

Calculate Median MELD at Transplant around Donor Hospital and Update Sorting within Liver Allocation

OPTN Liver and Intestinal Organ Transplantation Committee

Purpose of Proposal

- **Calculation change:** Calculate median MELD at transplant (MMaT) around Donor Hospital
 - Align the geographic units (area around the donor hospital) used in the calculation of MMaT with the geographic units used in liver allocation
 - Increase equity by assigning MELD exception scores relative to the median MELD at transplant (MMaT) of the donor hospital instead of the transplant program
- **Sorting update:** Update Sorting within Liver Allocation
 - Update sorting within liver allocation to align with proposed changes to MMaT and increase equity between exception and lab candidates
- Committee discussed multiple options for calculating MMaT during development of Acuity Circles and ultimately proposed utilizing a 250 NM circle around the transplant program

Proposal: MMaT around Donor Hospital

- **Current:**

- Exception candidates are assigned an exception score relative to MMaT of the transplant program where they are listed
- MMaT for each transplant program is based on transplants performed within 250 nautical miles (NM) of the program
- Transplant programs in close geographic proximity can have different MMaT scores and therefore, candidates with same exception diagnosis can have different exception scores

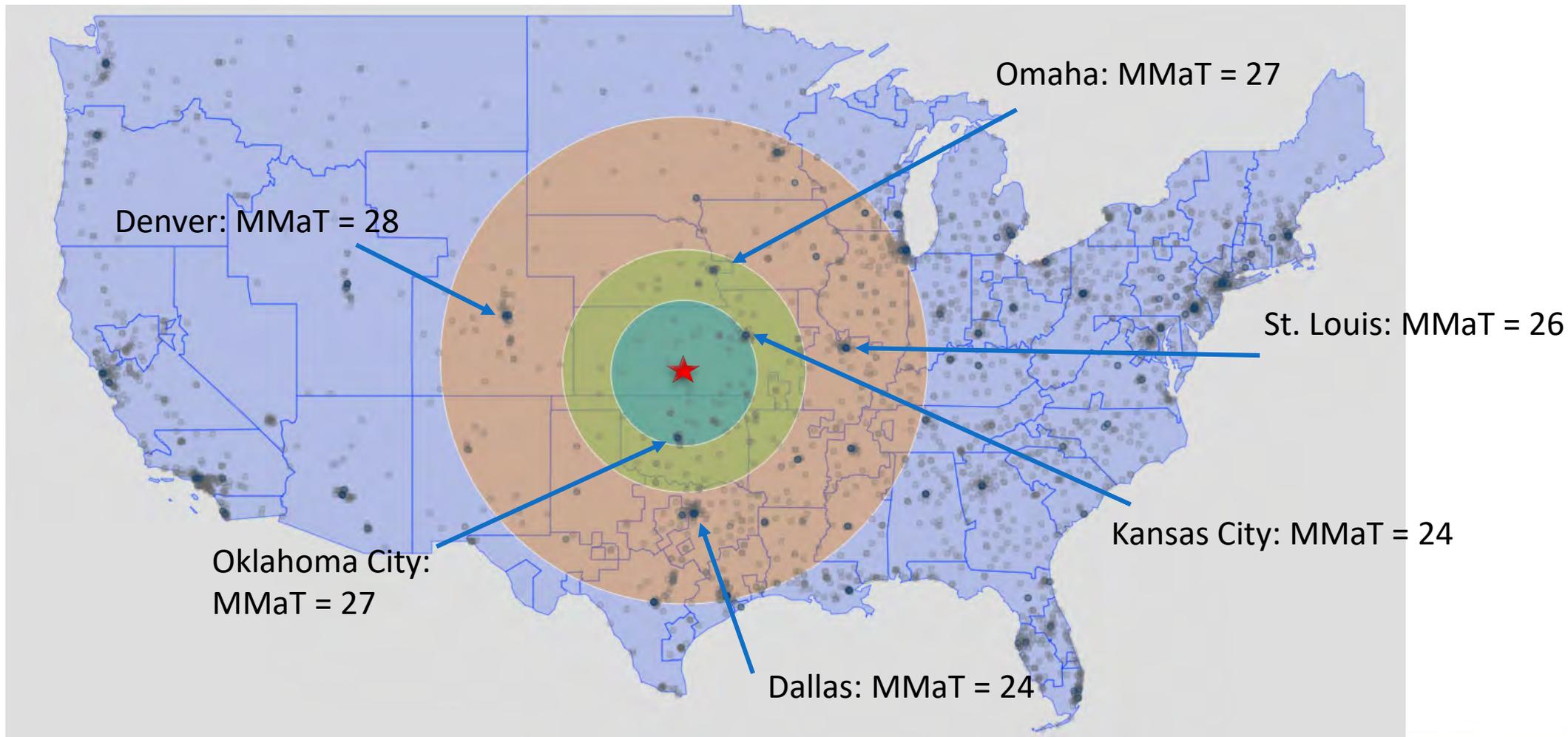
- **Proposal:**

- Calculate MMaT for each donor hospital based on transplants performed within 150 NM of donor hospital
- Exception candidates on match run are assigned exception score relative to the MMaT for the donor hospital where match is run and ranked against each other based on time since submission of earliest approved exception

