



# **ORGAN TRANSPLANTATION ACTIVITIES in ESTONIA**

Virge Pall, 02.05.2012  
Tartu University Hospital

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## Historical background

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- First **kidney** transplant - 20. Dec 1968  
Total 931 transplants, 423 functioning kidney allografts  
Organ exchange between Baltic states since 1977.
  - First **liver** transplant - 3. Jan 1999 (total 25, functioning 21)  
Collaboration with Helsinki (prof. Höckerstedt's team)  
since 1990.
  - First **lung** transplant - 7. Oct 2010 (total 5, all functioning)  
Twinning contract with Vienna since 2009.
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## Organ donation 2011

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### Deceased donors:

- 53 potential donors from 4 hospitals (out of 7); Tallinn 27, Tartu 23, Pärnu 2, Tallin children's 1
- Actual 26: only tissues 4, tissues and organs 22 (incl. 13 multi, 59% )

Reasons for elimination

- family refusal 11
- medically unsuitable
- brain death not declared 1
- no suitable recipient 4

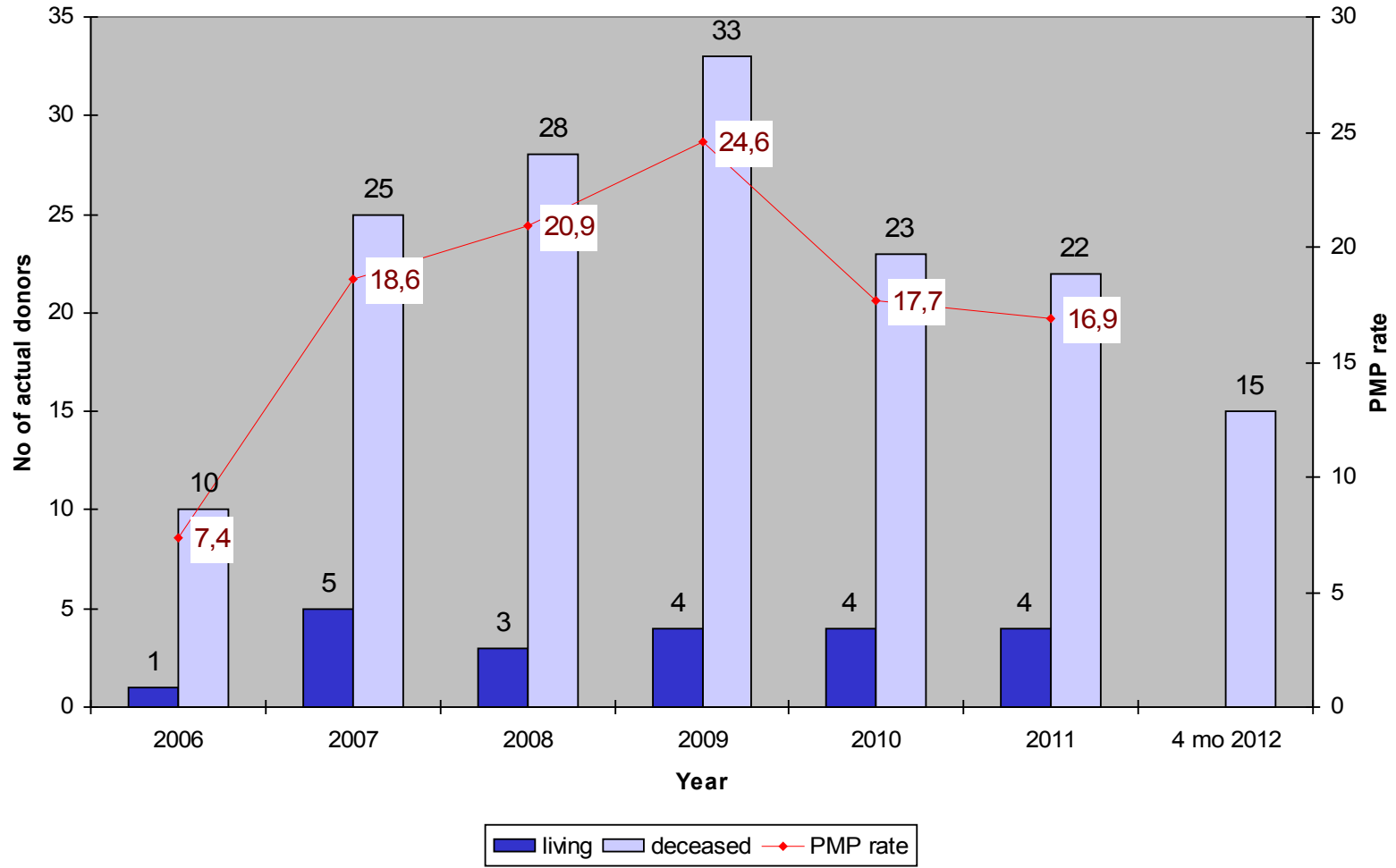
Removed organs: 44 kidneys, 9 livers, 10 lungs.

