



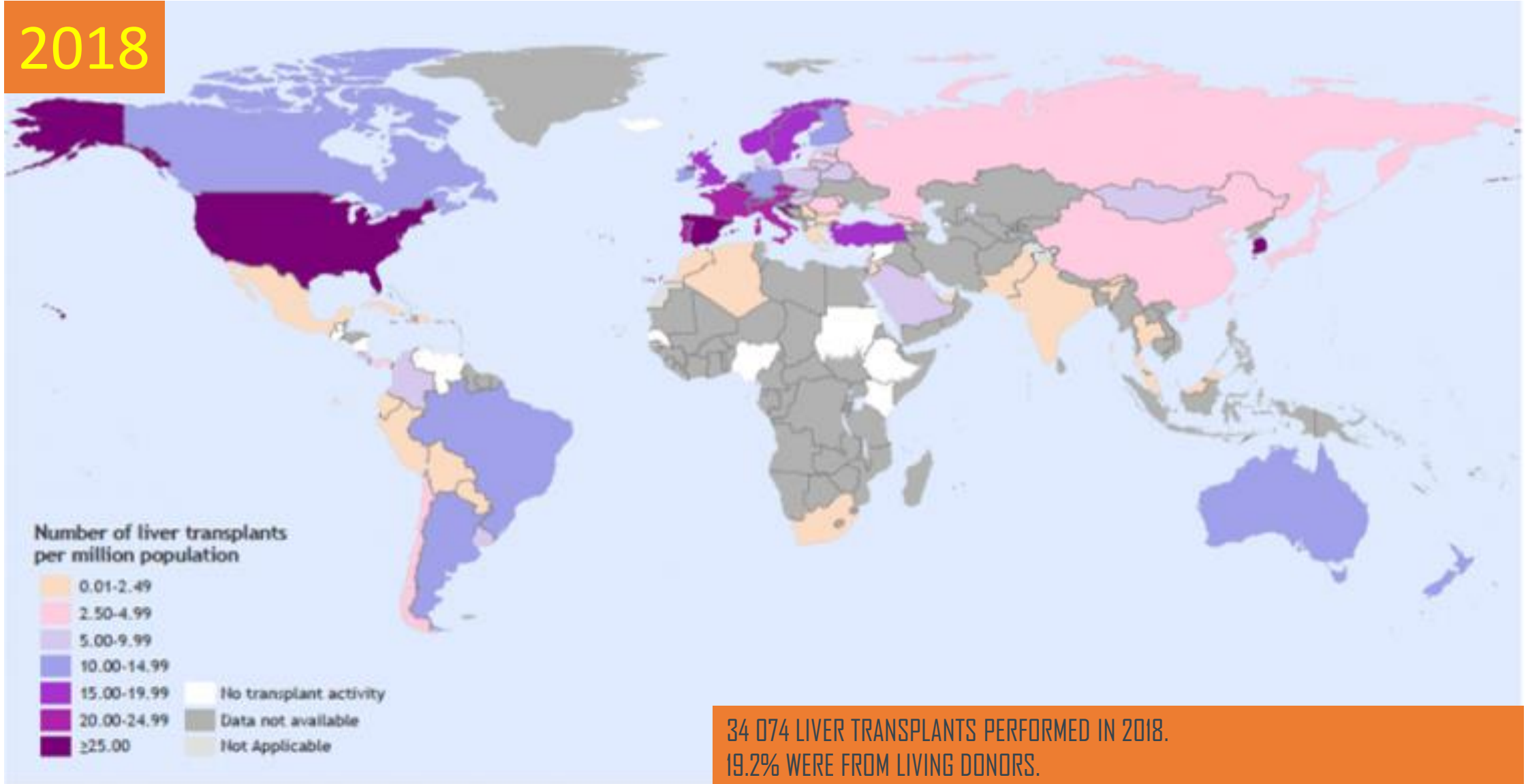
Türkiye'de Karaciğer Transplantasyonu
Dünü...
Bugünü...

Dr. Zeki Karasu
Ege Üniversitesi Tıp Fakültesi



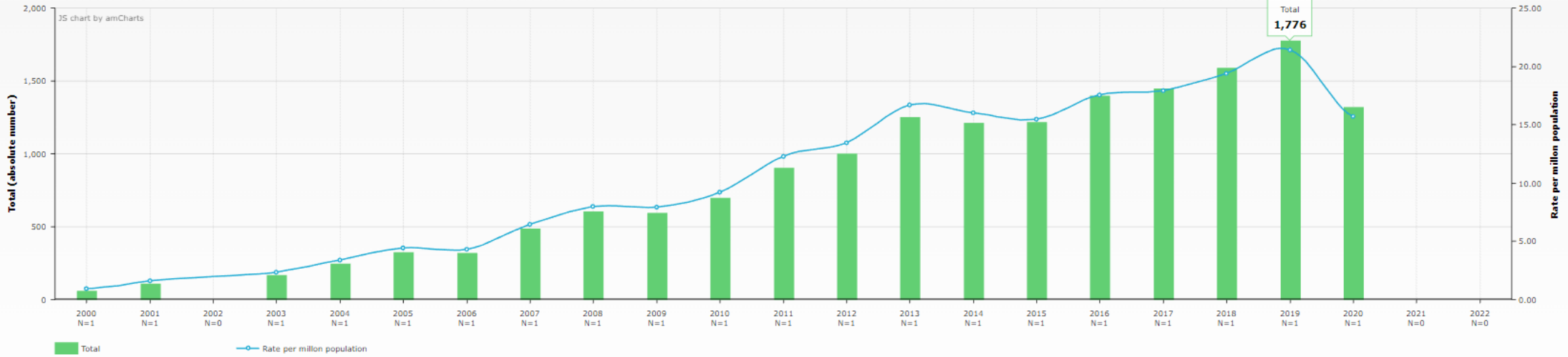
Dünyada Karaciğer Nakli

2018



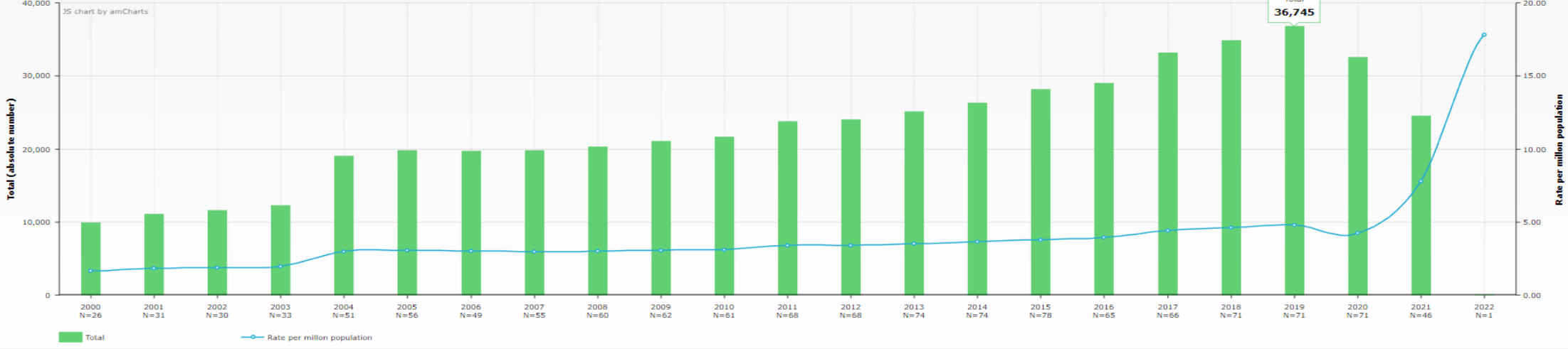
Dünyada ve Türkiyede Karaciğer Nakli

Total (Total Deceased + Total Living + Domino) (Turkey.2000-2022)
Source: GODT (<http://www.transplant-observatory.org>)



TOTAL TOTAL LIVER (TOTAL DECEASED + TOTAL LIVING + DOMINO)
GEOGRAPHIC AREA: GLOBAL FROM YEAR: 2000 TO YEAR 2022

Total (Total Deceased + Total Living + Domino) (Global.2000-2022)
Source: GODT (<http://www.transplant-observatory.org>)



Ülkemizde Karaciğer Nakli

Turkey

2019

View

TURKEY



REGION: EUROPE
POPULATION: 83.00 MILLION INHABITANTS
YEAR: 2019

Data presented in absolute number and rate per million inhabitants (pmp)
(-): Data Not Available or Not Applicable

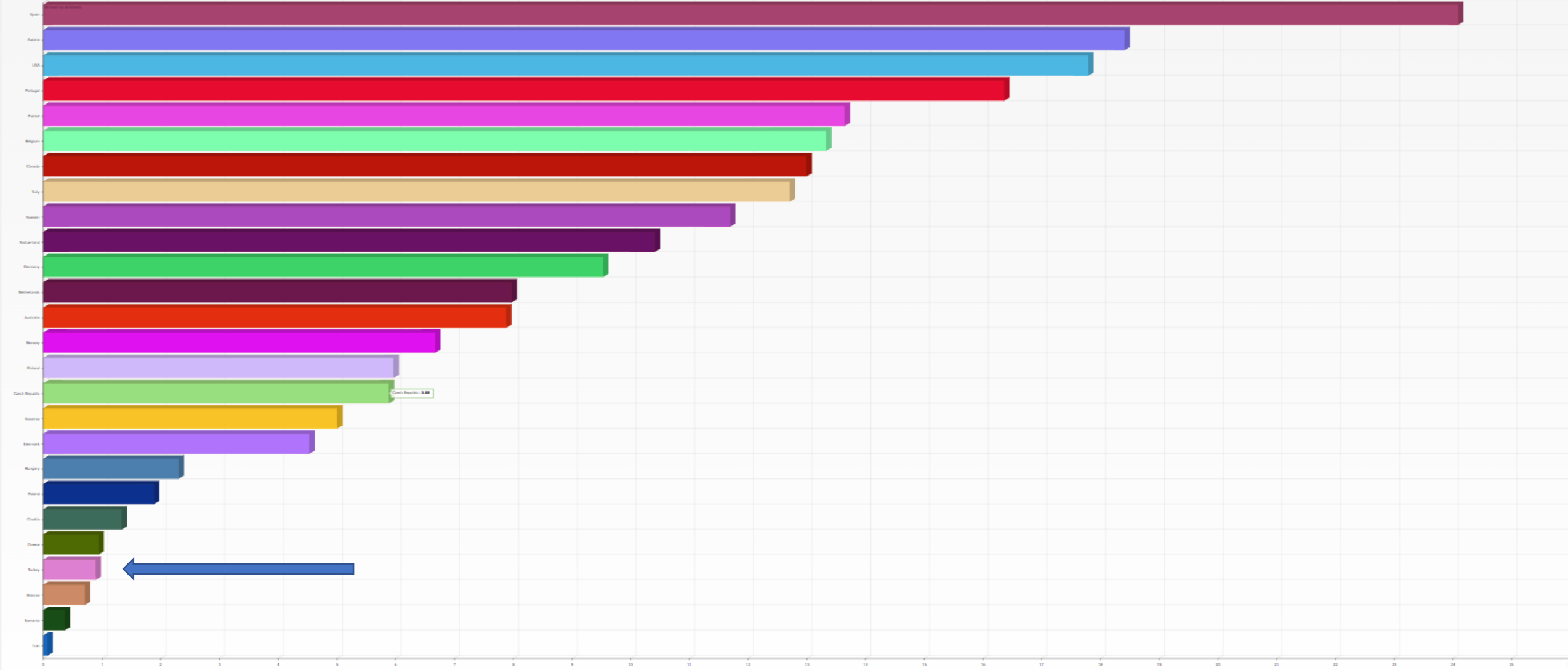
	Turkey	Europe	Global
ACTUAL DECEASED DONORS (DD)	499 (6.01)	13,388 (16.84)	40,858 (6.85)
ACTUAL DD AFTER BRAIN DEATH (DBD)	499 (6.01)	11,233 (14.13)	31,859 (5.34)
ACTUAL DD AFTER CIRCULATORY DEATH (DCD)	(-)	2,155(2.71)	8,999 (1.51)
TOTAL KIDNEY TRANSPLANTS	3,863 (46.54)	28,053 (35.3)	102,403 (17.18)
DECEASED KIDNEY TRANSPLANTS	808 (9.73)	20,287 (25.52)	64,091 (10.75)
LIVING KIDNEY TRANSPLANTS	3,055 (36.81)	7,766 (9.77)	38,312 (6.43)
TOTAL LIVER TRANSPLANTS	1 776 (%21.4)	10,754 (13.53)	36 745 (6.16)
DECEASED LIVER TRANSPLANTS	432 (5.2)	8,963 (11.28)	28,131 (4.72)
LIVING LIVER TRANSPLANTS	1,341 (16.16)	1,774 (2.23)	7,610 (1.28)

Dünyada ve Türkiyede Karaciğer Nakli

2000

TOTAL RATE (PMF) TOTAL LIVER (TOTAL DISCASED + TOTAL LIVING + DOMINA)
GEOGRAPHIC AREA GLOBAL YEAR: 2000

Total Rate (pmf) Total (Total Disceased + Total Living + Domina) (Global 2000)
Source: GDDT (http://www.transplant-observatory.org)

