

Briefing to the OPTN Executive Committee on


Access for Urgent Liver Candidates in Hawaii and Puerto Rico

OPTN Liver and Intestinal Organ Transplantation Committee

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Access for Urgent Liver Candidates in Hawaii and Puerto Rico

<i>Affected Policies:</i>	<i>9.8.E Allocation of Livers from Non-DCD Deceased Donors at Least 18 Years Old and Less than 70 Years Old</i> <i>9.8.F Allocation of Livers from Non-DCD Deceased Donors 11 to 17 Years Old</i> <i>9.8.G Allocation of Livers from Non-DCD Deceased Donors Less than 11 Years Old</i> <i>9.8.I Allocation of Liver-Intestines from Non-DCD Deceased Donors at Least 18 Years Old and Less than 70 Years Old</i> <i>9.8.K Allocation of Liver-Intestines from Non-DCD Donors Less than 11 Years Old</i> <i>9.11.D Closed Variance for Liver Transplantation in Hawaii and Puerto Rico</i>
<i>Sponsoring Committee:</i>	<i>Liver and Intestinal Organ Transplantation</i>
<i>Public Comment Period:</i>	<i>December 5, 2019 – January 9, 2020</i>
<i>Executive Committee Date:</i>	<i>January 16, 2020</i>

Executive Summary

For liver candidates listed in Hawaii or Puerto Rico who are in urgent need of a liver transplant, there may not be a donor of compatible blood type within 500 nautical miles (NM) in the necessary time frame. To address this potential issue, the Liver and Intestinal Organ Transplantation Committee (the Committee) submitted a proposal for public comment from December 5, 2019 to January 9, 2020. The proposal would create additional geographic units that only apply to urgent candidates listed in Hawaii or Puerto Rico in order to broaden the pool of donors for whom these candidates would be likely to receive offers. For candidates in Hawaii, there would be an additional unit of distribution of 2,400 NM between the donor and transplant hospitals. For candidates in Puerto Rico, there would be an additional unit of distribution of 1,100 NM between the donor and transplant hospitals. These additional units of distribution would follow allocation classifications for candidates of similar medical urgency within 500 NM of the donor hospital.

The additional units of distribution are being proposed as a variance and will be implemented only if the Acuity Circles policy is implemented.¹

¹ Liver and Intestine Distribution Using Distance from Donor Hospital, OPTN/UNOS Liver and Intestinal Transplantation Committee, December 2018, https://optn.transplant.hrsa.gov/media/2766/liver_boardreport_201812.pdf.

Purpose of Proposal

The proposal is intended to reduce the likelihood that an urgent liver candidate listed in Hawaii or Puerto Rico will die prior to receiving a liver offer. Because the number of liver donors available in these locations is relatively limited, the availability of donor livers is particularly important for candidates with a high likelihood of death within one or two weeks without a liver transplant.²

This proposal will improve timely access to donors for candidates listed as Status 1A, Status 1B, or with a model for end stage liver disease (MELD) or pediatric end-stage liver disease (PELD) score of 37 or higher in Hawaii and Puerto Rico. It will provide additional access to donors that become available in the closest parts of the continental United States by creating additional geographic units of 1,100 NM and 2,400 NM for candidates in Puerto Rico and Hawaii respectively. Candidates listed at the transplant programs in Hawaii and Puerto Rico will receive offers for livers from donor hospitals within these distances of the transplant program right after candidates of similar medical urgency within 500 NM of those donor hospitals. This will increase the likelihood that a donor of an acceptable blood type match becomes available for candidates on these islands within the critical timeframe.

Background

In December 2018, the OPTN Board of Directors (the Board) approved the Acuity Circles policy, which changed the units of distribution used in the allocation of deceased donor livers from donation service areas (DSAs) and OPTN Regions to a series of concentric circles.³

Questions about what impact the Acuity Circles policy would have on medically urgent candidates in Hawaii and Puerto Rico were initially raised during public comment for the allocation changes. At that time, the Committee chose to take more time to consider the impact and develop a solution.

In the Acuity Circle policy, livers are allocated to highly urgent candidates listed at transplant programs within 500 NM of the donor hospital early in the allocation sequence. However, the Committee was concerned that the geographic isolation of Hawaii and Puerto Rico meant that the number of deceased donor livers available within 500 NM of the transplant programs on the two islands would not be sufficient for highly urgent liver candidates.

Subsequently, the Committee formed a work group with representatives from the programs in Hawaii and Puerto Rico to evaluate the problem and develop a solution. The work group included two Committee members from Washington. The Committee also reached out to members of the community in California and Florida for more information on the potential impact the proposal may have on these areas.

Candidates listed as Status 1A, Status 1B, or with MELD or PELD 37 or higher do not have the ability to wait weeks or months for a suitable liver offer. In fact, candidates listed as Status 1A have an estimated 14-day waitlist survival probability of 71%, and those with MELD scores of 36-40 have a 14-day waitlist survival probability of 70%.⁴ Most of the waitlist deaths for Status 1A occur in the first seven days after

² In Hawaii, there were 28 livers recovered in 2018 and 26 livers recovered in 2017. In Puerto Rico, 83 livers were recovered in 2018 and 70 were recovered in 2017. Presentation for May 8, 2019 Meeting, OPTN Hawaii and Puerto Rico Workgroup

³ Liver and Intestine Distribution Using Distance from Donor Hospital, OPTN/UNOS Liver and Intestinal Transplantation Committee, December 2018, https://optn.transplant.hrsa.gov/media/2766/liver_boardreport_201812.pdf.

⁴ Sharma, P. , Schaubel, D. E., Gong, Q. , Guidinger, M. and Merion, R. M. (2012), End-stage liver disease candidates at the highest model for end-stage liver disease scores have higher wait-list mortality than status-1A candidates. *Hepatology*, 55: 192-198. doi:10.1002/hep.24632

listing as Status 1A.⁵ As a result, it is crucial that urgent candidates listed in Hawaii and Puerto Rico have appropriate access to donor livers.

However, the transplant programs in Hawaii and Puerto Rico experience a unique scarcity of donors within 500 NM. Table 1 below shows the average number of deceased liver donors within 500 NM in a week, by blood type, for the 10 transplant programs in the United States with the lowest averages. As shown in Table 1, there is less than one donor of each blood type on average within a week for the Hawaii and Puerto Rico transplant programs.

Table 1: Average Number of Deceased Liver Donors Per Week at Donor Hospitals Within 500 Nautical Miles of Liver Transplant Centers, During May 1, 2018 Through April 30, 2019, By Donor Blood Type

Transplant Center Code ⁶	A	AB	B	O
HIQM	0.23	0.04	0.15	0.21
PRSJ	0.45	0.02	0.17	0.74
WACH	2.60	0.23	0.55	2.98
WASM	2.60	0.23	0.55	2.98
WAUW	2.60	0.23	0.55	2.98
ORUO	4.15	0.29	1.04	5.45
ORVA	4.15	0.29	1.04	5.45
COCH	5.21	0.44	1.74	6.92
COUC	5.21	0.44	1.74	6.92
COSL	5.26	0.44	1.75	7.04

This analysis is limited to the number of donors, without considering how many compatible candidates might be listed at any given status in an area at any point in time. Although Hawaii and Puerto Rico each have relatively small numbers of candidates, the goal of this proposal is not to match the population of donors to the population of candidates. Instead, it is intended to increase access to timely offers for medically urgent candidates where that access is limited by extreme geographic isolation of the transplant program.

In order to ensure that the proposed changes will increase the availability of livers for urgent candidates in Hawaii and Puerto Rico, the Committee considered historical patterns of liver offer acceptance for the programs in Hawaii and Puerto Rico. By considering this data, the Committee was able to confirm that the proposed geographical units include those donor hospitals from which the transplant programs will accept an offer.

Figure 1 demonstrates that the closest cluster of donors outside of 500 NM of Puerto Rico is within 1,100 NM. Figure 2 demonstrates that the largest cluster of donors more than 500 NM away from Hawaii is within 2,400 NM. These data informed the Committee’s recommendation to adopt an additional classification for urgent liver candidates in Hawaii and Puerto Rico with distances of 2,400 NM and 1,100 NM, respectively, between the donor and transplant hospitals.

