

## ***Notice of OPTN Policy, Guidelines, and Guidance Changes***

# **Enhancements to the National Liver Review Board**

<b>Sponsoring Committee:</b>	<b>Liver and Intestinal Organ Transplantation Committee</b>
<b>Policies Affected:</b>	<b><i>9.4.A: MELD or PELD Score Exception Requests 9.4.C: MELD or PELD Score Exception Extensions 9.4.D: Calculation of Median MELD or PELD at Transplant 9.5.I.vii: Extensions of HCC Exceptions</i></b>
<b>Guidelines Affected:</b>	<b><i>National Liver Review Board Operational Guidelines</i></b>
<b>Guidance Affected:</b>	<b><i>Guidance to Liver Transplant Programs and the National Liver Review Board for Adult MELD Exception Review Guidance to Liver Transplant Programs and the National Liver Review Board for Adult MELD Exceptions for Hepatocellular Carcinoma (HCC)</i></b>
<b>Public Comment:</b>	<b>January 22, 2020 – March 24, 2020</b>
<b>Board Approved:</b>	<b>June 8, 2020</b>
<b>Effective Date:</b>	<b>August 4, 2020: <i>Policies 9.4.A: MELD or PELD Score Exception Requests and 9.4.D: Calculation of Median MELD or PELD at Transplant</i> Operational Guidelines and Guidance Documents Pending implementation and notice to OPTN members: <i>Policies 9.4.C: MELD or PELD Score Exception Extensions and 9.5.I.vii: Extensions of HCC Exceptions</i></b>

### **Purpose of Policy, Guidelines, and Guidance Changes**

The National Liver Review Board (NLRB) was implemented on May 14, 2019. The purpose of the NLRB is to provide equitable access to transplant for liver candidates whose calculated model for end-stage liver disease (MELD) score or pediatric end-stage liver disease (PELD) score does not accurately reflect the candidate's medical urgency for transplant. Since the implementation of the NLRB, the OPTN Liver and Intestinal Organ Transplantation Committee (the Liver Committee) has carefully evaluated the effectiveness of the system and has identified a number of ways in which the NLRB could be improved through updates to the NLRB policy, operational guidelines, and guidance documents. The purpose of this proposal is to improve the NLRB by incorporating feedback from the transplant community. The proposed changes are anticipated to create a more efficient and equitable system for the review of exception requests.

## Proposal History

Prior to the implementation of the NLRB, MELD and PELD exception requests were reviewed by Regional Review Board (RRBs). The implementation of the NLRB marked a significant change in the process for reviewing MELD and PELD exception requests. Due to the significance of the change and complexity of the NLRB, the Liver Committee anticipated that opportunities for improvement would become apparent based on the initial experience of the transplant community with the new system. This proposal incorporates those improvements to the NLRB into OPTN Policy, the operational guidelines, and guidance documents.

## Summary of Changes

The changes included in this proposal are listed below:

- **Policy:** The changes to policy will clarify the scope of the NLRB by instructing reviewers to base decisions on the medical urgency of the candidate, allow any candidate with hepatocellular carcinoma (HCC) meeting standardized extension criteria to be automatically approved, and clarify the update schedule for median MELD at transplant (MMaT) and median PELD at transplant (MPaT) to allow for more time to calculate, communicate, and implement the new scores.
- **Operational Guidelines:** The improvements to the operational guidelines include aligning the scope of the NLRB with the changes to policy, adjusting the threshold and schedule for removing inactive reviewers to reflect differences in individual reviewer caseloads and allow for more timely removal of inactive reviewers, and outlining the process for final appeals to the Committee.
- **Guidance:** The updates to the guidance documents include the addition of guidance for secondary sclerosing cholangitis (SSC) and adults with metabolic disease, the removal of unnecessary language for portopulmonary hypertension (PH), and clarifying that candidates who had HCC more than two years ago that was treated but then recurs should be considered the same as those with no prior HCC only when applying for an initial exception.

## Implementation

Liver transplant programs will need to be familiar with the changes. There is no anticipated fiscal impact on liver transplant programs. There is no anticipated operational or fiscal impact on organ procurement organizations (OPOs) or histocompatibility labs.

