

National Liver Review Board (NLRB) Guidance for Multivisceral Transplant (MVT) Candidates

OPTN Liver and Intestinal Organ Transplantation Committee

Purpose of Proposal

- Create NLRB guidance for adult MVT candidates to access higher MELD scores due to:
 - Higher rate of waitlist mortality than liver-alone candidates
 - Lower transplant rate than liver-alone candidates
 - Require access to selective segment of the donor pool
- MVT candidates include:
 - Liver-intestine-pancreas
 - Liver-intestine
 - Liver-intestine-pancreas-kidney
 - Liver-intestine-kidney

Background

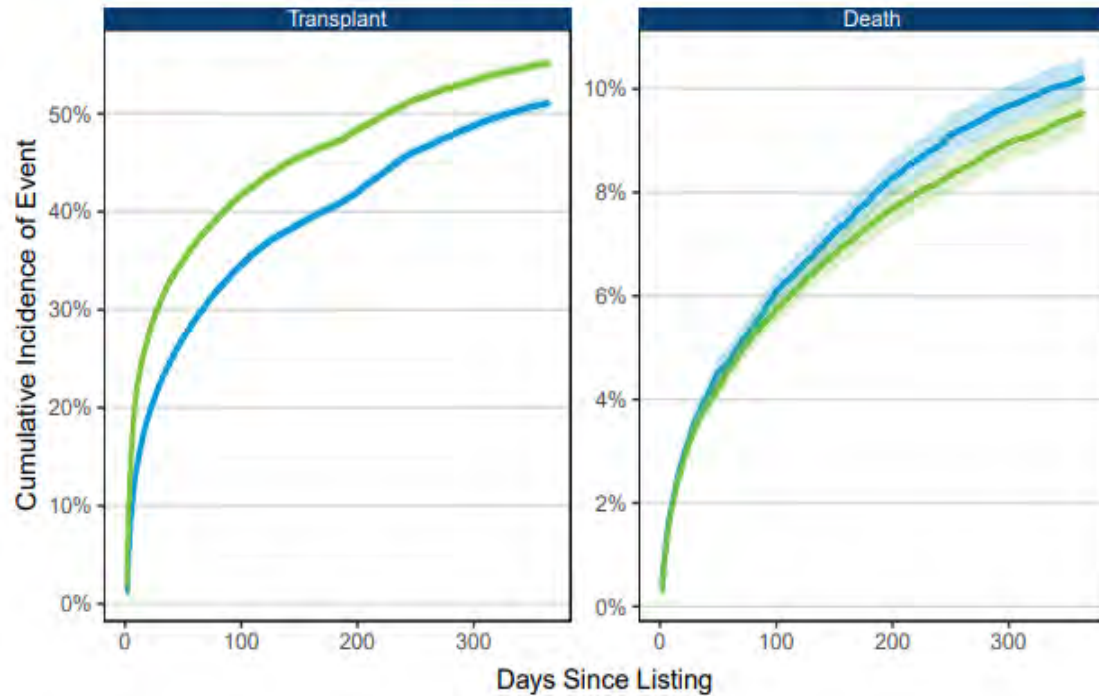
- In the two years after Acuity Circles (AC) implementation, there were **71 MVT transplants**; down from 86 in the pre-policy period
 - Roughly 35 MVT transplants per year in post-AC period
- The number of MVT waitlist removals for death or too sick **increased** from 25 in the pre-AC period to 31 in the post-AC period

Background: 2 years post-AC

Liver-Alone

Figure 4. Cumulative Incidence of Event for Liver-Alone Waitlist Additions by Era