The 1,100 NM threshold was preferred for Puerto Rico based on concerns about decreased efficiency and increased cold ischemic time that may impact organ quality. The Committee also sought to avoid

⁵ Figure 13: Waitlist Mortality Over Time, Liver and Intestine Distribution Using Distance from Donor Hospital, OPTN/UNOS Liver and Intestinal Transplantation Committee, December 2018, https://optn.transplant.hrsa.gov/media/2766/liver_boardreport_201812.pdf.

⁶ In the transplant center codes, the first two letters are the state or territory abbreviation. For example, Auxilio Mutuo Hospital’s center code begins with “PR” because it is located in Puerto Rico.

over-adjusting and providing these candidates an advantage relative to other candidates with the same medical urgency listed within the contiguous United States. The Committee agreed that a 1,100 NM circle provided sufficient access to donor organs for urgent candidates in Puerto Rico without unnecessarily impacting OPOs, donor hospitals, or transplant programs in the area.

Similarly, the Committee preferred a 2,400 NM circle for Hawaii because it would provide sufficient access to donor organs, but limited the impact on OPOs, donor hospitals, and transplant programs only to the extent necessary.

Figure 1: Distances from Donor Hospital to Transplant Hospital, Deceased Donor Liver Transplant Recipients at Auxilio Mutuo Hospital (PRJ) During 1/1/2012 to 10/31/2019

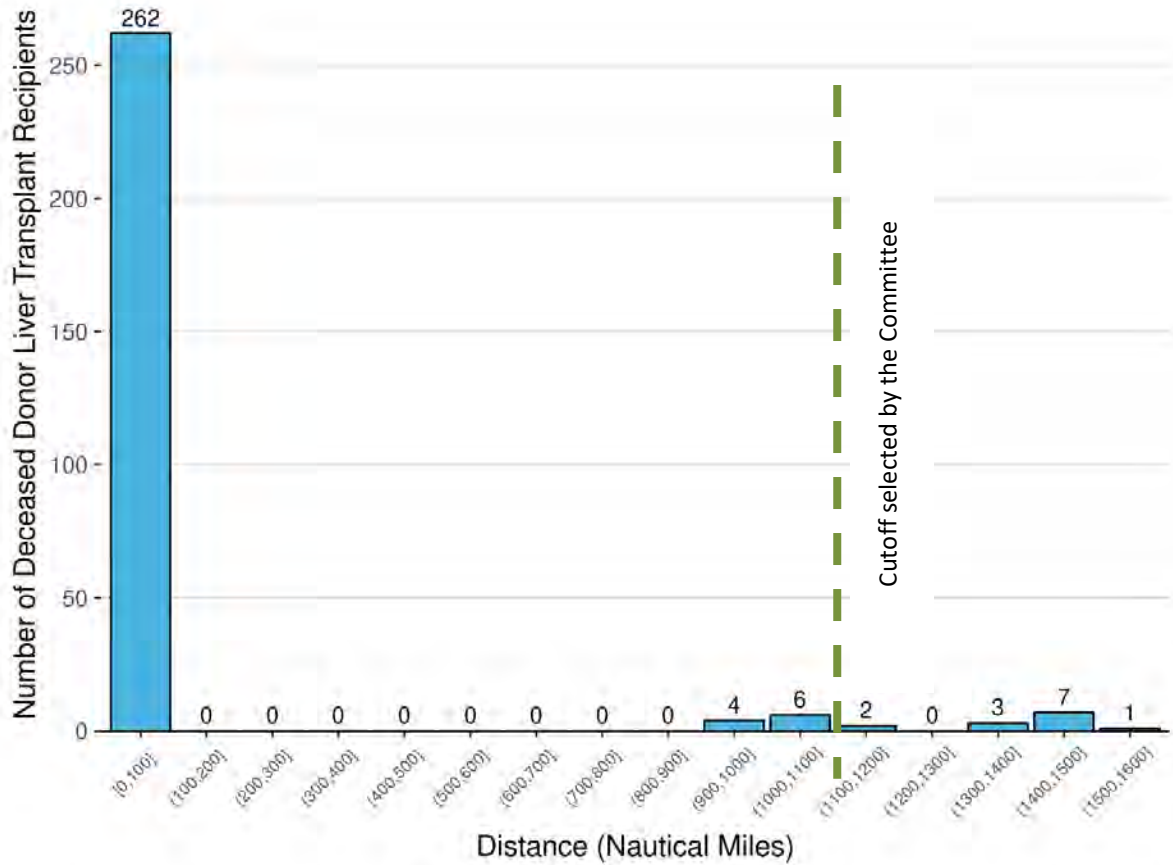
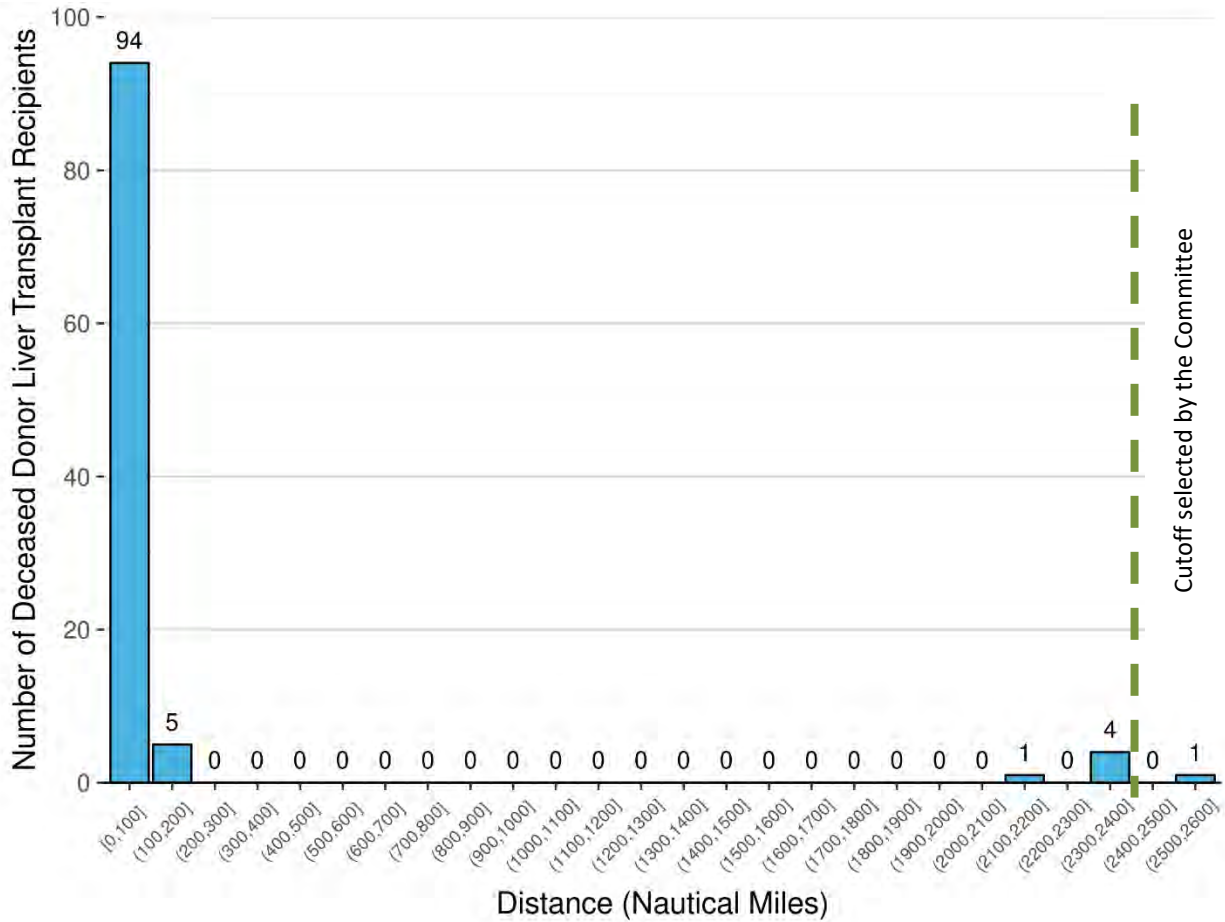
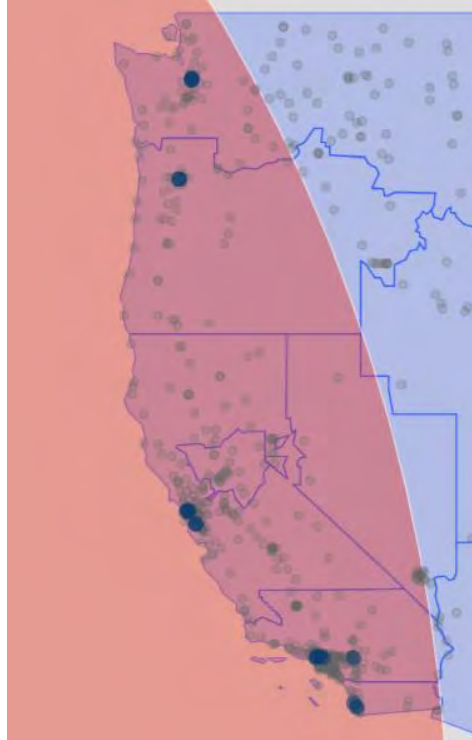


