



T.C. Sağlık Bakanlığı

WORLDWIDE NETWORK FOR
BLOOD & MARROW TRANSPLANTATION

The 4th **WBMT WORKSHOP**



KING FAISAL SPECIALIST HOSPITAL AND RESEARCH CENTRE
15-16 JANUARY 2017 RYADH, SAUDI ARABIA

2007-2015, The Rising Era of Turkish Transplant Activity

Mutlu Arat, MD



GROUP
FLORENCE NIGHTINGALE



T.C.
İSTANBUL BİLİM ÜNİVERSİTESİ

*on behalf of HSCT Scientific Council,
Turkish Ministry of Health*

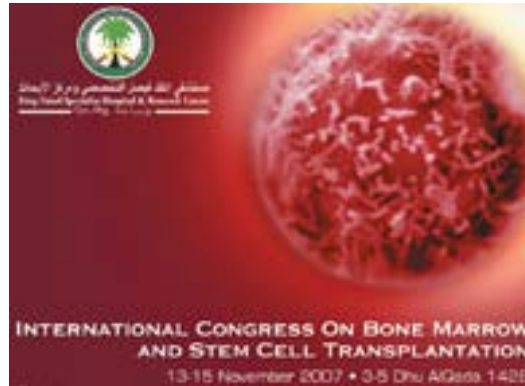


World Health
Organization



مستشفى الملك فيصل التخصصي ومركز الأبحاث
King Faisal Specialist Hospital & Research Centre
Gen. Örg. مؤسسة عامة

TTR



Turkish Transplant Registry: A Comparative Analysis of National Activity with the EBMT European Activity Survey

Mutlu Arat, M.D.

Ankara University Faculty of Medicine,
Dept. of Hematology, Stem Cell Tx. Unit

(arat@medicine.ankara.edu.tr),

EBMT/CIC 8405 Turkish Transplant Registry (TTR)

datamanager (ttr-datamanager@thd.org.tr)

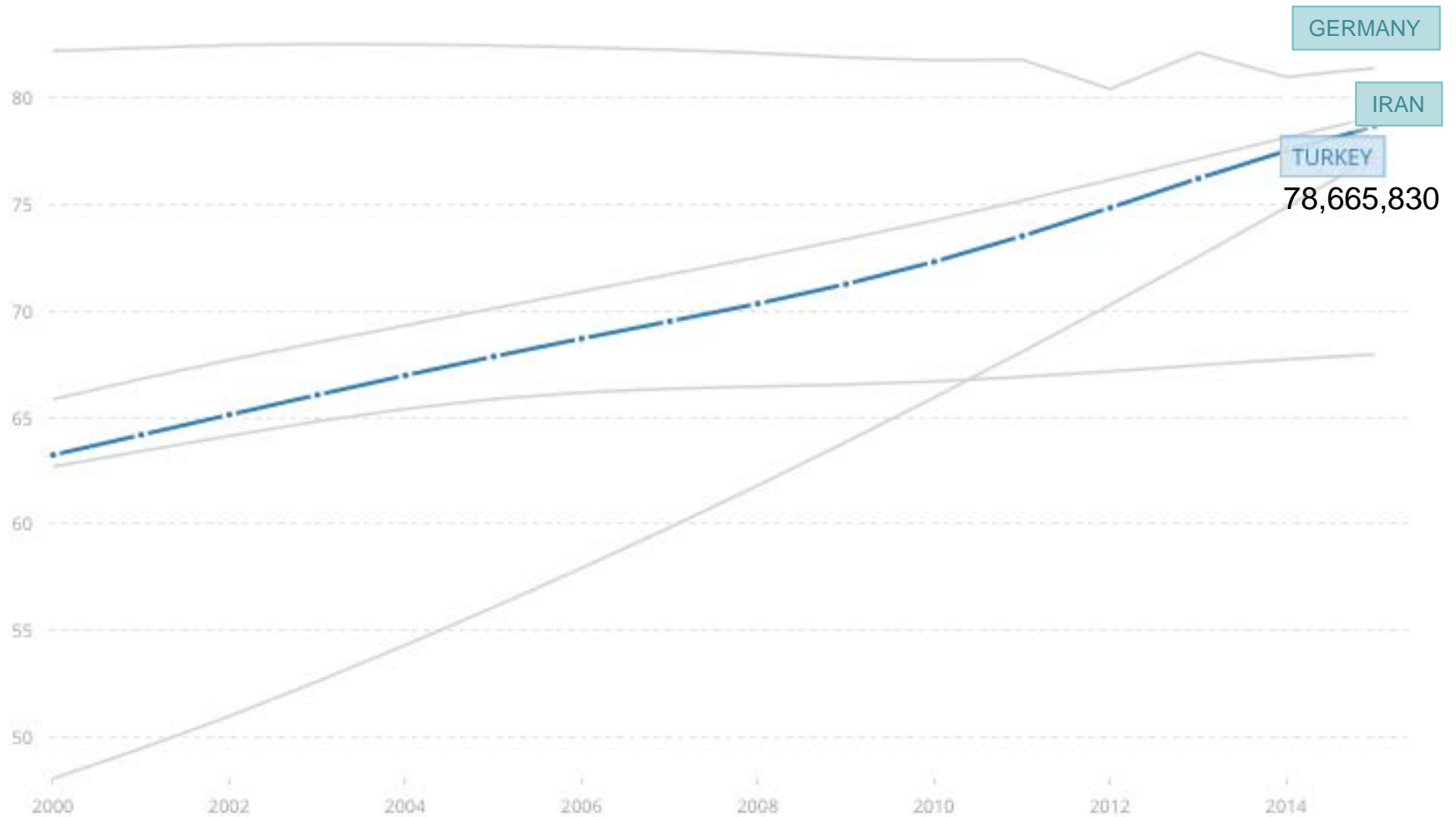




Demographics 2016

Population	80,274,604 (July 2016 est.)
Age structure	0-14 years: 25.08% (male 10,303,153/female 9,833,713) 15-24 years: 16.11% (male 6,605,634/female 6,329,921) 25-54 years: 43.15% (male 17,541,137/female 17,094,141) 55-64 years: 8.36% (male 3,335,021/female 3,374,965) 65 years and over: 7.3% (male 2,603,655/female 3,253,264) (2016 est.)
Dependency ratios	total dependency ratio: 49.7% youth dependency ratio: 38.4% elderly dependency ratio: 11.3% potential support ratio: 8.9% (2015 est.)
Median age	total: 30.5 years male: 30.1 years female: 31 years (2016 est.)
Population growth rate	0.9% (2016 est.)
Birth rate	16 births/1,000 population (2016 est.)
Death rate	5.9 deaths/1,000 population (2016 est.)
Net migration rate	-1.2 migrant(s)/1,000 population (2016 est.)
Urbanization	urban population: 73.4% of total population (2015) rate of urbanization: 1.97% annual rate of change (2010-15 est.)