The OPTN will need to implement programming changes in UNet<sup>SM</sup> to allow all HCC extension requests that meet standardized extension criteria to be automatically approved. No additional programming will be required for the proposed changes to the MMaT/MPaT update schedule, the operational guidelines, or the guidance documents. The OPTN will also need to communicate the changes and update educational offerings as appropriate.

## Affected Policy Language

New language is underlined (example) and language that is deleted is struck through (~~example~~).

## 9.4 MELD or PELD Score Exceptions

If a candidate's transplant program believes that a candidate's current MELD or PELD score does not appropriately reflect the candidate's medical urgency for transplant, the transplant program may submit a MELD or PELD score exception request to the National Liver Review Board (NLRB).

### 9.4.A MELD or PELD Score Exception Requests

A MELD or PELD score exception request must include *all* the following:

1. A request for a specific MELD or PELD score
2. A justification of how the medical criteria supports that the candidate has a higher MELD or PELD score
3. An explanation of how the candidate's current condition and potential for benefit from transplant would be is comparable to that of other candidates with that MELD or PELD score

Approved MELD or PELD exception scores are valid for 90 days from the date the exception is approved.

### 9.4.C MELD or PELD Score Exception Extensions

#### **9.4.C.i Hepatocellular Carcinoma (HCC) MELD or PELD Score Exception Extensions**

A candidate with an approved exception for HCC is eligible for automatic approval of an extension according to Policy 9.5.1.vii Extensions of HCC Exceptions, even if the initial exception was not a standardized MELD or PELD score exception.

#### **9.4.C.ii Other MELD or PELD Score Exception Extensions**

A candidate's approved exception will be maintained if the transplant hospital enters a MELD or PELD Exception Score Extension Request before the due date, even if the NLRB does not act before the due date. If the extension request is denied or if no MELD or PELD Exception Score Extension Request is submitted before the due date, then the candidate will be assigned the calculated MELD or PELD score based on the most recent reported laboratory values.

Each approved MELD or PELD exception extension is valid for an additional 90 days beginning from the day that the previous exception or extension expired.

### 9.4.D Calculation of Median MELD or PELD at Transplant

Median MELD at transplant (MMaT) is calculated by using the median of the MELD scores at the time of transplant of all recipients at least 12 years old who were transplanted at hospitals within 250 nautical miles of the candidate's listing hospital in the last 365 days, a prior 365 day period.

Median PELD at transplant (MPaT) is calculated by using the median of the PELD scores at the time of transplant of all recipients less than 12 years old in the nation.

The MMaT and MPaT calculations exclude recipients who are either of the following:

1. Transplanted with livers from living donors, DCD donors, and donors from donor hospitals more than 500 nautical miles away from the transplant hospital
2. Status 1A or 1B at the time of transplant.

~~The OPTN Contractor will recalculate the MMaT and MPaT every 180 days using the previous 365-day cohort. If there have been fewer than 10 qualifying transplants within 250 nautical miles of a transplant hospital in the previous 365 days, the MMaT will be calculated based on the previous 730 days.~~ The OPTN will recalculate the MMaT and MPaT twice a year based on an updated cohort. The updated cohort will include transplants over a prior 365 day period. If there have been fewer than 10 qualifying transplants within 250 nautical miles of a transplant hospital in the cohort, the MMaT will be calculated based on a total of a 730 day period.

Exceptions scores will be updated to reflect changes in MMaT or MPaT each time the MMaT or MPaT is recalculated. The following exception scores are not awarded relative to MMaT or MPaT and will not be updated:

1. Exception scores of 40 or higher awarded by the NLRB according to *Policy 9.4.A: MELD or PELD Score Exception Requests*
2. Any exception awarded according to *Policy 9.5.D: Requirements for Hepatic Artery Thrombosis (HAT) MELD Score Exceptions*
3. Exceptions awarded to candidates less than 18 years old at time of registration according to *Policy 9.5.I: Requirements for Hepatocellular Carcinoma (HCC) MELD or PELD Score Exceptions*
4. Initial exceptions and first extensions awarded to candidates at least 18 at time of registration according to *Policy 9.5.I: Requirements for Hepatocellular Carcinoma (HCC) MELD or PELD Score Exceptions*

