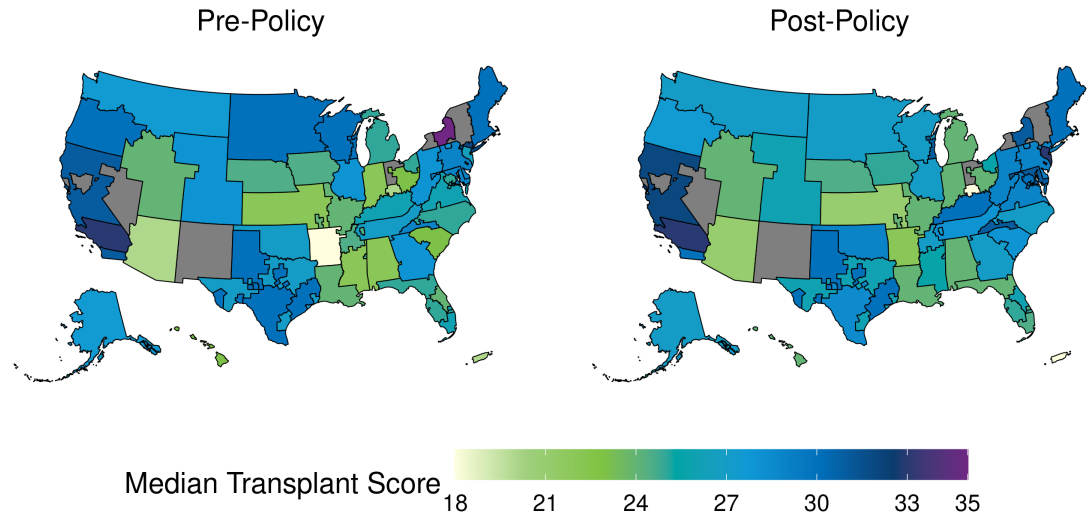
Main Findings

- Average distance increased from 154 to 199 NM while variation in median transplant score by DSA decreased from 13.30 to 11.88.

Conclusions

- Livers are traveling a greater distance with marginal increase in cold ischemic time, and there is less variation in median MELD score at transplant nationally with sicker patients being transplanted faster.

Median Allocation MELD Score at Transplant for Adult Deceased Donor Liver-Alone Transplants by DSA of Transplant Center



Location and allocation: inequity of access to liver transplantation for patients with ACLF-3 across Europe

Aim

- Evaluate the variability in listing strategies and transplant activity for patients with ACLF-3 across European transplant centers and its impact on patient survival

Methods

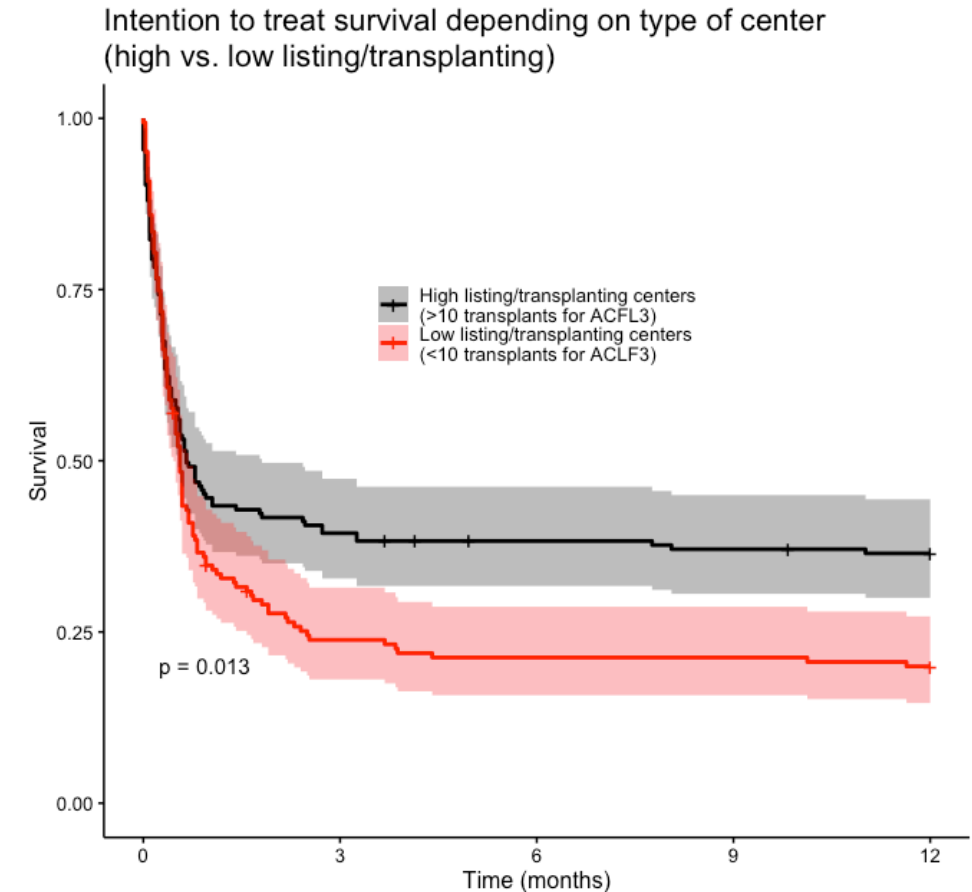
- Patients admitted to the ICU in 20 European centers between 2018 and 2019 with ACLF-3, listed and/or transplanted with ACLF-3.