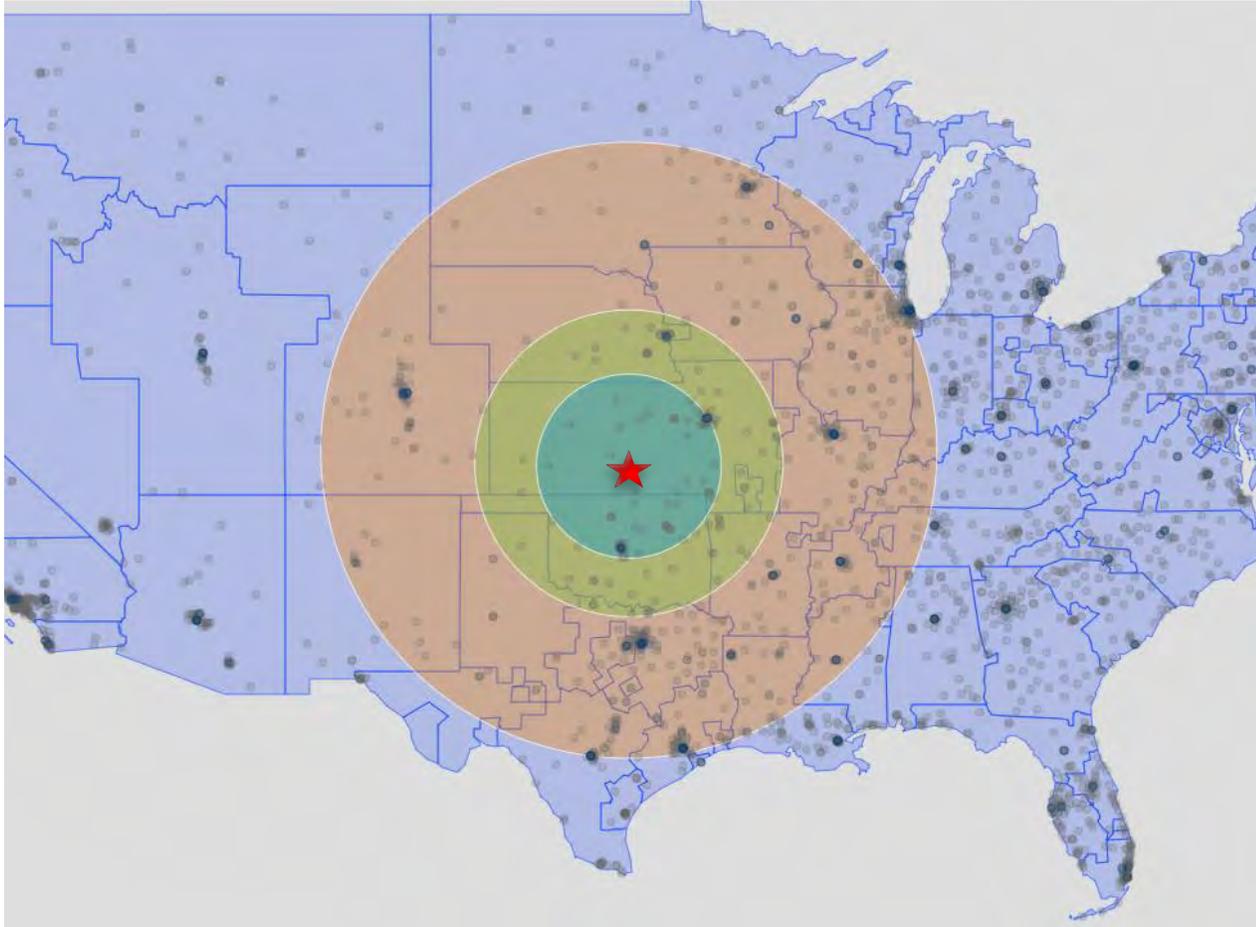
Proposal: MMaT around Donor Hospital

- **Calculation:**
 - Transplants performed at transplant programs within 150 NM of the donor hospital in previous 365 days
 - Transplants excluded: living donors, DCD donors, donors more than 500 NM from transplant program, Status 1A/1B
- **Cohort:**
 - Cohort must include at least two transplant programs and at least 10 qualifying transplants
 - If cohort size not met within 150 NM, expand circle around donor hospital in 50 NM increments
- **Other Considerations:**
 - MMaT scores updated twice each year
