

Eurotransplant protokoll

Acceptable Mismatch Program (AM)

The AM program is conducted by the ETRL. The AM program is open for every highly sensitized kidney patient of any of the countries participating in ET. Current or historical sensitization against HLA-A, B, C (Class I) and HLA-DR, DQ (Class II) is regarded equally important. The TTC must control first whether their patients have anti Class I and/or II antibodies using solid phase assays prior to apply for inclusion in the AM program. To be included, patients awaiting a kidney (re) transplant have to meet the following criteria:

- Patients must be typed for HLA-A,B,C, and DR,DQ.
- Sera of at least two different bleedings **must** show **mainly** cytotoxic % PRA value or a virtual PRA value of $\geq 85\%$ based on allo-sensitization and reported unacceptable HLA antigens.
- The panel **must** consist of ≥ 50 cell suspensions. Current and/or historical sensitization is regarded equally important.
- Solid phase assays allowing the definition of virtual %-PRA values can be used, however, patients having antibodies found in solid phase assays only cannot be accepted in the AM Program, even if their virtual PRA value exceeds 85%.
- The antibody reactivity **must** be due to alloantibodies against HLA antigens. The reactivity of autoantibodies should not contribute to this panel reactivity.

Definition of AM

AM can be defined by:

- Analysis of the HLA typing of panel donors with negative reactions in the screenings.
- A recently developed computer algorithm, called HLA Matchmaker ([link to matchmaker](#)), has shown to be of benefit for the detection of AM.
- Selection and crossmatching of blood donors with a single mismatch to the patients HLA phenotype.
- Use of single antigen beads or cells and selection of not by the serum of the patient recognized antigens / specificities

Submission of the data:

- The AM data of the patient are submitted to the ETRL using the form below together with an informative serum sample.
- In the ETRL screening is repeated and a logical control is performed and after confirmation the patient is entered in the AM program.
- This procedure takes in average 6 weeks from the moment the serum samples arrived at the ETRL.

Procedure AM program

- Recipient center and/or ETRL determine AM.
- The information is sent to the ETRL in combination with the non-acceptable mismatches.

- ETRL checks acceptable mismatches in relevant serum and if confirmed, inclusion in AM by ETRL.
- HLA typing of every potential donor is introduced in the AM program.
- Selection of potential recipients before any other matching procedure.
- The selection of recipients by the AM program is done by implementing the HLA-A,B, (C) and DR, (DQ) typing of the donor in ENIS. Potential crossmatch negative recipients are selected on the basis of compatibility of the donor with the patients own HLA-A,B,C and DR,DQ antigens in combination with the AM.
- The ETRL immunologist on duty must accept the offer prior to inform the patients center. The final cross match must be performed in the recipient center using both current and historical sera if available. In case of a negative crossmatch the transplantation can be performed.

Repeated HLA mismatches for broad and split HLA-A,B,DR antigens are considered a contra indication for transplantation, unless otherwise reported

Selection of potential organ donors

The HLA-A,B,(C), and DR,(DQ) typing of an organ donor is entered in the Eurotransplant Network Information System (ENIS). Potential recipients will be selected on the basis of their own HLA-A,B,C and DR,DQ antigens in combination with the AM. The AM are regarded, as patients own HLA antigens. Full compatibility between donor and patients including the AM is a prerequisite for allocation of kidneys via the AM program.

The ETRL immunologist on duty is informed about every potential offer. After acceptance the respective TC is informed, and if accepted, the kidney **must** immediately be dispatched. The crossmatch **must** be performed in the recipient TTC using both current and historical sera if available. In case of a negative crossmatch the transplantation can be performed. Repeated HLA mismatches for broad and split HLA-A,B,DR antigens are regarded as a contraindication for transplantation, unless otherwise reported.

NB Antibodies against HLA-C and HLA-DQ are reported as unacceptable antigens but are taken into consideration only when the organ donor is typed for these specificities.

For patients short on the AM waiting list (<2 years) minimal criteria of one HLA-B and one HLA-DR sharing or 0 MM HLA-DR apply.

The order by which the kidneys will be offered in case of multiple recipients is according to the calculated chance to receive an organ as provided by the ETRL (Donor Frequency Calculator). Patients with the lowest chance get the highest priority.

AM forms



Report AM



Application form AM