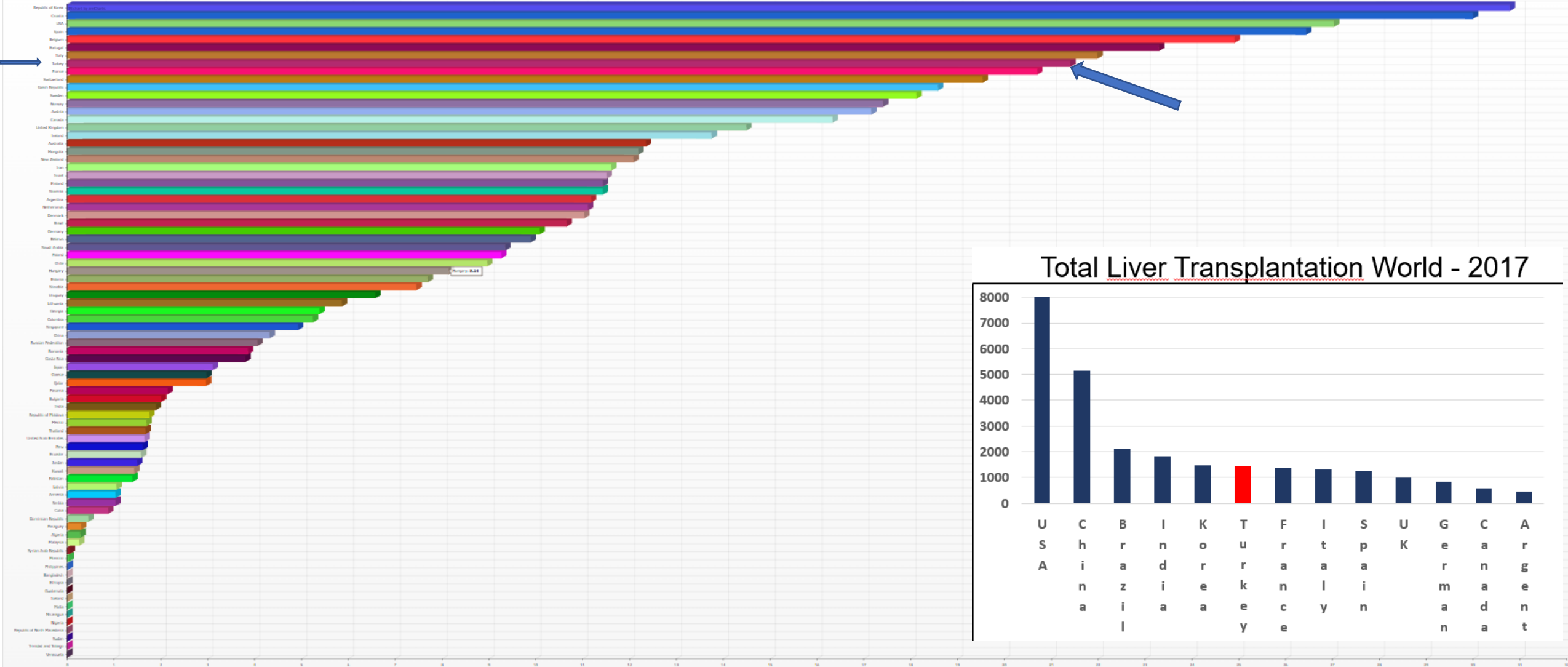


Dünyada ve Türkiyede Karaciğer Nakli

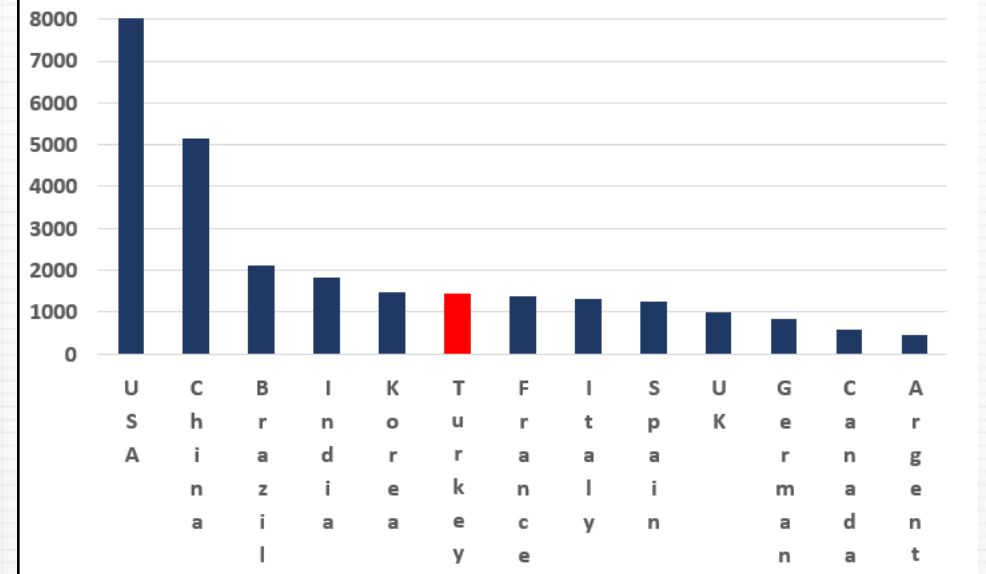
2019

TOTAL RATE (PMPTOTAL LIVER (TOTAL DECREASED +TOTAL LIVING + DOMING)
GEOGRAPHIC AREA(CB)AL YEAR: 2019

Total Rate (pmptotal) Total (Total Decreased + Total Living + Dominant) (Global:2019)
Source: GDDT (2019) (www.transplant-observatory.org)



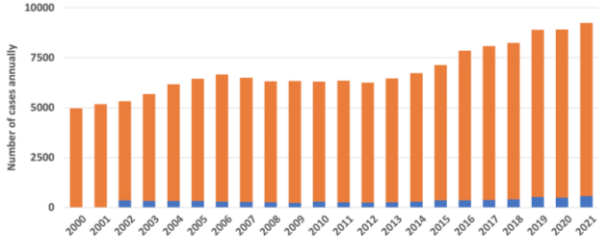
Total Liver Transplantation World - 2017



Dünyada Karaciğer Nakli

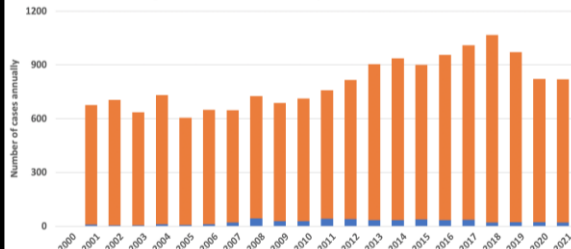
USA

The Living and Deceased Donor Liver Transplantations between 2000 and 2021 in USA



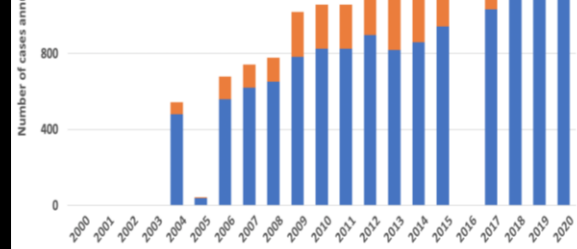
UK

The Living and Deceased Donor Liver Transplantations between 2000 and 2021 in UK



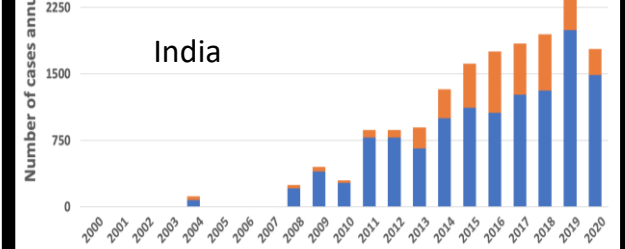
Korea

The Living and Deceased Donor Liver Transplantations between 2000 and 2021 in Korea



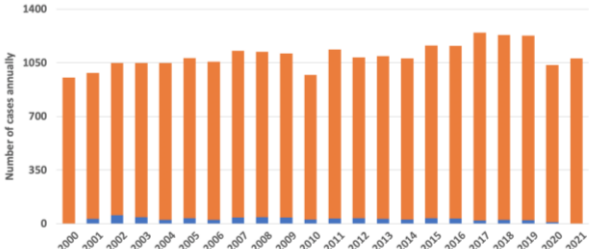
India

The Living and Deceased Donor Liver Transplantations between 2000 and 2021 in India



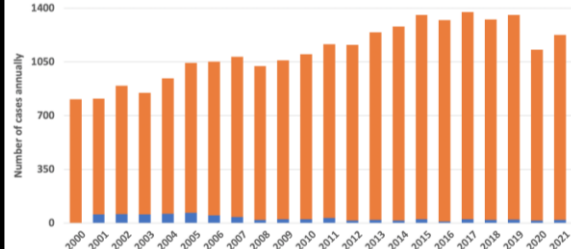
Spain

The Living and Deceased Donor Liver Transplantations between 2000 and 2021 in Spain



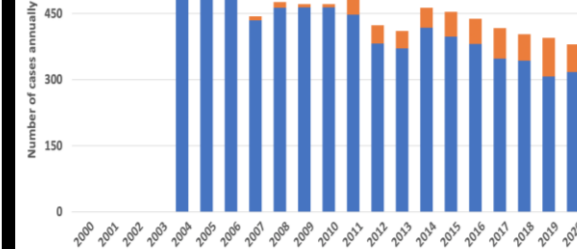
France

The Living and Deceased Donor Liver Transplantations between 2000 and 2021 in France



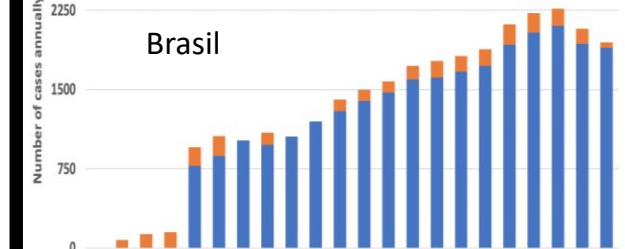
Japan

The Living and Deceased Donor Liver Transplantations between 2000 and 2021 in Japan



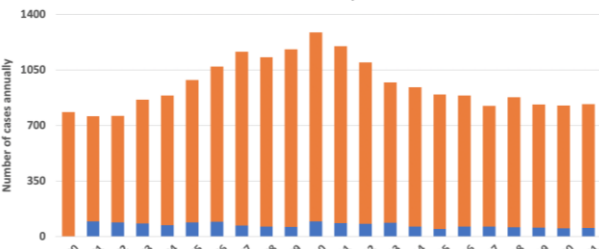
Brasil

The Living and Deceased Donor Liver Transplantations between 2000 and 2021 in Brasil



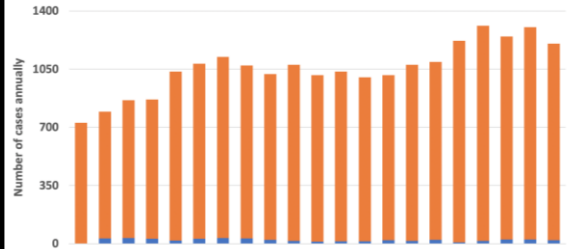
Germany

The Living and Deceased Donor Liver Transplantations between 2000 and 2021 in Germany



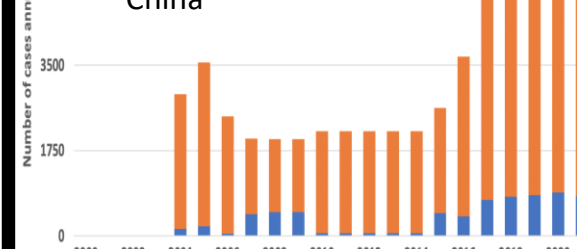
Italy

The Living and Deceased Donor Liver Transplantations between 2000 and 2021 in Italy



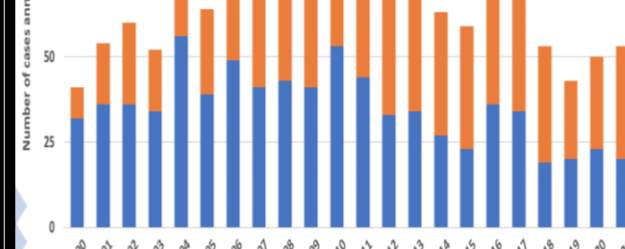
China

The Living and Deceased Donor Liver Transplantations between 2000 and 2021 in China