Main Findings

- There was a strong variability in LT activity for ACLF-3 patients across centers.
- This variability was correlated to listing strategies and not ICU admission practices.
- Patients admitted in centers that listed and transplanted more patients had higher one-year ITT survival (respectively, 35% vs. 19%, $p = 0.013$).

Conclusions

- Large variations in listing strategies translate into inequity in access to LT for patients with ACLF-3 and, ultimately, unequal chances of survival.



Spontaneous survival is associated with anti-HBc IgM and immunoregulatory cytokine response in patients with hepatitis B-related acute liver failure

Background

- Spontaneous survival occurs in ~30% of hepatitis B virus-related acute liver failure (HBV-ALF) cases.
- Little is known about the cytokine and chemokine patterns in HBV-ALF.

Objective

- To determine clinical, virological, and immunological factors associated with spontaneous survival of patients with HBV-ALF

Methods

- The Acute Liver Failure Study Group (ALFSG) was established in 1997 to conduct a multi-centered clinical trial to study ALF in adults across the USA.
- We identified 61 patients with HBV-ALF from the ALFSG registry (N= ~3400).
- Clinical, laboratory, and virological (i.e., anti-HBc IgM) data were collected at baseline, day 3-5, and day 21 post-hospital admission. Plasma samples were collected at baseline and on day 3-5.
- A panel of 42 pro- and anti-inflammatory cytokines and chemokines were measured using multiplex Luminex assay. The primary outcome was 21-day transplant-free survival (TFS).

Main Findings

- Detectable anti-HBc IgM were associated with 21-day TFS (aOR 4.641, 95% CI: 1.13-19.08, p=0.033*) irrespective of nucleos(t)ide analog therapy (N=13/61).
- Immunoregulatory cytokine response was observed in transplant-free survivors compared to pro-inflammatory chemokine response in HBV-ALF patients that died or required liver transplant.

Conclusions

- Detectable anti-HBc IgM and high levels of inflammation mediating cytokines were associated with TFS in HBV-ALF patients. .

Patel NH, et al., Abstract 18.