 - No change to national median PELD at transplant (MPaT) calculation
 - Hawaii and Puerto Rico: not required to include two transplant programs in calculation
 - Minimum exception score of 15 for all exception candidates

Current: MMaT around Transplant Program



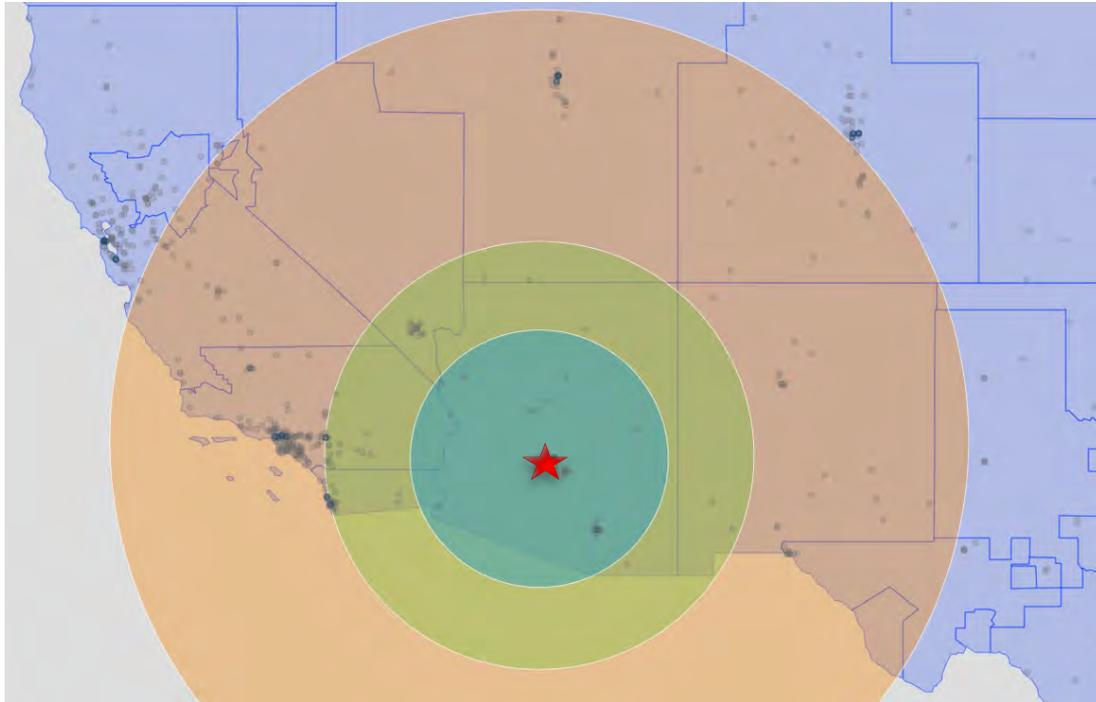
Proposal: MMaT around Donor Hospital



Donor in Wichita, KS

- MMaT based on transplants performed within 150 NM of donor hospital in Wichita is 28
- All exception candidates on match run (regardless of distance from donor hospital) are assigned exception score relative to MMaT = 28, so MMaT minus three = 25.