Figure 2: Distances from Donor Hospital to Transplant Hospital, Deceased Donor Liver Transplant Recipients at The Queen’s Medical Center (HIQM) During 1/1/2012 to 10/31/2019



In Figure 3, grey dots represent donor hospitals and navy dots represent other liver transplant programs. Donors located at donor hospitals within the red shaded portion of the United States will be included in the proposed classifications for potential transplant recipients in Hawaii that are Status 1A, Status 1B, or have a MELD or PELD score of 37 or higher.

Figure 3: Illustration of 2,400 NM Distance from The Queen’s Medical Center (HIQM)



In Figure 4, grey dots represent donor hospitals and navy dots represent other liver transplant programs. Donors located at donor hospitals within the redshaded portion of the United States will be included in the proposed classifications for potential transplant recipients in Puerto Rico that are Status 1A, Status 1B, or have a MELD or PELD score of 37 or higher.

Figure 4: Illustration of 1,100 NM Distance from Auxilio Mutuo Hospital (PRSJ)



Historical acceptance patterns are limited in their ability to predict which organs are likely to be accepted once the Acuity Circles changes to allocation are implemented because they are based on data from the current allocation system. Because of the small numbers of candidates affected, modeling would not provide sufficient inferences to determine the optimal distance to extend allocation. The Final Rule requires sound medical judgment to drive decision-making.⁷ In the Committee's judgment, the selected distances are an appropriate balance between ensuring sufficient access for urgent candidates, minimizing logistical challenges, such as increased travel and cold ischemic time, and treating candidates similarly.

To address these limitations, the Committee proposes this change as a variance that the Committee will evaluate for five years. The Committee chose a period of five years because the number of candidates affected by the variance is expected to be small, and a five year period is likely to provide more data for evaluation than a shorter time period would provide.

The proposed changes included in this proposal will be incorporated into the Acuity Circle policy, and will not be implemented while DSAs and OPTN Regions are the geographic units used in the allocation of deceased donor livers.⁸

Overview of Proposal

The Committee proposes a closed variance for liver allocation for five years. Under the variance, two distances for distribution will be added, creating additional classifications in the already approved classification tables. An additional distance of 1,100 NM will only apply for the most medically urgent candidates listed at a transplant hospital located in Puerto Rico. An additional distance of 2,400 NM will only apply for the most medically urgent candidates listed at a transplant hospital in Hawaii. These additional distances will follow the 500 NM classifications for Status 1A and 1B candidates, and 500 NM classifications for candidates with a MELD or PELD of 37.

There are certain types of donors where the allocation priority would not apply. Based on the clinical judgement of the Committee, the additional distances will not apply when the donor is 70 years old or older or is a DCD donor due to the reduced likelihood that the offer would be accepted at the greater distances.⁹

Additionally, there are certain donor types where the proposed classifications would not occur until a significant number of offers had already been made. As such, the Committee agreed that it was unlikely that these donors would be accepted for urgent candidates from that distance after that much cold ischemic time has accrued. Those donors include:

- When the donor is less than 18 years old and the candidate was listed after their 18th birthday
- When the donor is blood type O and the candidate is blood type A or AB
- When the liver is allocated for other methods of hepatic support

In each of these instances, the organ will have already been offered to a significant number of candidates and is therefore unlikely to be accepted for an urgent candidate at a long distance.

⁷ 42 CFR 121.8.

⁸ OPTN Policy Notice, *Liver and Intestine Distribution Using Distance from Donor Hospital*, OPTN/UNOS Liver and Intestinal Transplantation Committee, January 2019, https://optn.transplant.hrsa.gov/media/2788/liver_policynotice_201901.pdf.

⁹ Enhancing Liver Distribution, OPTN/UNOS Liver and Intestinal Transplantation Committee, December 2017, https://optn.transplant.hrsa.gov/media/2329/liver_boardreport_201712.pdf

The proposal does not address liver transplant candidates in Alaska, as there is no liver transplant program in Alaska.

The Committee will review the outcomes of the variance as described in “Research Design” below on an annual basis. Based on this data and any other data requested, the Committee can recommend to the Board that the variance be altered, incorporated into policy, or terminated at any time. For example, the Committee can decide that, based on the data provided, the proposed circle sizes must be widened or narrowed to provide equitable access. This recommendation would then go to the Board for consideration and approval. *OPTN Policy 1.3: Variances* allows the Board to extend, amend, or terminate a variance at any time.

The variance is proposed to end after five years. At the end of the five year period, if not before, the Committee will make its final recommendation to the Board.

Compliance with the OPTN Final Rule

The Final Rule requires that “experimental policies that test methods of improving allocation” must be developed “in accordance with §121.4”, which in turn incorporates the requirements in §121.8.¹⁰ This proposal meets the requirements of the Final Rule.

- **Shall be based on sound medical judgment:** The Committee proposes this change based on the medical judgment and data that support that Status 1 and high MELD or PELD candidates have greater waitlist mortality in a shorter period than those with lower MELD or PELD scores, and data that support that Status 1 and high MELD or PELD candidates in Hawaii and Puerto Rico are likely to have access to fewer compatible donors in a timely manner under the newly adopted liver allocation policy.
- **Shall seek to achieve the best use of donated organs:** The Committee believes that maximizing the gift of organ donation by using each donated organ to its full potential achieves the best use of donated organs. This proposal seeks to make the best use of donated organs by using them for the most medically urgent candidates first, within a rationally determined geographic distribution unit. Historic data demonstrate that livers from up to 2,400 NM away have been successfully transplanted in recipients in Hawaii, and 1,100 NM away in Puerto Rico.
- **Shall be designed to avoid wasting organs, to avoid futile transplants, ... and to promote the efficient management of organ placement:** This variance is designed to promote efficient placement and avoid wasting organs by limiting the size of the circles to those donors that are more likely to be accepted for urgent candidates by the transplant programs in Hawaii and Puerto Rico, based in part on the logistical and geographic feasibility of transporting them to these isolated locations. This may help mitigate poor outcomes or lost opportunities to transplant that may result from excessive cold ischemia times if the additional distribution unit were to be larger.
- **Shall be reviewed periodically and revised as appropriate:** This variance will be reviewed annually and will be due to expire or be revised, if needed, in five years. If successful in achieving the goals without adverse results, it will be recommended to become part of standing policy.
- **Shall be designed to...promote patient access to transplantation:** This proposal promotes access to transplant for medically urgent liver candidates in Hawaii and Puerto Rico by providing these urgent candidates access to livers from a greater distance in order to improve the

¹⁰ 42 CFR 121.8.

likelihood that they will receive an offer from a medically acceptable donor within a critically short time period.

- **Shall not be based on the candidate’s place of residence or place of listing, except to the extent required [by the aforementioned criteria]:** This proposal is limited to certain candidates based on their place of listing in geographically isolated areas in order to promote access to transplantation within a reasonable time, while:
 - achieving the best use of the organs by ensuring they are offered to these medically urgent candidates before they are offered to less urgent candidates,
 - balancing the goal of promoting efficient placement of organs by minimizing the size of the distribution units to a circle that will reasonably provide access to the candidates without unduly adding logistical challenges
 - minimizing the risk of organ wastage or futile transplants by ensuring that the circle size is reasonable in its presumed correlation to cold ischemic time.

