Lösningen

Skånes universitetssjukhus
En del av Region Skåne

LUND UNIVERSITY

- One of Europe's leading universities
- Education and research within; engineering, science, law, social sciences, economics and management, medicine, humanities, theology, fine art, music and theatre
- 47 000 students and 6 300 staff from all over the world
- 680 partner universities in more than 50 countries

SKÅNE UNIVERSITY HOSPITAL

- Third largest of Sweden's seven university hospitals
- 12 500 employees
- The department of Cardiothoracic Surgery
  - 1 400 open heart surgery cases
  - 55 thoracic transplantations
- It is one of the two hospital which are allowed to perform heart and lung transplantation in Sweden. The other hospital is Sahlgrenska in Gothenburg.

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Volym

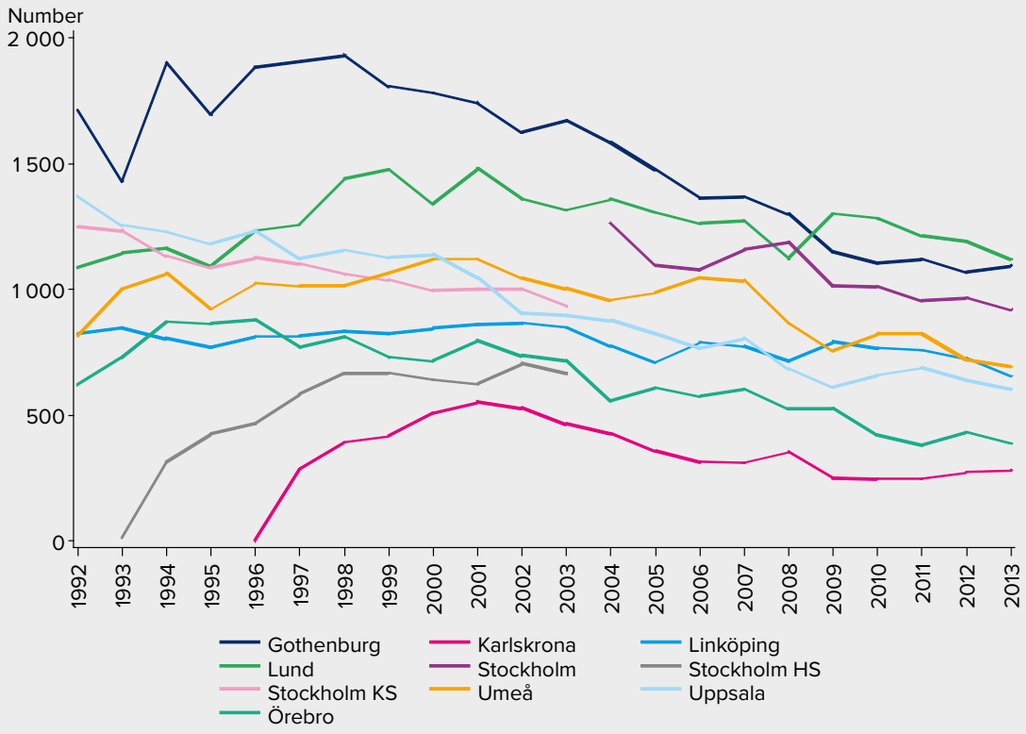
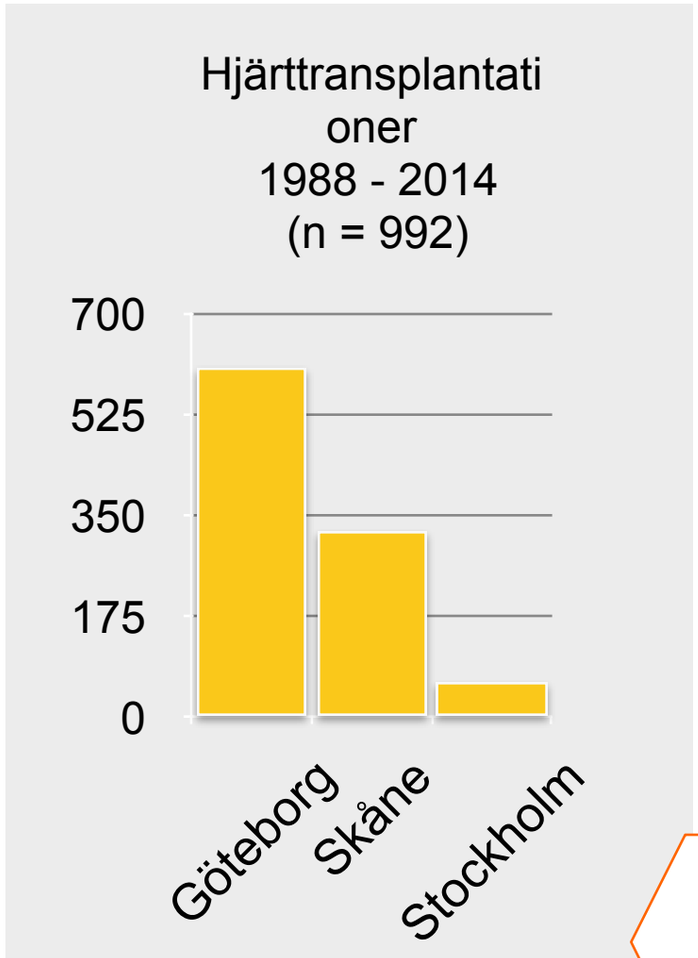


Figure 5. Procedures per centre, 2013.