TR; TotalPopulation, 2000-2015



Turkey, GDP per capita, 2006-2015

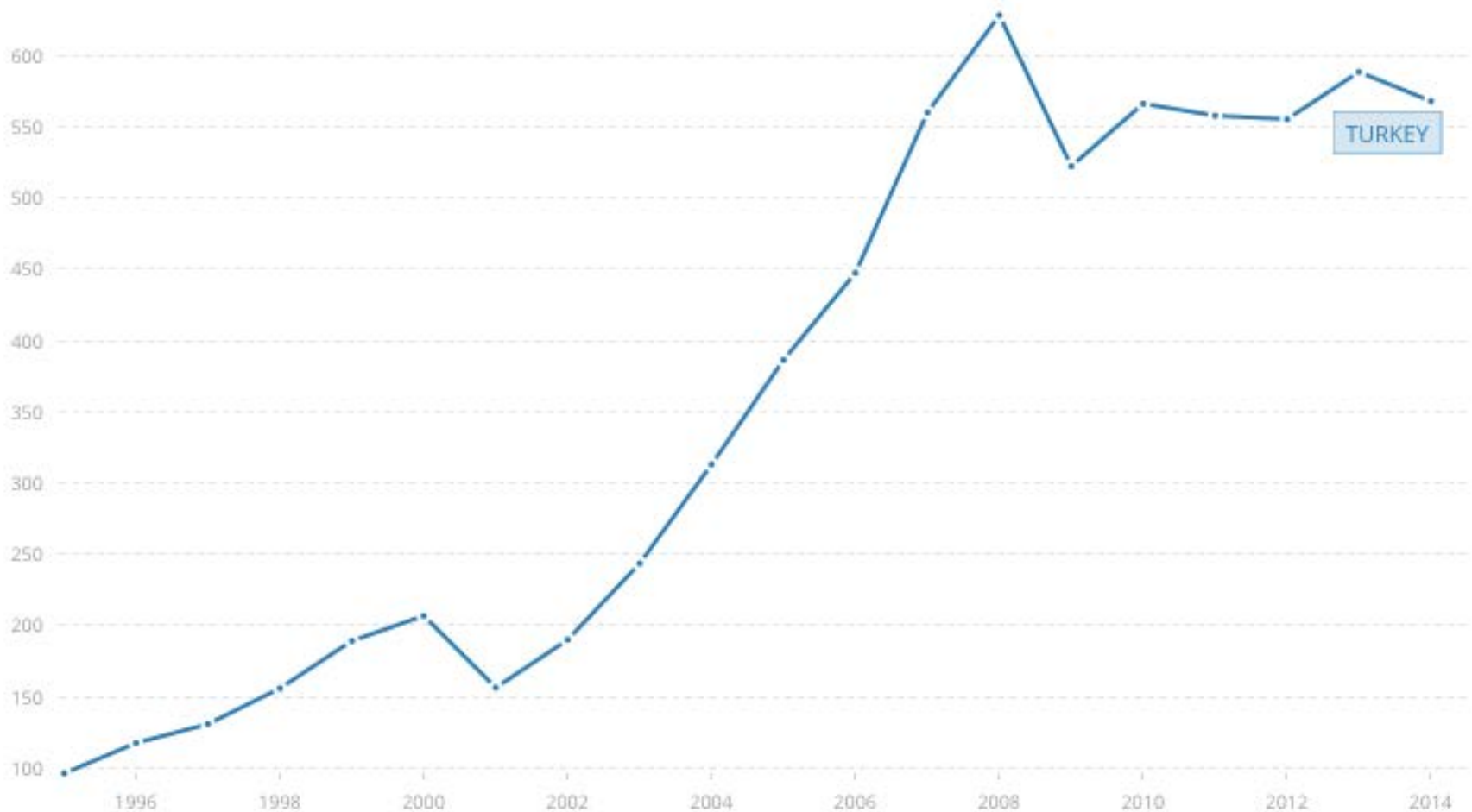


Health Expenditure per Capita, 2014



World Health Organization Global Health Expenditure database

TR: Health Expenditure per Capita, 1996-2014

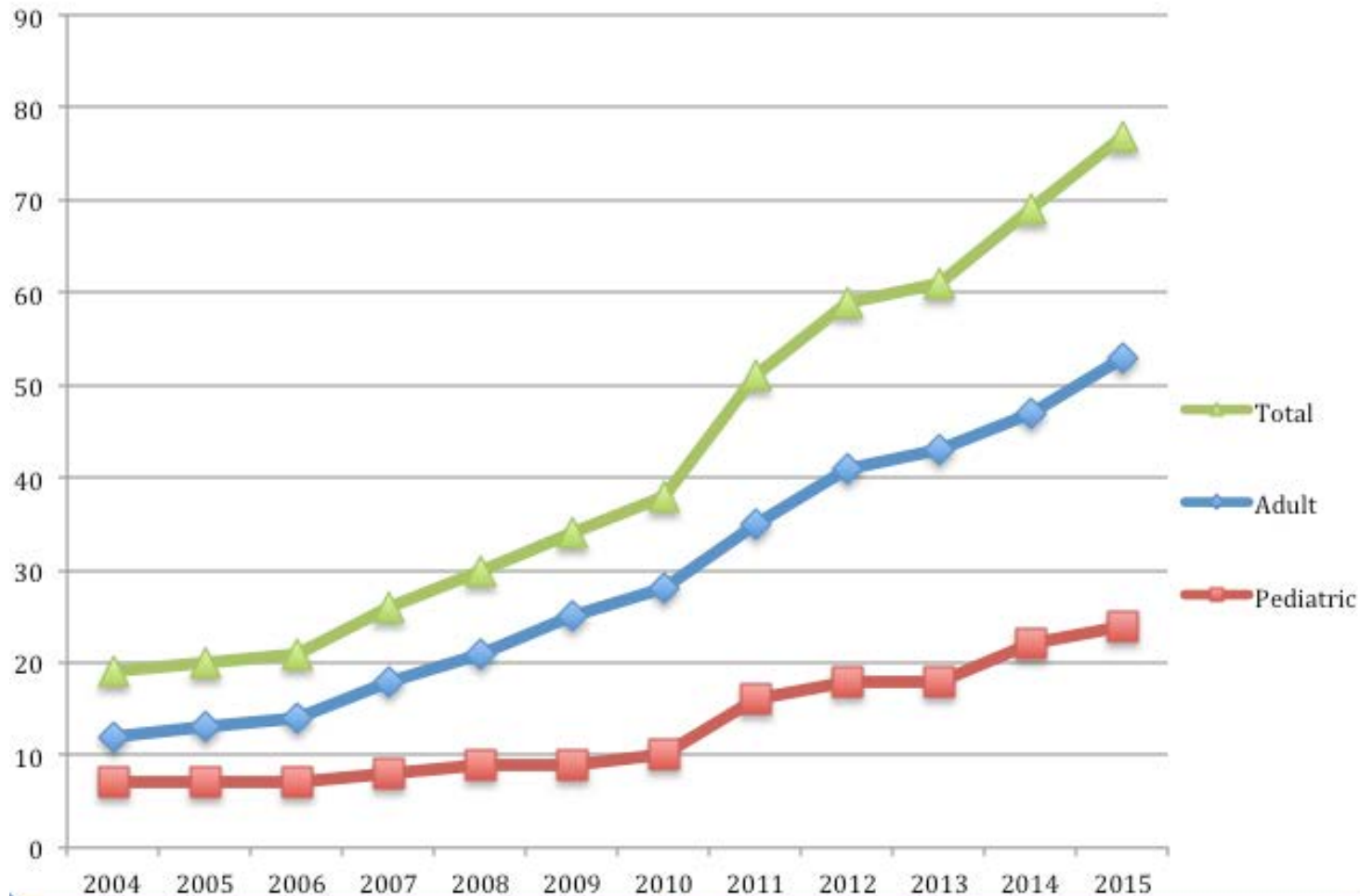


World Health Organization Global Health Expenditure database

N of adult/pediatric HCT centers during 2004-2015



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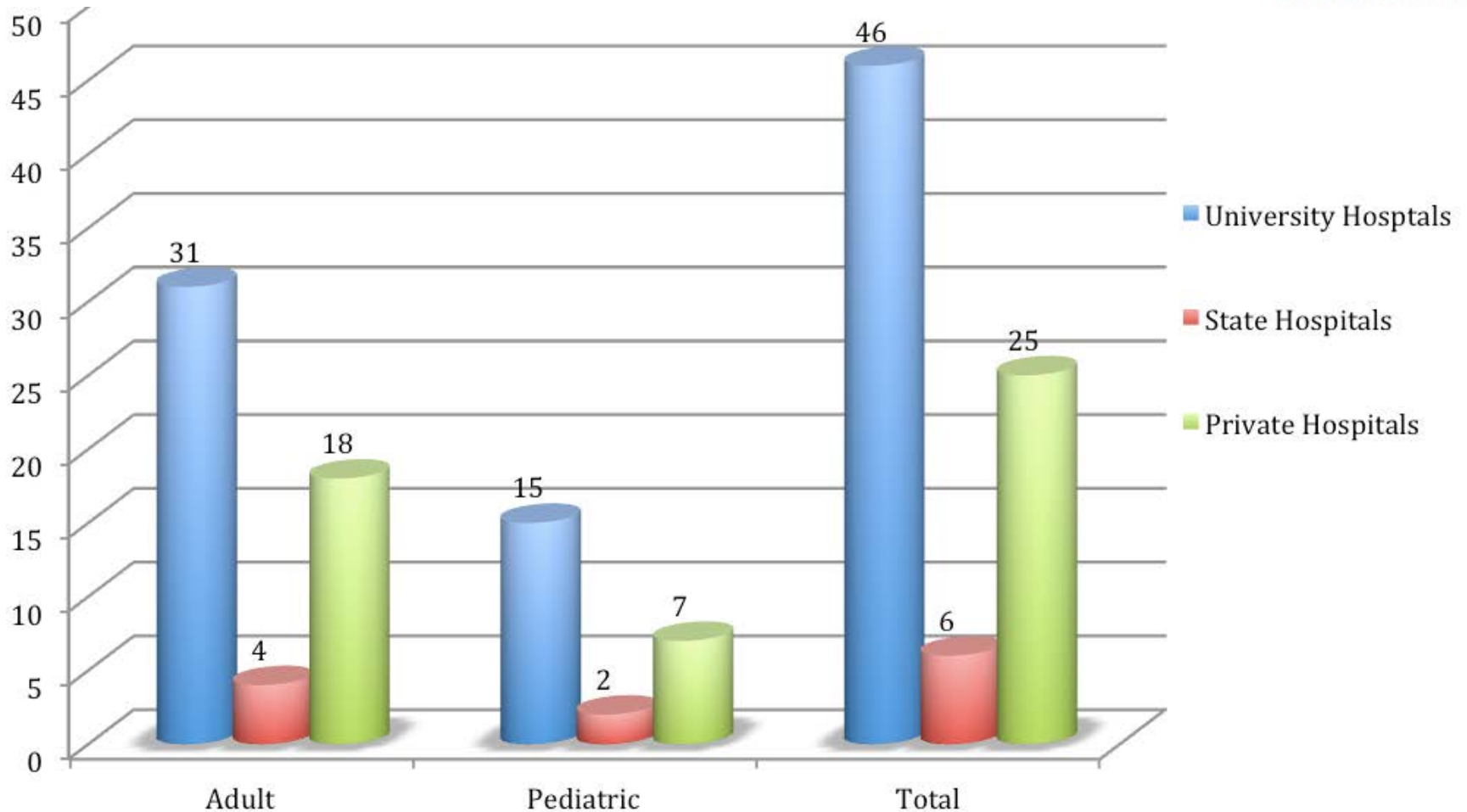


Tekgündüz E, et al, 2017. submitted

Distribution of HCT centers in Turkey as of 2015



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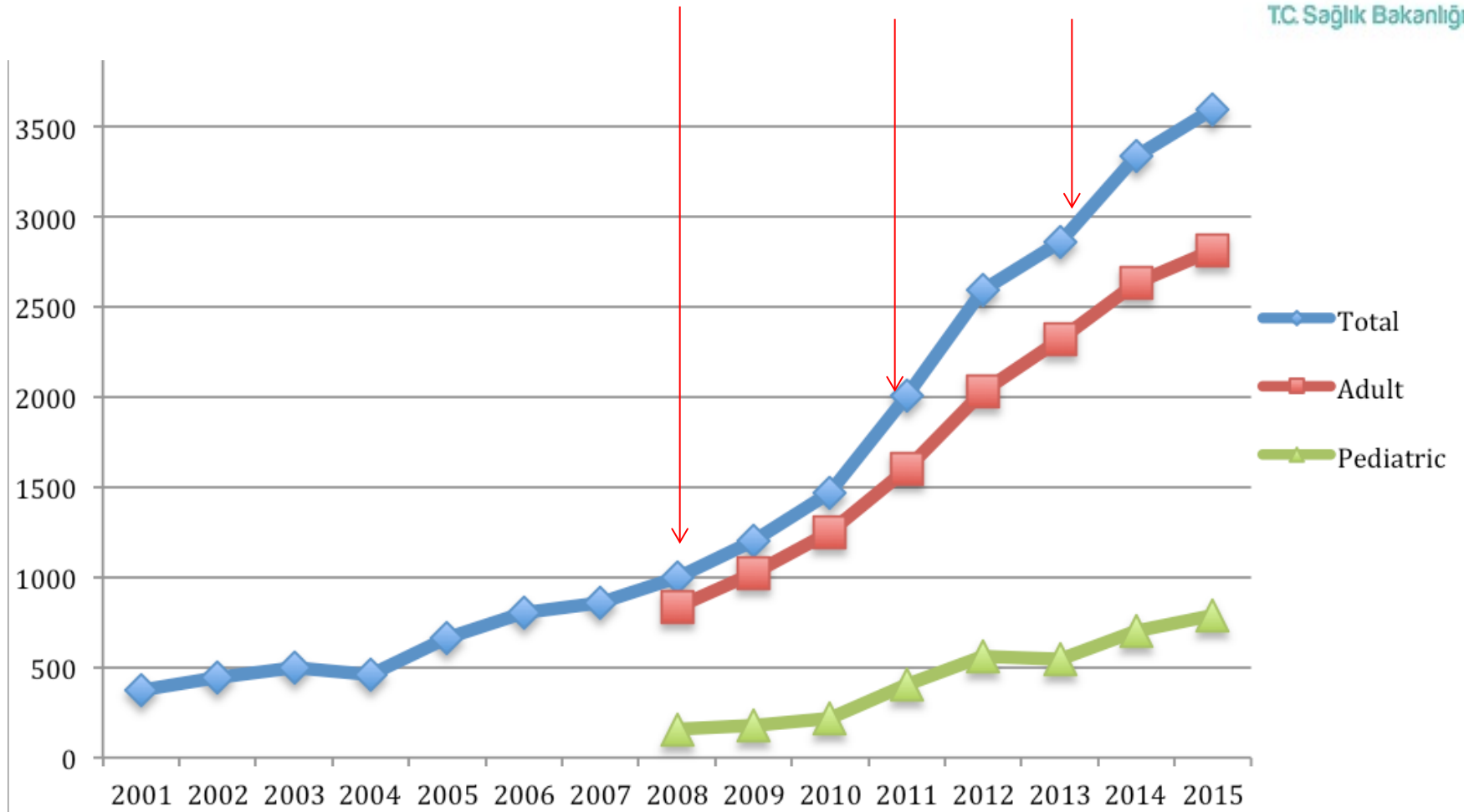