**Living: 4 kidney donors** (3 fathers, 1 mother)

- 16,9 pmp for deceased organ donors
  - 2,4 pmp for living donors.
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# Organ donation rate in Estonia





## Kidney transplants 2011

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### **Kidneys:**

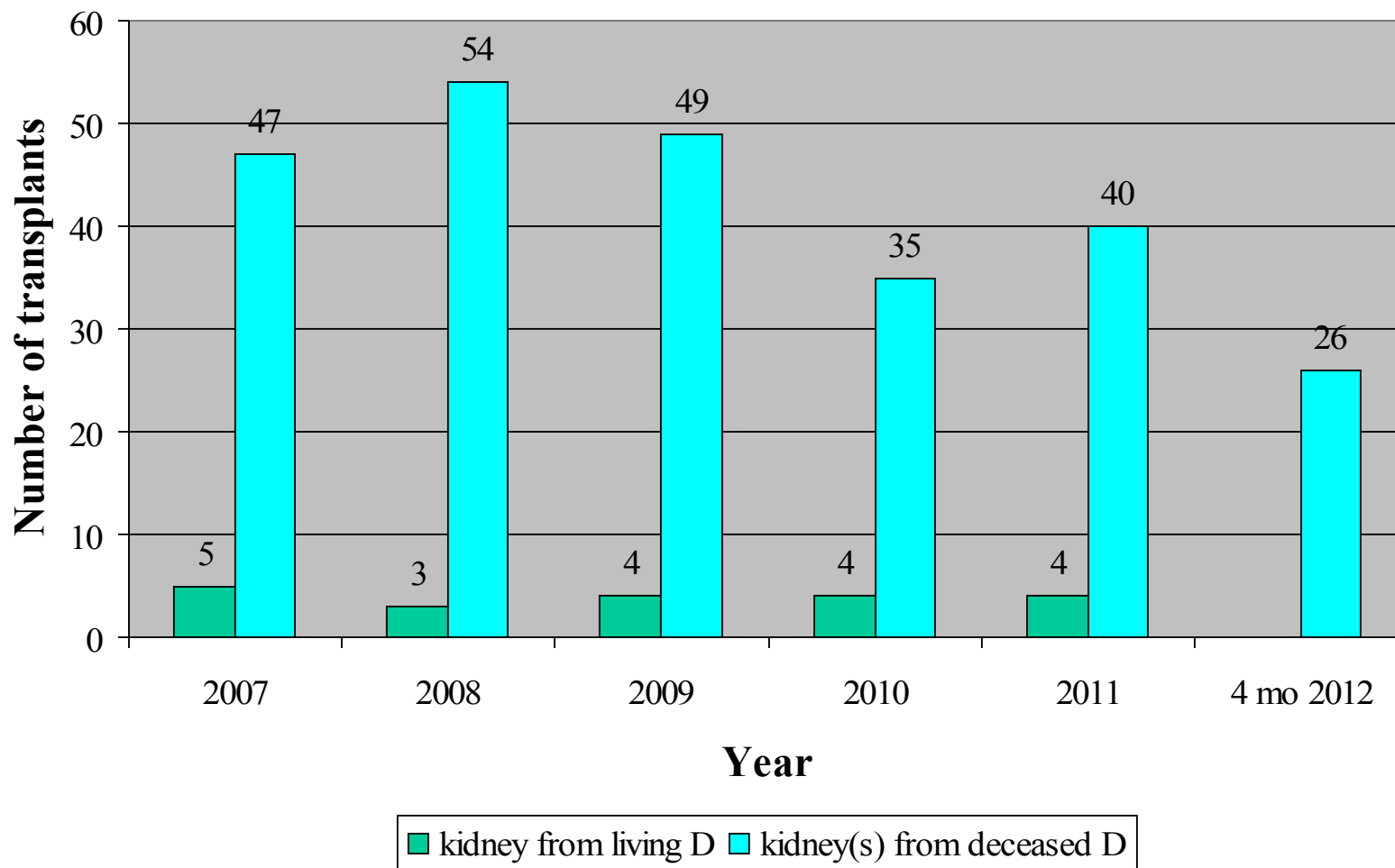
47 allografts (44 recipients), incl. 4 from living and 43 from deceased donors;