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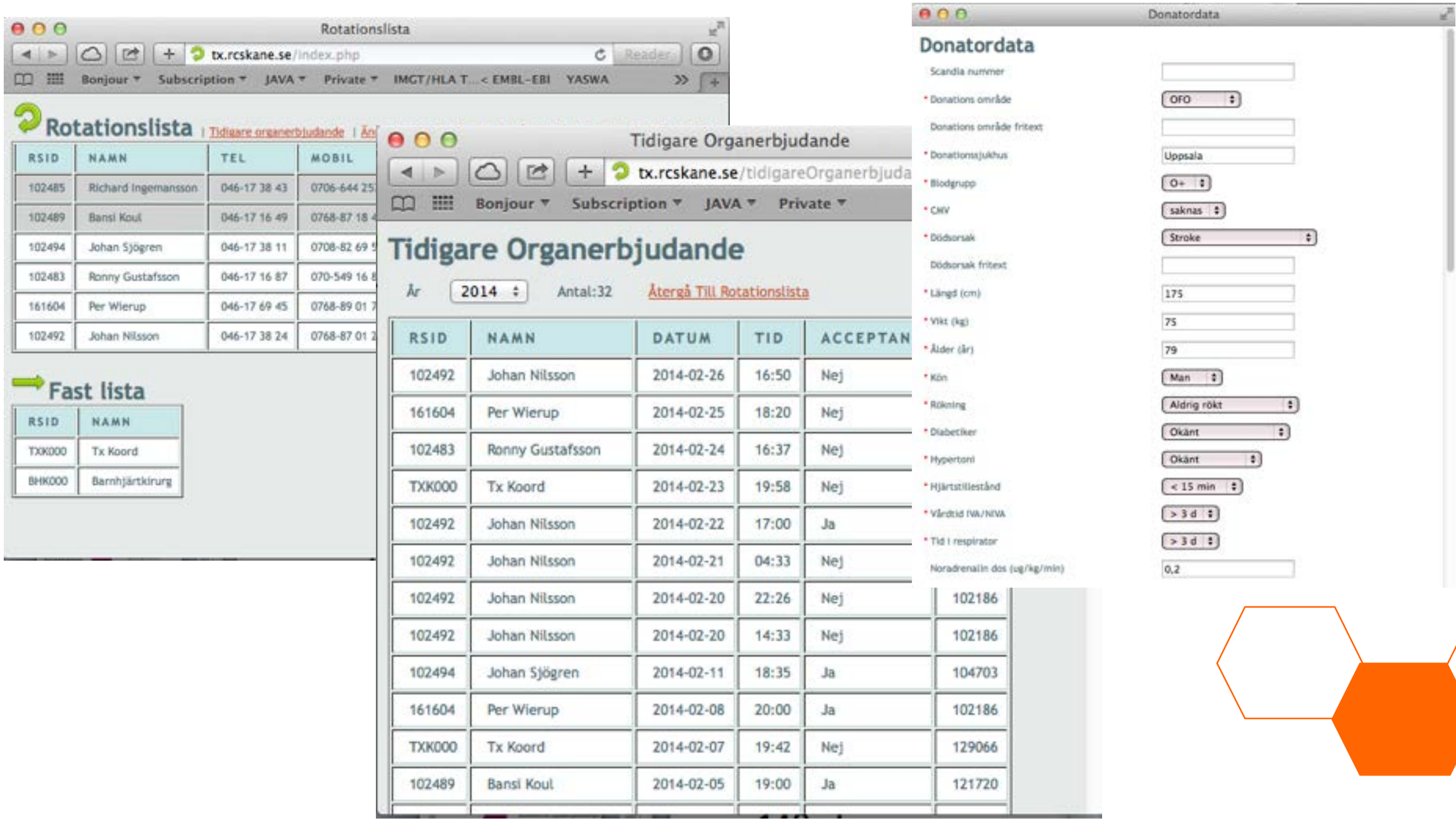
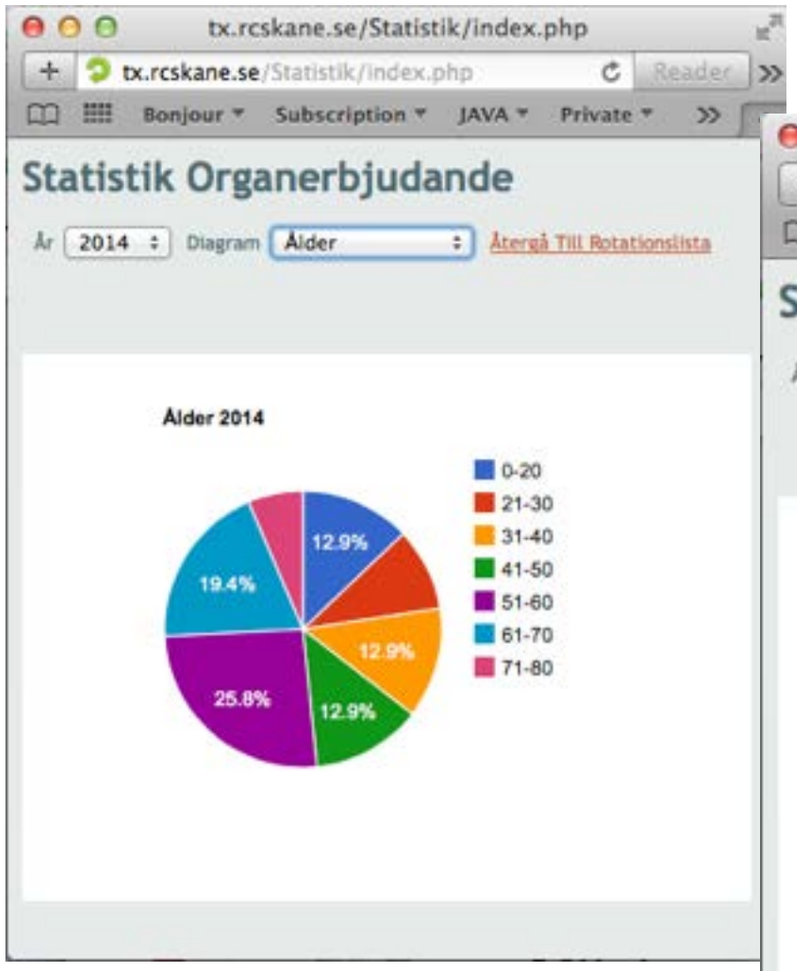
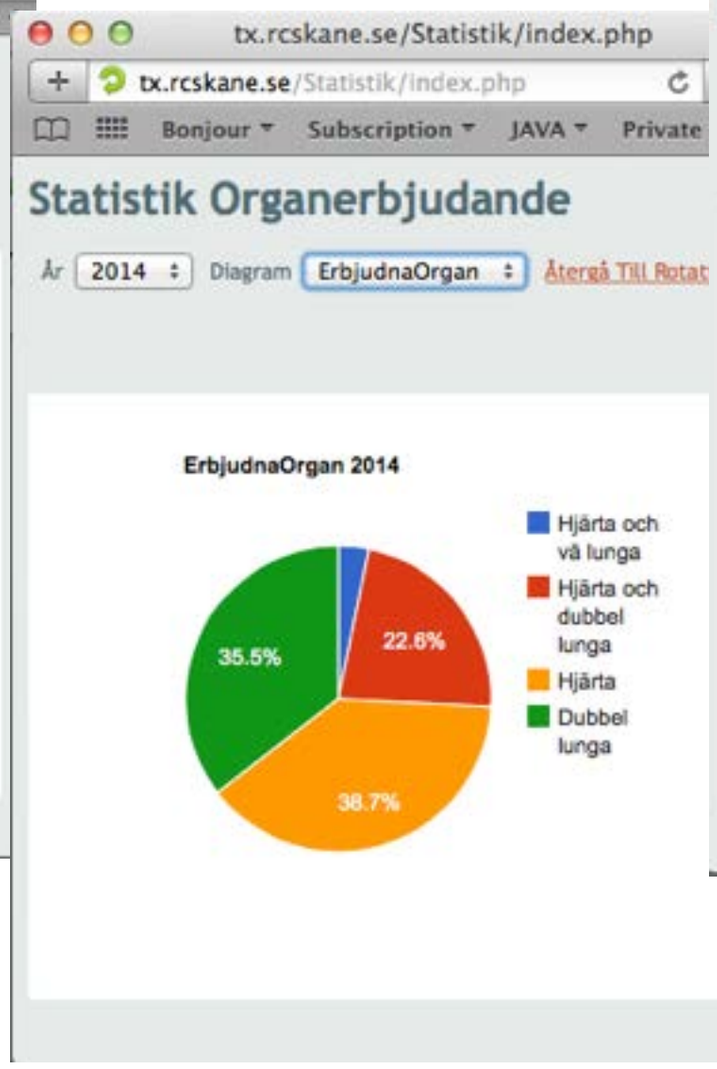
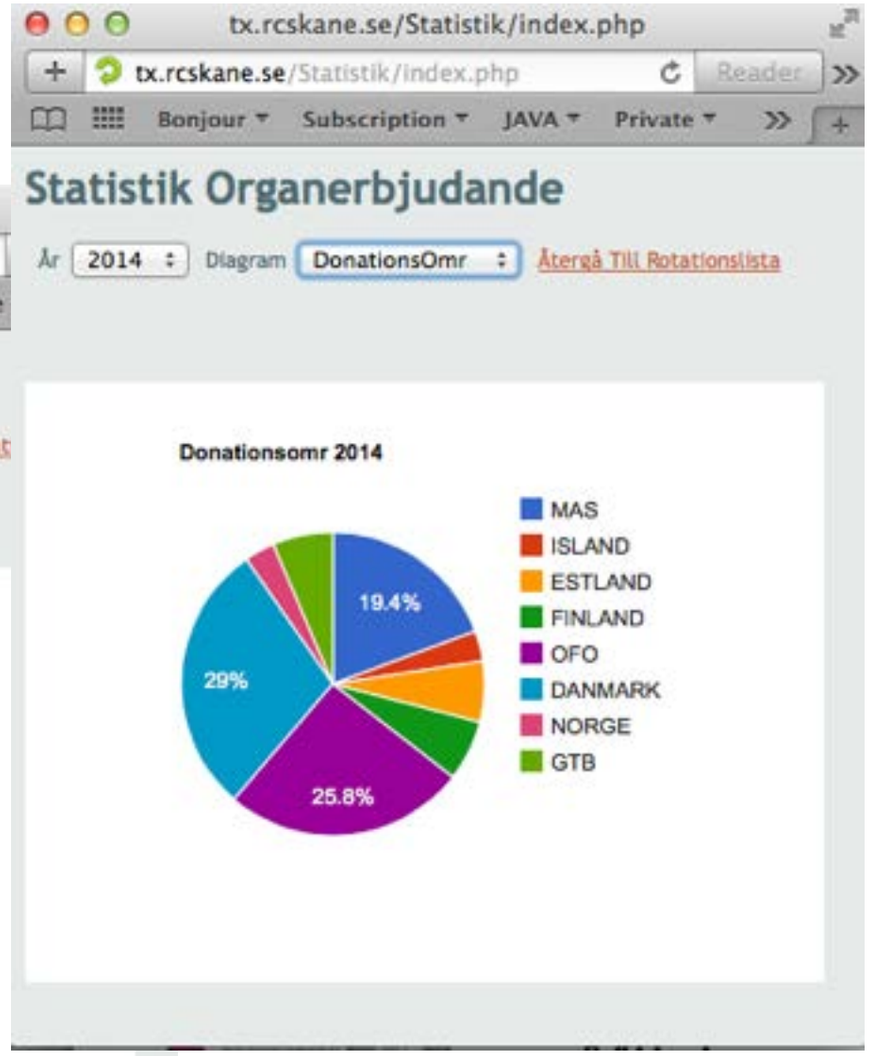
Organisation