Tekgündüz E, et al. 2017

Total Turkish HSCT Activity



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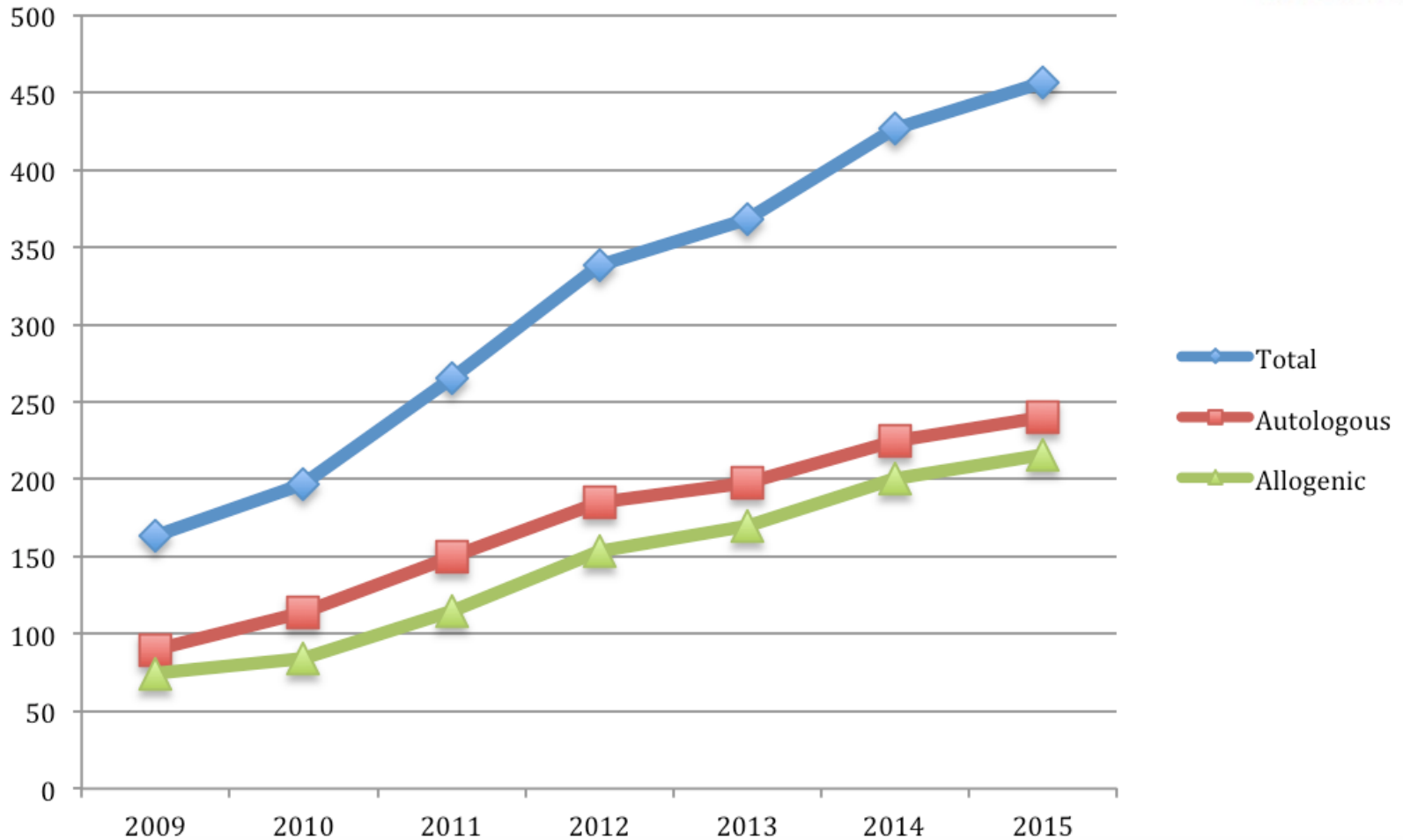