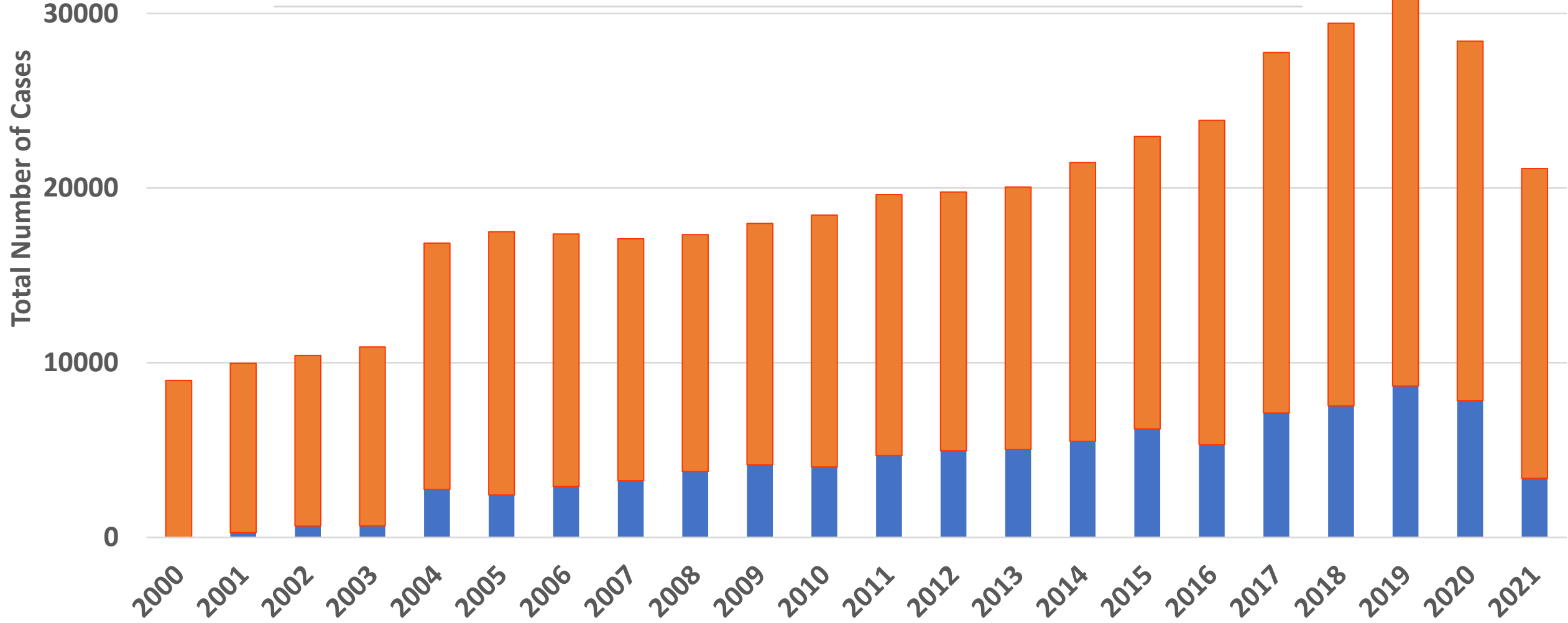
Hong Kong

The Living and Deceased Donor Liver Transplantations between 2000 and 2021 in Hong Kong

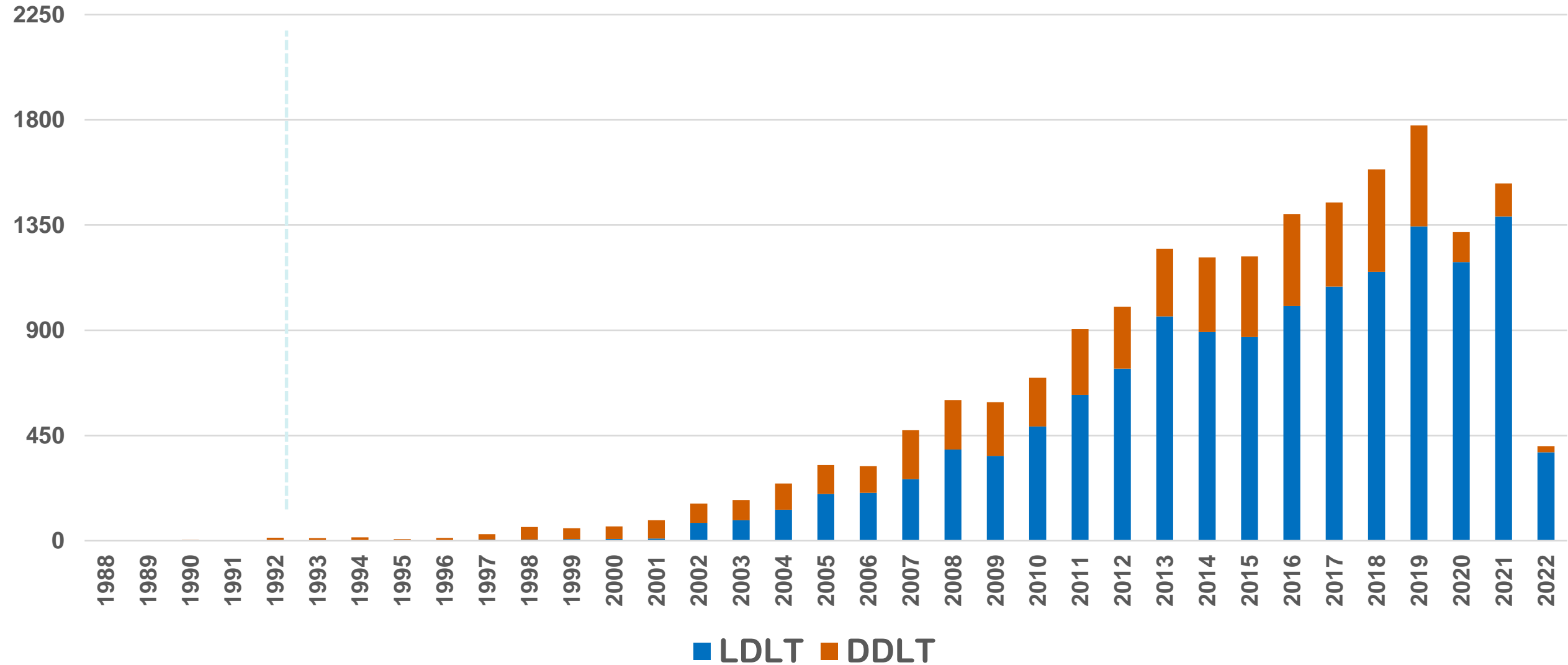


Dünyada Karaciğer Nakli

■ Kadavradan Kc Nakli
■ Canlı Vericili Kc Nakli



Ülkemizde Karaciğer Nakli



Türkiyede Karaciğer Nakli: Yabancı hastalar

BÖBREK NAKİLLERİ

SURİYE	44
KIRGIZİSTAN	21
HİNDİSTAN	20
LİBYA	19
BULGARİSTAN	18
AZERBAYCAN	13
ÜRDÜN	10
IRAK	7
SUDAN	6
KOSOVA	6
BAHREYN	6
YEMEN	5
ÖZBEKİSTAN	5
BOSNA HERSEK	5
UKRAYNA	4
SİRBİSTAN	4
MAKEDONYA	4
LÜBNAN	4
KUZEY KIBRIS TÜRK CUMHURİYETİ	4
GÜRCİSTAN	4
KAZAKİSTAN	3
FİLİSTİN	3
AMERİKA BİRLEŞİK DEVLETLERİ	3
.....	
.....	

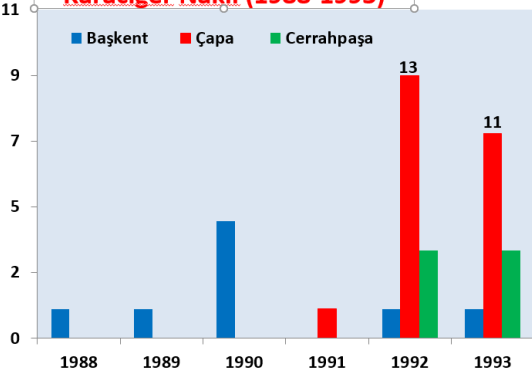
Genel Toplam **238**

KARACİĞER NAKİLLERİ

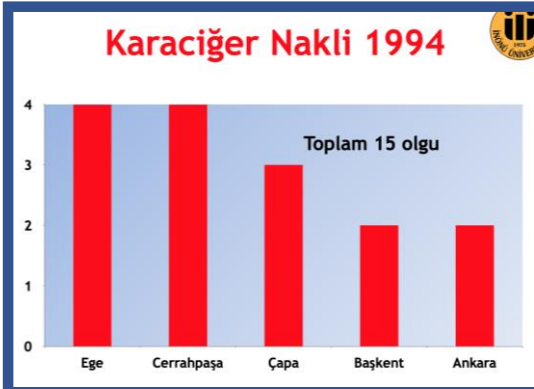
SURİYE	36
LİBYA	30
AZERBAYCAN	13
IRAK	12
CEZAYİR	9
ÜRDÜN	8
GÜRCİSTAN	8
FİLİSTİN	8
MAKEDONYA	7
BOSNA HERSEK	7
BAHREYN	7
TÜRKMENİSTAN	4
PAKİSTAN	4
KUZEY KIBRIS TÜRK CUMHURİYETİ	4
FAS	3
SİRBİSTAN	2
KIRGIZİSTAN	2
ALMANYA	2
AFGANİSTAN	2
YEMEN	1
SUUDİ ARABİSTAN	1
RUSYA FEDERASYONU	1
ROMANYA	1
.....	
.....	

Genel Toplam **178**

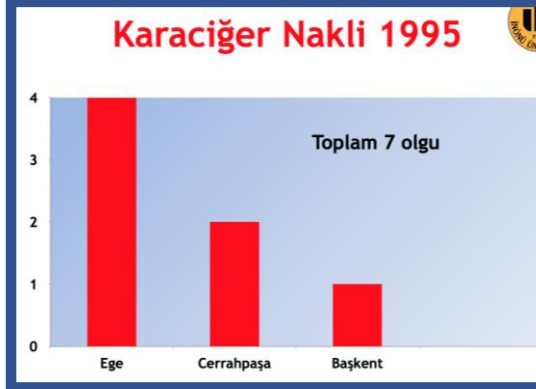
Karaciğer Nakli (1988-1993)



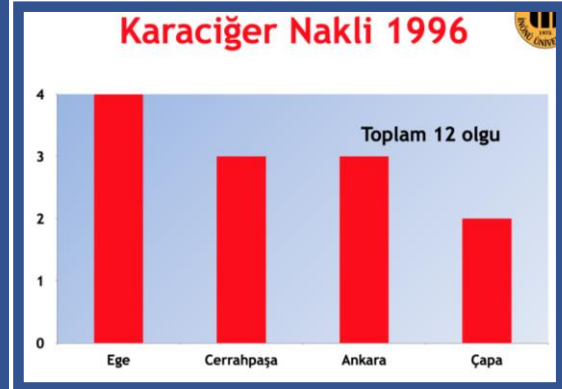
Karaciğer Nakli 1994



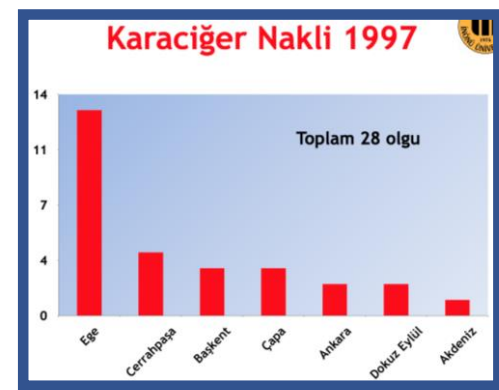
Karaciğer Nakli 1995



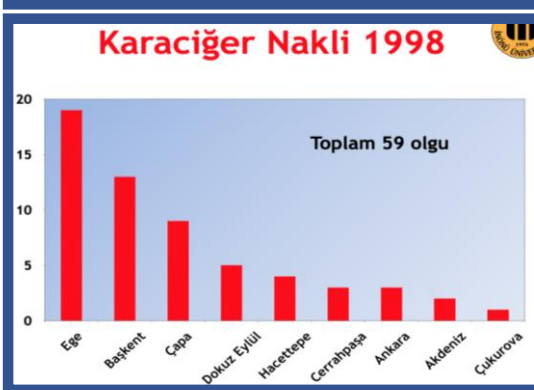
Karaciğer Nakli 1996



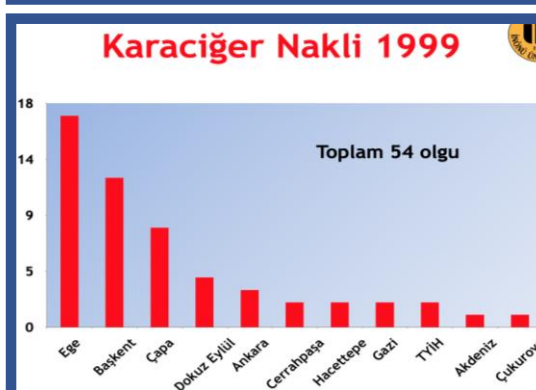
Karaciğer Nakli 1997



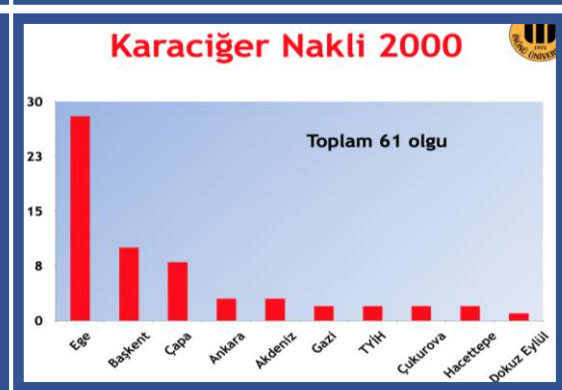
Karaciğer Nakli 1998



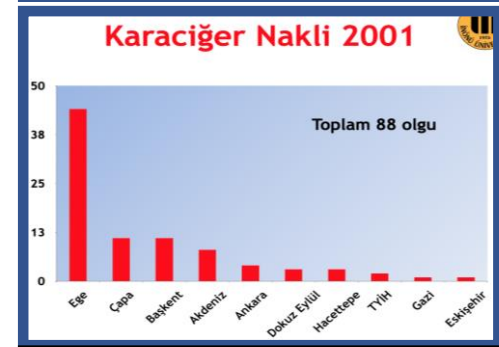
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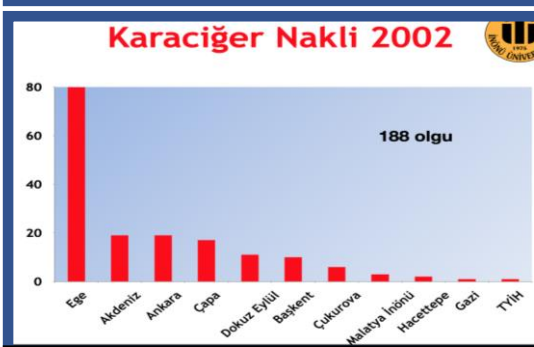
Karaciğer Nakli 2000