- average waiting time to transplant 16 months
- on waiting list at the end of year 55 (+ 50 in 2011)
- exported 4 kidneys, imported 3 kidneys (Latvia).



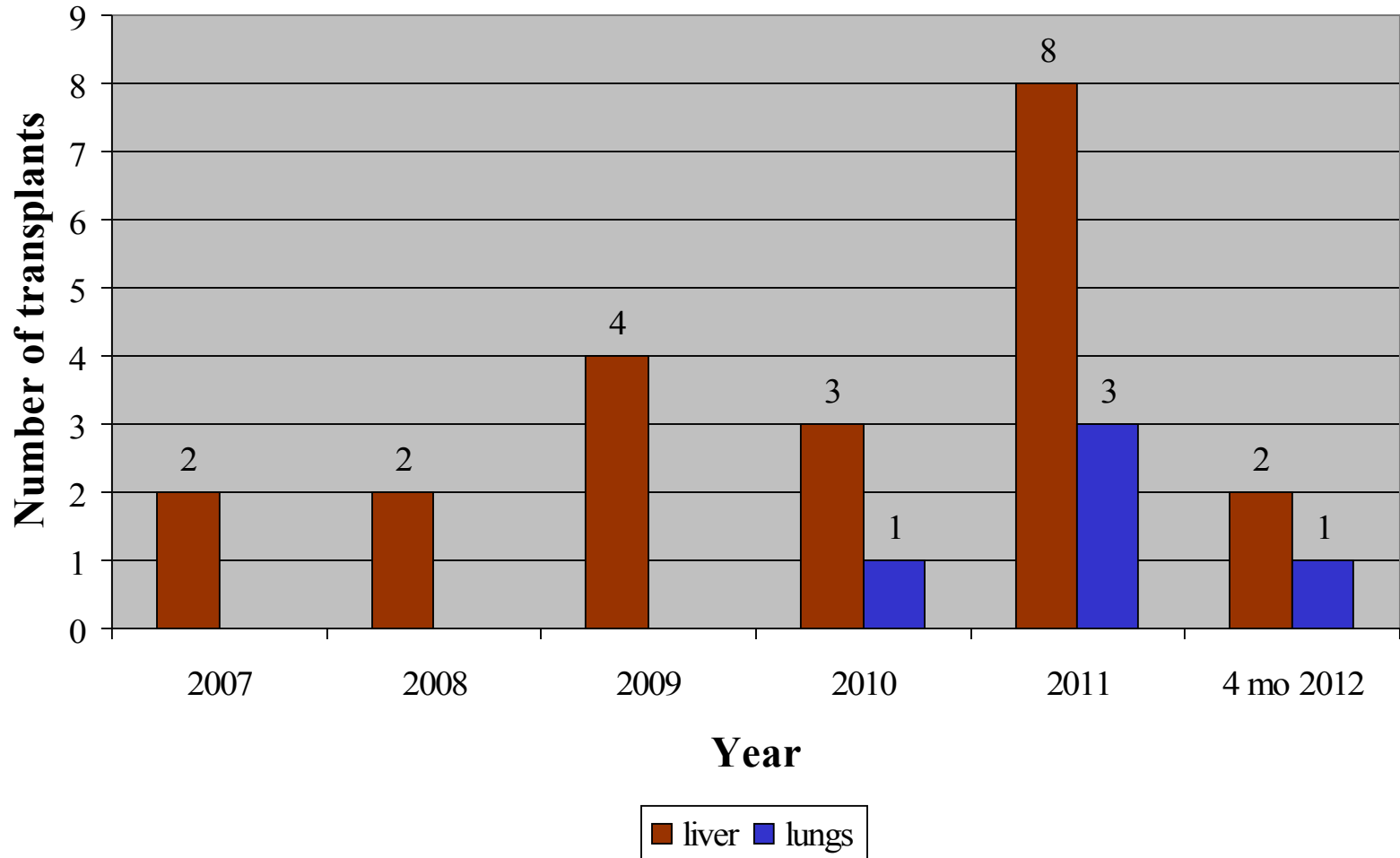


# Kidney transplants





# Liver and lung transplants





# Liver transplants 2011

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## Liver

- 8 transplants, incl. 1 retransplant
  - on waiting list 4 patients (+ 13 in 2011)
  - exported 1 liver (ET).
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# Lung transplants 2011

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## **Lungs:**

- 3 transplants;
- on waiting list 2 patients (+ 2 in 2011)
- exported 2 pairs of lungs (Vienna)

## **Heart + lungs:**

- 1 transplant in Vienna University Hospital
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## Organ exchange in Estonia

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|                        | <b>Export</b>   | <b>Import</b>  |
|------------------------|---|--|
| <b>2007</b>            | 2 kidneys to Latvia   | 1 kidney from Latvia   |
| <b>2008</b>            | 5 kidneys to Latvia   | 2 kidneys from Latvia  |
| <b>2009</b>            | 7 kidneys to Latvia, 2 to Lithuania,<br>5 pairs of lungs to Austria,<br>2 kidneys+ liver+ heart to ET | 3 kidneys from Latvia<br>(1 lungs transplant in Austria)       |
| <b>2010</b>            | 5 kidneys to Latvia,<br>2 pairs of lungs to Austria   | 1 kidney from Latvia   |
| <b>2011</b>            | 4 kidneys to Latvia,<br>2 pairs of lungs to Austria,<br>1 liver to ET                                 | 3 kidneys from Latvia<br>(1 lungs/heart transplant in Austria) |
| <b>02.05.<br/>2012</b> | 1 kidney to Latvia<br>2 kidneys+ 1 liver +3 pairs of lungs<br>to ET                                   |  |

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# Lab accreditation by EFI since 26.10.2011



EUROPEAN  
FEDERATION FOR  
IMMUNOGENETICS

CERTIFIES THAT

**Tartu University Hospital**

**United Laboratories, Department of Immunoanalysis  
TARTU - ESTONIA (01-EE-001.999)**

UNDER THE DIRECTION OF

**Dr. Astra VÄSTRIK**

HAVING MET THE REQUIREMENTS OF THE FEDERATION,  