tx.rcskane.se/Statistik/index.php
Bonjour
Subscription
JAVA
Private
Statistik Organerbjudande
År 2014
Diagram Ålder
Återgå Till Rotationslista
Ålder 2014
0-20
21-30
31-40
41-50
51-60
61-70
71-80
12.9%
12.9%
12.9%
25.8%
19.4%


tx.rcskane.se/Statistik/index.php
Bonjour
Subscription
JAVA
Private
Statistik Organerbjudande
År 2014
Diagram ErbjudnaOrgan
ErbjudnaOrgan 2014
Hjärta och vä lunga
Hjärta och dubbel lunga
Hjärta
Dubbel lunga
35.5%
22.6%
38.7%


tx.rcskane.se/Statistik/index.php
Bonjour
Subscription
JAVA
Private
Statistik Organerbjudande
År 2014
Diagram DonationsOmr
Återgå Till Rotationslista
Donationsomr 2014
MAS
ISLAND
ESTLAND
FINLAND
OFO
DANMARK
NORGE
GTB
19.4%
29%
25.8%

Skånes universitetssjukhus
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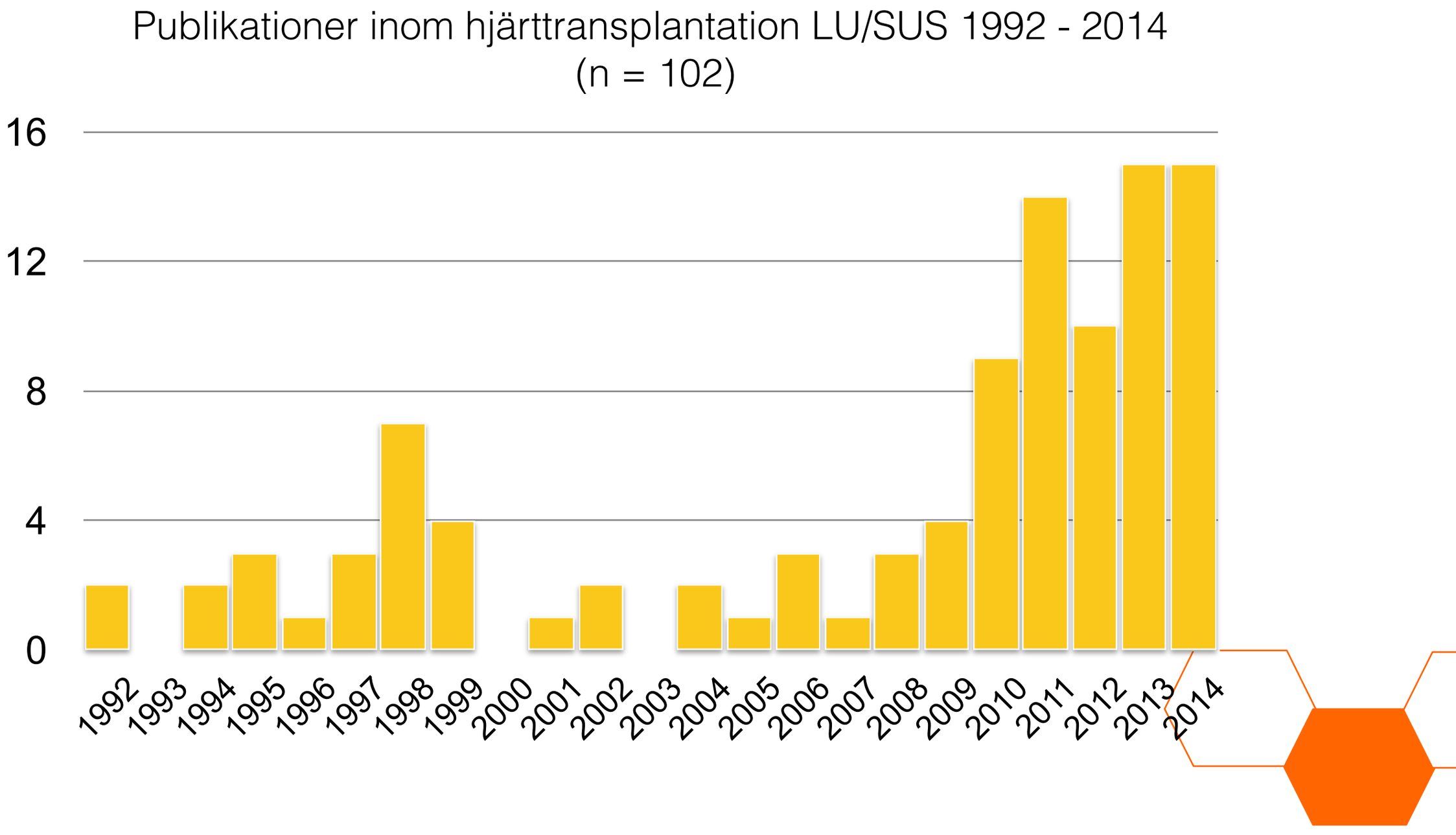
Forskning