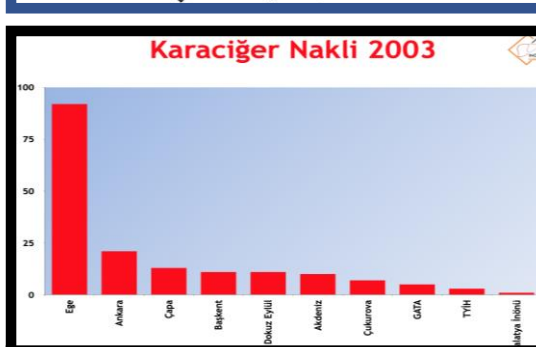
Karaciğer Nakli 2001



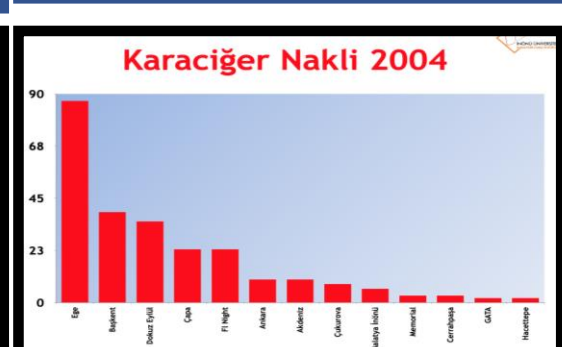
Karaciğer Nakli 2002



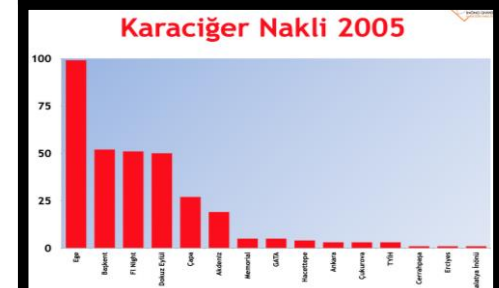
Karaciğer Nakli 2003



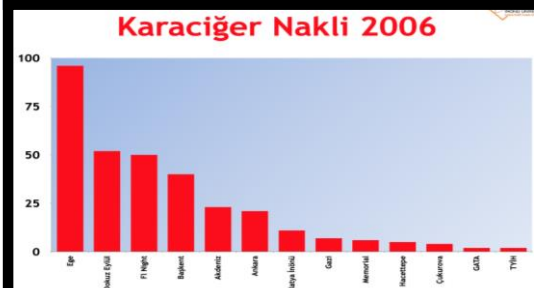
Karaciğer Nakli 2004



Karaciğer Nakli 2005

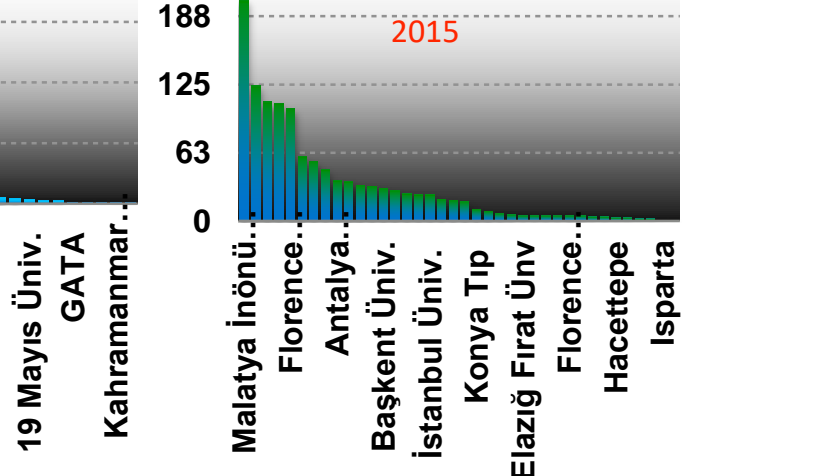
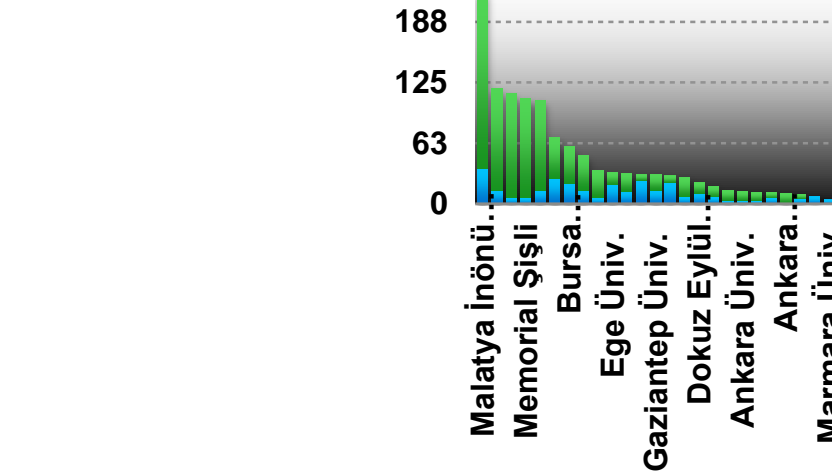
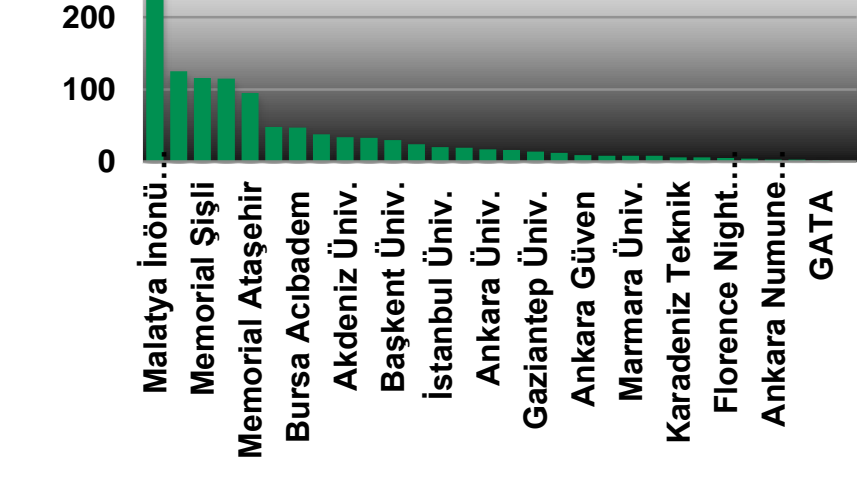
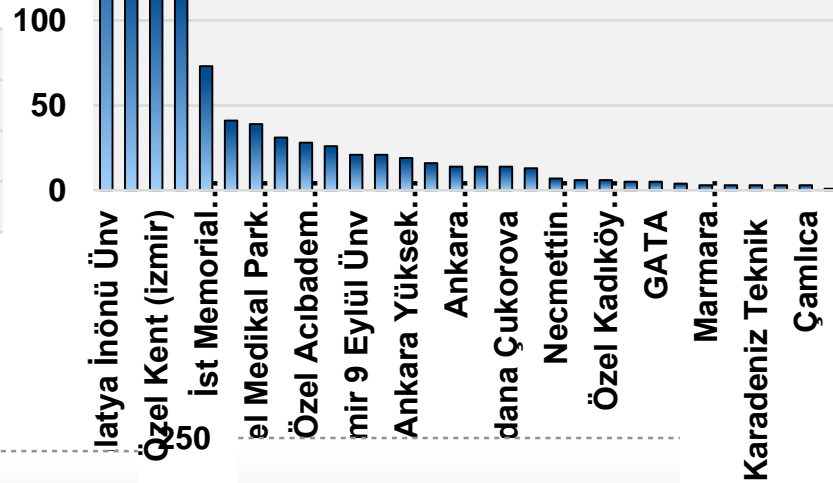
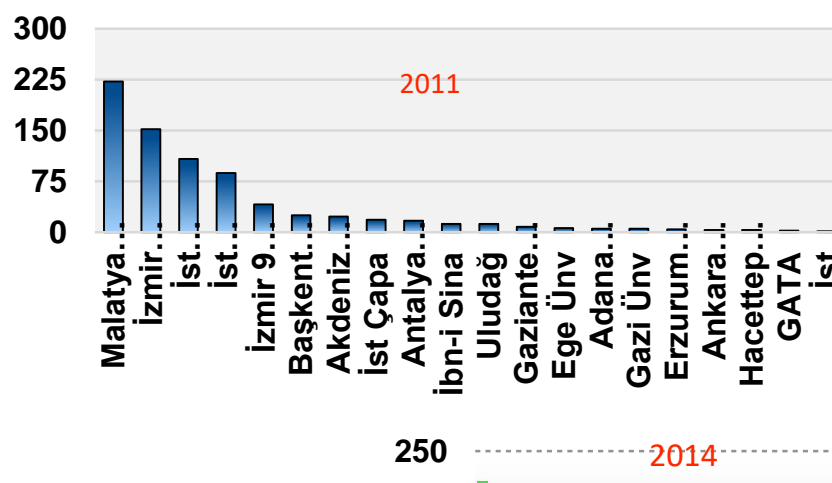
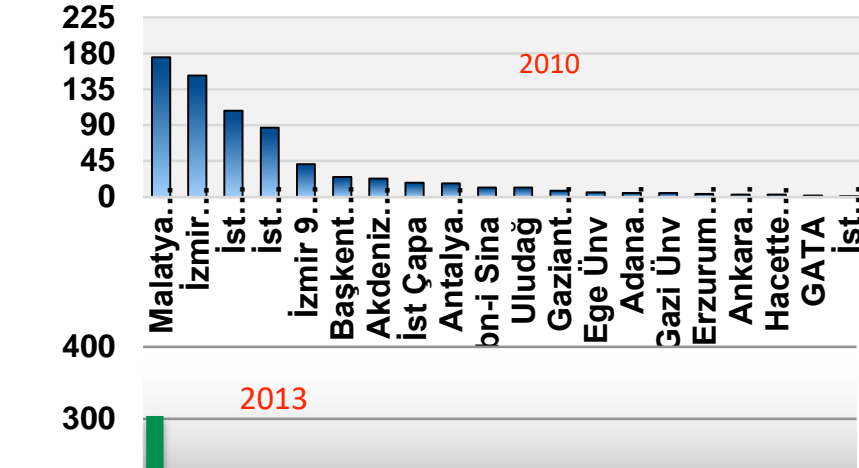
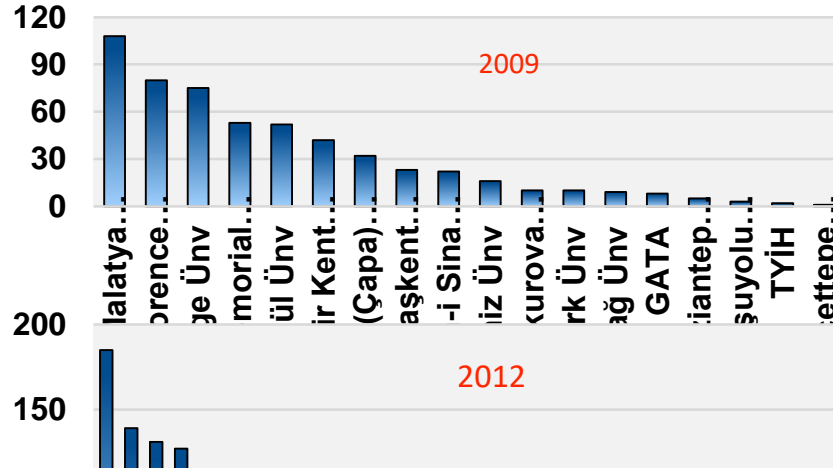
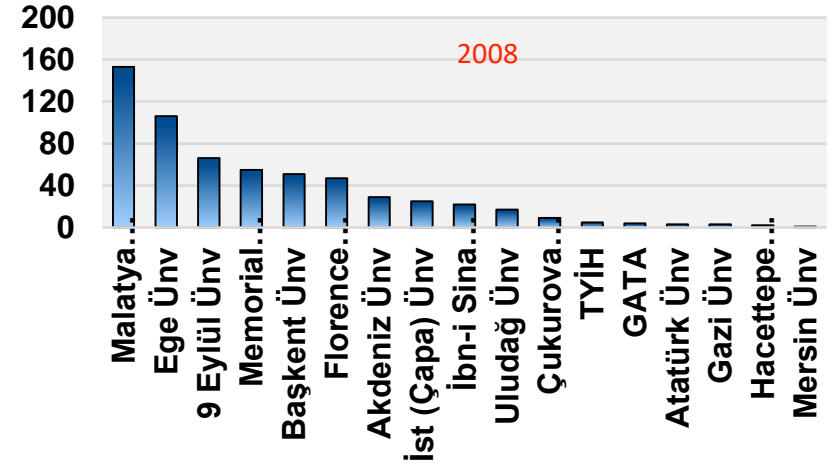