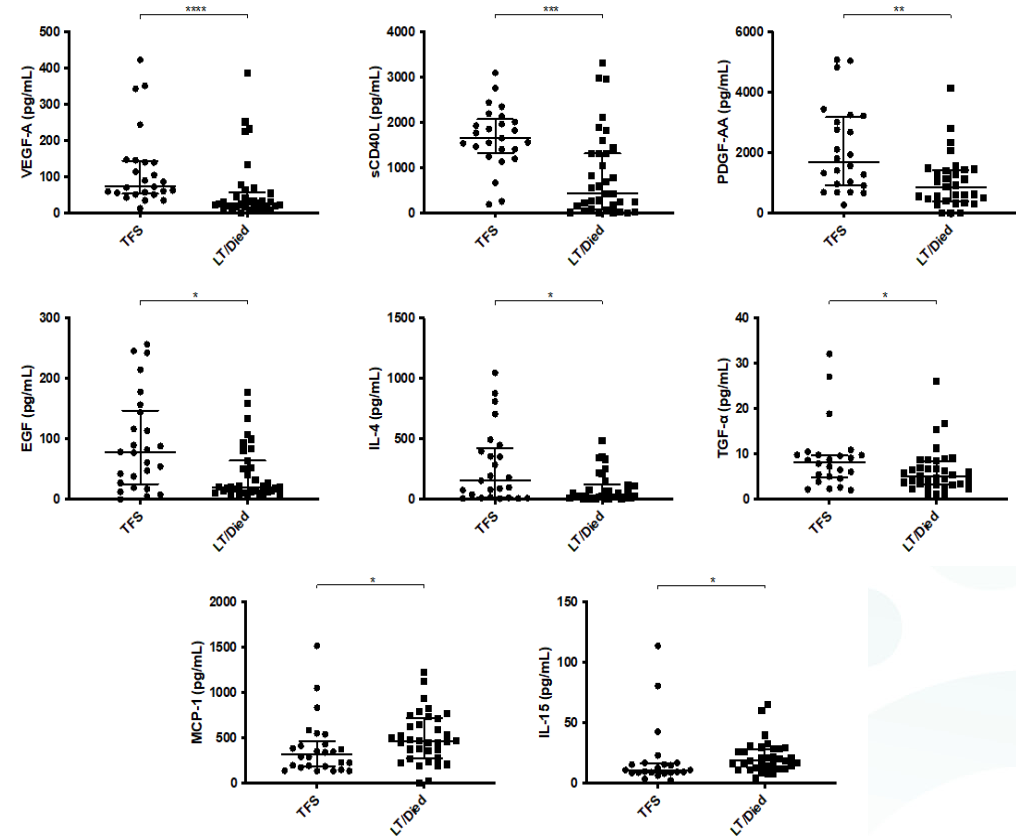


Figure 1: Transplant-free HBV-ALF survivors had higher levels of tissue regenerating and anti-inflammatory cytokines (i.e., VEGF-A, sCD40L, PDGF-AA, EGF, IL-4, and TGF-α). Whereas HBV-ALF patients that died or required liver transplant had higher levels of pro-inflammatory cytokines and chemokines (i.e., MCP-1 and IL-15). Mann Whitney U test was performed. * P <0.05. ** P <0.01. ***P<0.001. ****P<0.0001.



Cost-utility analysis of normothermic machine perfusion compared to static cold storage in liver transplantation in the Canadian setting

Hypothesis

- The addition of normothermic machine perfusion to a liver transplant program using static cold storage (NMP) is more cost-effective than a program using static cold storage alone (Control)

Methods

- Decision tree with a Markov Model with a 1-year cycle length and a 5-year time horizon from the public health care payer perspective with the outcomes of cost and quality adjusted life years (QALY)

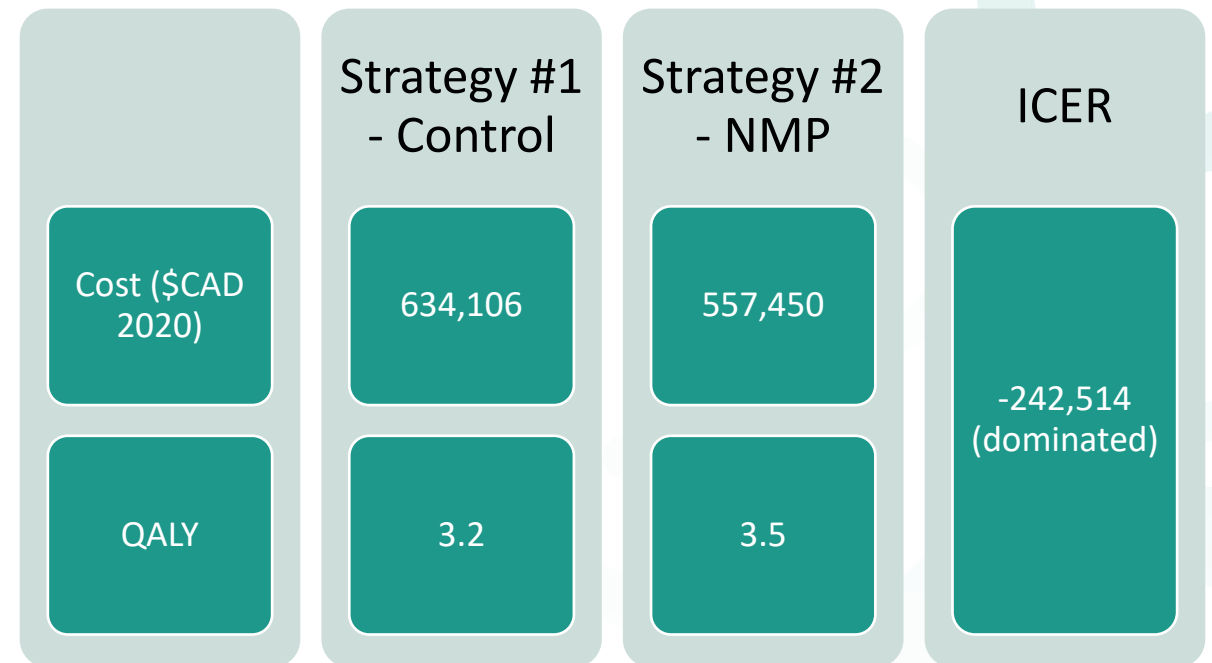
Main Findings

- The NMP strategy has more QALY gain and less cost
- The NMP strategy dominates the control strategy

Conclusions

- The addition of NMP to a liver transplant program results in greater QALY gains and is cost-effective relative to a program with only static cold storage from the public healthcare payer perspective.

Webb A, et al., Abstract 26.



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