Tekgündüz E, et al. 2017

HCT rates during 2009-2015

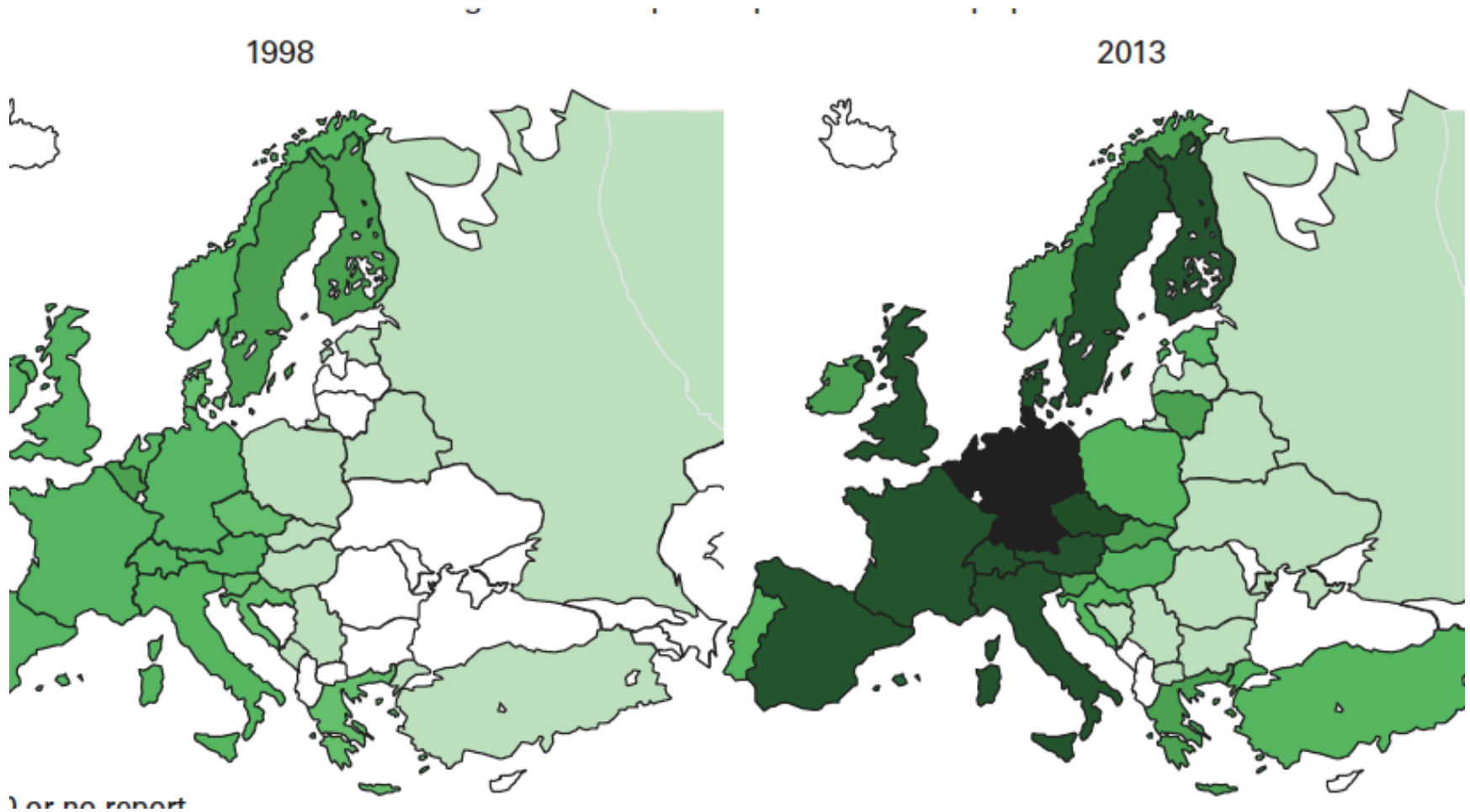


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Tekgündüz E, et al. 2017

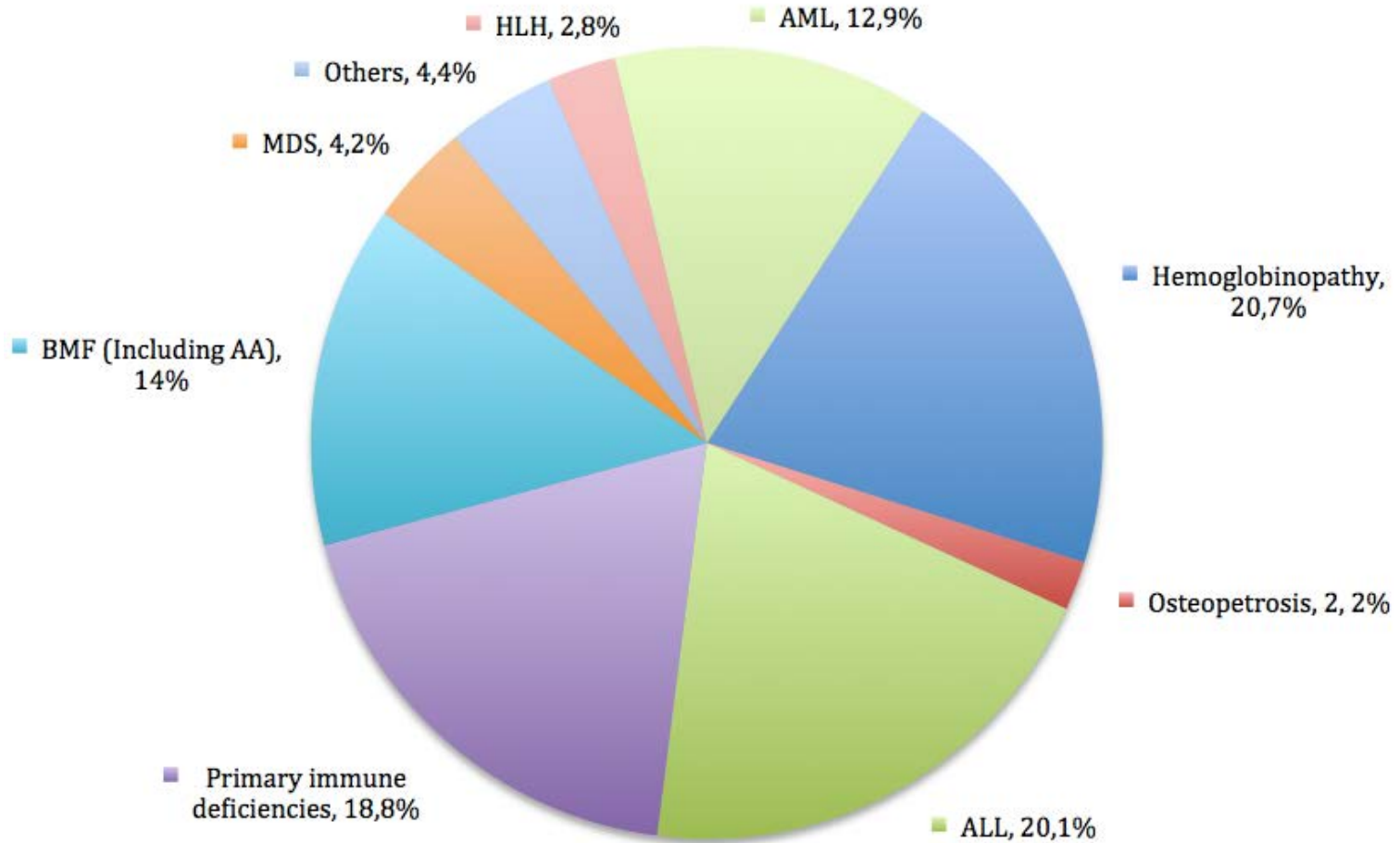
Allogeneic transplants per 10M



No report

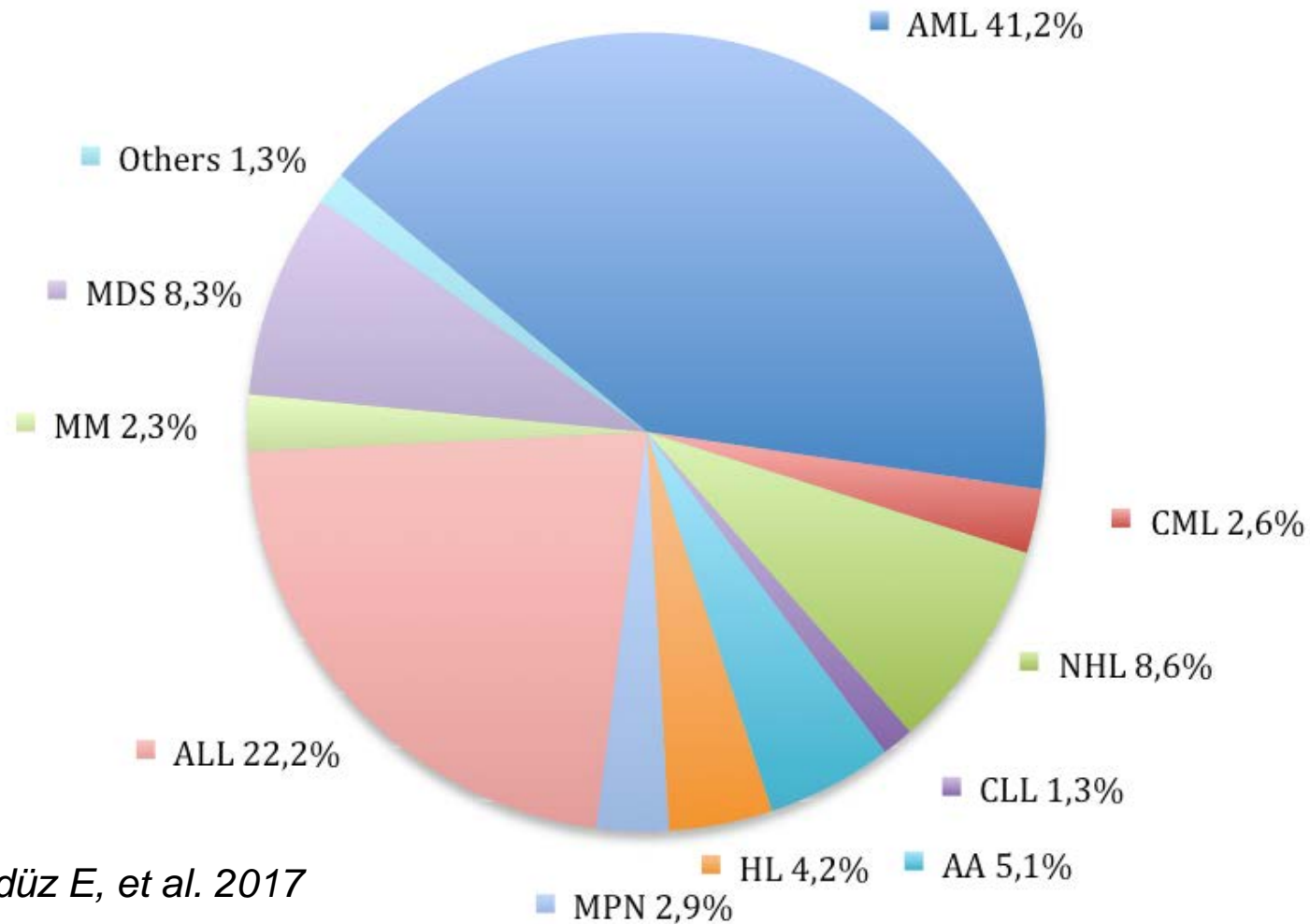
Bone Marrow Transplantation (2015), 1-7

Indications for pediatric allo-HCT in 2015

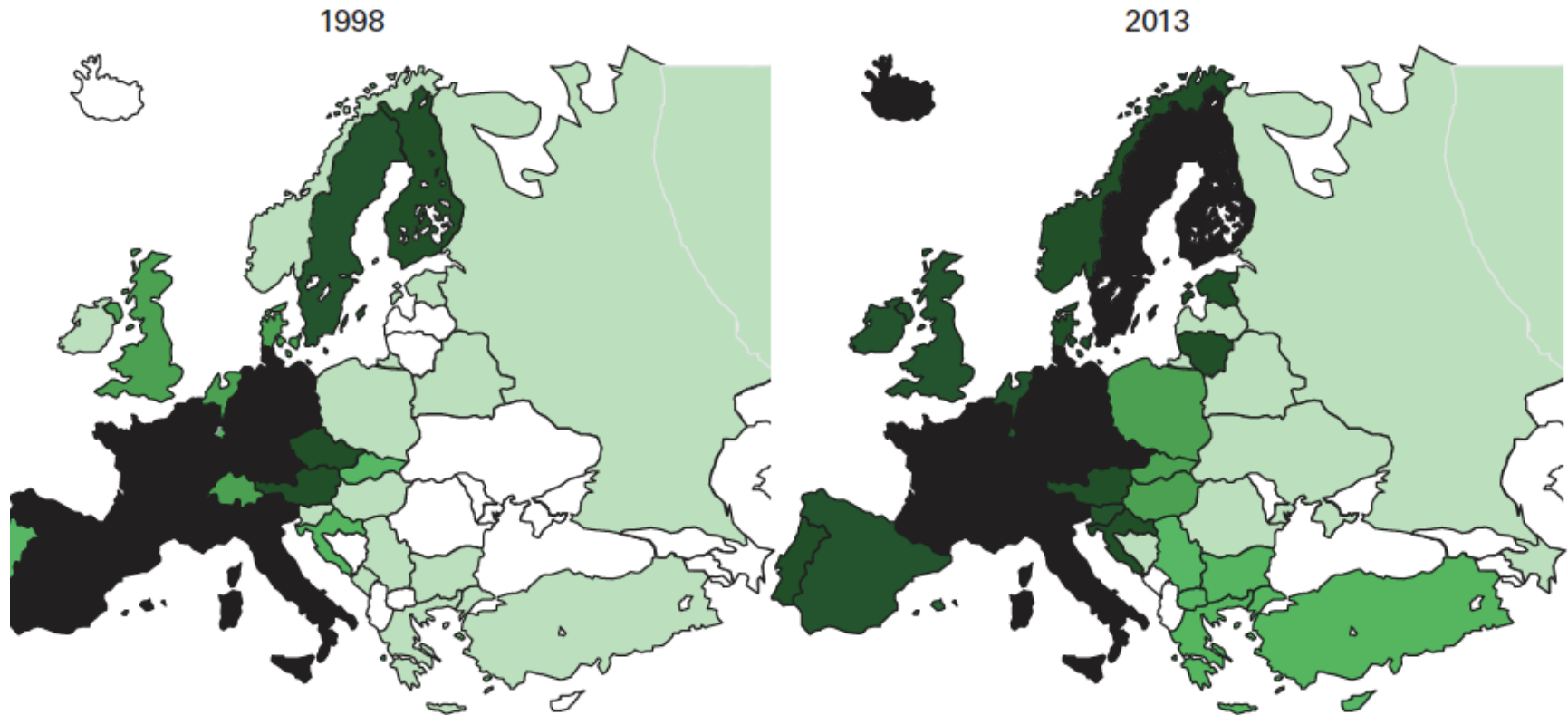


Tekgündüz E, et al. 2017

Indications for adult allo-HCT in 2015



Autologous Transplants per 10M