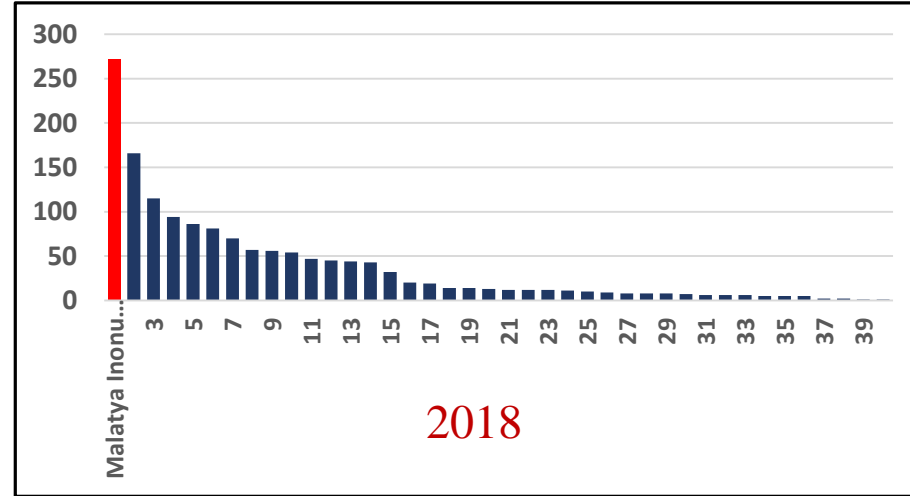
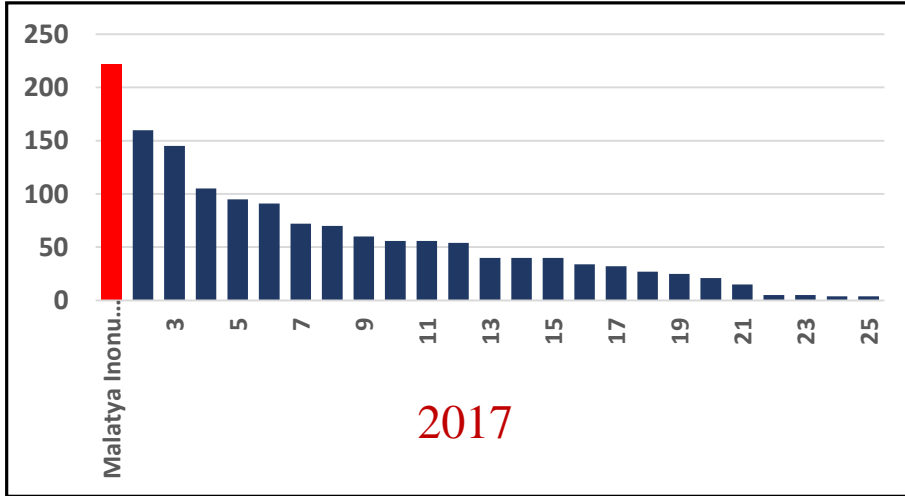
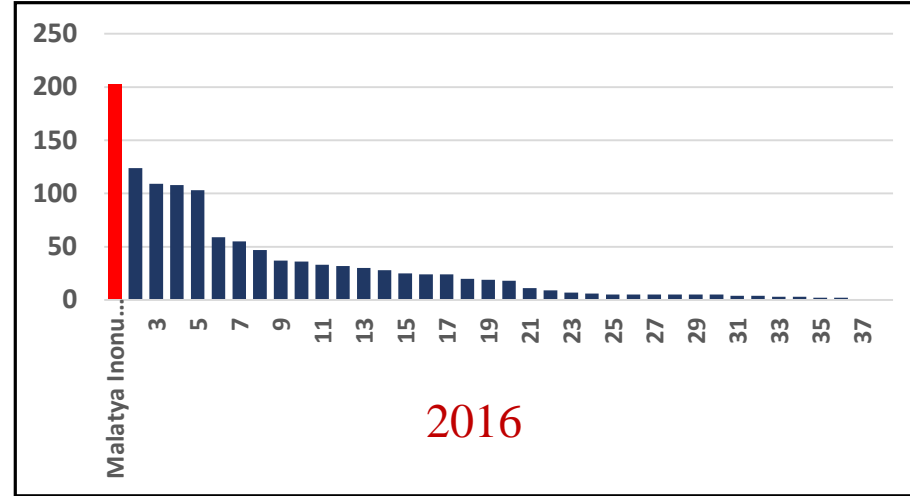
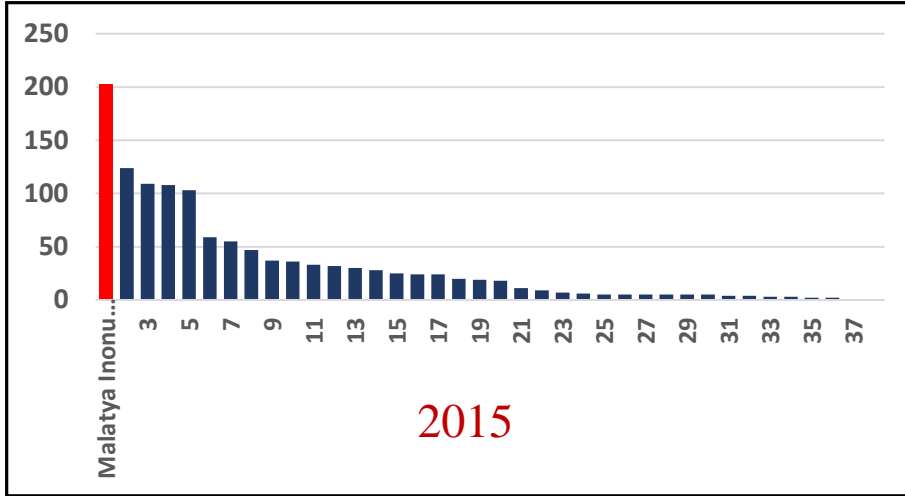
Karaciğer Nakli 2006



Karaciğer Nakil Sayıları - 2007

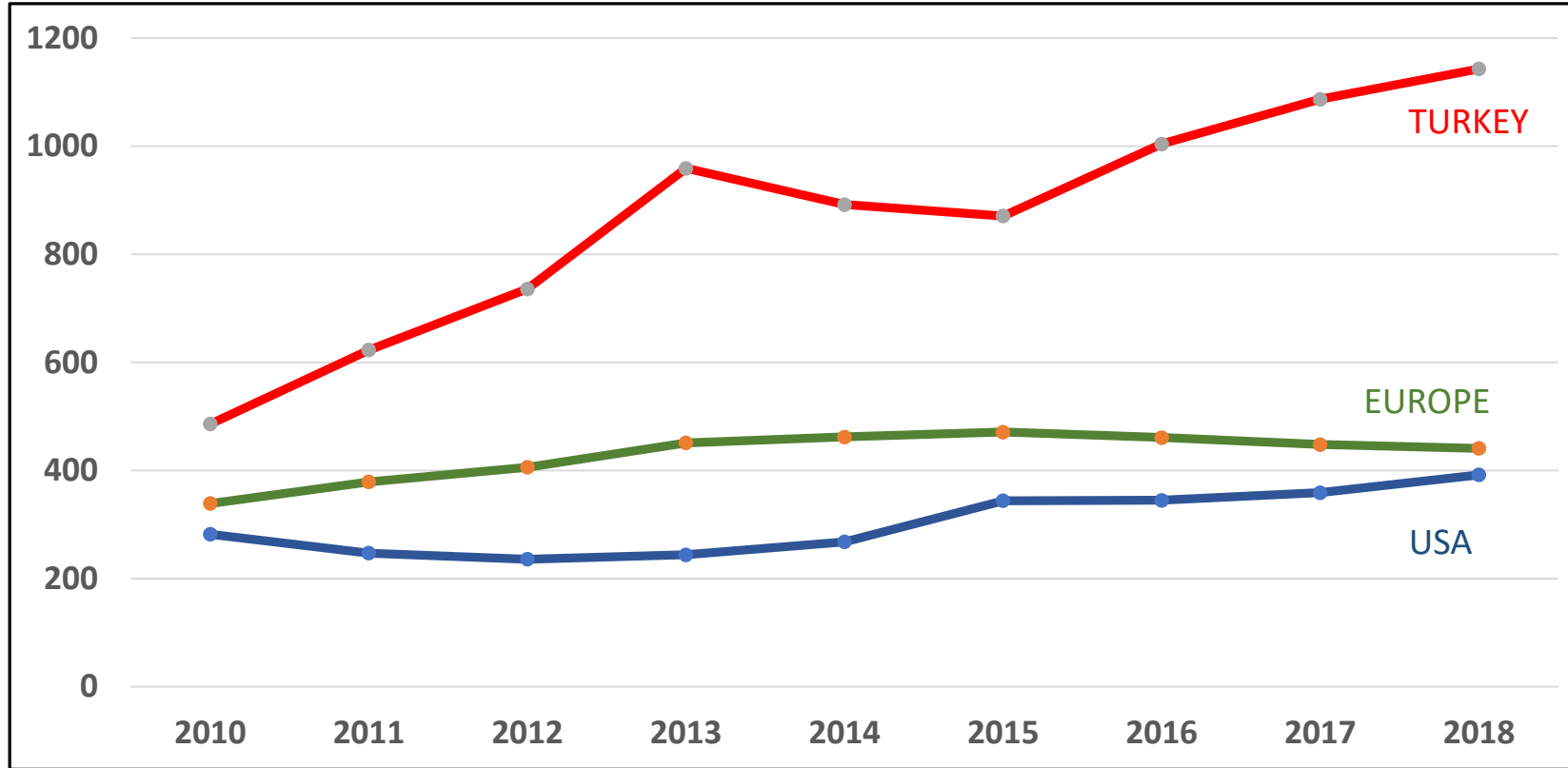




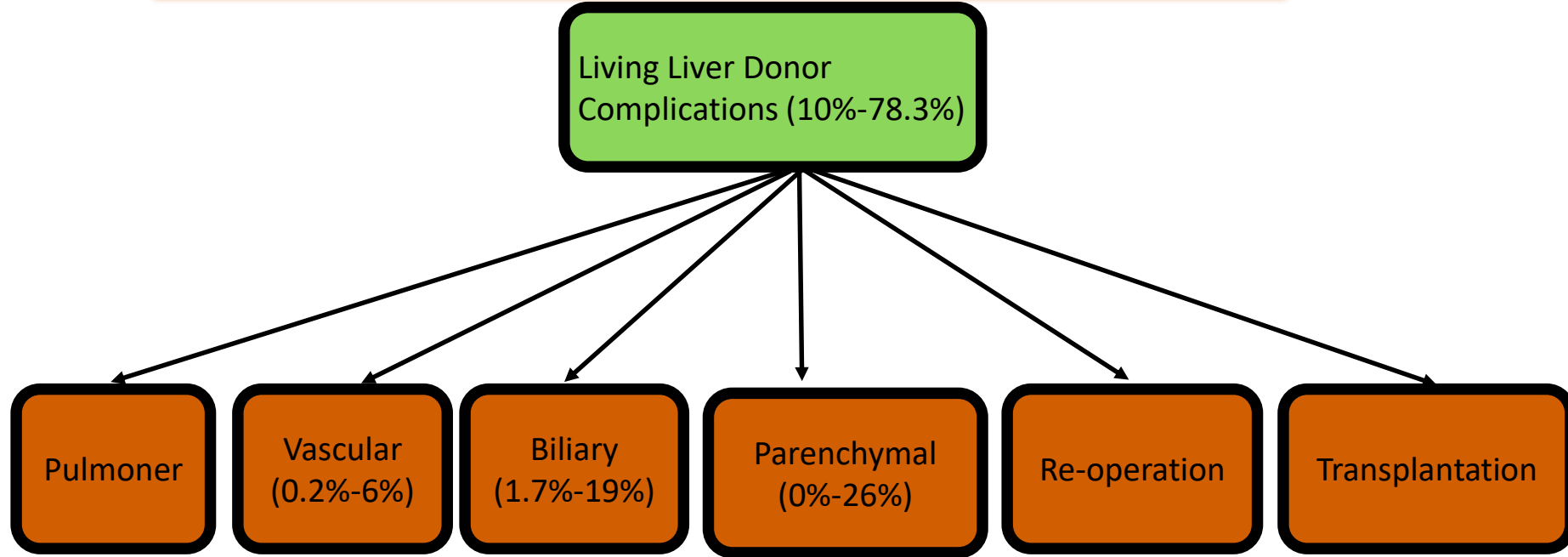


Dünyada ve Türkiyede Karaciğer Nakli

Canlı Vericiden Nakil



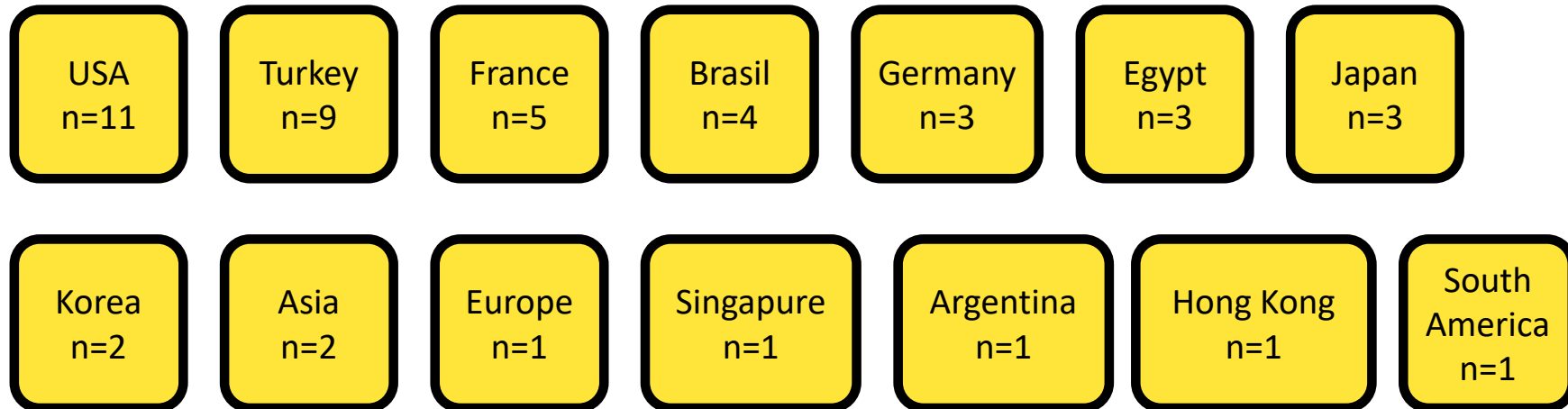
Canlı Donör Komplikeasyonları



- **Komplikasyonların tanımlanmasında orta dil kullanılmaması.**
- **Subklinik sızıntıların görmezden gelinmesi**
- **Radyolojik kontrollerin yapılmadan hastaların taburcu edilmesi**
- **Donör komplikasyonlarının yayınlanmasındaki isteksizlik**