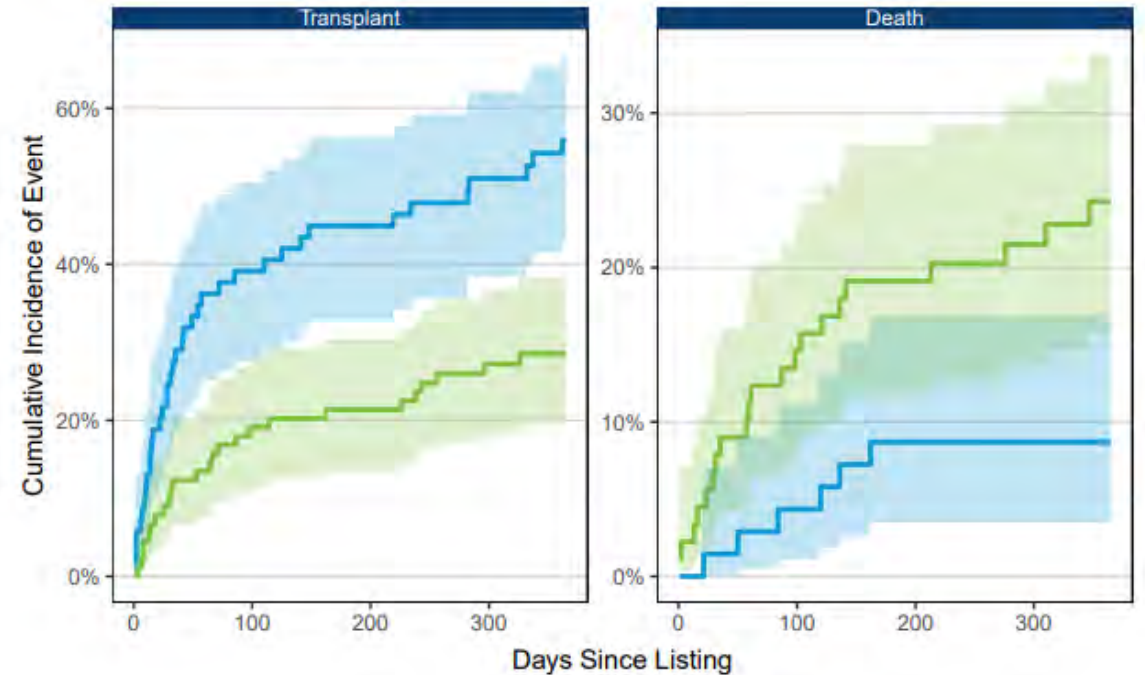
Pre Post



MVT

Figure 3. Cumulative Incidence of Event for Adult (18+ years) Multivisceral Waitlist Additions by Era