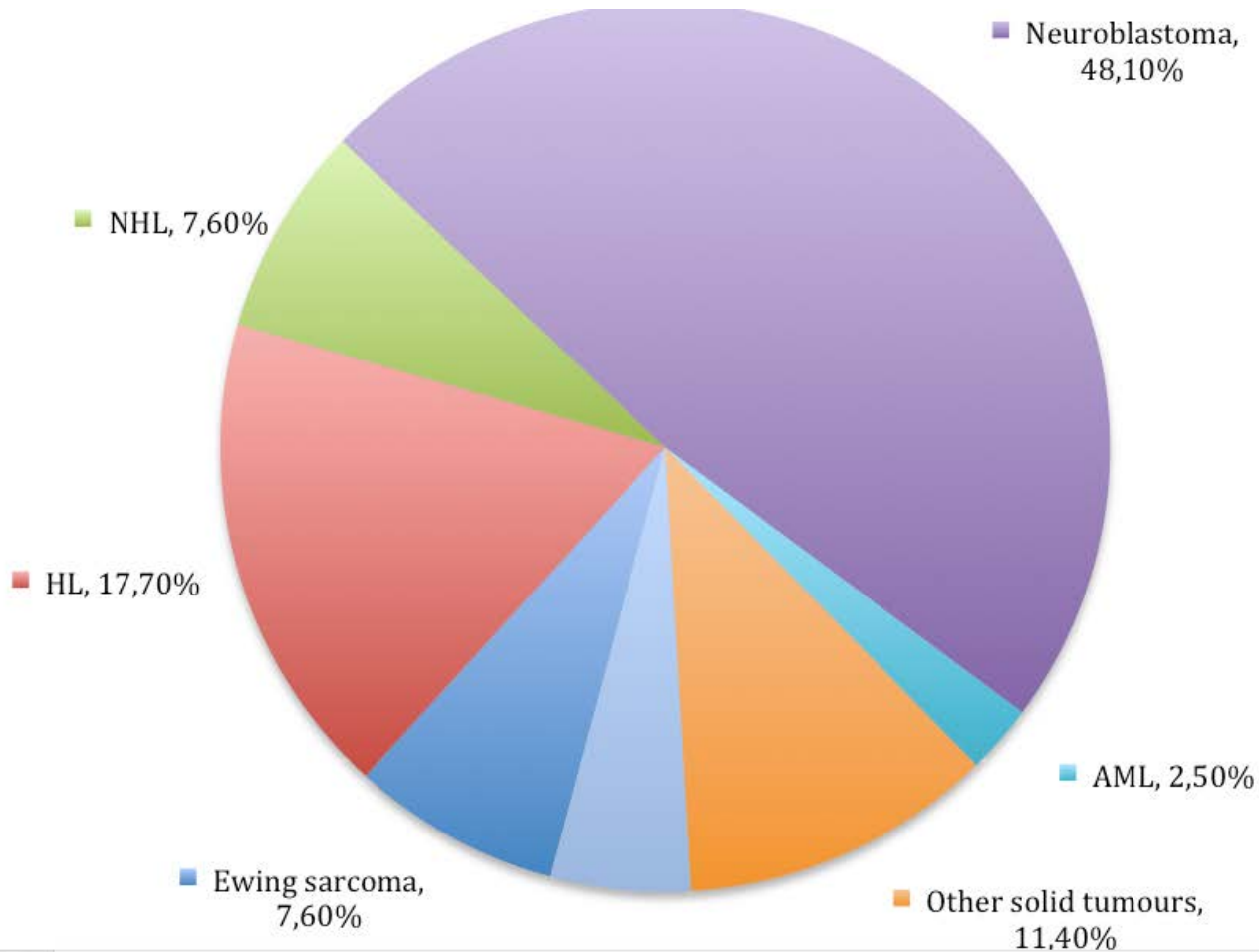


Bone Marrow Transplantation (2015), 1–7

Indications for pediatric auto-HCT in 2015

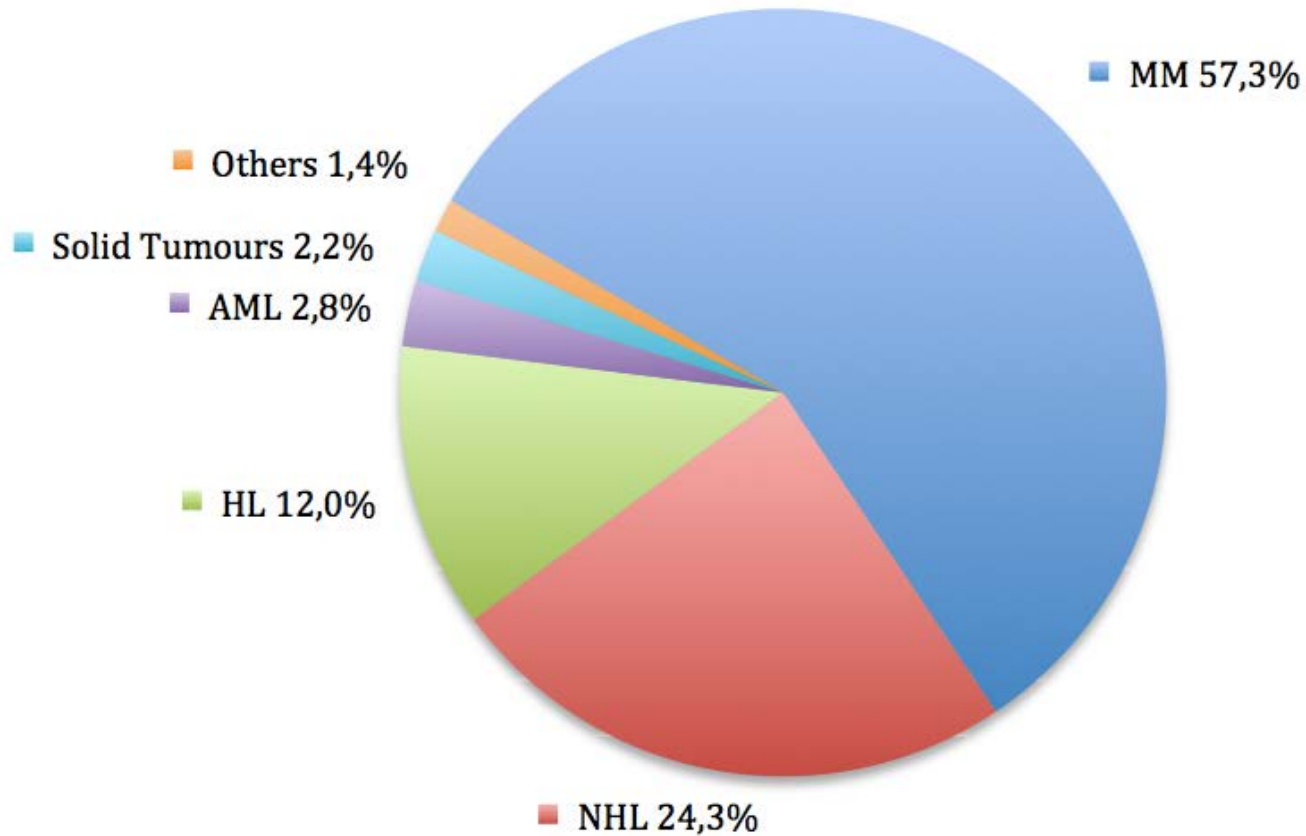


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Tekgündüz E, et al. 2017

Indications for adult auto-HCT in 2015

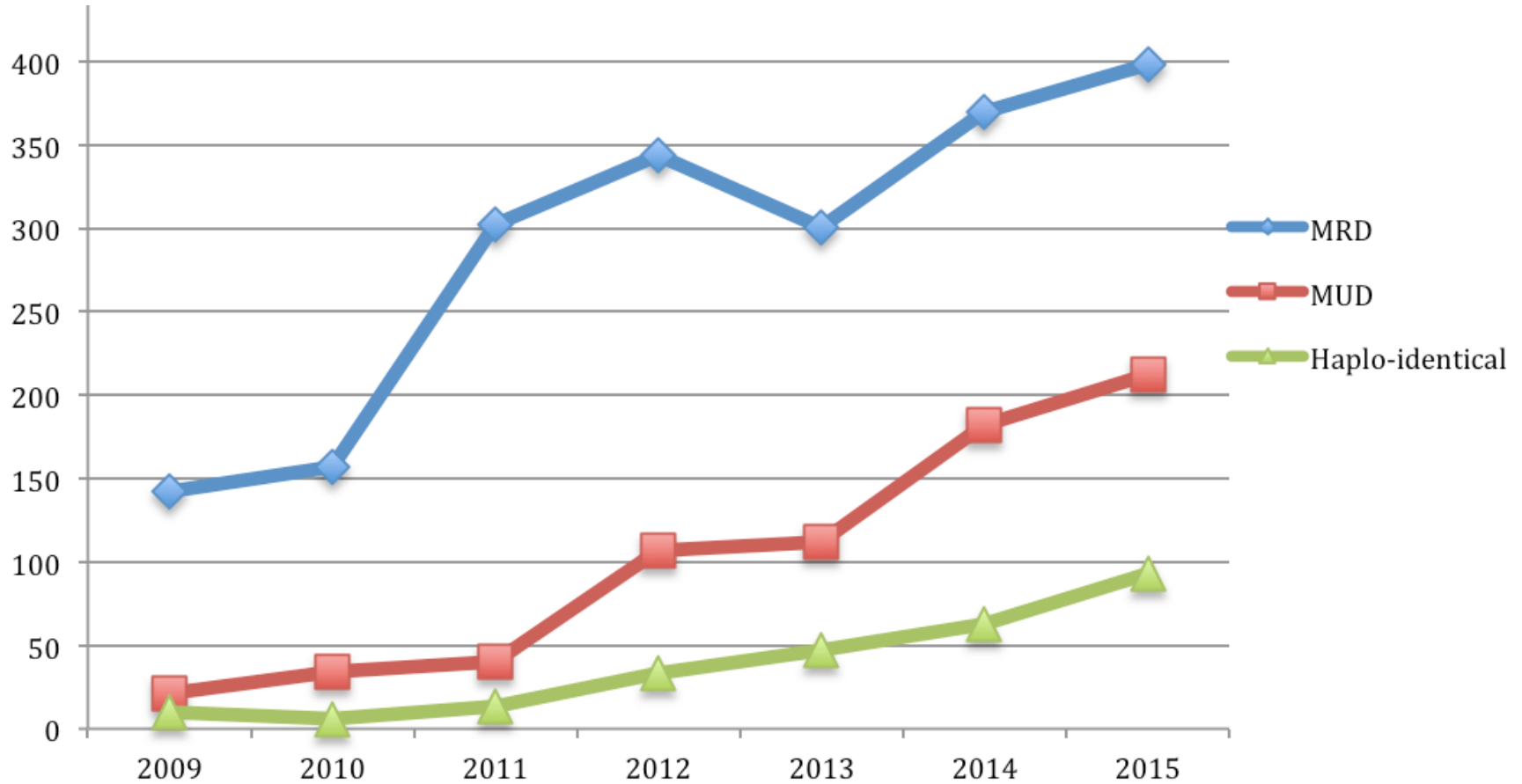


Tekgündüz E, et al. 2017

Pediatric allo-HCT numbers during 2009-2015 period according to HLA match



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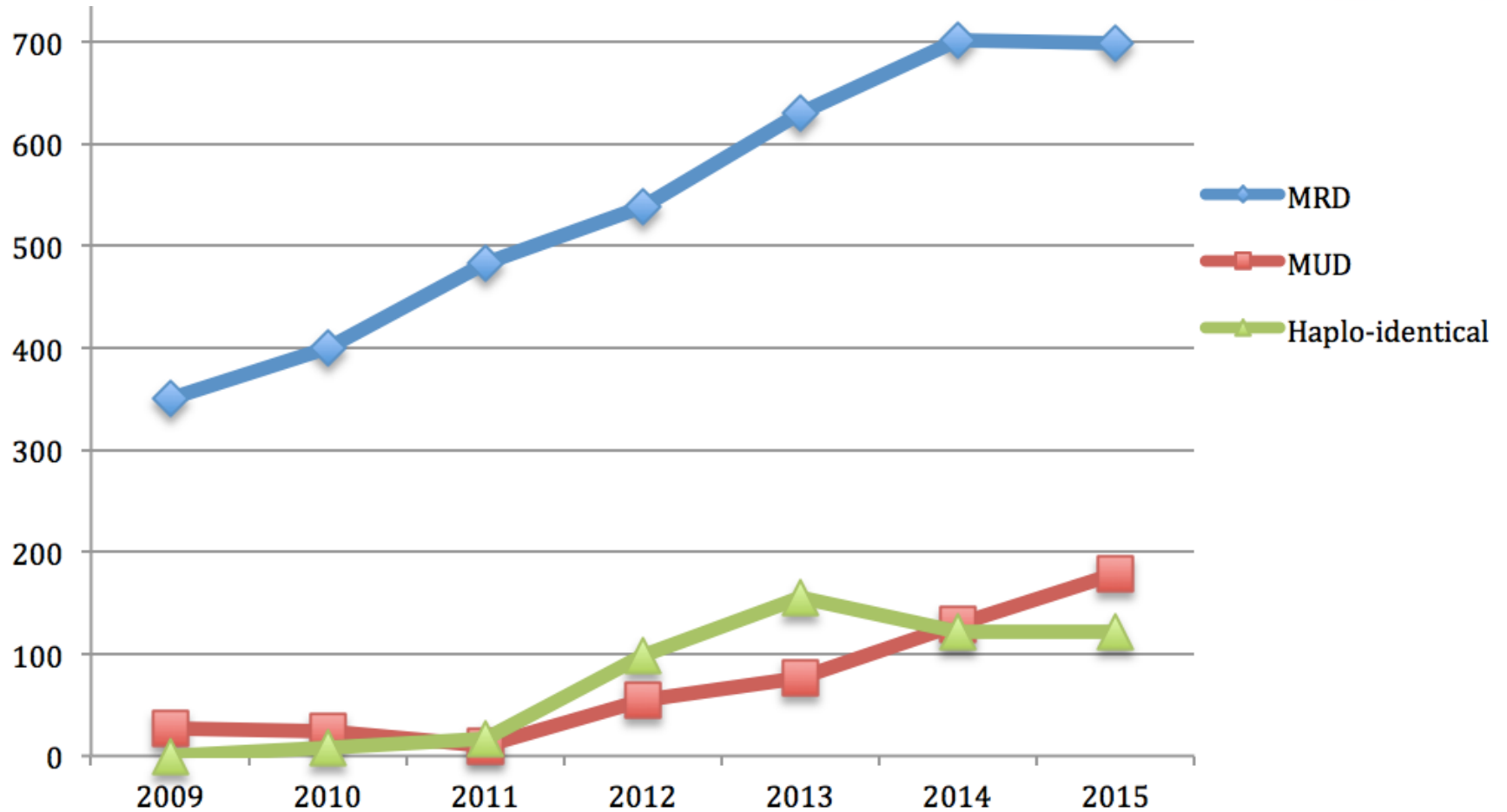


