

## **ASHI Comments to the Technology Assessment Report on The Impact of Pre-Transplant Red Blood Cell Transfusions on Renal Allograft Rejection**

The American Society for Histocompatibility and Immunogenetics (ASHI) would like to comment on the Technology Assessment Report on The Impact of Pre-Transplant Red Blood Cell Transfusions in Renal Allograft Rejection, based on research conducted by the University of Connecticut/Hartford Hospital EPC for the Agency for Healthcare Research and Quality (AHRQ). The report date was January 10, 2011.

The American Society for Histocompatibility and Immunogenetics (ASHI) is a not-for-profit association of clinical and research professionals including immunologists, geneticists, molecular biologists, transplant physicians and surgeons, pathologists and technologists. As a professional society involved in histocompatibility, immunogenetics and transplantation, ASHI is dedicated to advancing the science and application of histocompatibility and immunogenetics; providing a forum for the exchange of information; and advocating the highest standards of laboratory testing in the interest of optimal patient care. This includes assessing organ transplant recipient sensitization to potential organ donor human leukocyte antigens (HLA).

ASHI has reviewed the Technology Assessment Report and has determined that the following inconsistencies need to be addressed:

1. The questions in the assessment only addressed the impact of transfusion on transplant outcomes. They did not address nor consider the significant impact of sensitization on access to transplantation, particularly for women, pediatric patients and transplant patients requiring second and third transplants.
2. The assessment was based on a literature review that was not comprehensive and which focused primarily on older articles where assessment of sensitization was based on PRA levels obtained from cell panels. They did not review nor request Organ Procurement Transplant Network (OPTN) data and only included some Collaborative Transplant Study (CTS) data. In fact, the executive summary of the report rates the strength of evidence from the literature cited in the search as "low" or "insufficient" in all questions posed.
3. The assessment did not address the fact that more recent studies detailing HLA-specific antibodies in transplant patients are based on much more accurate and sensitive solid-phase assays and, therefore, that the older data cannot be used to draw conclusions for current practices.
4. The assessment also included some papers that showed a beneficial impact of donor-specific transfusions (DST). They failed to note that the DSTs in these studies were given to recipients in protocols designed to induce tolerance to donor HLA antigens. The transfusions in question in the current discussion are from random donors and are likely to induce sensitization.
5. The assessment attempted to address whether or not changes in immunosuppression changed the impact of transfusions, concluding that prior to 1992 transfusion had a beneficial effect, but that after 1992 the transfusion impact was equivocal. In fact, immunosuppression has changed dramatically since this period, with expanding use of induction therapies, desensitization protocols and rescue therapies directed at preventing antibody-mediated graft loss and reducing chronic rejection of allografts.

6. Finally, the overall conclusion of the report was that “transfusion has a beneficial to neutral effect on graft survival.” Clearly this is inconsistent with the current standard of care, where transfusion is avoided in order to reduce the possibility of increased sensitization to HLA antigens in this population of patients. Increased sensitization limits access to transplantation and increases the morbidity and mortality related to extended dialysis. It also does not address the needs of patients requiring chronic support for maintenance of adequate hemoglobin levels while on dialysis.

ASHI appreciates the opportunity to comment on this technology assessment report and welcomes any comments or questions that may arise from these remarks. Thank you for the opportunity to provide input into this important discussion.

Sincerely,

A handwritten signature in black ink, appearing to read "G. Land", written in a cursive style.

Geoffrey Land, PhD  
President, ASHI