Although the proposal outlined in this briefing paper addresses certain aspects of the Final Rule listed above, the Committee does not expect impacts on the following aspects of the Final Rule:

- Shall preserve the ability of a transplant program to decline an offer of an organ or not to use the organ for the potential recipient in accordance with §121.7(b)(4)(d) and (e);
- Shall include appropriate procedures to promote and review compliance including, to the extent appropriate, prospective and retrospective reviews of each transplant program's application of the policies to patients listed or proposed to be listed at the program.

Variance Requirements

In addition to meeting the Final Rule allocation policy requirements, this proposal meets the Final Rule and OPTN policy requirements for variances. The Final Rule requires that variances “be accompanied by a research design and include data collection and analysis plans.”¹¹ Further, OPTN Policy requires that proposed variances include certain information.¹² This variance proposal includes the required information to create a variance.

- **Purpose ... and how the variance will further this purpose:** The purpose of this variance is to address a particular scarcity of medically compatible donors within 500 NM of two transplant programs that affects the candidates listed at those hospitals who need a liver transplant most urgently.
- **If a member’s application to create, amend, or join a variance will require other members to join the variance, the applicant must solicit their support...:** Representatives from the liver transplant programs in Hawaii and Puerto Rico were involved in the development of this proposal and support it. No other members are required to join the variance.
- **A defined expiration date ... :** The variance is proposed to expire five years after implementation. Based on the evaluation of the variance, the Committee will then either recommend that the variance be modified, terminated, replaced with a national policy, or extended to collect more data.
- **An evaluation plan ... :** The Committee’s plan for evaluating the impact of the variance is outlined in the Research Design section below.

¹¹ 42 CFR 121.8(g).

¹² OPTN Policy 1.3.B: Application for a Variance

- **Any anticipated difficulties in demonstrating whether the variance is achieving its stated purpose:** Not many candidates are expected to utilize this variance, so it may be difficult to evaluate the impact of the variance.
- **Whether this is an open or closed variance ... :** This will be a closed variance and apply only to liver transplant programs in Hawaii or Puerto Rico.

Community Feedback

The proposal was posted for special public comment from December 5, 2019 to January 9, 2020. All comments provided during the public comment period were supportive of the proposed solution. Specifically, the American Society of Transplant Surgeons, the Starzl Network for Excellence in Pediatric Transplantation, NATCO, the Association of Organ Procurement Organizations, the American Society of Transplantation, and the Society for Pediatric Liver Transplantation either supported or strongly supported the proposal. Auxilio Mutuo Hospital, the liver transplant program in Puerto Rico, also offered their strong support for the proposal. The OPTN Transplant Coordinators Committee strongly supported the proposal as well. The Committee reviewed and discussed the results of public comment during a meeting on January 10, 2020. The Committee unanimously voted to send the proposal for consideration by the Board with no changes.¹³

Alignment with OPTN Strategic Plan

This proposal is aligned with the OPTN Strategic Plan goal of increasing equity in access to transplants. The variance is expected to improve equitable access to transplant for urgent liver candidates in Hawaii and Puerto Rico.

Potential Fiscal Impact of Proposal

Minimal or no fiscal impact to members is expected.

Implementation and Operational Considerations

Overview

The proposal is scheduled to be implemented as close to the implementation of the Acuity Circles policy as feasible. It will not be implemented while the allocation of deceased donor livers uses DSAs and OPTN Regions as the geographic units of distribution.

OPTN actions

Programming changes will be required to implement this variance. Changes will be made to the liver and liver-intestine allocation systems to add the additional classifications.

UNOS will follow established protocols to inform members and provide educational materials regarding any policy changes.

Member actions

OPOs will continue to follow the match run when allocating livers and liver-intestines. OPOs that serve donor hospitals within 2,400 NM of Hawaii or 1,100 NM of Puerto Rico may work with the transplant

¹³ The Committee met on January 10, 2020 to review public comments and vote on sending the proposal for consideration by the OPTN Executive Committee. Eleven Committee members supported sending the proposal to the Executive Committee. No Committee members abstained or opposed. OPTN Liver Committee Meeting Summary, January 10, 2020

programs in Hawaii or Puerto Rico more often, though the volumes of candidates affected by this proposed variance are expected to be low.

Post-implementation Monitoring

Member Compliance

The proposed language will not change the current routine monitoring of OPTN members. OPTN contractor staff will continue to review deceased donor match runs that result in a transplanted organ to ensure that allocation was carried out according to OPTN policy and will continue to investigate potential policy violations.

Research Design

This policy will be formally evaluated approximately each year post-implementation. The following questions, and any others subsequently requested by the Committee, will guide the evaluation of the proposal after implementation:

- Have liver candidates at transplant programs in Hawaii and Puerto Rico at Status 1A, Status 1B, or MELD or PELD 37 or higher received deceased donor liver offers or transplants?
- Have there been changes in the frequency of liver candidates removed from the waiting list due to death or too sick to transplant while listed as Status 1A, Status 1B, or MELD or PELD 37 or higher at transplant programs located in Hawaii and Puerto Rico?
- How long do Status 1A, Status 1B, or MELD or PELD 37 candidates in Hawaii and Puerto Rico wait in these statuses before receiving a transplant?

The following metrics, and any others subsequently requested by the Committee, will be evaluated as data become available to assess the performance of this variance. Comparisons before and after the implementation of this variance and by various geographic units for these metrics will be included as appropriate:

- Number of liver candidates ever waiting at Status 1A, Status 1B, or MELD or PELD 37 or higher at transplant programs in Hawaii and Puerto Rico
- Number of liver match runs with a liver acceptance that contain at least one Status 1A, Status 1B, or MELD or PELD 37 or higher potential liver candidate at transplant programs in Hawaii and Puerto Rico
 - Distribution of distance (in NM) from donor hospital to liver transplant program for these match runs
- Number of deceased donor liver transplants for Status 1A, Status 1B, or MELD or PELD 37 or higher at transplant programs in Hawaii and Puerto Rico
 - Distribution of distance (in NM) from donor hospital to liver transplant program for deceased liver donor recipients in Hawaii and Puerto Rico
- Number of liver candidates removed from the waiting list due to death or too sick to transplant, while listed as Status 1A, Status 1B, or MELD or PELD 37 or higher at transplant programs in Hawaii and Puerto Rico
- Waitlist dropout rates (defined as removal from waiting list due to death or too sick to transplant) for Status 1A, Status 1B, or MELD or PELD 37 or higher at transplant programs in Hawaii and Puerto Rico

- Distribution of time in Status 1A, Status 1B, or MELD or PELD 37 or higher before waitlist removal (minimum, 25th percentile, mean, standard deviation, median, 75th percentile, maximum) for liver candidates at transplant programs in Hawaii and Puerto Rico

This variance does not require participating members to submit any additional data to the OPTN.

Conclusion

This proposal will create additional geographic units that only apply for candidates listed in Hawaii or Puerto Rico who are in urgent need of a liver transplant in order to broaden the pool of donors for whom these candidates would be likely to receive offers in a timely manner. For candidates in Hawaii, there would be an additional unit of distribution at 2,400 NM. For candidates in Puerto Rico, there would be an additional unit of distribution at 1,100 NM. These additional units of distribution would follow allocation classifications for candidates of similar medical urgency within 500 NM of the donor hospital.

Policy Language

Proposed new language is underlined (example) and language that is proposed for removal is struck through (~~example~~). Heading numbers, table and figure captions, and cross-references affected by the numbering of these policies will be updated as necessary.

9.8 Liver Allocation, Classifications, and Rankings

9.8.E Allocation of Livers from Non-DCD Deceased Donors at Least 18 Years Old and Less than 70 Years Old

Livers from non-DCD deceased donors at least 18 years old and less than 70 years old are allocated to candidates according to *Table 9-11* below.