Resultatet

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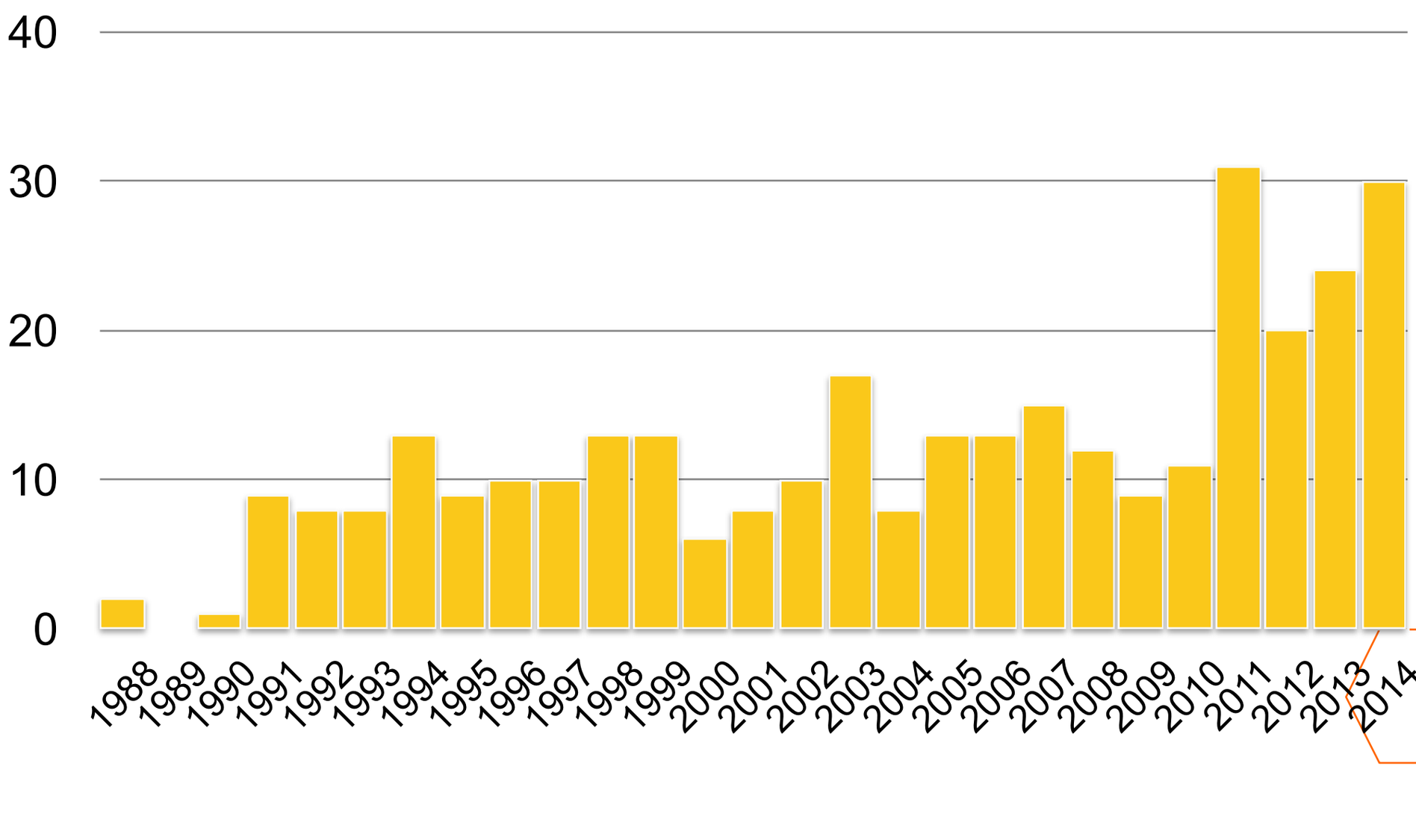
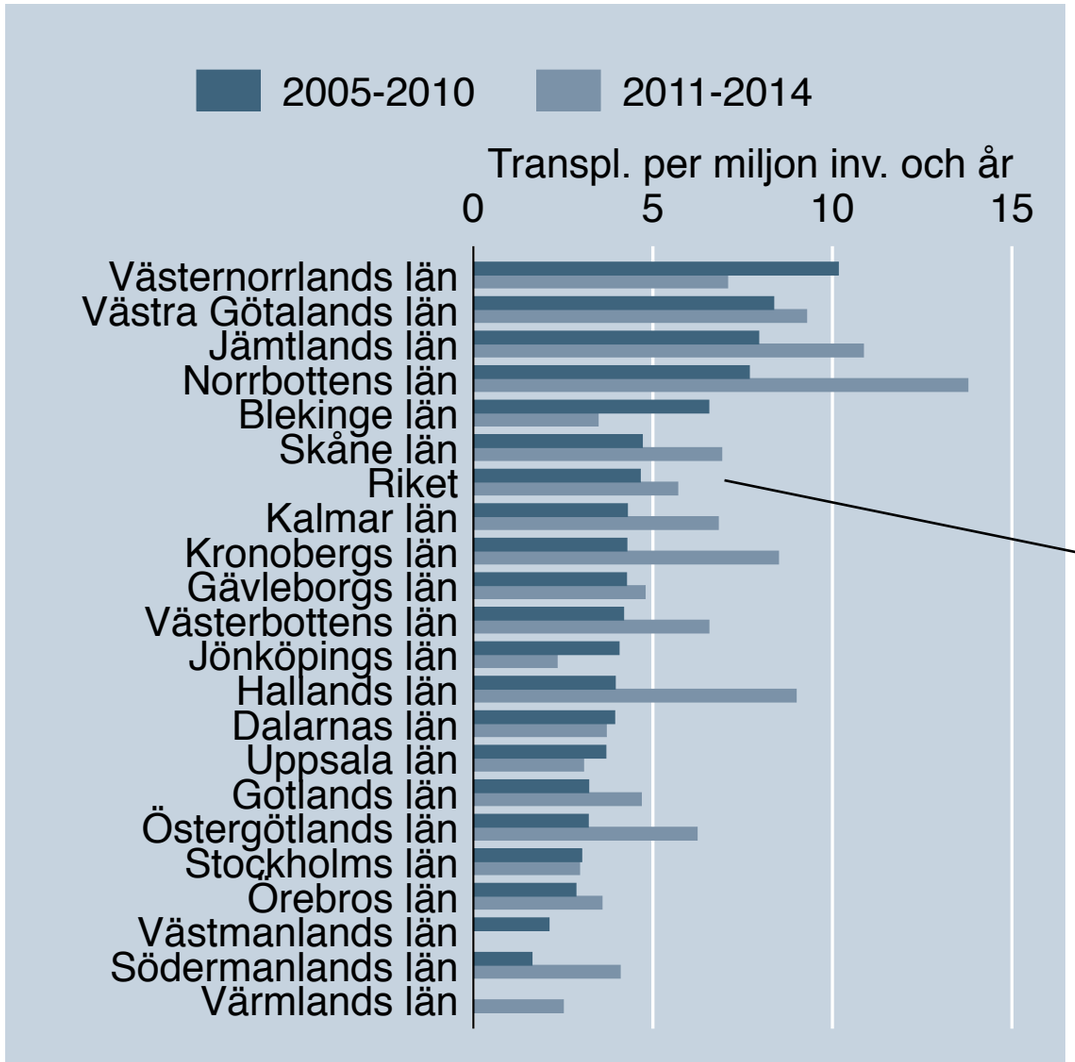
Hjärttransplantationer

Lund 1988 - 2014
(n = 324)