Tekgündüz E, et al. 2017

Adult allo-HCT numbers during 2009-2015 period according to HLA match

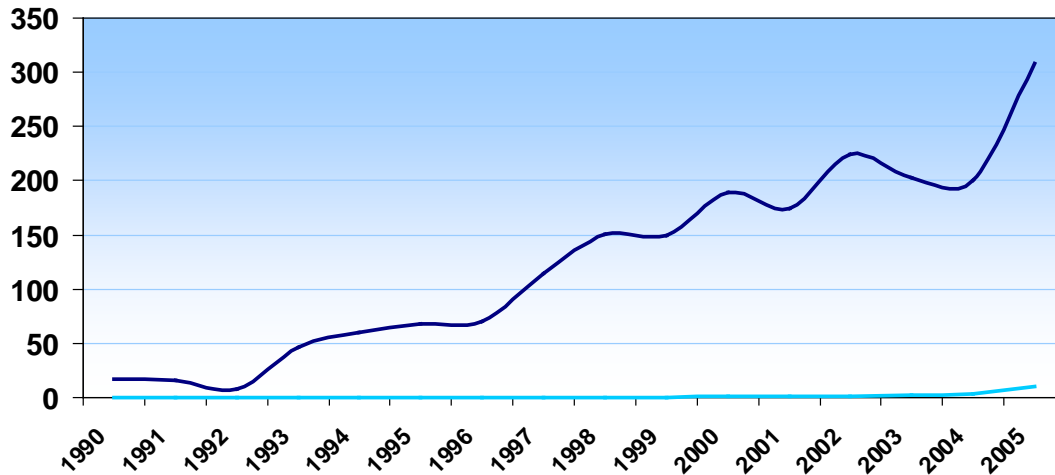


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Tekgündüz E, et al. 2017

Donors: Related vs Unrelated



Center N:23

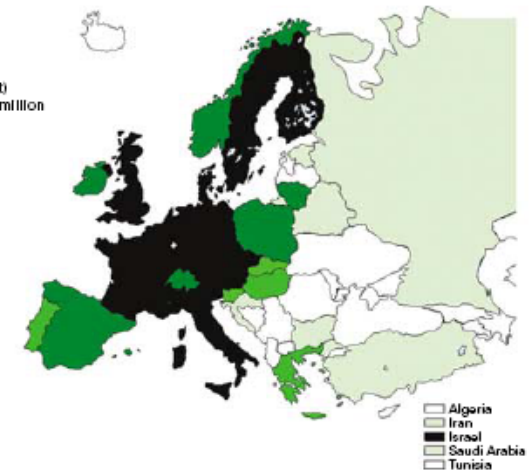
— Allo HSCT
— Unrelated

3%

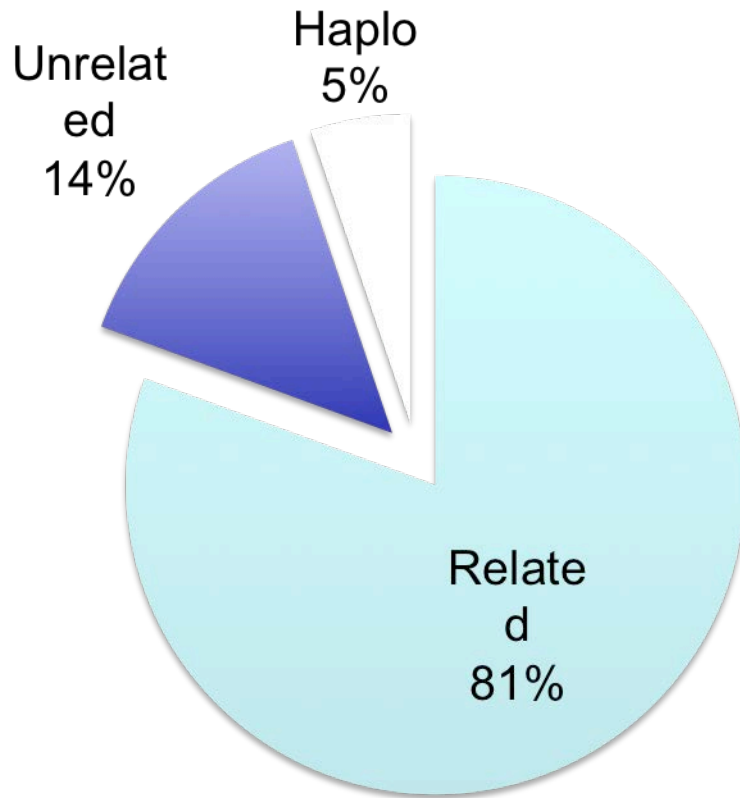
a

Total unrelated (1st) transplants per 10 million 2005

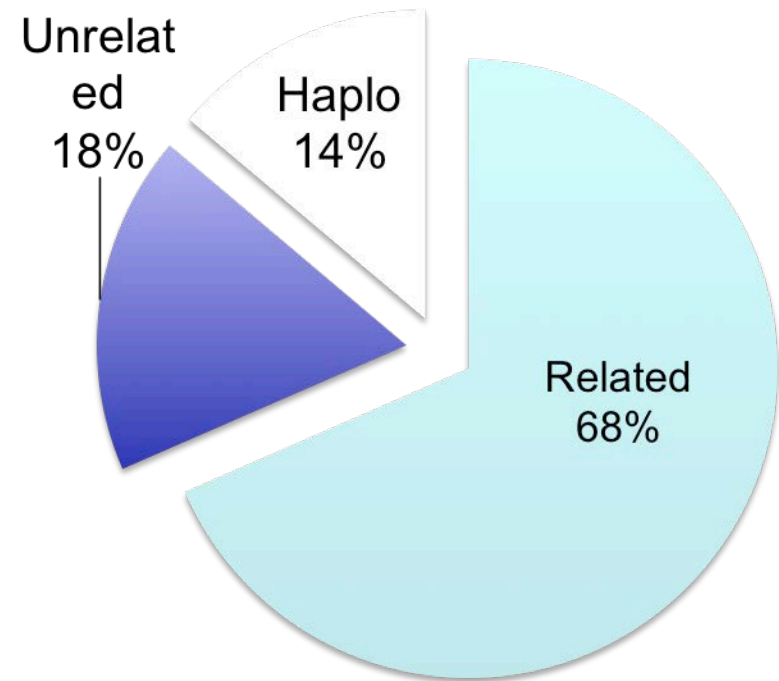
- 0 or no report
- 0.1 - 10
- 11 - 30
- 31 - 50
- > 50



