Chapter 3

Allocation General

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3.1 Introduction

Eurotransplant is involved in the allocation (fair distribution) of donor organs within Austria, Belgium, Croatia, Germany, Luxembourg, the Netherlands, and Slovenia. This chapter will describe the general process of allocation within Eurotransplant. The matching procedures used for organ allocation are described in the various organ-specific chapters of the ET manual.

The allocation procedure starts with the reporting of a donor to the Eurotransplant duty office and ends with the transplantation of the allocated organ(s) or with the termination of the allocation procedure (e.g. in case a specific organ has not been accepted). In this process, several steps can be distinguished which will be discussed in this chapter.

3.2 Allocation procedure

3.2.1 Donor reporting

Almost all donors from the centers within Eurotransplant are reported electronically.. Donors from outside Eurotransplant area are always reported by fax to the Eurotransplant office.

When donors are reported electronically, donor information is directly entered into the allocation program ENIS. Allocation can be started immediately. Donors reported by fax have to be manually entered into ENIS by a duty officer. In Chapter 9 of the ET manual, all information regarding the donor is further elucidated.

3.2.2 Matching

Mandatory donor data to start a matching procedure are the following:

- Donor center / region
- Blood group
- Rhesus factor
- Date of birth
- Sex
- Weight
- Height

- Cadaver type (heart beating / non heart beating)
- Identity
- (Brain) Death date
- Country of citizenship
- Donor hospital
- Contact telephone number
- Cause of death

The following data will influence the outcome of the ranking of the recipients on match lists. Therefore it is very important to report these data as soon as possible:

- Virology (HIV, HBV, HCV)
- Past history (drug abuse, malignancies)
- Presence of sepsis / meningitis
- Marginal liver donor parameters (Note: only applicable for liver match):
 - Age > 65 years
 - ICU stay with ventilation >7 days
 - BMI> 30
 - Steatotic liver >40%
 - Sodium >165 mmol/l
 - SGPT> 105 U/I
 - SGOT>90 U/I
 - Bilirubin >3 mg/dl
- HLA (only mandatory for Kidney match)

When these data are entered, an ET number is generated and the matches can be started. The matching procedures are described in:

- 1. Chapter 4 (kidney),
- 2. Chapter 5 (liver),
- 3. Chapter 6 (thoracic organs),
- 4. Chapter 7 (pancreas),
- 5. Chapter 8 (intestine).

3.2.3 Offering

The matching procedures generate the so-called match lists. On these lists all recipients selected for the match are shown in the sequence of organ offering according to the matching rules developed by the organ advisory committees. The different organs of a donor will be offered in the following order:

 $\text{Heart+lung} \rightarrow \text{heart} \rightarrow \text{lung} \rightarrow \text{liver} \rightarrow \text{intestine} \rightarrow \text{pancreas} \rightarrow \text{kidney}$

This order also depicts which organs are leading relative to the other organs, whenever a combination is necessary.

Prior to the first offers, the lists are screened by the duty officers on available combinations and match comments entered by the transplant centers. After the screening, the first offers can be made.

Offers are made in a recipient-oriented fashion according to the above mentioned match list, i.e. the offer is for a specific recipient on the match list. If the offer is rejected for this recipient, the duty office will go on to the next recipient on the match list. All decisions of the centers are entered in the ENIS system and noted on the match list.

3.2.3.1 Primary offer

The recipient receiving the primary offer has the first right to accept the organ. The center may accept the offer and transplant the organ in the recipient that the organ was offered for. For logistic reasons Eurotransplant urges centers to give their decision of non renal organs within 30 minutes. For renal organs, the center is urged to decide within 60 minutes

3.2.3.2 Secondary (reserve) offer

When the primary offer is made, the second recipient on the match list will generally receive a so-called backup or secondary offer. This offer is made to save time in the allocation procedure. For a secondary offer, the centers are also urged to decide within also a time limit of 30 minutes for non-renal organs and 60 minutes for renal organs is counted. The prime goal for a reserve offer is to gain time in the allocation process.