Canlı Donör Ölümleri

- > 100 000 LDLT
- Dökümente edilen ölümler: 49 (<0.1%)





Research Article

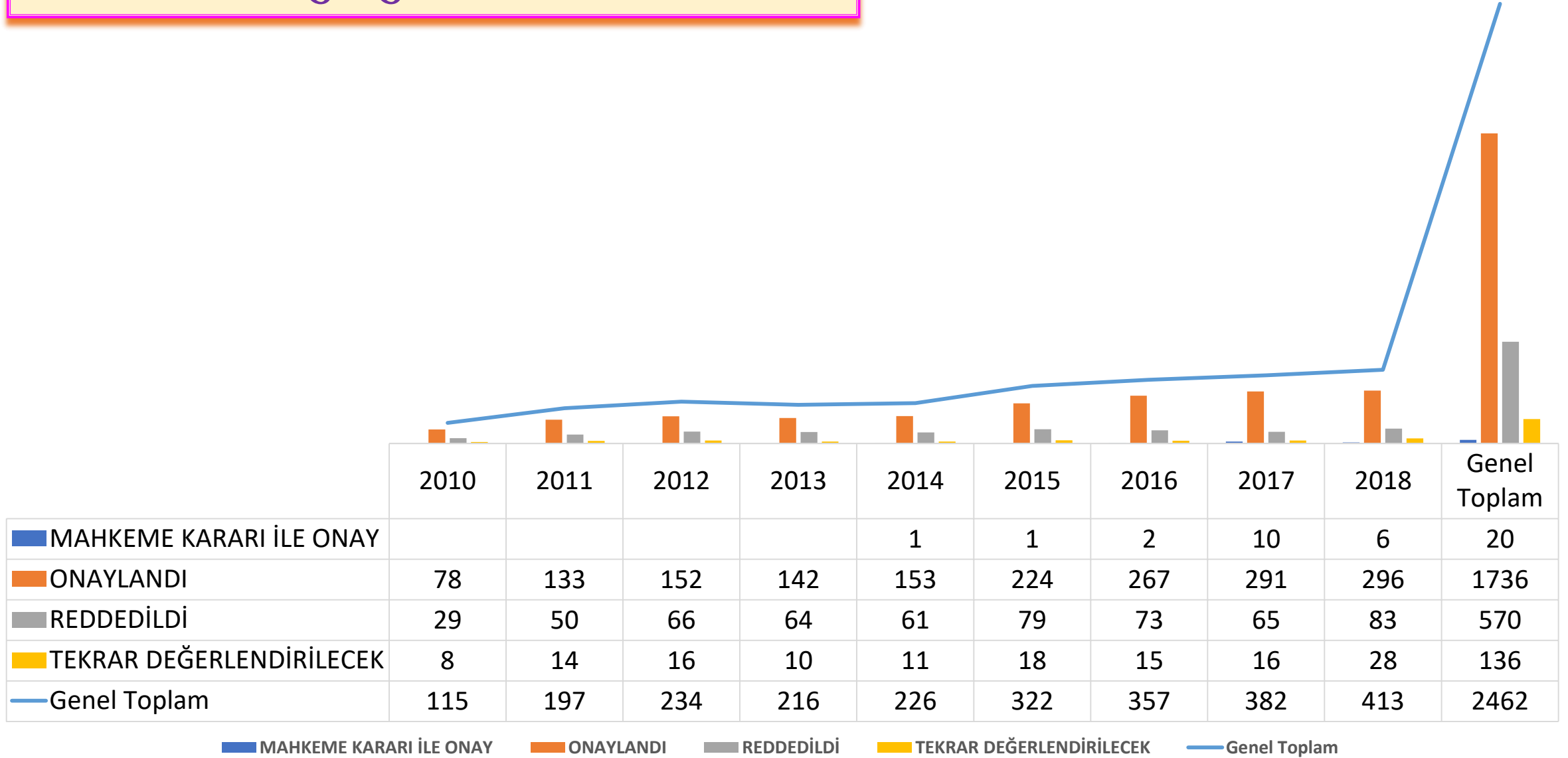
Outcomes of living liver donors are worse than those of matched healthy controls

Jin Yong Choi ^{1, †}, Jae Heon Kim ^{2, †}, Jong Man Kim ³  , Hyun Jung Kim ⁴  , Hyeong Sik Ahn ⁴, Jae-Won Joh ³

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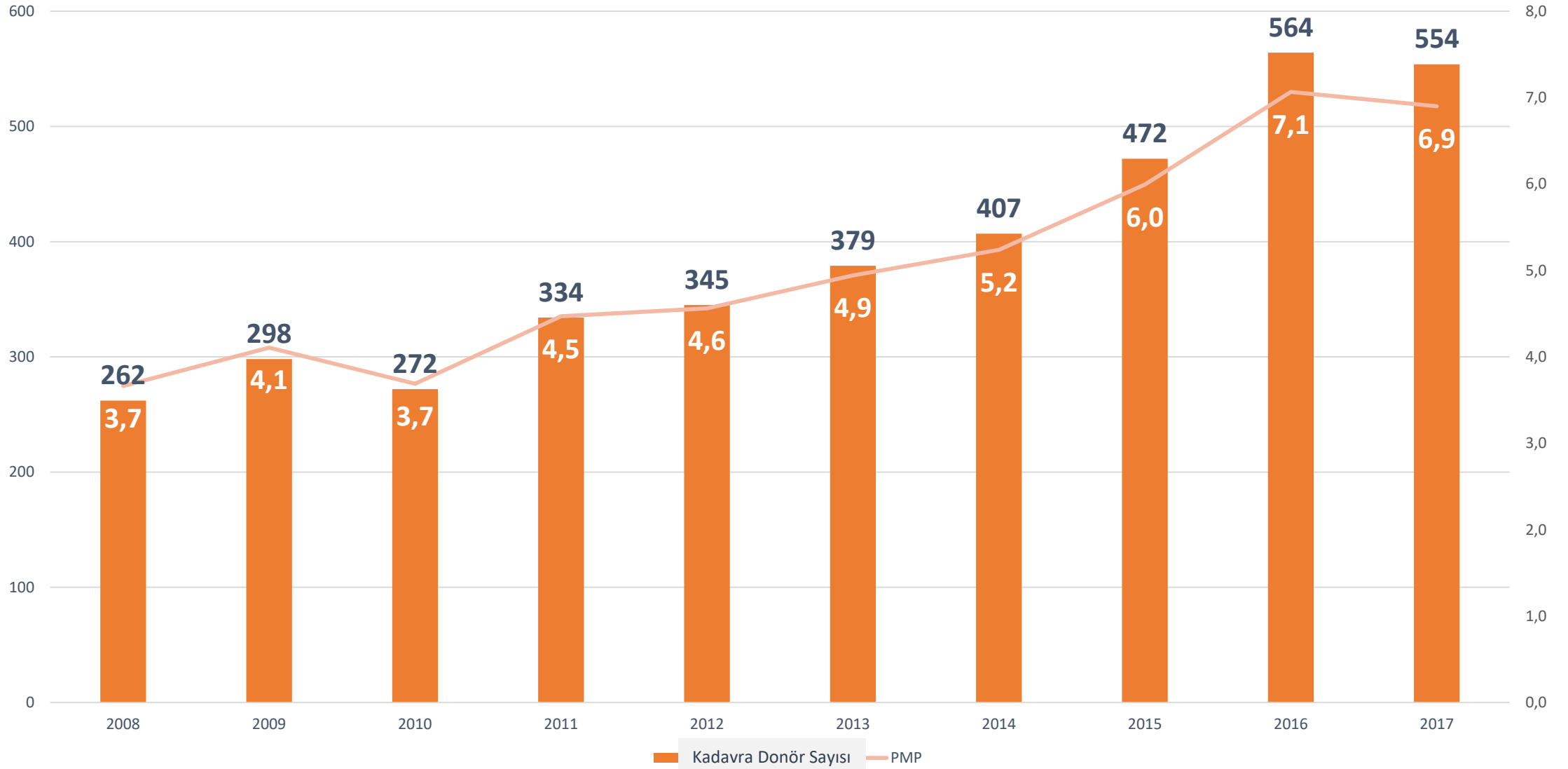
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ETİK KOMİSYON



Türkiyede Karaciğer Nakli

Milyon Nüfus Başına Düşen Kadavra Donör Sayısı



Karaciğer Nakli

Beyin ölümü tespiti

Aile onamının alınması

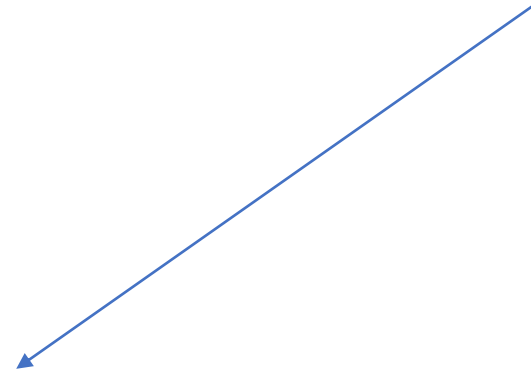
Donör cerrahisi ekiplerinin görevlendirilmesi

Alınan organların nakil merkezlerine transferi

Transplantasyonun gerçekleştirilmesi

Nakil sonrası takip ve problemlerin yönetimi

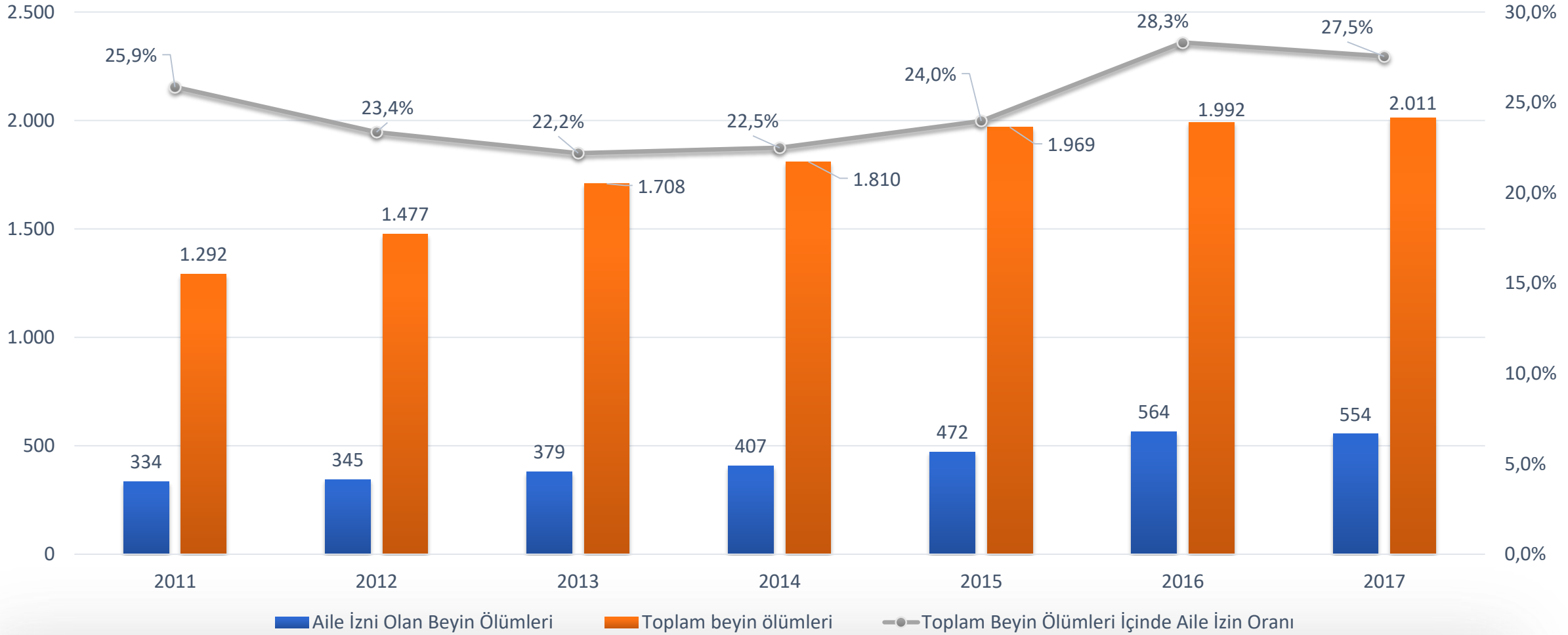
Canlı verici



Cerrahlar, uzman anestezi uzmanı, yoğun bakım uzmanı, hepatolog, girişimsel radyolog, girişimsel gastroenterolog, patolojisi, psikiyatrist, immünolog, enfeksiyon hastalıkları uzmanı, klinik eczacı ve uzman hemşirelik bakımı gereklidir. Kardiyolog, göğüs hastalıkları uzmanı, nefrolog, fizik tedavi uzmanı...7/24 ulaşılabilir olmalıdır.