Proposal: MMaT around Donor Hospital



Donor based in Sun City, AZ

- MMaT based on transplants performed within 150 NM of donor hospital in Sun City, AZ is 24
- All exception candidates on match run (regardless of distance from donor hospital) are assigned exception score relative to MMaT = 24, so MMaT minus three is 21.
- In CA, exception candidates will be ranked relatively low compared to lab MELD/PELD candidates in area
- Exception candidates in AZ will be ranked higher than exception candidates in CA based on distance between donor hospital and transplant program

Proposal: Sorting within Liver Allocation

- **Current:**
 - After MELD/PELD score and blood type compatibility, candidates are ranked by time at score or higher
 - Due to variability of MMaT around donor hospital, exception scores will change with each match run and exception candidates cannot be ranked by time at score or higher
- **Proposal:**
 - Exception candidates ranked by time since submission of first approved exception
 - Lab candidates ranked by time at score or higher
 - Lab candidates ranked ahead of exception candidates of the same MELD/PELD score and blood type compatibility

Proposal: Sorting

- **Sorting example:**
 - Donor age = 45, non-DCD
 - Offer down to MELD/PELD 27 within 150 NM of donor hospital

MELD/PELD	Lab/Exception	Waiting Time*
27	Lab	42 days
27	Lab	25 days
27	Lab	5 days
27	Exception	108 days
27	Exception	97 days
27	Exception	61 days

*Waiting Time

- Waiting time for lab candidates: time at score or higher
- Waiting time for exception candidates: time since submission of earliest approved exception

Rationale

- **Calculation Change: Calculate MMaT around Donor Hospital**
 - Intended to increase equity in access to specific donor offers based on initial experience with the Acuity Circles policy and align geographic units used in MMaT calculation with liver allocation
- **Sorting Update: Sorting within Liver Allocation**
 - Inability to use time at score or higher for exception candidates due to variability of MMaT
 - Ranking lab candidates ahead of exception candidates of the same MELD/PELD and blood type compatibility is based on historical data showing higher waitlist mortality and lower transplant rate for lab candidates