3.2.3.3 Rescue allocation

When an organ is not accepted via regular allocation, Eurotransplant is allowed to deviate from the normal allocation scheme in order to prevent the loss of the organ for transplantation, the so-called rescue allocation.

There are several reasons why an organ might not be accepted via regular allocation and a rescue allocation is justified. Most common reasons are:

- Medical reasons: when a non-renal organ is rejected in three different centers for medical reasons (renal organ: in five different centers)
- Logistical reasons: when it is not possible to reach the donor center in time, for example bad weather conditions or when the donor is unstable

Eurotransplant uses, as discussed with the national authorities, the following two types of rescue allocation:

- 1. Rescue allocation in sequence of the match list (Regular center offer)
- 2. Competitive rescue allocation (Competitive center offer).

In general, the amount of time left and previous decisions of the centers during regular allocation determines which type of rescue allocation is performed. *Please note:* for the liver an alteration in the rescue allocation procedure was made.

A <u>liver</u> rescue allocation procedure is only initiated in case a liver has not been allocated 1 hour before the planned explantation time. Medical declines are not taken into account in the initiation of the liver rescue allocation process

When, even after rescue allocation, no suitable recipient can be found within the Eurotransplant area, the medical doctor on duty at Eurotransplant will decide

together

with the donor coordinator whether to offer the organ outside the Eurotransplant area.

3.2.3.3.1 Rescue in sequence of the match list

Enough time for allocation: Rescue offer to the centers in the donor region or country in the sequence of the recipients on the match list (recipients that already were included in the regular allocation process are not considered any more). Rescue allocation will primarily be performed in the region of the donor center (Germany) or in the donor country (all other Eurotransplant countries). Using these regional structures is supposed to reduce the ischemic time of the organ. If there are no recipients within the region or country, the organs are offered to more distant centers and countries.

When an organ is offered via rescue allocation, the transplant center will receive a center offer and may choose the recipient from all AB0-compatible recipients in the center.

3.2.3.3.2 Competitive rescue allocation

Very limited time for allocation (due to unstable donor, long CIP etc.): Competitive offer to at least 3 centers in the region or country allocating the organ to the center that accepts the offer first. At the time of acceptance of the offer the ET number of the selected recipient has to be given to the ET allocation desk. If one or more centers already got the donor information, these centers will be informed last. The center may choose the recipient from all AB0-compatible recipients in the center.

3.2.3.4 Offering the organ(s) outside the Eurotransplant area

When, even after rescue allocation, no suitable recipient can be found within the Eurotransplant area, the duty officer will contact the donor coordinator whether the organ should be offered outside the Eurotransplant area. If the coordinator gives consent, the offer is made to several organ exchange organizations in Europe at the same time. The organization accepting the offer first, may transplant the organ.

3.2.3.5 3.2.3.5 Donors outside the Eurotransplant area

When a donor from outside the Eurotransplant area is reported, the organ will generally be offered via competitive rescue allocation since the organ is often reported to several organ exchange organizations at the same time. The competitive rescue offer will be done to the first three centers on the match list plus three centers that are logistically/geographically well suited.

3.2.3.6 Access to Donor information

Upon receiving the organ offer, the center is entitled to see the donor information. All donor and organ information (if available) can be viewed via the internet on <u>www.donordata.eu</u>. This is the easiest and fastest way to view both donor and recipient data at once. To view the donor data, an account for the donor data web site and the ET donor number is necessary

As of July 1, 2011 exchange of donor information via the web-based application 'donordata.eu' (or similar web-based applications in use within the ET member countries) is **mandatory**.