Table 9-11: Allocation of Livers from Non-DCD Deceased Donors at Least 18 Years Old and Less than 70 Years Old

Classification	Candidates with a MELD/PELD score of at least	And registered at a transplant hospital that is at or within this distance from a donor hospital	Donor blood type	Candidate blood type
<u>1</u>	Status 1A	500NM	Any	Any
<u>2</u>	Status 1B	500NM	Any	Any
<u>3</u>	<u>Status 1A</u>	<u>2,400NM and candidate is registered in Hawaii or 1,100NM and candidate is registered in Puerto Rico</u>	<u>Any</u>	<u>Any</u>
<u>4</u>	<u>Status 1B</u>	<u>2,400NM and candidate is registered in Hawaii or 1,100NM and candidate is registered in Puerto Rico</u>	<u>Any</u>	<u>Any</u>
<u>5</u>	37	150NM	O	O or B
<u>6</u>	37	150NM	Non-O	Any
<u>7</u>	37	250NM	O	O or B
<u>8</u>	37	250NM	Non-O	Any
<u>9</u>	37	500NM	O	O or B
<u>10</u>	37	500NM	Non-O	Any
<u>11</u>	<u>37</u>	<u>2,400NM and candidate is registered in Hawaii or 1,100NM and candidate is registered in Puerto Rico</u>	<u>O</u>	<u>O or B</u>

Classification	Candidates with a MELD/PELD score of at least	And registered at a transplant hospital that is at or within this distance from a donor hospital	Donor blood type	Candidate blood type
<u>12</u>	<u>37</u>	<u>2,400NM and candidate is registered in Hawaii or 1,100NM and candidate is registered in Puerto Rico</u>	<u>Non-O</u>	<u>Any</u>
<u>13</u>	33	150NM	O	O or B
<u>14</u>	33	150NM	Non-O	Any
<u>15</u>	33	250NM	O	O or B
<u>16</u>	33	250NM	Non-O	Any
<u>17</u>	33	500NM	O	O or B
<u>18</u>	33	500NM	Non-O	Any
<u>19</u>	30	150NM	O	O or B
<u>20</u>	29	150NM	O	O
<u>21</u>	29	150NM	Non-O	Any
<u>22</u>	30	250NM	O	O or B
<u>23</u>	29	250NM	O	O
<u>24</u>	29	250NM	Non-O	Any
<u>25</u>	30	500NM	O	O or B
<u>26</u>	29	500NM	O	O
<u>27</u>	29	500NM	Non-O	Any
<u>28</u>	15	150NM	O	O
<u>29</u>	15	150NM	Non-O	Any
<u>30</u>	15	250NM	O	O
<u>31</u>	15	250NM	Non-O	Any
<u>32</u>	15	500NM	O	O
<u>33</u>	15	500NM	Non-O	Any
<u>34</u>	Status 1A	Nation	Any	Any
<u>35</u>	Status 1B	Nation	Any	Any
<u>36</u>	30	Nation	O	O or B
<u>37</u>	15	Nation	O	O
<u>38</u>	15	Nation	Non-O	Any
<u>39</u>	Any	150NM	O	O
<u>40</u>	Any	150NM	Non-O	Any
<u>41</u>	Any	250NM	O	O
<u>42</u>	Any	250NM	Non-O	Any
<u>43</u>	Any	500NM	O	O
<u>44</u>	Any	500NM	Non-O	Any

Classification	Candidates with a MELD/PELD score of at least	And registered at a transplant hospital that is at or within this distance from a donor hospital	Donor blood type	Candidate blood type
<u>45</u>	Any	Nation	O	O
<u>46</u>	Any	Nation	Non-O	Any
<u>47</u>	29	150NM	O	B
<u>48</u>	29	250NM	O	B
<u>49</u>	29	500NM	O	B
<u>50</u>	15	150NM	O	B
<u>51</u>	15	250NM	O	B
<u>52</u>	15	500NM	O	B
<u>53</u>	15	Nation	O	B
<u>54</u>	Any	150NM	O	B
<u>55</u>	Any	250NM	O	B
<u>56</u>	Any	500NM	O	B
<u>57</u>	Any	Nation	O	B
<u>58</u>	37	150NM	O	A or AB
<u>59</u>	37	250NM	O	A or AB
<u>60</u>	37	500NM	O	A or AB
<u>61</u>	33	150NM	O	A or AB
<u>62</u>	33	250NM	O	A or AB
<u>63</u>	33	500NM	O	A or AB
<u>64</u>	29	150NM	O	A or AB
<u>65</u>	29	250NM	O	A or AB
<u>66</u>	29	500NM	O	A or AB
<u>67</u>	15	150NM	O	A or AB
<u>68</u>	15	250NM	O	A or AB
<u>69</u>	15	500NM	O	A or AB
<u>70</u>	15	Nation	O	A or AB
<u>71</u>	Any	150NM	O	A or AB
<u>72</u>	Any	250NM	O	A or AB
<u>73</u>	Any	500NM	O	A or AB
<u>74</u>	Any	Nation	O	A or AB
<u>75</u>	Status 1A, for other method of hepatic support	Nation	Any	Any
<u>76</u>	Status 1B, for other method of hepatic support	Nation	Any	Any

Classification	Candidates with a MELD/PELD score of at least	And registered at a transplant hospital that is at or within this distance from a donor hospital	Donor blood type	Candidate blood type
<u>77</u>	Any MELD or PELD for other method of hepatic support	Nation	Any	Any

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9.8.F Allocation of Livers from Non-DCD Deceased Donors 11 to 17 Years Old

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Livers from non-DCD deceased donors 11 to 17 years old are allocated to candidates according to *Table 9-12* below.

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Table 9-12: Allocation of Livers from Non-DCD Deceased Donors 11 to 17 Years Old

Classification	Candidates with a MELD/PELD score of at least	And registered at a transplant hospital that is at or within this distance from a donor hospital	Donor blood type	Candidate blood type
<u>1</u>	Pediatric Status 1A	500NM	Any	Any
<u>2</u>	Adult Status 1A	500NM	Any	Any
<u>3</u>	Pediatric Status 1B	500NM	Any	Any
<u>4</u>	<u>Pediatric Status 1A</u>	<u>2,400NM and candidate is registered in Hawaii or 1,100NM and candidate is registered in Puerto Rico</u>	<u>Any</u>	<u>Any</u>
<u>5</u>	<u>Adult Status 1A</u>	<u>2,400NM and candidate is registered in Hawaii or 1,100NM and candidate is registered in Puerto Rico</u>	<u>Any</u>	<u>Any</u>
<u>6</u>	<u>Pediatric Status 1B</u>	<u>2,400NM and candidate is registered in Hawaii or 1,100NM and candidate is registered in Puerto Rico</u>	<u>Any</u>	<u>Any</u>
<u>7</u>	<u>PELD of at least 37</u>	<u>500NM</u>	<u>O</u>	<u>O or B</u>
<u>8</u>	<u>PELD of at least 37</u>	<u>500NM</u>	<u>Non-O</u>	<u>Any</u>
<u>9</u>	<u>PELD of at least 37</u>	<u>2,400NM and candidate is registered in Hawaii or 1,100NM and candidate is registered in Puerto Rico</u>	<u>O</u>	<u>O or B</u>

Classification	Candidates with a MELD/PELD score of at least	And registered at a transplant hospital that is at or within this distance from a donor hospital	Donor blood type	Candidate blood type
<u>10</u>	<u>PELD of at least 37</u>	<u>2,400NM and candidate is registered in Hawaii or 1,100NM and candidate is registered in Puerto Rico</u>	<u>Non-O</u>	<u>Any</u>
<u>11</u>	PELD of at least 30	500NM	O	O or B
<u>12</u>	Any PELD	500NM	O	O
<u>13</u>	Any PELD	500NM	Non-O	Any
<u>14</u>	<u>MELD of at least 37 and candidate is less than 18 years old at registration</u>	<u>500NM</u>	<u>O</u>	<u>O or B</u>
<u>15</u>	<u>MELD of at least 37 and candidate is less than 18 years old at registration</u>	<u>500NM</u>	<u>Non-O</u>	<u>Any</u>
<u>16</u>	<u>MELD of at least 37 and candidate is less than 18 years old at registration</u>	<u>2,400NM and candidate is registered in Hawaii or 1,100NM and candidate is registered in Puerto Rico</u>	<u>O</u>	<u>O or B</u>
<u>17</u>	<u>MELD of at least 37 and candidate is less than 18 years old at registration</u>	<u>2,400NM and candidate is registered in Hawaii or 1,100NM and candidate is registered in Puerto Rico</u>	<u>Non-O</u>	<u>Any</u>
<u>18</u>	MELD of at least 30 and candidate is less than 18 years old at registration	500NM	O	O or B
<u>19</u>	Any MELD and candidate is less than 18 years old at registration	500NM	O	O
<u>20</u>	Any MELD and candidate is less than 18 years old at registration	500NM	Non-O	Any
<u>21</u>	Pediatric Status 1A	Nation	Any	Any
<u>22</u>	Adult Status 1A	Nation	Any	Any
<u>23</u>	Pediatric Status 1B	Nation	Any	Any