ACCORDING TO THE EFI STANDARDS 5.6.1,  
IS GRANTED ACCREDITATION FOR HISTOCOMPATIBILITY TESTING

From **26 October 2011** To **26 October 2012**

**ACCREDITATION CATEGORIES:**

|  | Renal | Non-Renal |
|--|-------|-----------|
| <b>I Organ Transplantation:</b>                    |       |           |
| Recipient Typing                                   | Yes   | Yes       |
| Antibody Screening                                 | Yes   | Yes       |
| Antibody Identification                            | Yes   | Yes       |
| Donor Typing                                       | Yes   | Yes       |
| Cross-matching                                     | Yes   | Yes       |
| <b>II Hematopoietic Stem Cell Transplantation:</b> |       |           |
| Donor Register Typing                              | Yes   |           |
| Related Donor Typing                               | Yes   |           |
| Unrelated Donor Typing                             | --    |           |
| Cord Blood Typing                                  | --    |           |
| Cross-matching                                     | --    |           |
| <b>III Disease Association Studies</b>             | --    |           |
| <b>IV Transfusion</b>                              |       |           |

**TECHNIQUES**

|                             | CDC | Flow cytometry | DNA<br>2-digits | DNA<br>4-digits |
|-----------------------------|-----|----------------|-----------------|-----------------|
| <b>I HLA-Typing:</b>        |     |                |                 |                 |
| Class I                     | Yes | --             | Yes             | Yes             |
| Class II                    | --  | --             | Yes             | Yes             |
| <b>II Antibody testing:</b> | CDC | Flow cytometry | ELISA           | Bead array      |
| Screening                   | Yes | --             | Yes             | --              |
| Identification              | Yes | --             | --              | --              |
| Cross-matching              | Yes | --             | --              | --              |