#### **9.5.I.vii Extensions of HCC Exceptions**

~~In order for a candidate to maintain an approved exception for HCC, the transplant program must submit an updated MELD or PELD Exception Score Request Form that contains the following:~~ A candidate with an approved exception for HCC is eligible for automatic approval of an extension if the transplant program enters a MELD or PELD Exception Score Extension Request that contains the following:

1. Documentation of the tumor using a CT or MRI
2. The type of treatment if the number of tumors decreased since the last request
3. The candidate's alpha-fetoprotein (AFP) level

~~The candidate will then receive the additional priority.~~ The candidate's exception extension will then be automatically approved unless any of the following occurs:

- The candidate's lesions progress beyond T2 criteria, according to *9.5.I.ii: Eligible Candidates Definition of T2 Lesions*

- The candidate’s alpha-fetoprotein (AFP) level was less than or equal to 1,000 ng/mL on the initial request but subsequently rises above 1,000 ng/mL
- The candidate’s AFP level was greater than 1,000 ng/mL, the AFP level falls below 500 ng/mL after treatment but before the initial request, then the AFP level subsequently rises to greater than or equal to 500 ng/mL
- The candidate’s tumors have been resected since the previous request
- The program requests a score different from the scores assigned in Table 9-10.

When a liver candidate at least 18 years old at the time of registration submits an initial request or the first extension request that meets the requirements for a standardized MELD score exception, the candidate will receive a MELD score of 6, and appear on the match according to that exception score or the calculated MELD score, whichever is higher.

A candidate who meets these requirements for a ~~standardized~~ MELD or PELD score exception for HCC will be assigned a score according to *Table 9-10* below.

**Table 9-10: HCC Exception Scores**

Age	Age at registration	Exception Request	Score
At least 18 years old	At least 18 years old	Initial and first extension	6
At least 18 years old	At least 18 years old	Any extension after the first extension	3 points below MMat
At least 12 years old	Less than 18 years old	Any	40
Less than 12 years old	Less than 12 years old	Any	40

# National Liver Review Board Operational Guidelines

## 1. Overview

The purpose of the National Liver Review Board (NLRB) is to provide fair, equitable, and prompt peer review of exceptional candidates whose medical urgency is not accurately reflected by the calculated MELD/PELD score. The NLRB will base decisions on policy, the guidance documents, and in cases which lack specific guidance, the medical urgency of the candidate as compared to other candidates with the same MELD or PELD score.

The NLRB is comprised of specialty boards, including:

- Adult Hepatocellular Carcinoma (HCC)
- Adult Other Diagnosis
- Pediatrics, which reviews requests made on behalf of any candidate registered prior to turning 18 years old and adults with certain pediatric diagnoses

The immediate past-Chair of the Liver and Intestinal Organ Transplantation Committee serves as the Chair of the NLRB for a two year term.

## 2. Representation

Every active liver transplant program may appoint a representative and alternate to each of the adult specialty boards. A liver transplant program with an active pediatric component may appoint a representative and alternate to the pediatric specialty board. Individuals may serve on more than one specialty board at the same time. Transplant programs are encouraged to appoint representatives from both hepatology and surgery who have active transplant experience. Liver transplant programs are not required to provide a representative to the NLRB.

Representatives and alternates serve a one year term. A liver transplant program may appoint the same representative or alternate to serve consecutive terms.

If a transplant hospital withdraws or inactivates its liver program, it may not participate in the NLRB. However, the transplant hospital's participation may resume once it has reactivated its liver program.

## 3. Representative and Alternate Responsibilities

Prior to each term of service, representatives and alternates are required to sign the *UNOS Confidentiality and Conflict of Interest Statement* and complete orientation training.

Representatives must vote within 7 days on all exception requests, exception extension requests, and appeals. A representative will receive an e-mail reminder after day 3 and day 5 if the representative has an outstanding vote that must be completed. On the eighth day, if the vote has not been completed, then the request will be randomly reassigned to another representative. The original reviewer will receive a notification that the request has been reassigned.