Classification	Candidates with a MELD/PELD score of at least	And registered at a transplant hospital that is at or within this distance from a donor hospital	Donor blood type	Candidate blood type
<u>24</u>	PELD score of at least 30	Nation	O	O or B
<u>25</u>	Any PELD	Nation	O	O
<u>26</u>	Any PELD	Nation	Non-O	Any
<u>27</u>	MELD of at least 30 and candidate is less than 18 years old at registration	Nation	O	O or B
<u>28</u>	Any MELD and candidate is less than 18 years old at registration	Nation	O	O
<u>29</u>	Any MELD and candidate is less than 18 years old at registration	Nation	Non-O	Any
<u>30</u>	MELD of at least 30 and candidate is at least 18 years old at registration	500NM	O	O or B
<u>31</u>	Any MELD and candidate is at least 18 years old at registration	500NM	O	O
<u>32</u>	Any MELD and candidate is at least 18 years old at registration	500NM	Non-O	Any
<u>33</u>	MELD of at least 30 and candidate is at least 18 years old at registration	Nation	O	O or B
<u>34</u>	Any MELD and candidate is at least 18 years old at registration	Nation	O	O
<u>35</u>	Any MELD and candidate is at least 18 years old at registration	Nation	Non-O	Any
<u>36</u>	Any PELD	500NM	O	B

Classification	Candidates with a MELD/PELD score of at least	And registered at a transplant hospital that is at or within this distance from a donor hospital	Donor blood type	Candidate blood type
<u>37</u>	Any MELD and candidate is less than 18 years old at registration	500NM	O	B
<u>38</u>	Any PELD	Nation	O	B
<u>39</u>	Any MELD and candidate is less than 18 years old at registration	Nation	O	B
<u>40</u>	Any MELD and candidate is at least 18 years old at registration	500NM	O	B
<u>41</u>	Any MELD and candidate is at least 18 years old at registration	Nation	O	B
<u>42</u>	Any PELD	500NM	O	A or AB
<u>43</u>	Any MELD and candidate is less than 18 years old at registration	500NM	O	A or AB
<u>44</u>	Any PELD	Nation	O	A or AB
<u>45</u>	Any MELD and candidate is less than 18 years old at registration	Nation	O	A or AB
<u>46</u>	Any MELD and candidate is at least 18 years old at registration	500NM	O	A or AB
<u>47</u>	Any MELD and candidate is at least 18 years old at registration	Nation	O	A or AB
<u>48</u>	Adult or Pediatric Status 1A, for other method of hepatic support	Nation	Any	Any

Classification	Candidates with a MELD/PELD score of at least	And registered at a transplant hospital that is at or within this distance from a donor hospital	Donor blood type	Candidate blood type
<u>49</u>	Pediatric Status 1B, for other method of hepatic support	Nation	Any	Any
<u>50</u>	Any MELD or PELD for other method of hepatic support	Nation	Any	Any

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9.8.G Allocation of Livers from Non-DCD Deceased Donors Less than 11 Years Old

Livers from non-DCD donors less than 11 years old are allocated to candidates according to *Table 9-13* below.

Table 9-13: Allocation of Livers from Non-DCD Deceased Donors Less than 11 Years Old

Classification	Candidates with a MELD/PELD score of at least	And registered at a transplant hospital that is at or within this distance from a donor hospital	Donor blood type	Candidate blood type
<u>1</u>	Pediatric Status 1A	500NM	Any	Any
<u>2</u>	Pediatric Status 1A and candidate is less than 12 years old	Nation	Any	Any
<u>3</u>	Adult Status 1A	500NM	Any	Any
<u>4</u>	Pediatric Status 1B	500NM	Any	Any
<u>5</u>	<u>Pediatric Status 1A and candidate is at least 12 years old</u>	<u>2,400NM and candidate is registered in Hawaii or 1,100NM and candidate is registered in Puerto Rico</u>	<u>Any</u>	<u>Any</u>
<u>6</u>	<u>Adult Status 1A</u>	<u>2,400NM and candidate is registered in Hawaii or 1,100NM and candidate is registered in Puerto Rico</u>	<u>Any</u>	<u>Any</u>
<u>7</u>	<u>Pediatric Status 1B</u>	<u>2,400NM and candidate is registered in Hawaii or 1,100NM and candidate is registered in Puerto Rico</u>	<u>Any</u>	<u>Any</u>
<u>8</u>	<u>PELD of at least 37</u>	<u>500NM</u>	<u>O</u>	<u>O or B</u>

Classification	Candidates with a MELD/PELD score of at least	And registered at a transplant hospital that is at or within this distance from a donor hospital	Donor blood type	Candidate blood type
<u>9</u>	<u>PELD of at least 37</u>	<u>500NM</u>	<u>Non-O</u>	<u>Any</u>
<u>10</u>	<u>PELD of at least 37</u>	<u>2,400NM and candidate is registered in Hawaii or 1,100NM and candidate is registered in Puerto Rico</u>	<u>O</u>	<u>O or B</u>
<u>11</u>	<u>PELD of at least 37</u>	<u>2,400NM and candidate is registered in Hawaii or 1,100NM and candidate is registered in Puerto Rico</u>	<u>Non-O</u>	<u>Any</u>
<u>12</u>	<u>PELD of at least 30</u>	<u>500NM</u>	<u>O</u>	<u>O or B</u>
<u>13</u>	<u>Any PELD</u>	<u>500NM</u>	<u>O</u>	<u>O</u>
<u>14</u>	<u>Any PELD</u>	<u>500NM</u>	<u>Non-O</u>	<u>Any</u>
<u>15</u>	<u>MELD of at least 37 and candidate is less than 18 years old at registration</u>	<u>500NM</u>	<u>O</u>	<u>O or B</u>
<u>16</u>	<u>MELD of at least 37 and candidate is less than 18 years old at registration</u>	<u>500NM</u>	<u>Non-O</u>	<u>Any</u>
<u>17</u>	<u>MELD of at least 37 and candidate is less than 18 years old at registration</u>	<u>2,400NM and candidate is registered in Hawaii or 1,100NM and candidate is registered in Puerto Rico</u>	<u>O</u>	<u>O or B</u>
<u>18</u>	<u>MELD of at least 37 and candidate is less than 18 years old at registration</u>	<u>2,400NM and candidate is registered in Hawaii or 1,100NM and candidate is registered in Puerto Rico</u>	<u>Non-O</u>	<u>Any</u>
<u>19</u>	<u>MELD of at least 30 and candidate is less than 18 years old at registration</u>	<u>500NM</u>	<u>O</u>	<u>O or B</u>
<u>20</u>	<u>Any MELD and candidate is less than 18 years old at registration</u>	<u>500NM</u>	<u>O</u>	<u>O</u>

Classification	Candidates with a MELD/PELD score of at least	And registered at a transplant hospital that is at or within this distance from a donor hospital	Donor blood type	Candidate blood type
<u>21</u>	Any MELD and candidate is less than 18 years old at registration	500NM	Non-O	Any
<u>22</u>	Pediatric Status 1A and candidate is at least 12 years old	Nation	Any	Any
<u>23</u>	Adult Status 1A	Nation	Any	Any
<u>24</u>	Pediatric Status 1B	Nation	Any	Any
<u>25</u>	PELD of at least 30	Nation	O	O or B
<u>26</u>	Any PELD	Nation	O	O
<u>27</u>	Any PELD	Nation	Non-O	Any
<u>28</u>	MELD of at least 30 and candidate is less than 18 years old at registration	Nation	O	O or B
<u>29</u>	Any MELD and candidate is less than 18 years old at registration	Nation	O	O
<u>30</u>	Any MELD and less than 18 years old at registration	Nation	Non-O	Any
<u>31</u>	MELD of at least 30 and candidate is at least 18 years old at registration	500NM	O	O or B
<u>32</u>	Any MELD and candidate is at least 18 years old at registration	500NM	O	O
<u>33</u>	Any MELD and at least 18 years old at registration	500NM	Non-O	Any
<u>34</u>	MELD of at least 30 and at least 18 years old at registration	Nation	O	O or B
<u>35</u>	Any MELD and at least 18 years old at registration	Nation	O	O