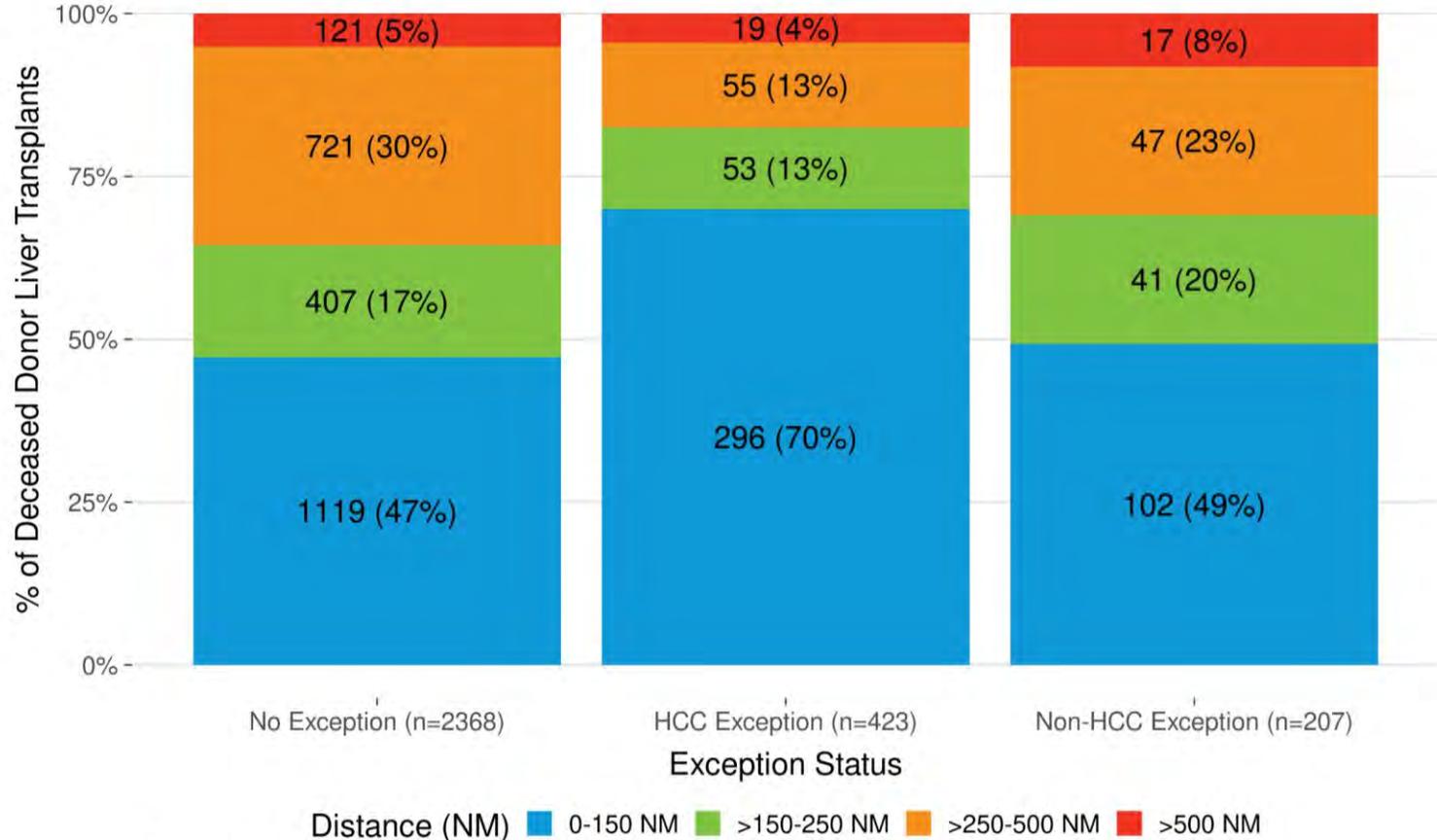
Member Actions

- Transplant programs:
 - Exception candidates will not have a static exception score
 - Exception requests will not be for specific score (i.e. MELD 28, PELD 32, etc.)
 - Exception requests will be for a number of points higher or lower than MMaT or MPaT (i.e. MMaT-3, MPaT+1, etc.)
 - Requests for MELD or PELD 40 and above can be specifically requested and are not tied to MMaT or MPaT

What do you think?