The representative must notify UNOS in UNet<sup>SM</sup> of an absence, during which the alternate will fulfill the responsibilities of the representative.

If a representative or alternate does not vote on an open request within 7 days on ~~three separate instances~~ more than 5% of the cases assigned to that reviewer within a ~~12~~ 6 month period, the Chair may ~~will~~ remove the individual from the NLRB. If a representative or alternate does not vote because a case is approved and closed before the 7 day timeframe expires, it is not considered a failure to vote. A representative or alternate who has been removed for failure to perform the duties required is not eligible to serve again for 3 years.

If a transplant program exhibits a pattern of non-responsiveness, as evidenced by the removal of two members from the NLRB, the Chair may suspend the program's participation for a period of three months after notifying the program director. Further non-compliance with the review board process may result in cessation of the program's representation on the NLRB until such a time as the transplant hospital can satisfactorily assure the Chair that it has addressed the causes of non-compliance.

#### **4. Voting Procedure**

An exception request is randomly assigned to five representatives of the appropriate specialty board. A representative may vote to approve or deny the request, or ask that the request be reassigned. The request must achieve four out of five affirmative votes in order to be approved. If the request does not achieve the necessary four affirmative votes, it is denied.

As part of the MELD/PELD Exception program in UNet<sup>SM</sup>, NLRB members are notified of new cases by email. ~~To access the exception request, click on the emailed link or go to <https://www.unet.unos.org/>. Log in using your UNet<sup>SM</sup> username and password and click on "Waitlist," then "NLRB."~~

Voting on an exception request is closed either at the end of the appeal period or when no additional votes will change the outcome of the vote, whichever occurs earlier. Members no longer have the ability to vote once a request is closed.

#### **5. Appeal Process**

A liver program may appeal the NLRB's decision to deny an exception request. Patients are not eligible to appeal exception requests. All reviewer comments are available in UNet<sup>SM</sup>. The NLRB advises programs to respond to the comments of dissenting reviewers in the appeal.

The same five members that reviewed the original request will review the appeal. The appeal must achieve four out of five affirmative votes in order to be approved. If the appeal does not achieve the necessary four affirmative votes, it is denied. If the appeal is denied, the liver program may request a conference call with the Appeals Review Team (ART).

If the ART denies the request, the liver program may initiate a final appeal to the Liver and Intestinal Organ Transplantation Committee (Liver Committee). Referral of cases to the ~~Liver and Intestinal Organ Transplantation~~ Committee will include information about the number of previous referrals from that program and the outcome of those referrals.

## **6. Appeals Review Team (ART)**

At the beginning of each new service term, nine NLRB members are randomly assigned to serve each month of the year on the ART. There may be multiple ARTs, depending on the volume of cases. An NLRB member will be selected to serve for no more than one month each year on the ART. The ART meets via conference call at the same day and time each week; however calls may be rescheduled in advance to accommodate federal holidays.

In the event of a planned absence, the ART member may designate their alternate to serve. The representative must notify UNOS of this in UNet<sup>SM</sup>.

Five members of the ART must participate in the call. If at least five members do not attend the call, the appeal will be rescheduled for the following regularly scheduled conference call. If at least five members do not attend the second attempt to review the appeal, the candidate's exception request is automatically approved.

The appeal must achieve a majority plus one affirmative votes in order to be approved.

A representative at the petitioning program may serve as the candidate's advocate. If a representative is unable to attend the conference call, the program may ask for the appeal to be scheduled for the following regularly scheduled conference call. If after two attempts a representative is unable to attend the call, the ART will review the appeal without the program's participation. In the absence of a representative on the conference call, the program may submit written information for the ART's consideration.

The ART will work with UNOS staff to document the content of the discussion and final decision in UNet<sup>SM</sup>.

## **7. Liver Committee Review**

The Liver Committee may delegate review to a subcommittee. If the review is delegated, majority is based on the size of the subcommittee.

Appeals to the Liver Committee will be considered electronically unless at least one member of the Liver Committee requests a conference call. If the case is discussed on a conference call, quorum is a majority of the Liver Committee (or the subcommittee, if delegated).