Classification	Candidates with a MELD/PELD score of at least	And registered at a transplant hospital that is at or within this distance from a donor hospital	Donor blood type	Candidate blood type
<u>36</u>	Any MELD and at least 18 years old at registration	Nation	Non-O	Any
<u>37</u>	Any PELD	500NM	O	B
<u>38</u>	Any MELD and candidate is less than 18 years old at registration	500NM	O	B
<u>39</u>	Any PELD	Nation	O	B
<u>40</u>	Any MELD and candidate is less than 18 years old at registration	Nation	O	B
<u>41</u>	Any MELD and candidate is at least 18 years old at registration	500NM	O	B
<u>42</u>	Any MELD and candidate is at least 18 years old at registration	Nation	O	B
<u>43</u>	Any PELD	500NM	O	A or AB
<u>44</u>	Any MELD and candidate is less than 18 years old at registration	500NM	O	A or AB
<u>45</u>	Any PELD	Nation	O	A or AB
<u>46</u>	Any MELD and candidate is less than 18 years old at registration	Nation	O	A or AB
<u>47</u>	Any MELD and candidate is at least 18 years old at registration	500NM	O	A or AB
<u>48</u>	Any MELD and candidate is at least 18 years old at registration	Nation	O	A or AB

Classification	Candidates with a MELD/PELD score of at least	And registered at a transplant hospital that is at or within this distance from a donor hospital	Donor blood type	Candidate blood type
<u>49</u>	Status 1A, for other method of hepatic support	Nation	Any	Any
<u>50</u>	Status 1B, for other method of hepatic support	Nation	Any	Any
<u>51</u>	Any MELD or PELD for other method of hepatic support	Nation	Any	Any

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9.8.I Allocation of Liver-Intestines from Non-DCD Deceased Donors at Least 18 Years Old and Less than 70 Years Old

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Livers and intestines from non-DCD deceased donors at least 18 years old and less than 70 years old are allocated to candidates according to *Table 9-15* below:

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Table 9-15: Allocation of Liver-Intestines from Non-DCD Deceased Donors at Least 18 Years Old and Less than 70 Years Old

Classification	Candidates with a MELD/PELD score of at least	And registered at a transplant hospital that is at or within this distance from a donor hospital	Donor blood type	Candidate blood type
<u>1</u>	Status 1A	500NM	Any	Any
<u>2</u>	Status 1B	500NM	Any	Any
<u>3</u>	<u>Status 1A</u>	<u>2,400NM and candidate is registered in Hawaii or 1,100NM and candidate is registered in Puerto Rico</u>	<u>Any</u>	<u>Any</u>
<u>4</u>	<u>Status 1B</u>	<u>2,400NM and candidate is registered in Hawaii or 1,100NM and candidate is registered in Puerto Rico</u>	<u>Any</u>	<u>Any</u>
<u>5</u>	37	150NM	O	O or B
<u>6</u>	37	150NM	Non-O	Any
<u>7</u>	37	250NM	O	O or B
<u>8</u>	37	250NM	Non-O	Any
<u>9</u>	37	500NM	O	O or B

Classification	Candidates with a MELD/PELD score of at least	And registered at a transplant hospital that is at or within this distance from a donor hospital	Donor blood type	Candidate blood type
<u>10</u>	37	500NM	Non-O	Any
<u>11</u>	<u>37</u>	<u>2,400NM and candidate is registered in Hawaii or 1,100NM and candidate is registered in Puerto Rico</u>	<u>O</u>	<u>O or B</u>
<u>12</u>	<u>37</u>	<u>2,400NM and candidate is registered in Hawaii or 1,100NM and candidate is registered in Puerto Rico</u>	<u>Non-O</u>	<u>Any</u>
<u>13</u>	33	150NM	O	O or B
<u>14</u>	33	150NM	Non-O	Any
<u>15</u>	33	250NM	O	O or B
<u>16</u>	33	250NM	Non-O	Any
<u>17</u>	33	500NM	O	O or B
<u>18</u>	33	500NM	Non-O	Any
<u>19</u>	30	150NM	O	O or B
<u>20</u>	29	150NM	O	O
<u>21</u>	29	150NM	Non-O	Any
<u>22</u>	30	250NM	O	O or B
<u>23</u>	29	250NM	O	O
<u>24</u>	29	250NM	Non-O	Any
<u>25</u>	30	500NM	O	O or B
<u>26</u>	29	500NM	O	O
<u>27</u>	29	500NM	Non-O	Any
<u>28</u>	Status 1A and also registered for an intestine	Nation	Any	Any
<u>29</u>	Status 1B and also registered for an intestine	Nation	Any	Any
<u>30</u>	30 and also registered for an intestine	Nation	O	O or B
<u>31</u>	Any and also registered for an intestine	Nation	O	O

Classification	Candidates with a MELD/PELD score of at least	And registered at a transplant hospital that is at or within this distance from a donor hospital	Donor blood type	Candidate blood type
<u>32</u>	Any and also registered for an intestine	Nation	Non-O	Any
<u>33</u>	15	150NM	O	O
<u>34</u>	15	150NM	Non-O	Any
<u>35</u>	15	250NM	O	O
<u>36</u>	15	250NM	Non-O	Any
<u>37</u>	15	500NM	O	O
<u>38</u>	15	500NM	Non-O	Any
<u>39</u>	Status 1A	Nation	Any	Any
<u>40</u>	Status 1B	Nation	Any	Any
<u>41</u>	30	Nation	O	O or B
<u>42</u>	15	Nation	O	O
<u>43</u>	15	Nation	Non-O	Any
<u>44</u>	Any	150NM	O	O
<u>45</u>	Any	150NM	Non-O	Any
<u>46</u>	Any	250NM	O	O
<u>47</u>	Any	250NM	Non-O	Any
<u>48</u>	Any	500NM	O	O
<u>49</u>	Any	500NM	Non-O	Any
<u>50</u>	Any	Nation	O	O
<u>51</u>	Any	Nation	Non-O	Any
<u>52</u>	29	150NM	O	B
<u>53</u>	29	250NM	O	B
<u>54</u>	29	500NM	O	B
<u>55</u>	Any and also registered for an intestine	Nation	O	B
<u>56</u>	15	150NM	O	B
<u>57</u>	15	250NM	O	B
<u>58</u>	15	500NM	O	B
<u>59</u>	15	Nation	O	B
<u>60</u>	Any	150NM	O	B
<u>61</u>	Any	250NM	O	B
<u>62</u>	Any	500NM	O	B
<u>63</u>	Any	Nation	O	B
<u>64</u>	37	150NM	O	A or AB

Classification	Candidates with a MELD/PELD score of at least	And registered at a transplant hospital that is at or within this distance from a donor hospital	Donor blood type	Candidate blood type
<u>65</u>	37	250NM	O	A or AB
<u>66</u>	37	500NM	O	A or AB
<u>67</u>	33	150NM	O	A or AB
<u>68</u>	33	250NM	O	A or AB
<u>69</u>	33	500NM	O	A or AB
<u>70</u>	29	150NM	O	A or AB
<u>71</u>	29	250NM	O	A or AB
<u>72</u>	29	500NM	O	A or AB
<u>73</u>	Any and also registered for an intestine	Nation	O	A or AB
<u>74</u>	15	150NM	O	A or AB
<u>75</u>	15	250NM	O	A or AB
<u>76</u>	15	500NM	O	A or AB
<u>77</u>	15	Nation	O	A or AB
<u>78</u>	Any	150NM	O	A or AB
<u>79</u>	Any	250NM	O	A or AB
<u>80</u>	Any	500NM	O	A or AB
<u>81</u>	Any	Nation	O	A or AB
<u>82</u>	Status 1A, for other method of hepatic support	Nation	Any	Any
<u>83</u>	Status 1B, for other method of hepatic support	Nation	Any	Any
<u>84</u>	Any MELD or PELD for other method of hepatic support	Nation	Any	Any

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9.8.K Allocation of Liver-Intestines from Non-DCD Donors Less than 11 Years Old

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Livers and intestines from non-DCD donors less than 11 years old are allocated to candidates according to *Table 9-16* below.