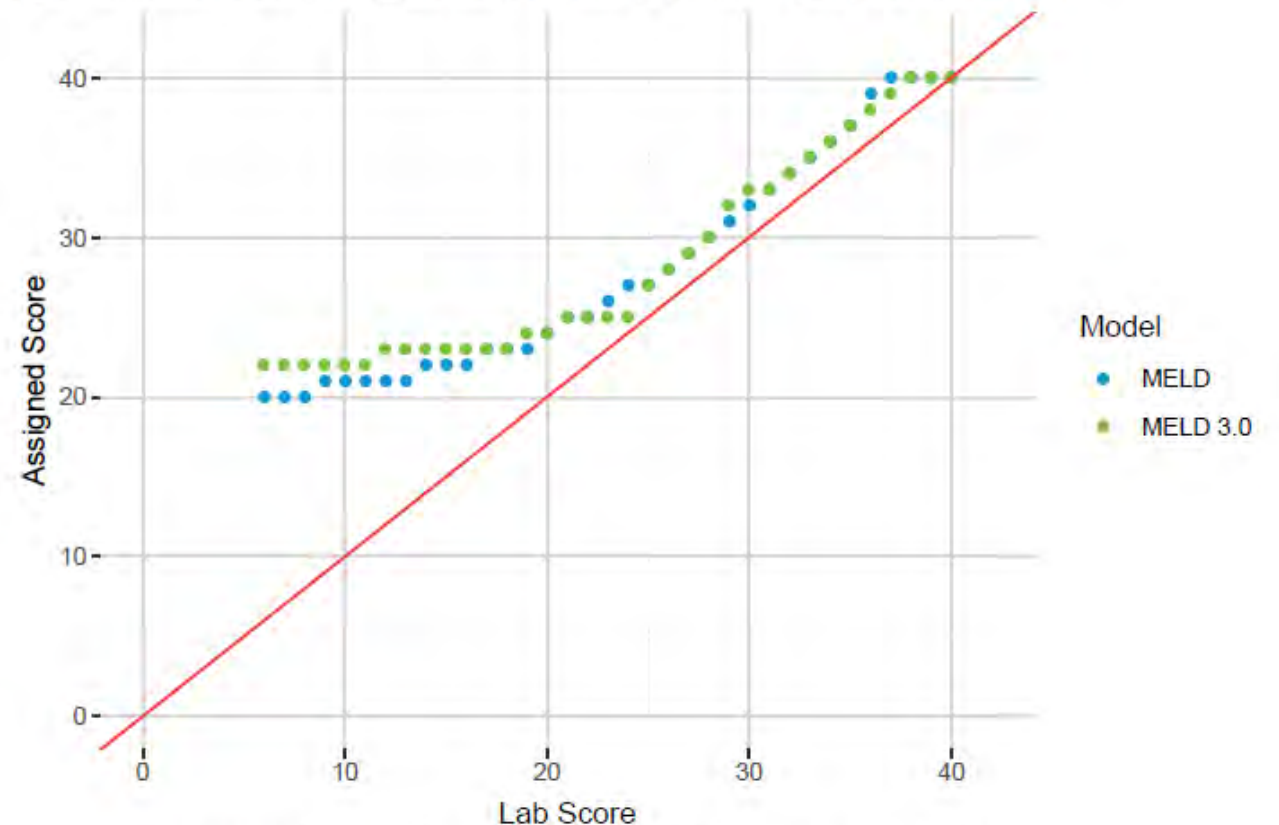
Pre Post



Background: Current Policy

- Adult liver-intestine candidates automatically receive an additional increase in **their MELD or PELD score equivalent to a 10 percentage point increase in risk of 3-month mortality.**
- Pediatric candidates receive **23 additional points to their calculated MELD or PELD score**
- Liver-intestines are offered to liver-intestine candidates across the nation before being offered to any candidates with MELD/PELD below 29 (adult donors)

Figure 3. Scatter Plot of Assigned Score vs. Lab Score under MELD 3.0 and MELD



Based on SRTR data from August 2012 (MELD) and August 2022 (MELD 3.0)

Donor Selection

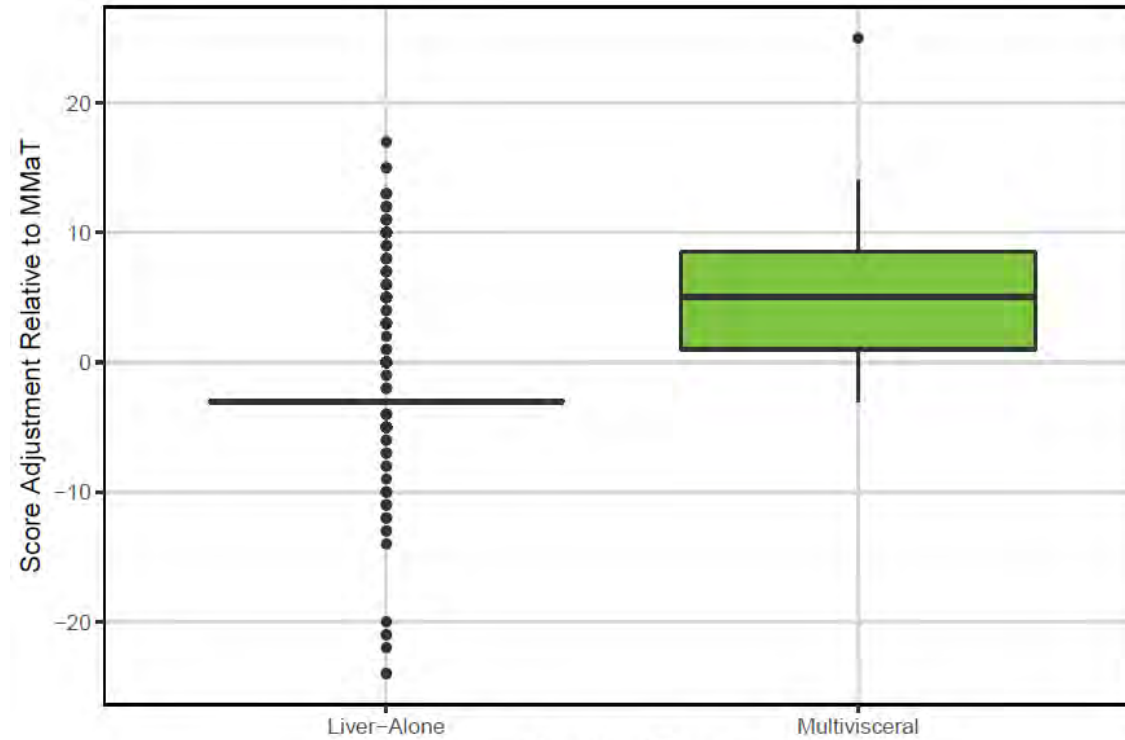
- MVT candidates also need access to **high-quality donors**:
 - No DCD
 - Intestine
 - Maximum donor age should be around 40 years
 - Donor should not require high dose or multiple pressors
 - No ileus
 - Pancreas
 - BMI should be lower than 30
 - No pancreatitis
 - No history of diabetes

Proposal: Guidance Overview

- Applies to all MVT candidates:
 - Liver-intestine-pancreas
 - Liver-intestine
 - Liver-intestine-pancreas-kidney
 - Liver-intestine-kidney
- Score recommendation:
 - MMaT+6 with 3 point increase every 90 days
- Asks transplant programs to provide information on:
 - Previous exception requests
 - Reason candidate needs MVT
- Does not apply to candidates who need liver solely for immunological purposes
- List of typical diagnoses is for reference only; not intended to exclude any MVT candidates from accessing exception