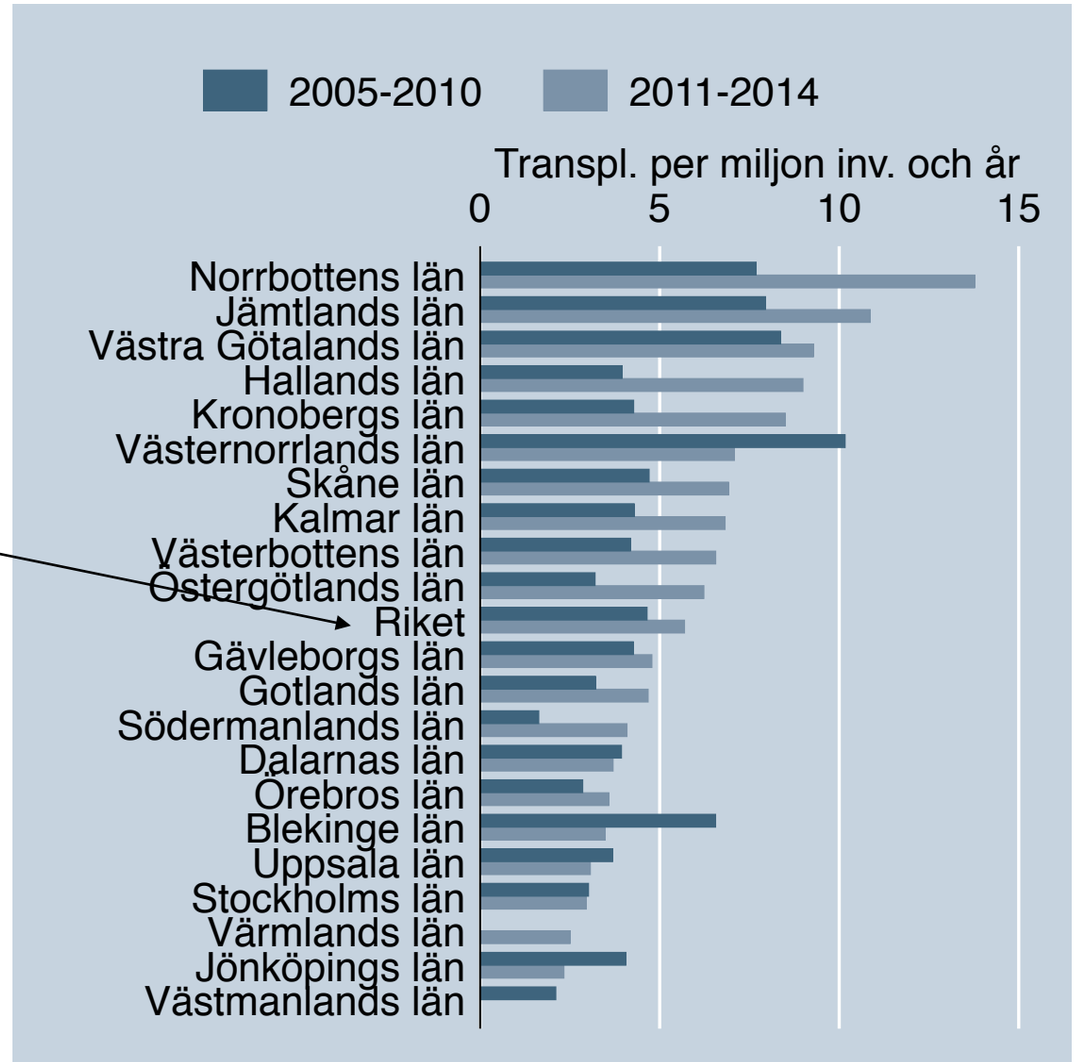


Hjärttransplantationer i Sverige 2005-2014

Före rikssjukvård

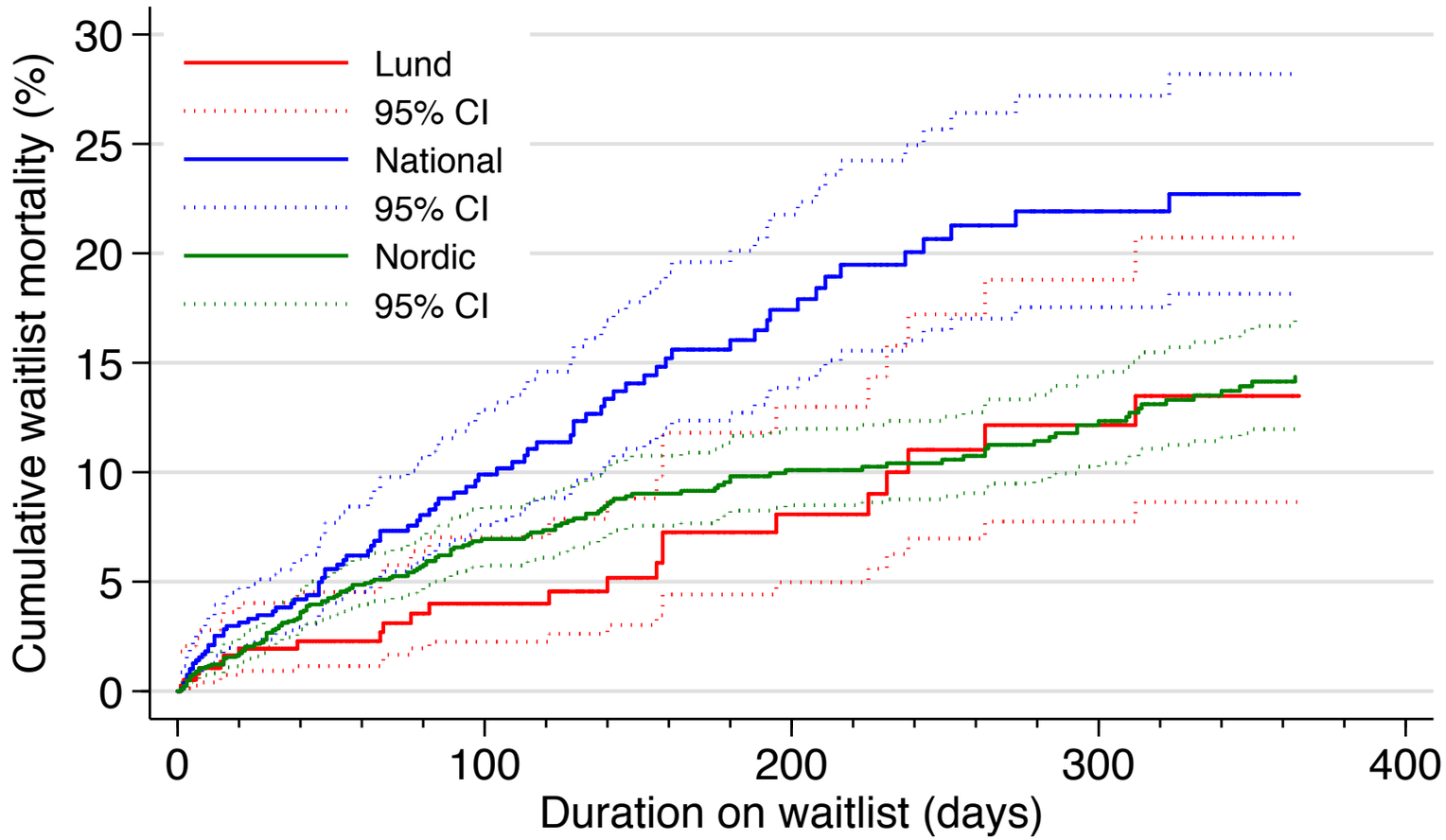


Efter rikssjukvård



Antal transplantationer 494
Antal invånare 9 747 355

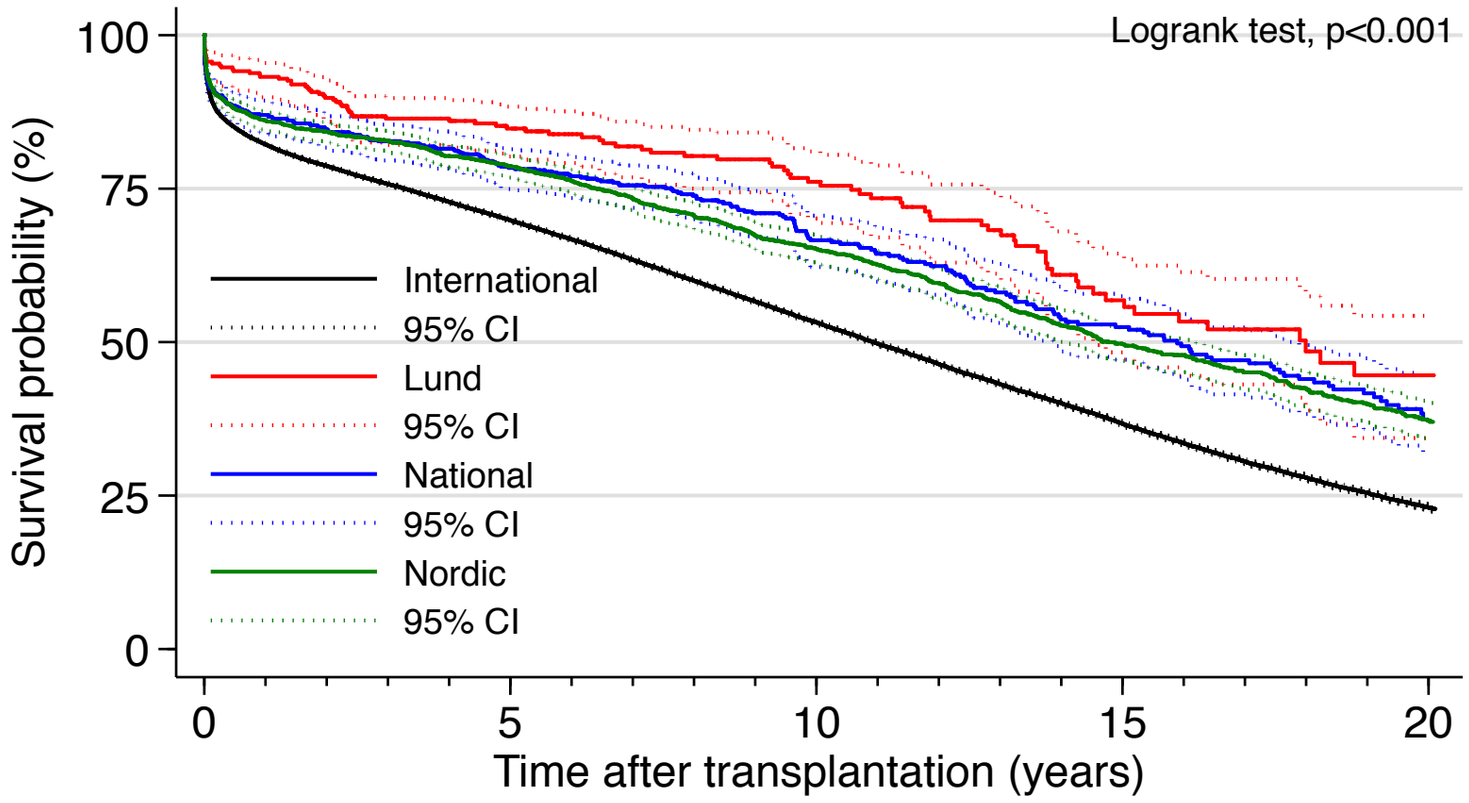
Heart transplantation 1983-2014



Patients at risk

Lund	389	192	110	66	45
National	824	323	169	107	66
Nordic	2084	970	627	470	352

Heart transplantation 1983-2014



Patients at risk

International	93003	47102	23609	9427	2254
Lund	324	198	121	52	18
National	654	420	222	122	53
Nordic	2032	1360	838	435	193

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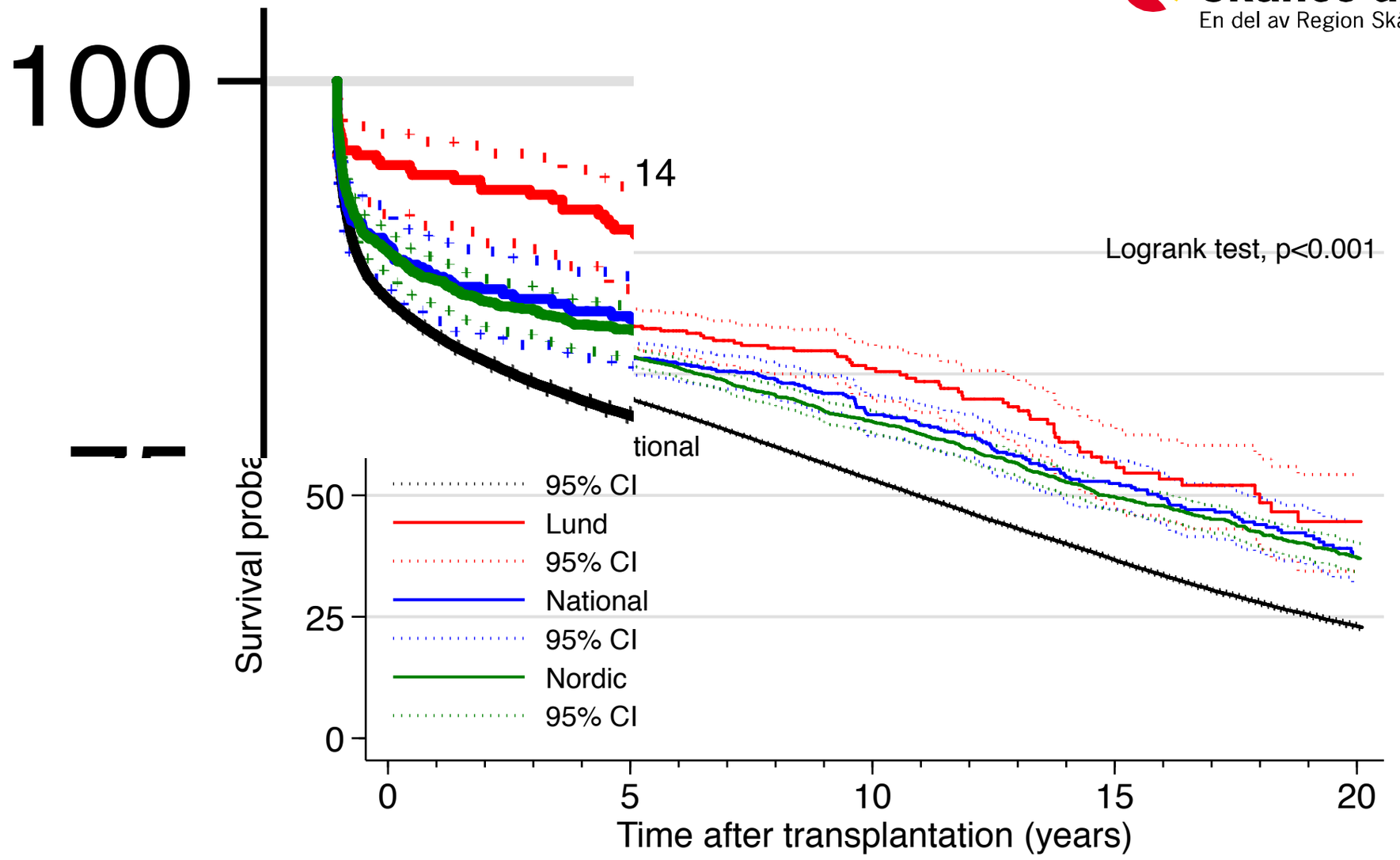

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?

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Hjärtpreservation 24 timmar

Professor Stig Sten

Articles

Transplantation of lungs from a non-heart-beating donor

Stig Steen, Trygve Sjöberg, Leif Pierre, Qiuming Liao, Leif Eriksson, Lars Algotsson

Summary

Background In animals, we have previously done successful lung transplantations using organs from non-heart-beating donors. We have also developed an ex-vivo system of assessing the function of such organs before transplantation. The next stage was to try the technique in human beings. Bearing in mind the sensitive ethical issues involved, our first aim was to find out what procedures would be acceptable, and to use the results to guide a clinical lung transplantation from a non-heart-beating donor.