Use of Alternative Donors



2011-2014



2011-2015



TC Sağlık Bakanlığı

Organizational Chart

TÜRKÖK
KÖK
HÜCRE

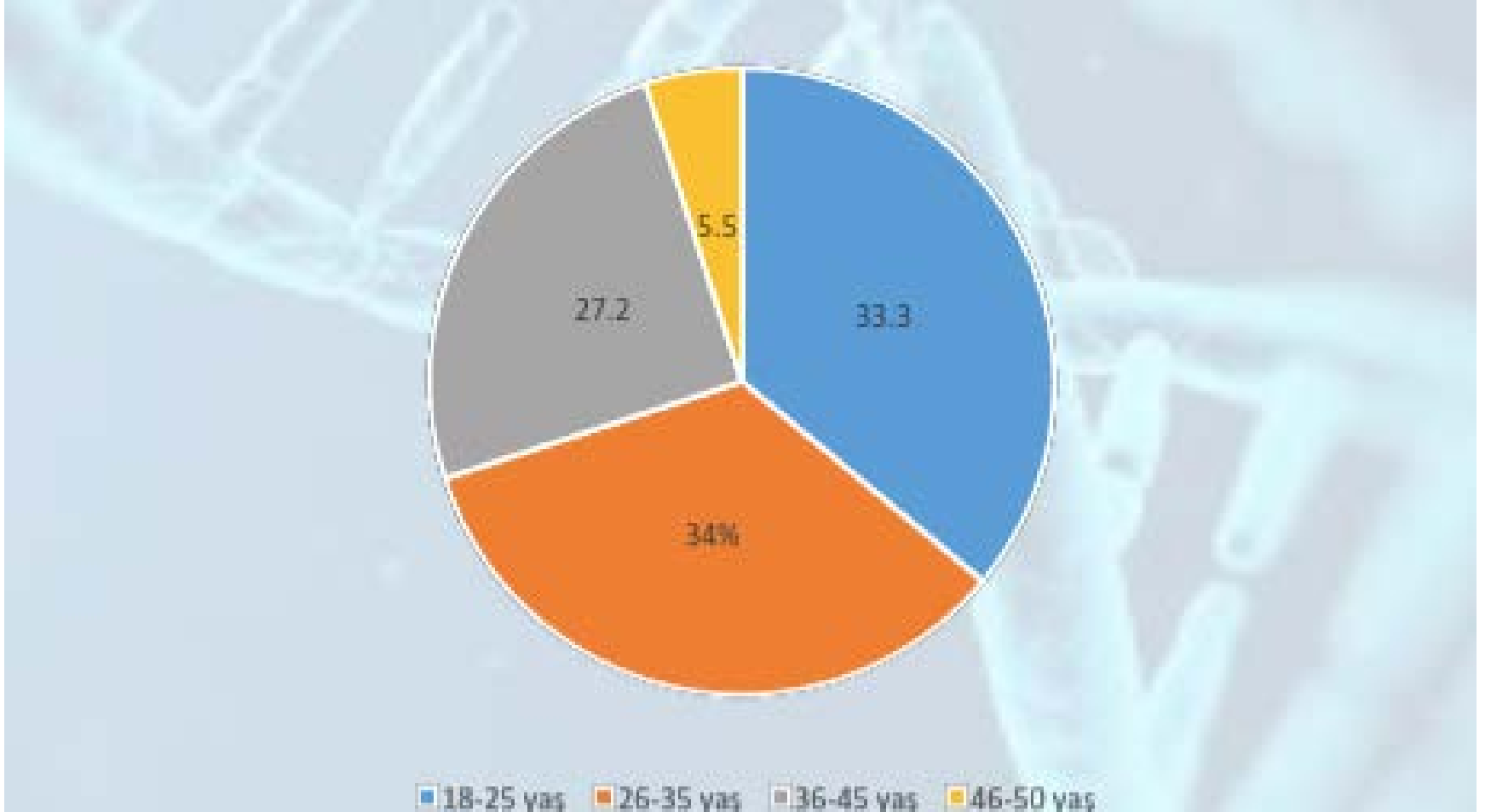




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191.444 Donors

TÜRKÖK
KÖK
HÜCRE



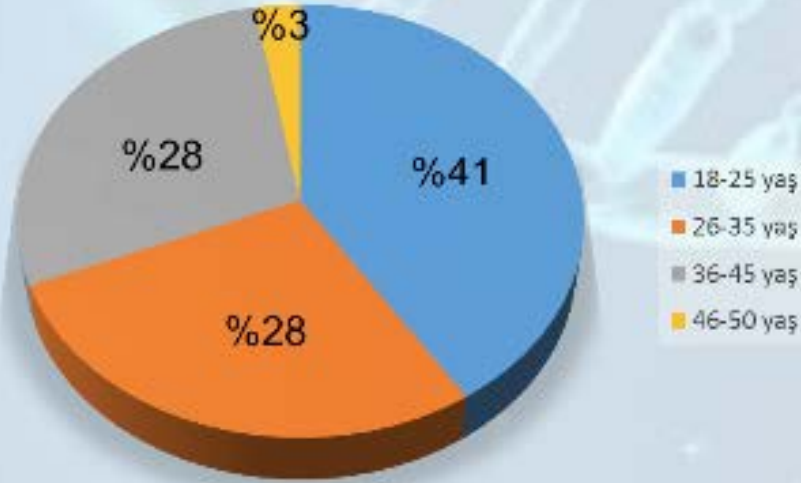


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Donor's Age & Donation Type

TÜRKÖK
KÖK
HÜCRE

Bağışçıların yaş dağılımı



Bağışçılarımızın yaş ortalaması 30

Bağış türüne göre dağılım

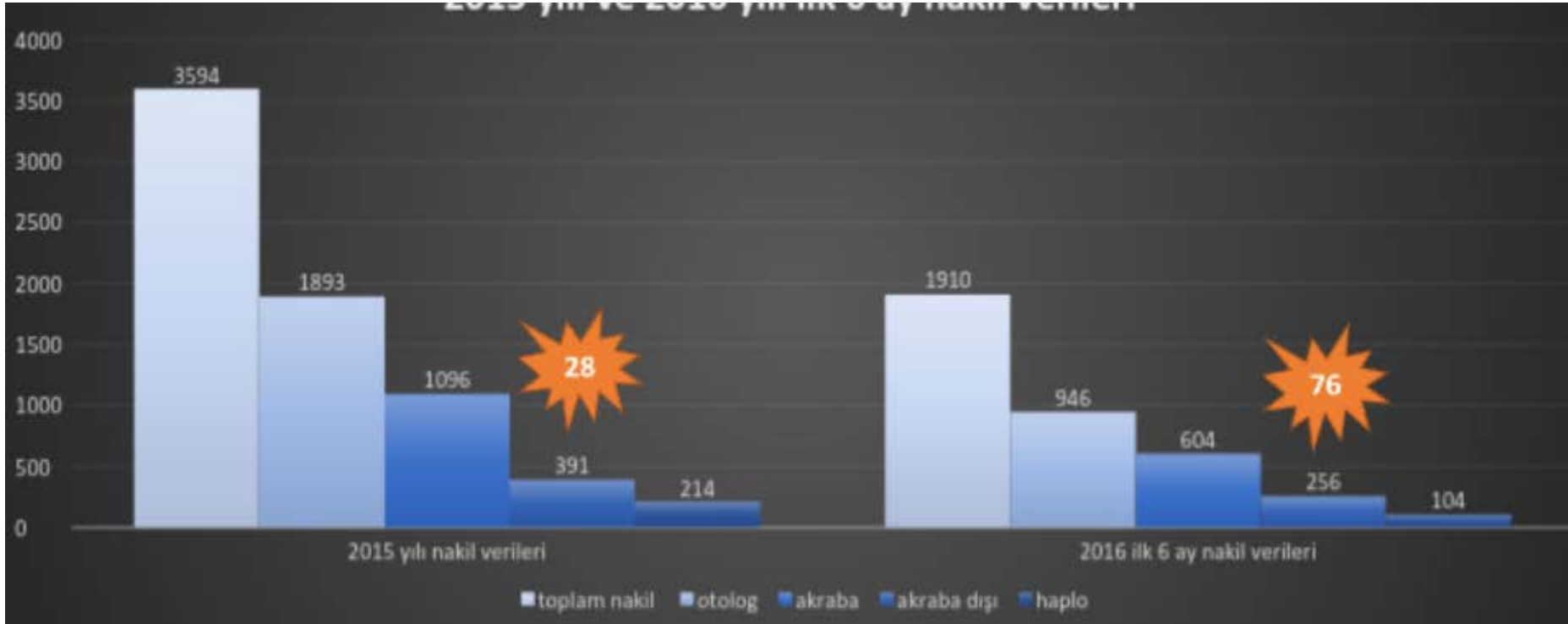




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2015-2016 (6 mo.s)

TÜRKÖK
KÖK
HÜCRE





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Current Status

TÜRKÖK
KÖK
HÜCRE

- BMDW member, 5th April 2016
- Full government coverage, no fee
- 225 HSCT s performed
- 48%, 9/10-10/10 match
- Time line;
 - time to confirm a match **84** days
 - time from inquiry to transplant **102** days