In exceptional cases, donor information is allowed to be provided in other ways (e.g. by fax). Exceptional cases will only be considered as such if they are included in the 'donordata.eu exceptional case description'. A description of exceptional cases will be established prior to implementation of ROPC03.10 (e.g. technical calamities The centers outside the ET area have no access to the Donor data website. All information is faxed.

3.2.4 Accepting

Upon acceptance of the organ, the transplant center will be put in contact with the donor center to make further arrangements. If necessary, the Eurotransplant duty office can assist in arranging transport.

Centers that have the secondary offer at the moment of acceptance of the primary offer will be notified that the organ offer is withdrawn.

When the organ is accepted, the recipient will receive the code "accepted" in the ENIS system and will from then on not be selected in further matching procedures.

3.2.5 Transport

Organizing transport is generally the responsibility of donor coordinator and transplant center. Eurotransplant can assist in establishing contact between donor and transplant coordinators, selecting flights, etc. This is mainly done in case of acceptance of kidneys. For further information concerning this subject please see chapter 9.

3.2.6 Organ not transplantable at time of arrival in transplant center

When an organ is deemed not transplantable (for the selected recipient) upon arrival in the transplant center, the Eurotransplant duty office must be informed immediately! Eurotransplant has to withdraw the acceptance code so the recipient will be selected in future matches again.

Furthermore, following actions must be discussed with Eurotransplant. The organ may never be discarded without consent of the Eurotransplant duty office.

3.2.7 Confirming

Several hours after explantation, the Eurotransplant duty office will check if the transplant center registered the transplantation in the ENIS system. If this is not done, the duty officers will try to confirm the transplantation. The transplant center is called whether the organ is (being) transplanted. If this is confirmed by the center, the recipient will temporally receive the status "Confirmed" in our system. This status is replaced by the status "Transplanted" after the transplantation is registered.

Confirming is especially important for the thoracic matches, because the HU and total country balance will immediately be adjusted. It is equally important for the liver match, where an obligation will be generated or closed immediately upon confirmation of liver transplantation.

3.2.8 Transplantation Registration

When the organ is transplanted, the organ can no longer be allocated and therefore the allocation procedure is closed. The transplant center must register the transplantation as soon as possible. After registration of the transplantation, the new status of the recipient is "FU" (follow –up).

3.2.8.1 Documentation of transplantation via rescue allocation

When an organ is accepted by a transplant center via rescue allocation, the transplant center must enter the following items into ENIS upon transplant registration:

1. Reason for selecting the specific recipient for transplantation

2. Person in charge for selecting the recipient

These data fields are mandatory items in the transplant registration screen.

3.3 Eurotransplant Duty Office

3.3.1 Personnel

The Eurotransplant duty office is operational 24 hours a day, 7 days per week. Personnel at the duty desk have been specially trained and that are continuously being trained. A yearly knowledge test on the different allocation rules has to be performed by all duty officers.

3.3.1.1 Tasks

All duty desk personnel is trained to work independently and is involved in all donor procedures that include:

- 1. Receiving and processing relevant donor data;
- 2. Initiating of matching procedures;
- 3. Offering organs to transplant centers;
- 4. Receiving transplant centers' decision regarding the organ offers;
- 5. Communicating with donor coordinator on results from allocation;
- 6. Assisting in contacting all organizations involved in donor procedures;
- 7. Organizing transports;
- 8. Receiving and processing requests for high urgency.

3.3.2 Medical Staff

3.3.2.1 Supervision of duty office

The Eurotransplant medical staff is on duty 24 hours, 7 day a week as officers on call supervising allocation procedures. They also assist in all questions related to suitability of donors for organ allocation.

The medical doctor on duty is responsible if standard criteria for all allocation procedures are fulfilled. The end responsibility is taken by the medical director.

3.3.2.2 Requests for high urgency

The medical doctor on duty will judge all received requests for high urgency using pre-defined criteria as mentioned in the organ-specific chapters of the ET manual. They also assist in all questions related to suitability of the recipient for high urgency request.