Introduction

The possibility of transplanting lungs from fresh non-heart-beating cadavers (eg, patients who have had a witnessed cardiac arrest due to ischaemic heart disease) has been the subject of much discussion.[1] Experimental studies have shown that the lungs and their vascular function can be safely preserved for up to 24 h;[2,3] that the gas-exchange system of the lungs can tolerate 1 h of warm ischaemia after circulatory arrest without significant loss of its functional capacity;[4–5] and that the pulmonary artery can withstand warm ischaemia for 3 h after death without impairment of endothelium-

http://www.med.lu.se/klinvetlund/thoraxkirurgi/forskargruppsledare/stig_steen/hjaerttransplantationsforskning

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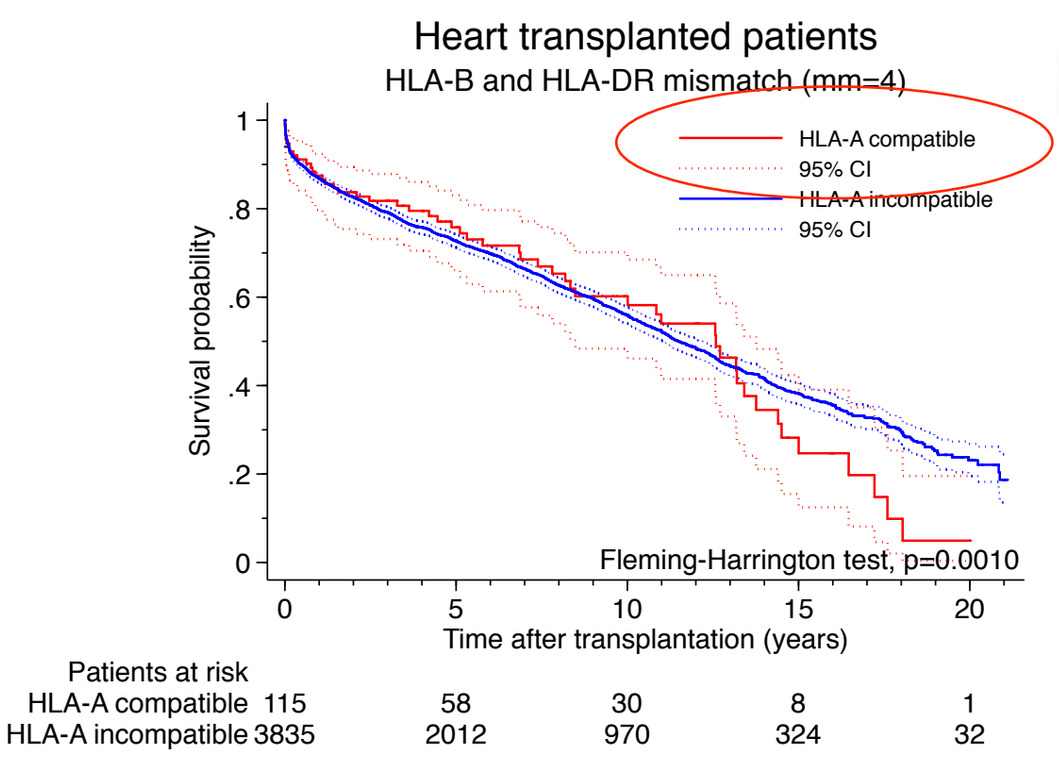
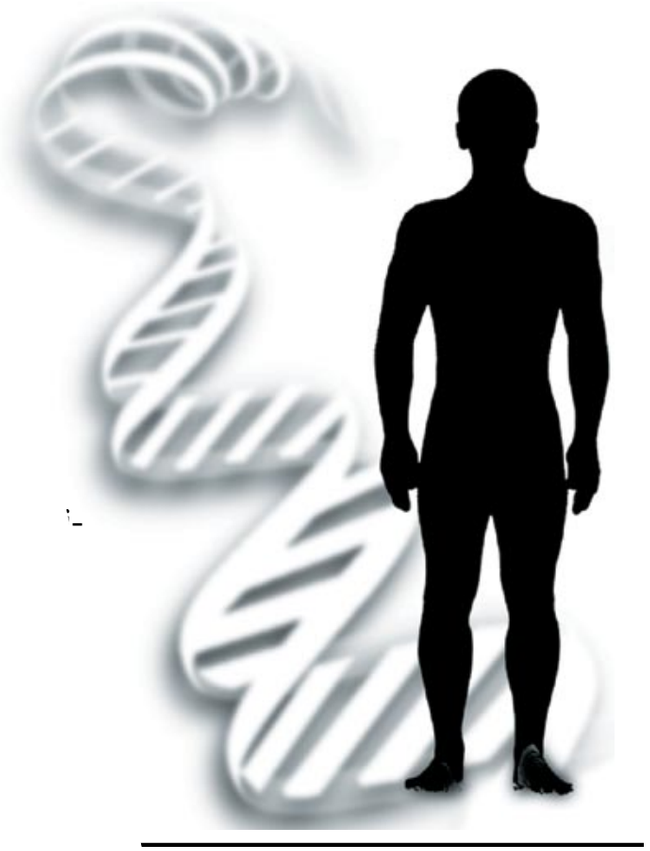
Forskning

Risk stratification of graft failure for heart transplanted patients by genome sequencing





1.Nilsson J, Bucin D, Hoglund P, Ohlsson M, Andersson B. Influence of HLA Matching on Heart Transplant Outcomes. American Journal of Transplantation. 2012;12:382-3.

LUND UNIVERSITY

RESEARCH ARTICLE

The International Heart Transplant Survival Algorithm (IHTSA): A New Model to Improve Organ Sharing and Survival

Johan Nilsson[1]*, Mattias Ohlsson[2], Peter Höglund[3], Björn Ekmehag[4¤], Bansi Koul[1], Bodil Andersson[5]