Rationale

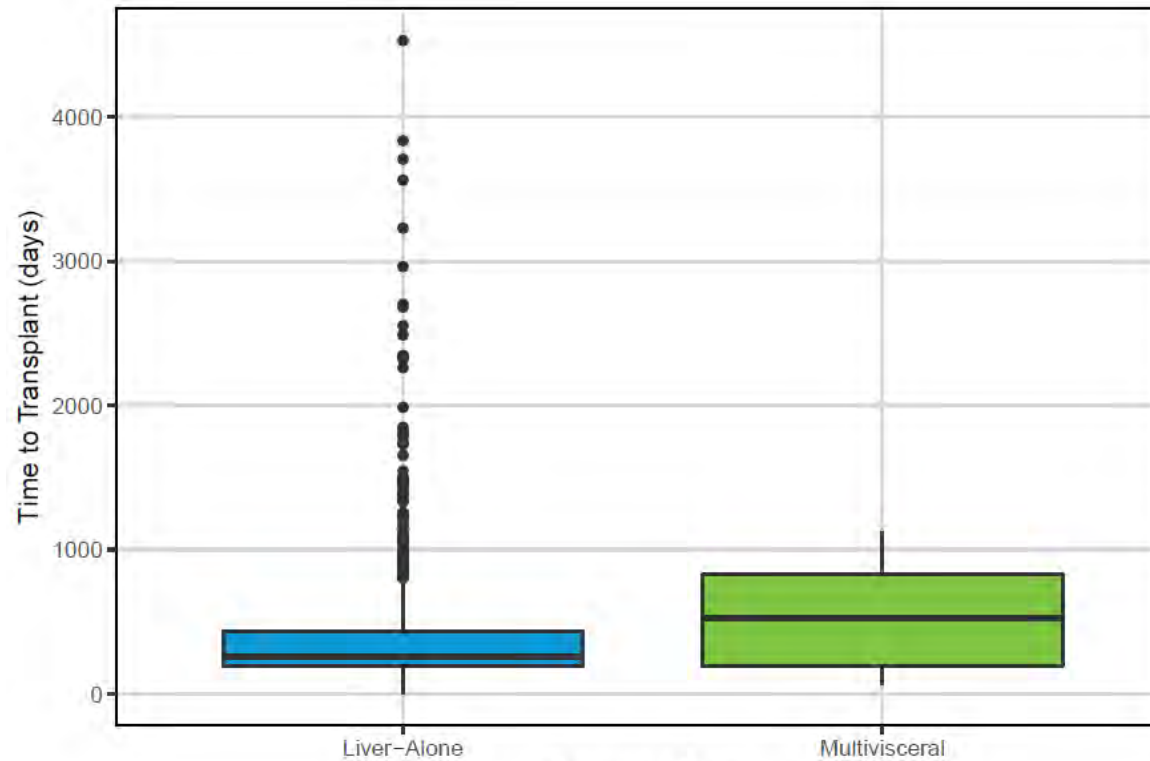
Distribution of MMaT Adjustments for Multivisceral and Liver-Alone Transplant Recipients Transplanted with Exceptions in 2021



Transplant Type	Transplant Type					
	Minimum	25th Percentile	Median	75th Percentile	Maximum	Number of Recipients
Liver-Alone	-24	-3	-3	-3.0	17	1398
Multivisceral	-3	1	5	8.5	25	15

Rationale

Distribution of Time-To-Transplant in Days for Multivisceral and Liver-Alone Transplant Recipients Transplanted with Exceptions in 2021



Transplant Type	Transplant Type					Number of Recipients
	Minimum	25th Percentile	Median	75th Percentile	Maximum	
Liver-Alone	1	191	259.5	431.75	4531	1398
Multivisceral	66	194	524.0	826.00	1123	15

Rationale

- Score recommendation for MMaT+6 with 3 point increase every 90 days balances need for MVT candidates to access higher MELD scores against urgency of high MELD liver-alone candidates
- MMaT+6 generally provides scores higher than MELD 29, which is national sharing threshold for liver-intestines
- Candidates with a calculated MELD score are ranked ahead of candidates with exception MELD score, when MELD score, age category, and blood type compatibility are the same

Member Actions

- Transplant programs and NLRB reviewers will need to be familiar with updated guidance

What do you think?

- The Committee requests feedback from the community on:
 - The proposed exception score for adult MVT candidates in the guidance document
 - Whether the guidance should apply to all adult MVT candidates or should there be more specific criteria