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**Table 9-16: Allocation of Combined Liver-Intestines from Donors
Less than 11 Years Old**

Classification	Candidates with a MELD/PELD score of at least	And registered at a transplant hospital that is at or within this distance from a donor hospital	Donor blood type	Candidate blood type
1	Pediatric Status 1A	500NM	Any	Any
2	Pediatric Status 1A and candidate is less than 12 years old	Nation	Any	Any
3	Pediatric Status 1A, candidate is at least 12 years old, and candidate is also registered for an intestine	Nation	Any	Any
4	Adult Status 1A	500NM	Any	Any
5	Pediatric Status 1B	500NM	Any	Any
<u>6</u>	<u>Pediatric Status 1A and candidate is at least 12 years old</u>	<u>2,400NM and candidate is registered in Hawaii or 1,100NM and candidate is registered in Puerto Rico</u>	<u>Any</u>	<u>Any</u>
<u>7</u>	<u>Adult Status 1A</u>	<u>2,400NM and candidate is registered in Hawaii or 1,100NM and candidate is registered in Puerto Rico</u>	<u>Any</u>	<u>Any</u>
<u>8</u>	<u>Pediatric Status 1B</u>	<u>2,400NM and candidate is registered in Hawaii or 1,100NM and candidate is registered in Puerto Rico</u>	<u>Any</u>	<u>Any</u>
<u>9</u>	<u>PELD of at least 37</u>	<u>500NM</u>	<u>O</u>	<u>O or B</u>
<u>10</u>	<u>PELD of at least 37</u>	<u>500NM</u>	<u>Non-O</u>	<u>Any</u>
<u>11</u>	<u>PELD of at least 37</u>	<u>2,400NM and candidate is registered in Hawaii or 1,100NM and candidate is registered in Puerto Rico</u>	<u>O</u>	<u>O or B</u>
<u>12</u>	<u>PELD of at least 37</u>	<u>2,400NM and candidate is registered in Hawaii or 1,100NM and candidate is registered in Puerto Rico</u>	<u>Non-O</u>	<u>Any</u>

Classification	Candidates with a MELD/PELD score of at least	And registered at a transplant hospital that is at or within this distance from a donor hospital	Donor blood type	Candidate blood type
<u>13</u>	PELD 30	500NM	O	O or B
<u>14</u>	PELD 20	500NM	O	O
<u>15</u>	PELD 20	500NM	Non-O	Any
<u>16</u>	Pediatric Status 1B, and candidate is also registered for an intestine	Nation	Any	Any
<u>17</u>	PELD of at least 30 and candidate is also registered for an intestine	Nation	O	O or B
<u>18</u>	PELD of at least 20 and candidate is also registered for an intestine	Nation	O	O
<u>19</u>	PELD of at least 20 and candidate is also registered for an intestine	Nation	Non-O	Any
<u>20</u>	Any PELD	500NM	O	O
<u>21</u>	Any PELD	500NM	Non-O	Any
<u>22</u>	<u>MELD of at least 37 and candidate is less than 18 years old at registration</u>	<u>500NM</u>	<u>O</u>	<u>O or B</u>
<u>23</u>	<u>MELD of at least 37 and candidate is less than 18 years old at registration</u>	<u>500NM</u>	<u>Non-O</u>	<u>Any</u>
<u>24</u>	<u>MELD of at least 37 and candidate is less than 18 years old at registration</u>	<u>2,400NM and candidate is registered in Hawaii or 1,100NM and candidate is registered in Puerto Rico</u>	<u>O</u>	<u>O or B</u>
<u>25</u>	<u>MELD of at least 37 and candidate is less than 18 years old at registration</u>	<u>2,400NM and candidate is registered in Hawaii or 1,100NM and candidate is registered in Puerto Rico</u>	<u>Non-O</u>	<u>Any</u>

Classification	Candidates with a MELD/PELD score of at least	And registered at a transplant hospital that is at or within this distance from a donor hospital	Donor blood type	Candidate blood type
<u>26</u>	MELD of at least 30 and less than 18 years old at registration	500NM	O	O or B
<u>27</u>	Any MELD and less than 18 years old at registration	500NM	O	O
<u>28</u>	Any MELD, candidate is less than 18 years old at registration	500NM	Non-O	Any
<u>29</u>	Pediatric Status 1A and at least 12 years old	Nation	Any	Any
<u>30</u>	Adult Status 1A	Nation	Any	Any
<u>31</u>	Pediatric Status 1B	Nation	Any	Any
<u>32</u>	PELD at least 30	Nation	O	O or B
<u>33</u>	Any PELD	Nation	O	O
<u>34</u>	Any PELD	Nation	Non-O	Any
<u>35</u>	MELD of at least 30 and less than 18 years old at registration	Nation	O	O or B
<u>36</u>	Any MELD and less than 18 years old at registration	Nation	O	O
<u>37</u>	Any MELD and less than 18 years old at registration	Nation	Non-O	Any
<u>38</u>	MELD of at least 30 and at least 18 years old at registration	500NM	O	O or B
<u>39</u>	Any MELD and at least 18 years old at registration	500NM	O	O
<u>40</u>	Any MELD and at least 18 years old at registration	500NM	Non-O	Any
<u>41</u>	MELD of at least 30 and at least 18 years old at registration	Nation	O	O or B

Classification	Candidates with a MELD/PELD score of at least	And registered at a transplant hospital that is at or within this distance from a donor hospital	Donor blood type	Candidate blood type
<u>42</u>	Any MELD and at least 18 years old at registration	Nation	O	O
<u>43</u>	Any MELD and at least 18 years old at registration	Nation	Non-O	Any
<u>44</u>	PELD 20	500NM	O	B
<u>45</u>	PELD of at least 20 and candidate is also registered for an intestine	Nation	O	B
<u>46</u>	Any PELD	500NM	O	B
<u>47</u>	Any MELD and candidate is less than 18 years old at registration	500NM	O	B
<u>48</u>	Any PELD	Nation	O	B
<u>49</u>	Any MELD and candidate is less than 18 years old at registration	Nation	O	B
<u>50</u>	Any MELD and candidate is at least 18 years old at registration	500NM	O	B
<u>51</u>	Any MELD and candidate is at least 18 years old at registration	Nation	O	B
<u>52</u>	PELD 20	500NM	O	A or AB
<u>53</u>	PELD of at least 20 and candidate is also registered for an intestine	Nation	O	A or AB
<u>54</u>	Any PELD	500NM	O	A or AB
<u>55</u>	Any MELD and candidate is less than 18 years old at registration	500NM	O	A or AB
<u>56</u>	Any PELD	Nation	O	A or AB

Classification	Candidates with a MELD/PELD score of at least	And registered at a transplant hospital that is at or within this distance from a donor hospital	Donor blood type	Candidate blood type
<u>57</u>	Any MELD, candidate is less than 18 years old at registration	Nation	O	A or AB
<u>58</u>	Any MELD, candidate is at least 18 years old at registration	500NM	O	A or AB
<u>59</u>	Any MELD, candidate is at least 18 years old at registration	Nation	O	A or AB
<u>60</u>	Adult or Pediatric Status 1A, for other method of hepatic support	Nation	Any	Any
<u>61</u>	Pediatric Status 1B, for other method of hepatic support	Nation	Any	Any
<u>62</u>	Any MELD or PELD for other method of hepatic support	Nation	Any	Any

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9.11.D Closed Variance for Liver Transplantation in Hawaii and Puerto Rico

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This is a closed variance that applies only to liver and liver-intestine candidates registered at transplant programs in Hawaii or Puerto Rico, due to geographic location. This variance provides for additional classifications in the allocation sequences in Policies 9.8.E-9.8.K. The additional classifications apply to the following:

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- Candidates registered at transplant programs in Hawaii when the transplant hospital is at or within 2,400 NM of the donor hospital.
- Candidates registered at transplant programs in Puerto Rico when the transplant hospital is at or within 1,100 NM of the donor hospital.

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