Türkiyede Karaciğer Nakli

Toplam Beyin Ölümleri İçinde Aile İzin Oranı (%)



Donation and Liver Transplant Units and activity
 (data from Newsletter Transplant 2013, vol 18 no1 (www.ont.es)
 Pmp= per million population

Country	Population (million)	Deceased donor rates	Liver Transplants pmp	Liver Transplant Units	Liver Transplant Units pmp
USA	315.8	25.8	19.8	139	0.43
Brazil	198.4	12.4	7.9	56	0.28
Germany	82.0	12.8	13.4	25	0.30
France	63.5	25.9	18.3	22	0.34
UK	62.8	18.5	13.0	7	0.11
Italy	61.0	21.9	16.4	22	0.36
Spain	46.8	35.1	23.2	25	0.53
Canada	34.7	15.6	14.1	12	0.35
Australia	22.9	15.5	10.1	8	0.35
Greece	11.4	6.8	4.1	1	0.09
Sweden	9.5	15.1	16.1	1	0.10
Switzerland	7.7	12.5	13.0	3	0.39
Finland	5.4	20.0	9.6	1	0.19
Norway	5.0	23.4	20	1	0.20

Turkey (2019) 80 22 49 0.61

Karaciğer Nakli Merkezi Standartları

Standards required for aspiring new adult liver transplant units (proposed to Liver Advisory group, NHSBT)

Transplant Surgeons

Minimum of 5 surgeons to maintain rota

Minimum of 2 years experience in a transplant unit within previous 3 years

Familiarity with retrieval techniques and splitting livers

Experience in liver resection (at least 12 cases/year)

Transplant Physicians

Experience of management of patients with acute liver failure, chronic liver disease and awaiting transplant

At least 2 years experience in a liver transplant units in last 3 years

Familiarity with managing immunosuppression, rejection, disease recurrence and long-term management

Unit Transplant Activity

Deliver >50 transplants/year

Karaciğer Nakli Merkezi Standartları

Standards required for aspiring new adult liver transplant units (proposed to Liver Advisory group, NHSBT)

Service Provision

Full Multidisciplinary team

Psychological and social support

24h/day access by patients/carers to medical advice

24h/day consultant transplant medical and surgical support

Written protocols and guidelines

Specialist input from experienced nurses, recipient coordinators. Dieticians, pharmacists, physiotherapists, social worker chaplain, psychiatric liaison nurse

24h/day access to specialist diagnostic services (radiology, microbiology,, histopathology) with experienced consultants

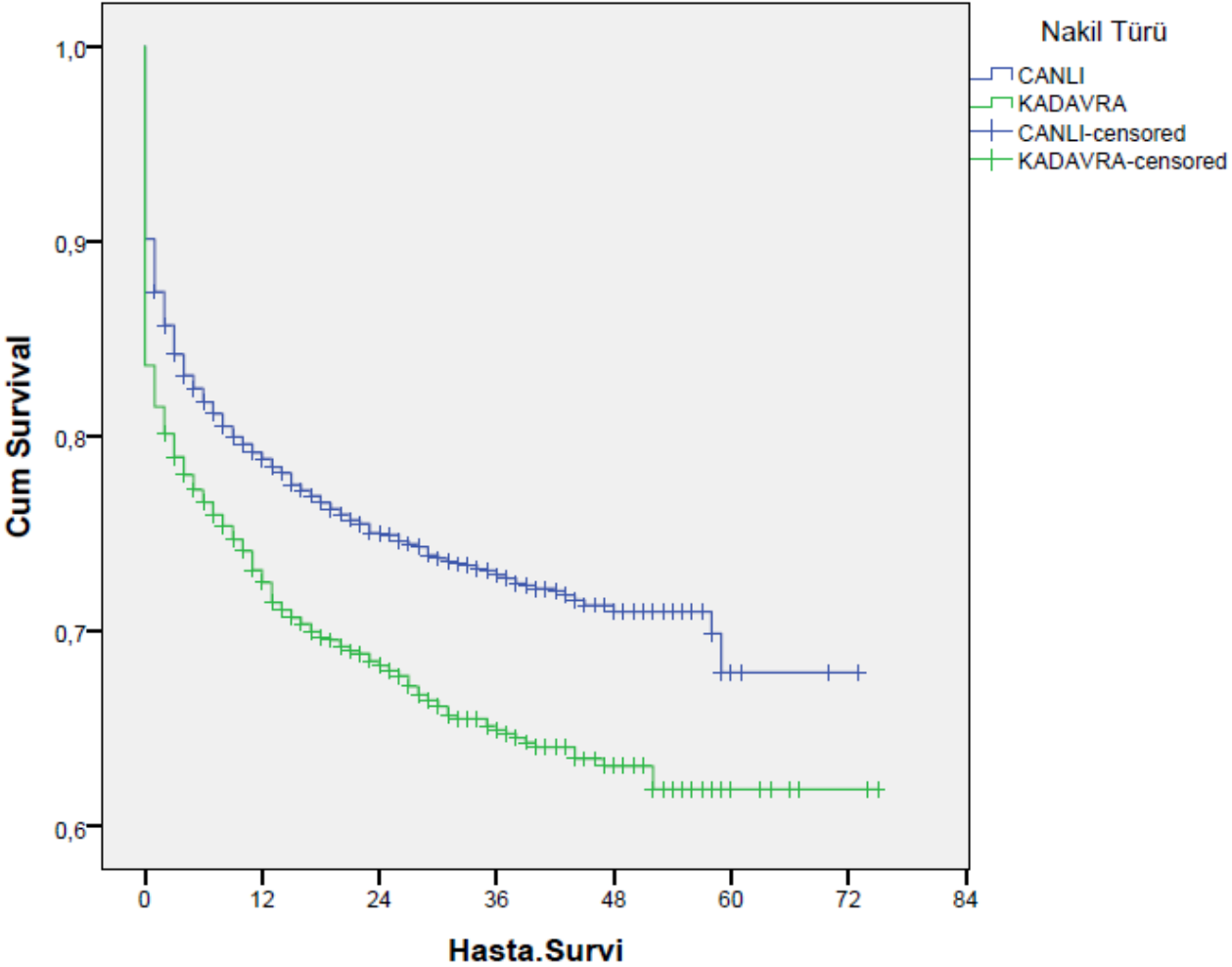
Anaesthetist support from consultant anaesthetists experienced in acute and chronic liver failure, liver transplantation and liver surgery

Full programmes of education, audit, research

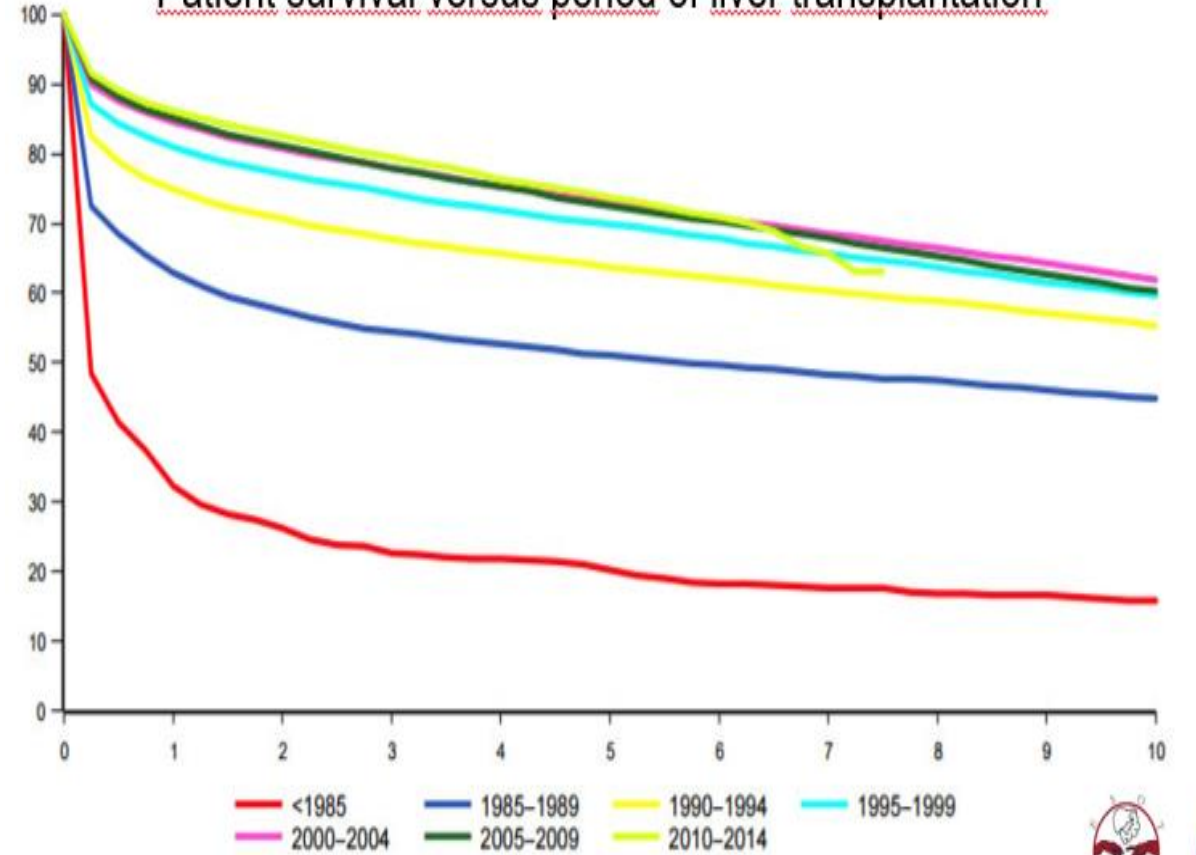
Karaciğer Nakli: Türkiye Verileri

2011-2015 yılları, 5166 Hasta

Survival Functions



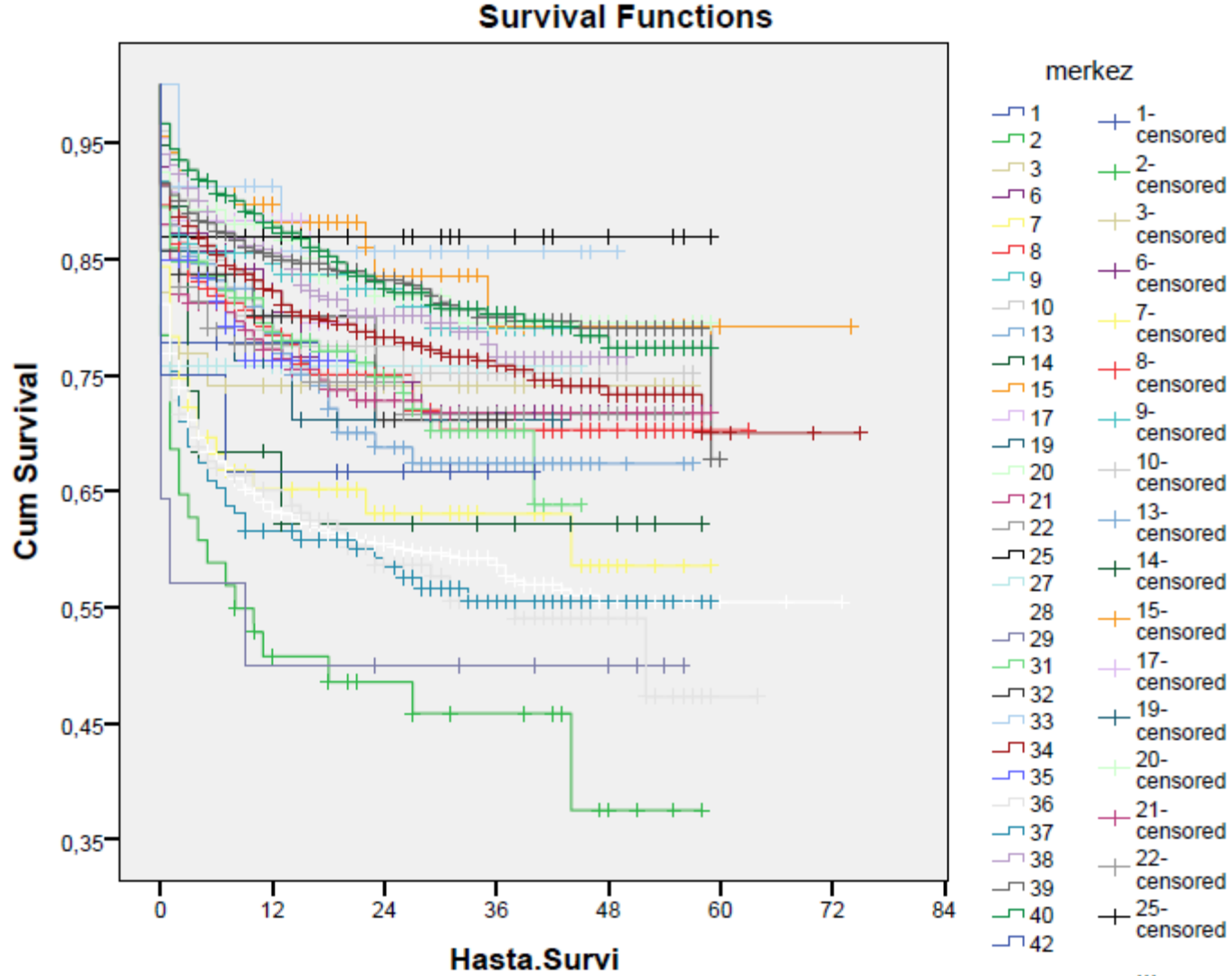
Patient survival versus period of liver transplantation