The appeal must achieve a majority affirmative votes in order to be approved.



# Guidance to Liver Transplant Programs and the National Liver Review Board for Adult MELD Exception Review

## Portopulmonary Hypertension

Candidates meeting the criteria in *Policy 9.5: Specific Standardized MELD or PELD Score Exceptions* are eligible for MELD or PELD score exceptions that do not require evaluation by the full Review Board. ~~The transplant program must submit a request for a specific MELD or PELD score exception with a written narrative that supports the requested score. Templates were developed for these exceptions to aid the transplant programs in the process of submitting the required information to justify the exception. The Committee recommends that the following three elements be considered in reviewing the exception application in addition to the requirements listed in policy for the purposes of policy research:~~

- ~~1. Although policy only requires reporting of the MPAP and PVR, complete Hemodynamics should be reported, including MPAP, PVR, PWAP and CO.~~
- ~~2. To be considered abnormal, the initial mean pulmonary artery pressure (MPAP) should be  $>35$  mmHg and pulmonary vascular resistance (PVR) levels should be  $> 240$  dynes.s.cm<sup>-5</sup>.~~
- ~~3. The initial transpulmonary gradient (MPAP - PVR) to correct for volume overload should be  $> 12$  mmHg~~

~~As noted in policy, these candidates will receive a MELD score of 22/ PELD score of 28. In order to qualify for MELD/PELD extensions and a 10% mortality equivalent increase in points, the required documentation must be resubmit every three months and the mean pulmonary arterial pressure (MPAP) must remain below 35 mmHg, confirmed by repeat heart catheterization.~~

## Primary Sclerosing Cholangitis or Secondary Sclerosing Cholangitis

Candidates with Primary Sclerosing Cholangitis (PSC) or Secondary Sclerosing Cholangitis (SSC) historically have low mortality rates, and therefore do not need exception scores. Based on clinical experience and a review of the available literature, the Committee recommends that four specific elements be considered.

**Transplant programs should provide the following criteria when submitting exceptions for PSC or SSC. The Review Board should consider the following criteria when reviewing exception applications for candidates with PSC or SSC.**

The candidate must meet both of the following two criteria:

1. The candidate has been admitted to the intensive care unit (ICU) two or more times over a three month period for hemodynamic instability requiring vasopressors
2. The candidate has cirrhosis

In addition the candidate must have one of the following criteria:

- The candidate has biliary tract stricture which are not responsive to treatment by interventional radiology (PTC) or therapeutic endoscopy (ERCP) or

- The candidate has been diagnosed with a highly-resistant infectious organism (e.g. Vancomycin Resistant Enterococcus (VRE), Extended Spectrum Beta-Lactamase (ESBL) producing gram negative organisms, Carbapenem-resistant Enterobacteriaceae (CRE), and Multidrug-resistant Acinetobacter.)

## Metabolic Disease

Adults who develop metabolic symptoms secondary to an inherited organic acidemia or urea cycle defect which are typically transplanted during infancy or childhood may be suitable for MELD exception. Given later onset, anticipate a reduced urgency compared to early-onset disease, thus priority for transplant may be similar to other exceptions, though if a patient has more urgent medical condition, as reflected by life-threatening complications, a higher priority score can be considered.

# Guidance to Liver Transplant Programs and the National Liver Review Board for Adult MELD Exceptions for Hepatocellular Carcinoma (HCC)

## Recommendation

1. Patients with the following are contraindications for HCC exception score:

- Macro-vascular invasion of main portal vein or hepatic vein
- Extra-hepatic metastatic disease
- Ruptured HCC
- T1 stage HCC

While in most cases, ruptured HCC and primary portal vein branch invasion of HCC would be contraindications, some patients who remain stable for a prolonged (minimum of 12 months) interval after treatment for primary portal vein branch invasion or after ruptured HCC may be suitable for consideration.

2. Patients who have a history of prior HCC more than→2 years ago which was completely treated with no evidence of recurrence, who develop new or recurrent lesions after 2 years should generally be considered the same as those with no prior HCC, in order to determine the current stage suitability for an initial MELD exception, and initial MELD exception score assignment.