Participation in International Registries

- Total N: 77
- EBMT; 34
- WBMT reporting; 46
- CIBMTR; 6

Turkey

Name	City	Country
Hacettepe Universite - Ihsan Dogramaci Cocuk Hastanesi	Ankara	Turkey
Capadocia Transplant Center	Kayseri	Turkey
Istanbul Medical Faculty Bone Marrow Bank	Istanbul	Turkey
Medical Park Hospital, Antalya-Turkey	Antalya	Turkey
Ankara University Medical School / Ibni Sina Hospital	Ankara	Turkey
Gulhane Military Medical Academy	Ankara	Turkey

Approximate actual cost for HSCT and cost to patient and type of coverage for HSCT

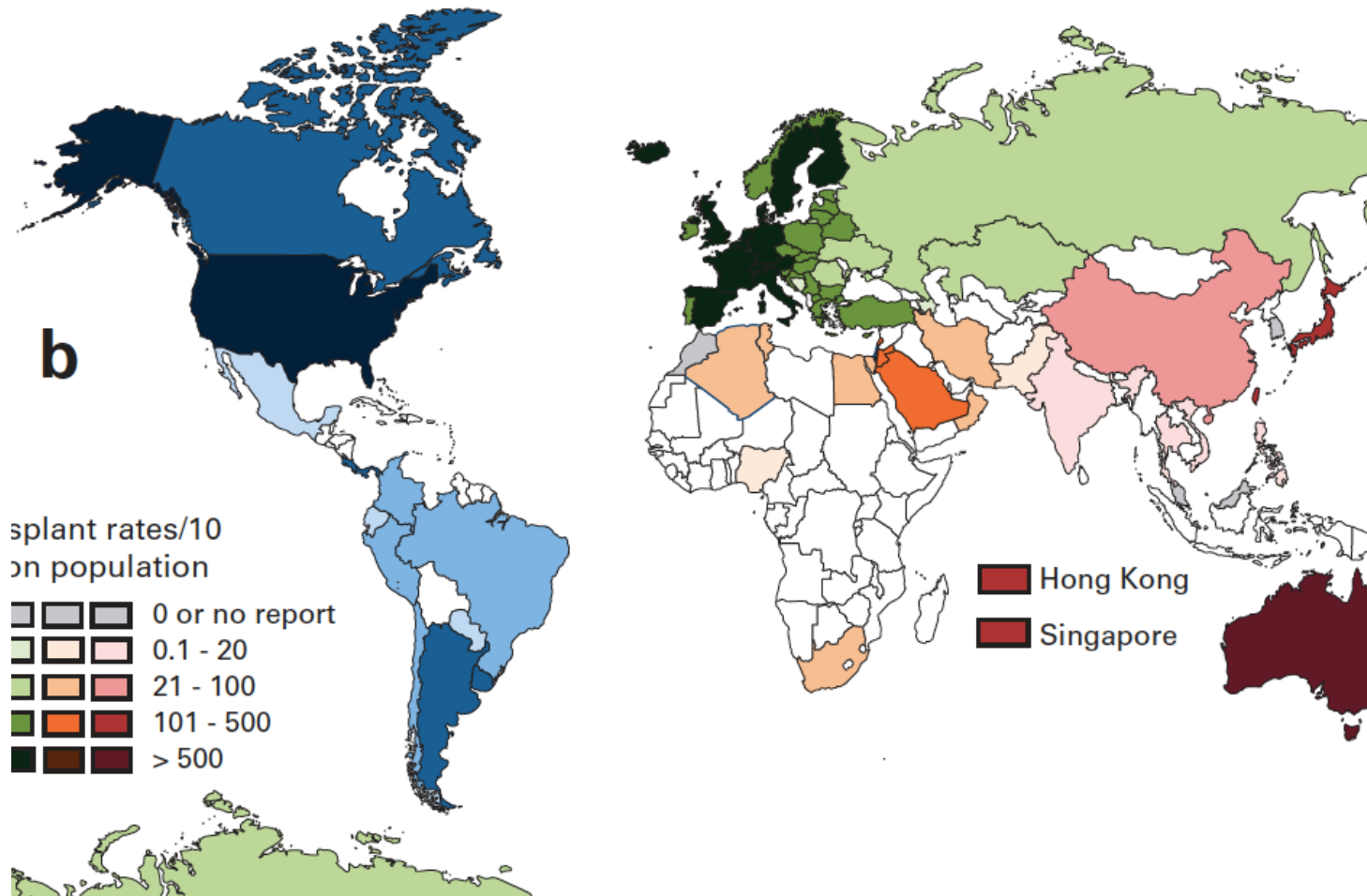
All under social security system coverage, SGK (according to national published official indication list for HSCT)

- Autologous, 42k Turkish Lira
- Allogeneic
 - Related, 77k Turkish Lira
 - Unrelated, 152k Turkish Lira (exc. Reg.&Courier costs)
 - Haplo-identical, 141k Turkish Lira

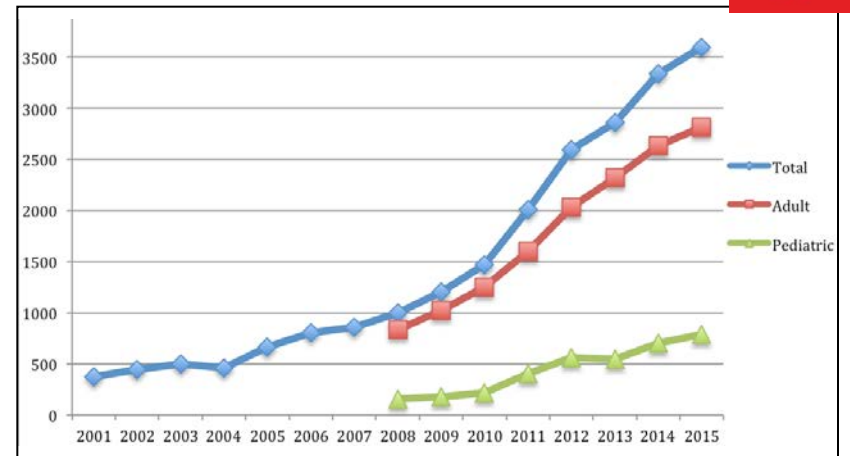
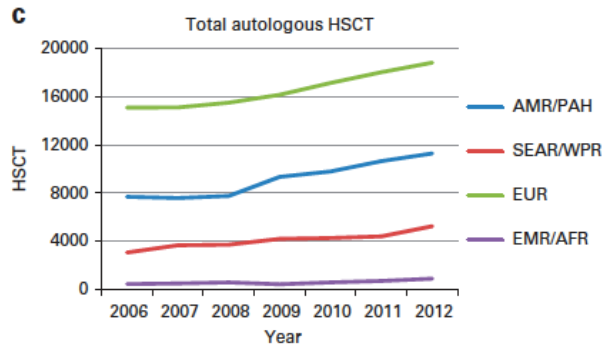
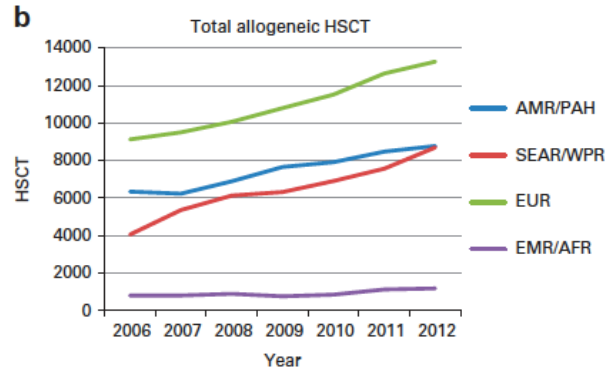
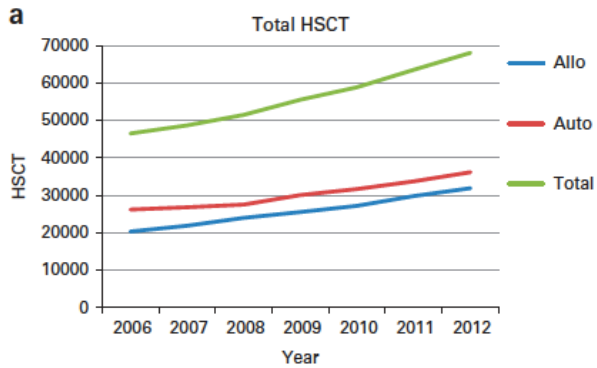
Quality Management

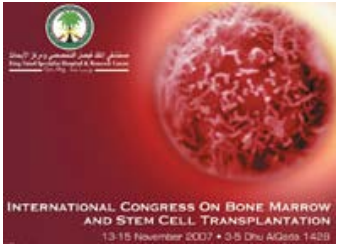
- JACIE accredited,
 - 2 centers,
 - Adana Baskent University, Adana
 - Erciyes University, Kayseri
 - TSH, JACIE Support Project
 - 4 state university
 - 4 private hospitals

HSCT Activity Worldwide in 2012



Global trends 2006–2012





Problems in 2008

- Low HSCT Numbers (expected > 4000)
 - Team Density↓, Tx Beds↓
 - Man power↓ (academic, non academic, staff) ✘
 - Health Budget, reimbursement policy
 - Lack of donor registries and CBBs
- Success?
 - Data collection
 - National DB
 - Data managers → ✘
 - Accreditation, quality management → ★

Problems 2016/Challenges

UNCONTROLLED RISE, has a fall/plateau

- Medical
 - Super bugs
 - Ease of haplos
 - Lack of dedicated intermediate-late f/u
- Education
 - Experienced transplanters moved to private centers
- Uncontrolled rise of HSCTs both private&state
 - Lack of Contemporary , updated regulation for HSCT
 - Lack of staff, experience, infrastructure only
 - Competition
 - Regulatory control issues
- Financial
 - Sustainability, national economical concerns
- Quality management
- International Registry contribution, EBMT
- Scientific contributions and productivity, collaboration

Acknowledgement

- Ministry of Health
- TÜRKÖK
 - M Hascuhadar
- TTR
 - G Gurman, M Ertem, F Arpacı
- Turkish Tx Teams (77)
 - Physicians
 - Patients
 - Donors
 - Caregivers



TTR



- EBMT
- EBMT Registry
- EBMT Act. Report
 - J Passweg
 - H Baldomero
- Turkish Society of Hematology
 - JACIE Support Group
- My Team
- Personal
 - E Tekgündüz
 - E Eşkazan