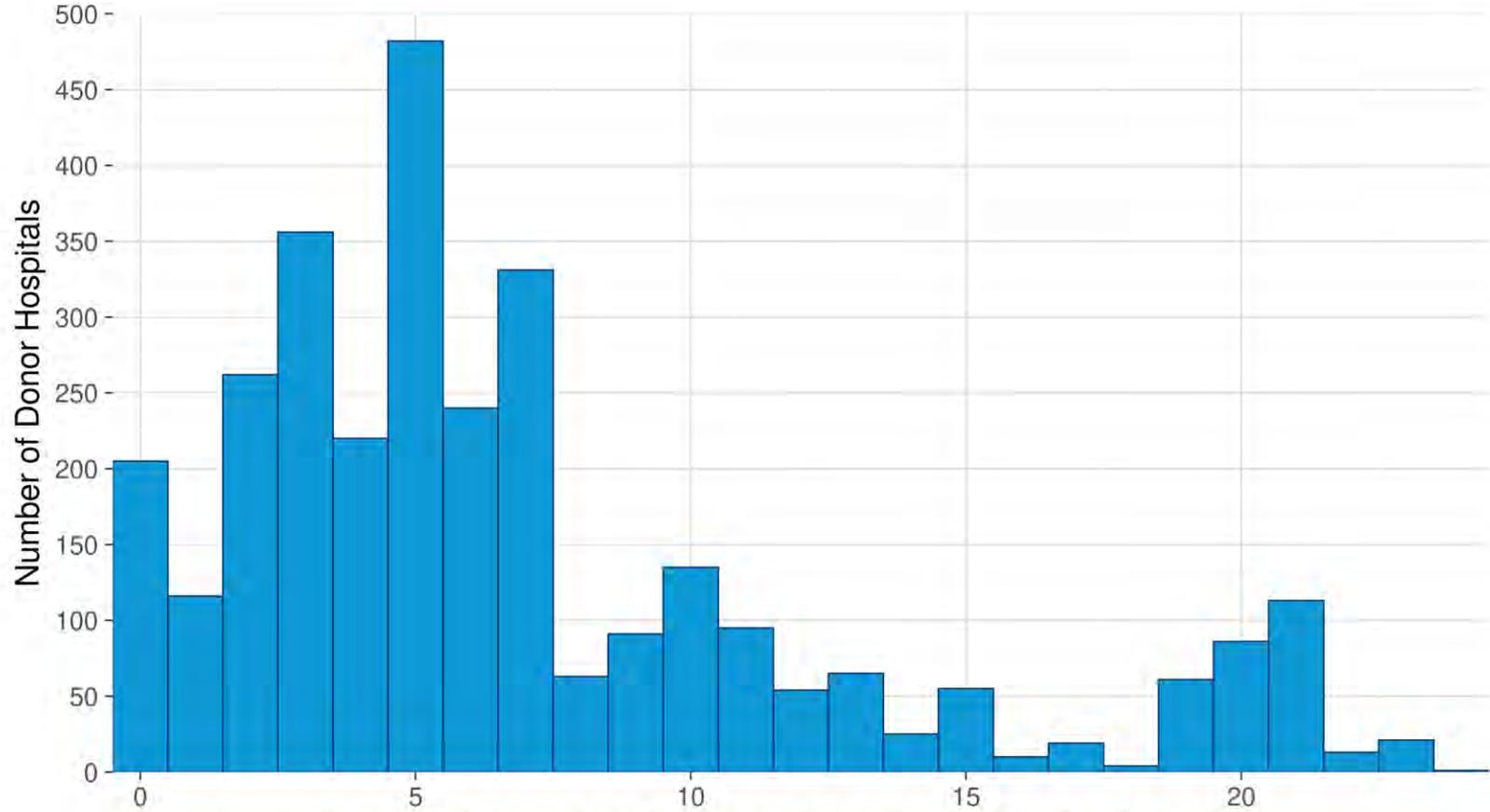
- Is the use of a 150 NM circle to calculate MMaT around a donor hospital appropriate?
- Do you agree with the minimum transplant program and number of transplant cohort sizes?
- Do you support increasing the geographic basis in 50 NM increments if minimum threshold is not met?
- Do you support the proposed changes to sorting candidates of the same blood type compatibility and MELD or PELD score?
- Do you foresee any issues with the minimum exception score or requesting score adjustments, instead of specific scores?

Deceased Donor, Liver-Alone Transplants by Exception Status and Distance from Donor Hospital to Transplant Program, During 2/4/2020 – 8/4/2020



* National state of emergency declared in US due to COVID-19 pandemic on March 13, 2020.

Number of Liver Transplant Programs within 150 NM of Each Donor Hospital* with at least One MMaT-Qualifying** Transplant During 2/28/2019-2/27/2020



Number of Transplant Programs With at Least One Qualifying Liver Transplant During 02/28/2019-02/27/2020 Within 150NM of Each Donor Hospital

* Donor hospitals included if at least one deceased liver donor ever recovered.
 ** MMaT-qualifying transplant: MELD score based, deceased donor transplant. Excludes Status 1 transplants, DCD and > 500 NM donor transplants.