Proposal: Directive to Reduce the Risk of Donor Derived Rabies Transmission

ASTS Position: Support

Transplant-transmitted rabies is a rare event. From 1978 to 2013, three transplant-transmitted rabies events in the United States affected nine tissue or organ recipients. Most recently in 2024, a kidney transplant recipient died 51 days after receiving an organ from a donor who had been scratched by a skunk approximately 6 weeks before death. While the incidence is low, rabies has a fatality rate approaching 100% once symptoms develop, making prevention through risk assessment and timely post-exposure prophylaxis (PEP) critical.

The OPTN proposal responds to an April 2025 directive from the Health Resources and Services Administration (HRSA) to further reduce the risk of donor-derived rabies transmission. Following this directive, the OPTN Ad Hoc Disease Transmission Advisory Committee engaged in consultation with multiple OPTN stakeholder committees, HRSA, and the Centers for Disease Control and Prevention (CDC). The CDC conducted analysis of data from seven organ procurement organizations (OPOs) to estimate the frequency of animal exposures in the deceased donor population, finding that approximately 913 deceased donors per year report mammal exposure and approximately 9 deceased donors per year report wild mammal exposure.

The proposal establishes screening criteria for high-risk rabies exposures in both deceased and living donor populations, requires OPOs and living donor transplant programs to contact CDC for additional risk assessment when screening criteria are identified, and requires transplant programs to inform potential recipients when screening criteria are present and provide appropriate clinical monitoring after transplant, including monitoring specific to receipt of rabies PEP.

The proposal represents a reasonable, low-burden intervention for OPOs and transplant programs. The screening questions are already present in current donor risk assessment questionnaires, minimizing the need for new data collection processes or significant workflow modifications. Based on CDC analysis, the number of donors requiring further investigation will be very small—an estimated median of 9 deceased donors annually (reported 95% uncertainty interval: 1-31 donors annually). This represents fewer than one case per week nationally and will likely cause minimal operational burden. The proposal does not exclude potential donors from consideration for organ donation if screening criteria for high-risk rabies exposure are present, preserving donor opportunities while enabling informed risk assessment. The CDC has established a 24-hour hotline for the transplant community to ensure that OPOs can reach subject matter experts at any time,

including federal holidays. The proposed criteria are limited to the highest-risk exposures based on available evidence, including direct contact with bats, bites or scratches from wild mammals in the United States, bites or scratches from stray or feral cats, and bites or scratches from any mammal outside the United States within the last 12 months. These criteria avoid overly broad screening while capturing the exposures most likely to result in rabies transmission.

Given the extremely low incidence of transplant-transmitted rabies but the uniformly fatal nature of the disease once symptoms develop, this represents a proportionate response. Post-exposure prophylaxis is nearly 100% effective in preventing rabies if received after exposure and prior to symptom development. Three organ recipients who received PEP 18 months post-transplant from a rabid donor survived without developing rabies, demonstrating acceptable antibody responses despite immunosuppression. This underscores the value of identifying risk and enabling timely PEP administration. The requirement for transplant programs to inform potential recipients when screening criteria are identified and to provide appropriate clinical monitoring, including monitoring specific to receipt of rabies PEP, is consistent with existing OPTN policy requirements for donors with other identified risks and represents a logical extension of current practice.

ASTS supports this proposal as a measured approach to reducing the risk of transplant-transmitted rabies while preserving access to life-saving organ transplantation. The proposal balances patient safety with operational feasibility, leverages existing screening infrastructure, provides access to expert CDC consultation, and preserves donor opportunities by not automatically excluding donors who meet screening criteria.

Considerations for the community:

Does the community support extending rabies screening requirements to living donors? Are there different considerations for screening living donors for rabies risk that the Committee should contemplate?

While all four documented cases of transplant-transmitted rabies in the United States involved deceased donors, the variable incubation period of rabies makes it biologically possible for rabies to be present and undetected in a living donor. The same screening criteria and CDC consultation process are appropriate for living donors, though do represent a slightly increased burden on transplant centers who may have to update their screening protocols, educate the providers involved in screening and consult the CDC on any positive screens. The screening of living donors also raises the question of management of positive screens – specifically responsibility for follow up regarding CDC recommendations regarding the donor including administration of PEP. This should be

clarified and education and resources provided to centers regarding post positive screen protocol.

Are the proposed requirements for programs to inform patients when screening criteria are identified in a donor sufficient, or should more explicit informed consent requirements be adopted?

The proposed requirements that programs provide information on donor risk and post-transplant management and monitoring if a high-risk donor should be used are in line with that of other high risk donor conditions and do not require unique informed consent.

What educational resources would be beneficial for potential recipients who may accept an offer from a donor meeting rabies screening criteria? How can information around the implications, benefits, and risks of receiving PEP best be provided to potential recipients in a transplant setting?

Information from the CDC regarding risk and efficacy of PEP, plan for post-transplant management and monitoring and resources for further information should be provided during discussion of organ offer.

What additional information would help OPOs and living donor programs operationalize the requirement to contact CDC when a donor meets one of the rabies screening criteria?

Programs would need information on how to contact the CDC and how this should be documented and followed up.

What experiences have OPO and living donor programs had with evaluating donors with reported animal exposures in their medical and social history? Does your program experience match the Committee's assumptions that donors meeting the proposed screening requirements will be low?

It is our program experience that the rate of living donors meeting screening requirements is likely to be low.

Are the proposed rabies screening criteria clear and understandable to the community?

Yes.

Are there different or additional strategies to prevent rabies transmission in solid organ transplant that should be considered?

The proposed screening represents a relatively easy to implement, low cost, low burden strategy that we feel to be a measured response to an extremely low incidence donor risk. We do not feel further screening or prevention measures to be necessary.

How would OPOs and programs consider operationalizing the new requirements if the OPTN pursues a phased implementation approach? Under this scenario, the policy requirements would take effect prior to rabies screening data collection being standardized in the OPTN Computer System, and OPOs would be required to consult CDC if they observed any of the screening criteria in the donor history.

Requirements being in effect prior to data collection and screening requirements being standardized in the system may cause confusion and could lead to over reporting of possible high-risk patients, which could cause increased work for OPOs or lead to alarm in the community, or under reporting. Both situations would make the efficacy of the policy difficult to track. It would be preferable to have infrastructure in place when the policy is implemented.