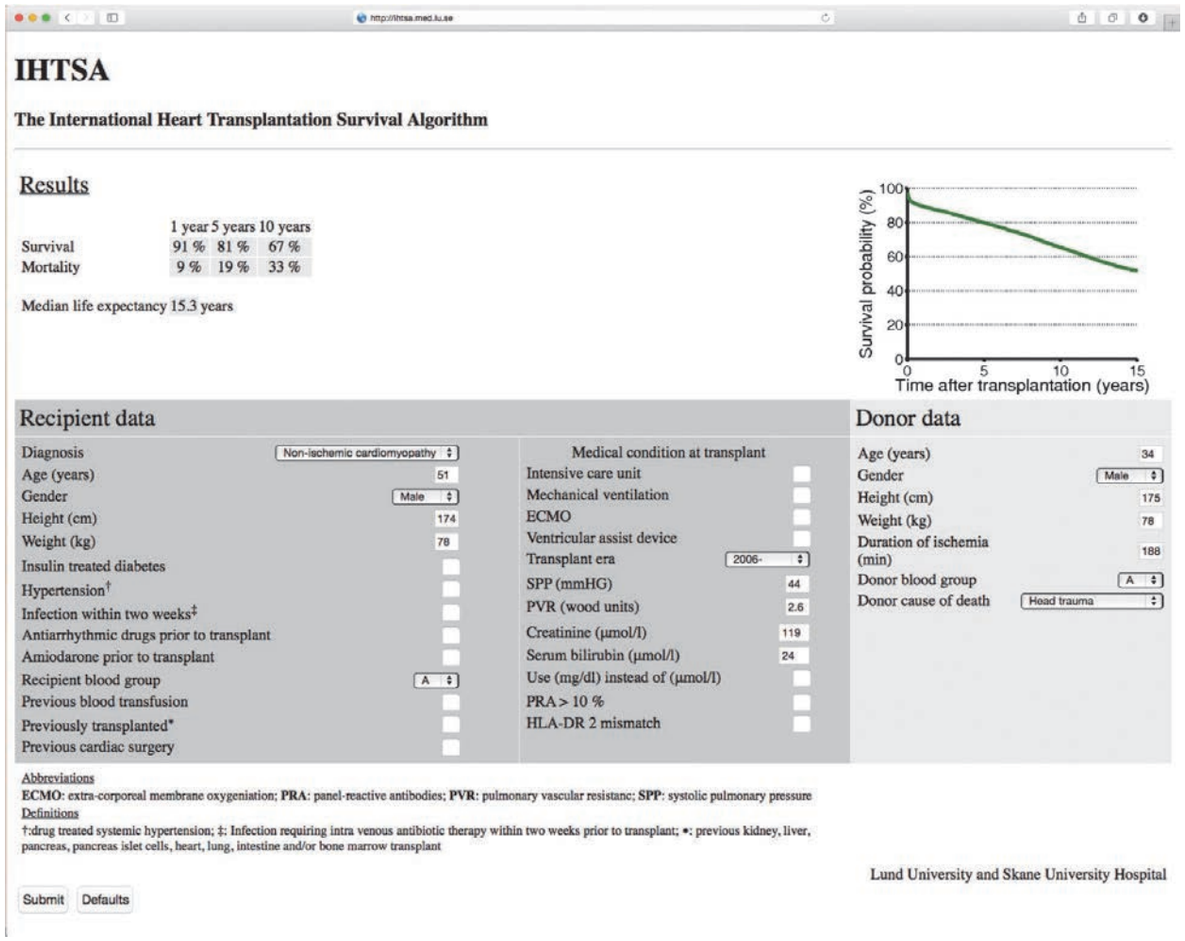


Fig 7. The International Heart Transplantation Survival Algorithm (IHTSA) as a web application. The IHTSA has been implemented as an interactive program that estimates median, 1-, 5-, and 10-year survival, and the benefit of adding (or removing) properties from an individual recipient and the potential donor (http://www.ihtsa.med.lu.se). ECMO, extracorporeal membrane oxygenation; HLA, human leukocyte antigen; PRA, panel reactive antibody; PVR, pulmonary vascular resistance; SPP, systolic pulmonary pressure. †Drug treated systemic hypertension. ‡Infection requiring intra venous antibiotic therapy within two weeks prior to transplant. *Previous transplant——previous kidney, liver, pancreas, pancreas islet cells, heart, lung, intestine and/or bone marrow transplant.

doi:10.1371/journal.pone.0118644.g007

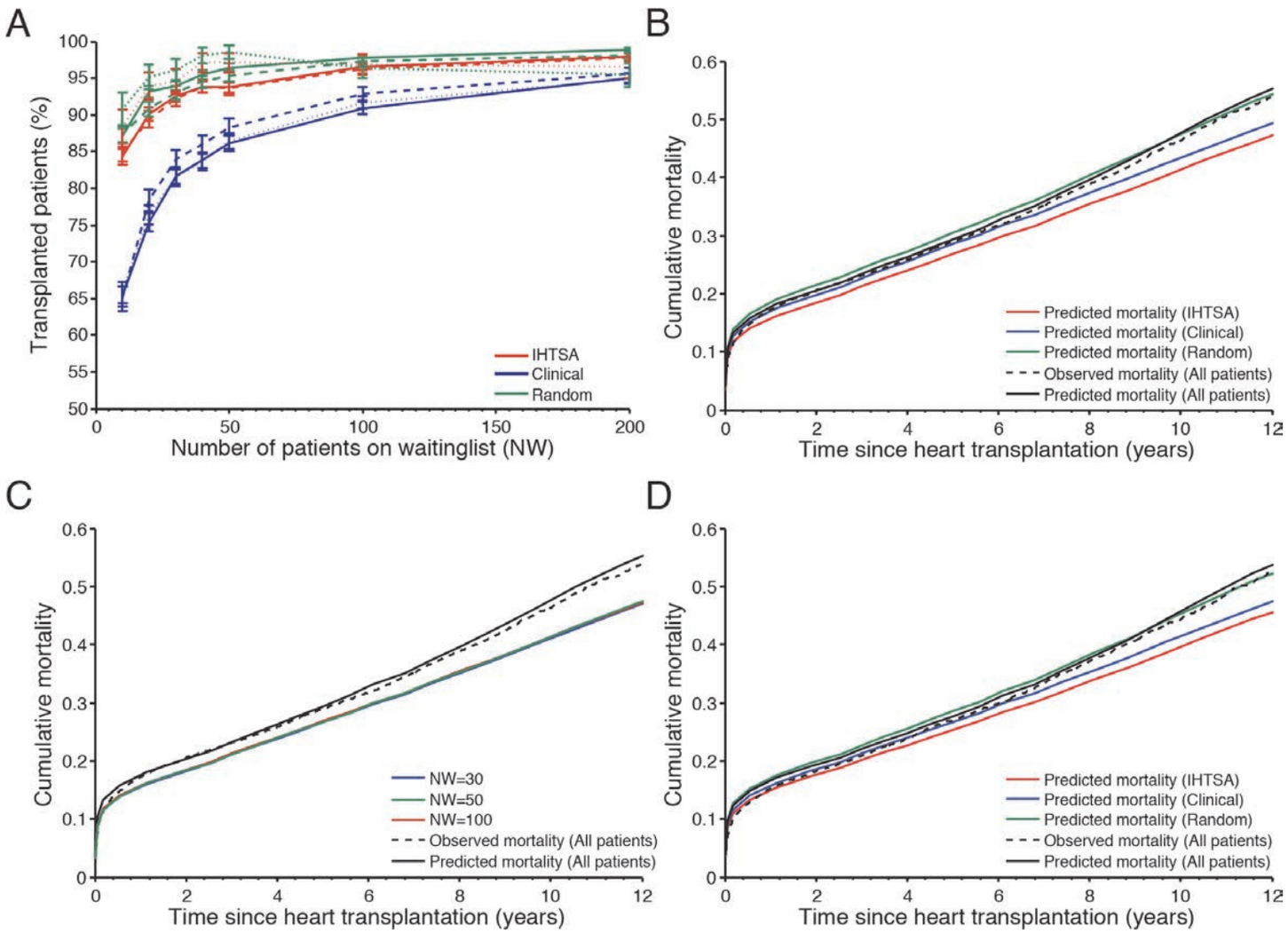


Fig 8. Predicted cumulative mortality for different organ allocation models. In panel (A) the graph shows the number of transplanted patients for The IHTSA model (red lines), Clinical model (blue lines) and Control (green lines) influenced by the size of the waiting list. The internal validation cohort (IVC) is presented with solid lines, temporal validation cohort (TVC) dashed lines and external validation cohort NTTD dotted lines. In panel (B) the graph shows the difference in predicted cumulative mortality as a function of time since heart transplantation for a waiting list including 50 patients in the IVC (N = 8,569). The solid black lines present the observed mortality and the dotted lines the predicted mortality for all patients. Panel (C) shows the difference in predicted cumulative mortality for IHTSA model influenced by the number of patients on the waiting list (NW). In panel (D) the results from the sub analysis including patients from the IVC, who were not treated in the intensive care unit and were not on life support prior to transplantation, are presented (N = 4,868).

doi:10.1371/journal.pone.0118644.g008

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Sammanfattning

- Graft/patient överlevnaden inom transplantation har förbättras påtagligt de senaste årtionden
- SUS resultat vid hjärttransplantation är i internationell toppklass
- Trots att antalet donationer ökar nyttjas endast 20-30% av donatorerna för thorax transplantation
- Nya organfördelningsmodeller utvecklade vid Lunds Universitet kan dock förbättra detta inom en snar framtid

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