Transplant International 2018; 31: 1293-1317

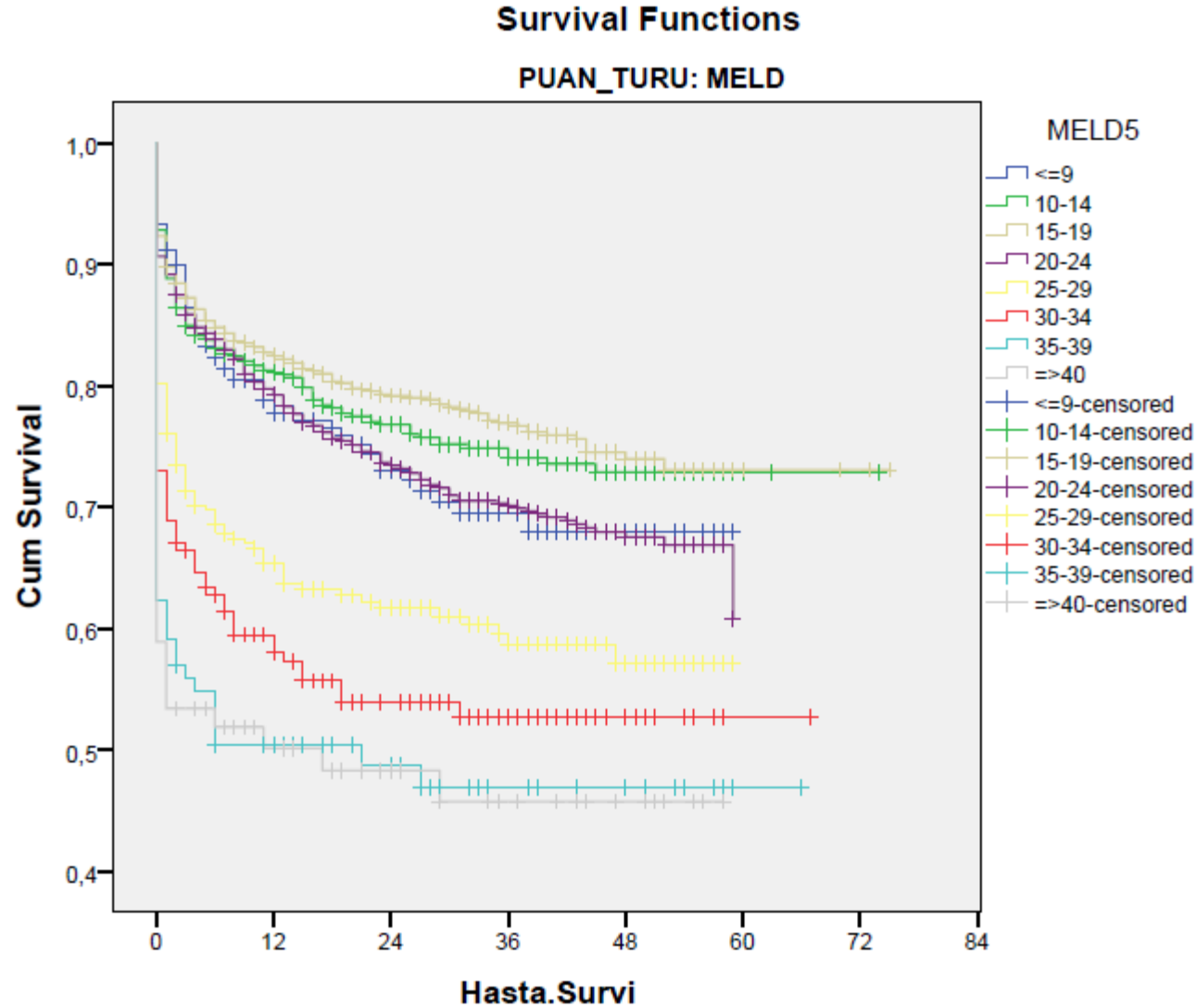
Karaciğer Nakli: Türkiye Verileri

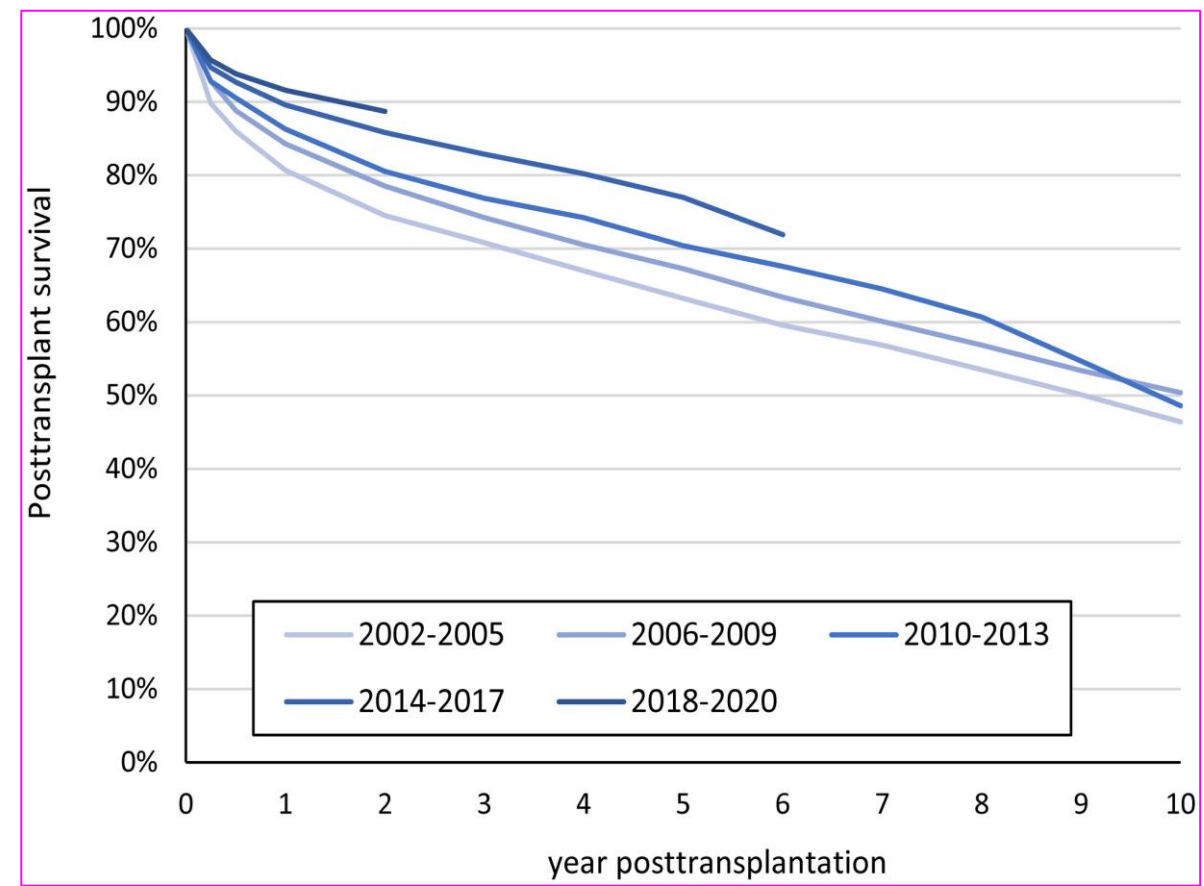
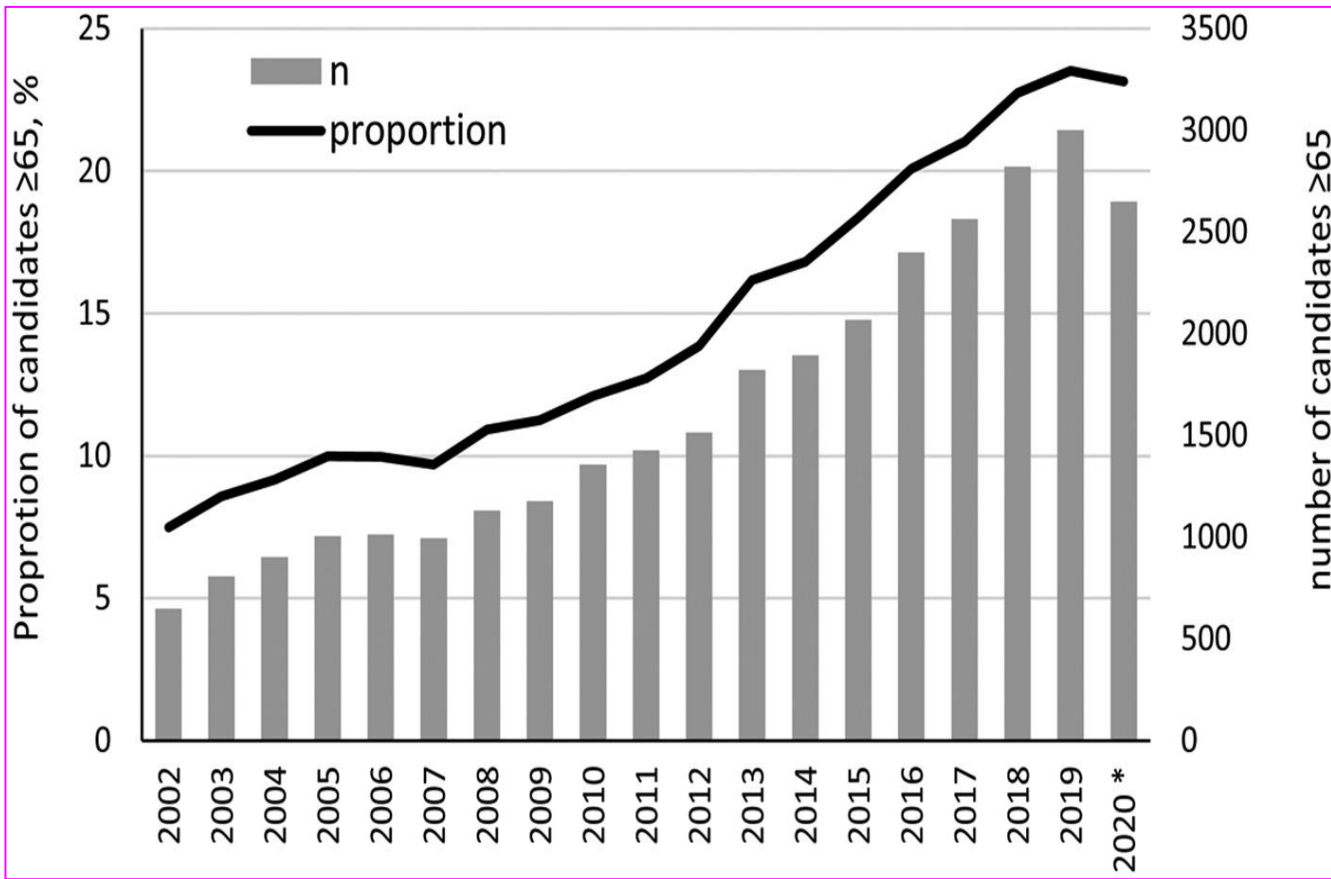
2011-2015 yılları, 5166 Hasta



Karaciğer Nakli: Türkiye Verileri

2011-2015 yılları, 5166 Hasta





Durum Özeti

Canlı vericili nakil sayımızı çok arttırmışız

Nakil merkezi sayımızı çok arttırmışız

Yurt dışından gelen hasta sayısı artıyor

Beyin ölümü tespitini yeterince arttıramamışız

Ailelerden bağış onamı alınmasını arttıramamışız

Akrabalık dışı verici sayısı hızla artıyor (etik/hukuk)

Organ çıkarım ekipleri oluşturamamışız

Cerrahi / Hepatoloji ekiplerinin yetki-sorumluluk-ekonomik paylaşım sınırları

Ameliyatı yapmaya hevesli merkez çok, hasta bakmaya (preop,postop) hevesli merkez az (Sgk paket ödemesi)

Postop hasta takipte sorun çok

Tam donanımlı merkez sayısı çok az: Ağır hasta yönetimi yetersiz, sağkalım oranları sorunlu

Merkez sayısı çok, bilimsel yayın sayısı az, eğitim kurumu sayısı az



Teşekkürler