*Prof. Dr. Ilmar Davaudis*

Prof. Dr. Ilmar I.N. Davaudis  
PRESIDENT

*Dr. Andrea Hamor*

Dr. Andrea Hamor  
CHAIR, ACCREDITATION COMMITTEE



# Lab accreditation by Estonian Accreditation Centre (ISO)

EESTI AKREDITEERIMISKESKUS  
ESTONIAN ACCREDITATION CENTRE



**AKREDITEERIMISTUNNISTUS  
ACCREDITATION CERTIFICATE**

Eesti Akrediteerimiskeskus kinnitab käesolevaga, et  
*The Estonian Accreditation Centre hereby certifies that*

TARTU ÜLIKOOLI KLIINIKUMI SA ÜHENDLABOR  
Puusepa 1A TARTU  
Tartu University Hospital Foundation  
United Laboratories

vastab ISO 15189 nõuetele, kui meditsiinilabor  
*has competence according to ISO 15189 to conduct research*

kliinilise mikrobioloogia, immuunoloogia, hematoloogia ja  
kliinilise keemia analüüside valdkonnas  
*in the field of clinical microbiological, immunological,*  
*haematological and clinical chemical analyses*

Akrediteerimise ulatus ja tingimused on antud tunnistuse lisas, mis koosneb 12 lehest  
*The scope and conditions of accreditation are specified in the annex which consists of 12 pages*

Registreerimisnumber: L167  
*Registration number:*

Akrediteeritus kehtib kuni: 02.02.2015  
*The present accreditation shall remain in effect until:*

Tallinnas 03.02.2010

  
**VIKTOR KRUTOB**  
Juhataja *Director*

Käesolev tunnistus on välja antud seoses uusakrediteerimisega, esimene tunnistus oli välja antud 03.02.2005  
*This certificate was issued due to re-accreditation, initial certificate was issued on 03.02.2005*

Käesoleva tunnistuse kehtivust saab kontrollida EAK veebilehelt. Validity of this certificate can be checked on the EAK web site



# Donor Blood tests

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**Donor blood tests performed at Tartu University Hospital**

**ABO, X-match**

**HLA-DR**

**HBV, HCV, HIV, CMV**

**Taxi service 24 / 7**

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# Activity licence by State Agency of Medicines



Ravimiamet  
State Agency of Medicines

## RAKKUDE, KÜBDEDE JA ELUNDITE KÄITLEMISE TEGEVUSLUBA

Tegevusloa number: 1

Tegevusloa omanaja: Sihtasutus Tartu Ülikooli Kliinikum  
L. Puusepa 1a, 50406 Tartu

Tegevusala: Rakkude käitlemine

Eritingimused: Autooloogsete ja allogeensete luudeli tüvirakkude, autooloogsete ja allogeensete peritocarse vere tüvirakkude ja terapeutiliste rakkude (T-lümfotsüütide ja mononukleaarsete rakud) käitlemine

Tegutsemiskoht: Hematoloogia-onkoloogia kliinik, L. Puusepa 8, 51014 Tartu

Pädev isik: Ainu Kaare

Eritingimused: Sugurakkude ja embrüote käitlemine

Tegutsemiskoht: Naistekliinik, L. Puusepa 8, 51014 Tartu

Pädev isik: Aivar Ehrnberg

Tegevusala: Kübde käitlemine

Eritingimused: Vaskulaarkoe käitlemine

Tegutsemiskoht: Kirurgikliniik, L. Puusepa 8, 51014 Tartu

Pädev isik: Toomas Ellervec

Eritingimused: Luukoe käitlemine

Tegutsemiskoht: Traumatoloogia ja ortopeedia kliinik, L. Puusepa 8, 51014 Tartu

Pädev isik: Matti Merila

Eritingimused: Silmsarvkesta ja amnionimembraani käitlemine

Tegutsemiskoht: Silmakliinik, J. Kuperjanovi 3, 51003 Tartu

Pädev isik: Rõna Pulgac

### Tegevusala:

Eritingimused:  
Tegutsemiskoht:  
Pädev isik:

Eritingimused:  
Tegutsemiskoht:  
Pädev isik:

Eritingimused:  
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Eritingimused:  
Tegutsemiskoht:  
Pädev isik:  
Käitlemise õigus alates:

Eritingimused:  
Tegutsemiskoht:  
Pädev isik:  
Käitlemise õigus alates:

Tegevusluba uuendatud alates:

Tegevusluba kehtib kuni:

Alus:

Kristin Raudsepp  
Peadirektor

### Elundite käitlemine

Neerude käitlemine  
Kirurgikliniik, L. Puusepa 8, 51014 Tartu  
Aleksander Lõhmus

Maksa käitlemine  
Kirurgikliniik, L. Puusepa 8, 51014 Tartu  
Toomas Väli

Kopsu käitlemine  
Kopsukliniik, L. Puusepa 8, 51014 Tartu  
Tanel Laisaar

Südamete käitlemine  
Südamekliinik, L. Puusepa 8, 51014 Tartu  
Arno Ruusalepp  
30.04.2012

Kõhuõõsme käitlemine  
Kirurgikliniik, L. Puusepa 8, 51014 Tartu  
Marko Muruste  
30.04.2012

30.04.2012

29.04.2017

Ravimiameti 26.04.2012 otsus BPO.-5.M1



## Other important dates

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- 28.10.2011 - Deputy Secretary General on Health of the Ministry of Social Affairs confirmed that Tartu University Hospital is entitled to represent Estonia in multinational organ exchange
  - 01.01.2012 – the revised financing criteria (incl. procurement, handling and transplantation of tissues and organs) entered into force
  - 25.04.2012 – a new home page about Estonian transplantation activities is available for public – [www.elundidoonorlus.ee](http://www.elundidoonorlus.ee)
  - 30.04.2012 - the activity licence of Tartu University Hospital is renewed for next 5 years, incl. new heart and pancreas procurement and handling
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## Waiting list (02.05.2012)

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- **Kidneys** 44 (0- 17, A – 9, B – 10, AB – 8)
- **Livers** 4 (0 – 1, A – 1, AB – 2)
- **Lungs** 1 (0)

### Main problems:

- Limited donor pool
  - High urgent patients, paediatric patients
  - Patients in need of a donor heart or heart/lungs
  - Quite unique HLA genotype and ABO distribution
  - Average time on WL for kidney – 23 mo ↑  
max 88 mo;  $\geq 36$  mo – 11 (25%)
  - Highly immunized, i.e. PRA  $\geq 80\%$  = 9 patients (20%)
  - Waiting for third transplant 2, second transplant 22
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## Activities in process

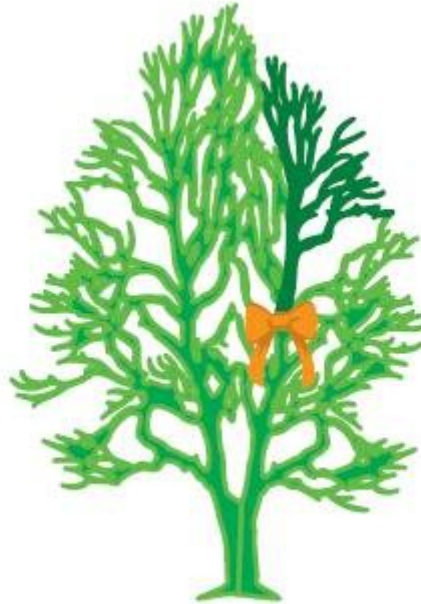
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- Revision of the law and regulations governing handling and transplanting of cells, tissues and organs in order to meet the standards of the EU directive
    - Creation / nomination of national transplant organisation
    - Revision of national requirements for licensing
    - Revision of brain death diagnostic criteria
    - Creation of living donor register
  - Continuing preparations for national heart and pancreas transplant programs
  - Negotiations about possibilities to join OEO
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# Membership in Scandiatriplant?

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2012 (02.05.2012)

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- 27 potential donors → 15 actual donors
    - family refusal 5
    - brain death not declared, medic. unsuitable or no suitable recipient 7
  - 26 kidney transplantations
  - 2 liver transplantations
  - 1 lung transplantation
  - Exported: 1 kidney to Latvia;
  - 2 kidneys + 1 liver + 3 pairs of lungs to ET member states
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