

Structure Building for Self-Sufficiency in Organ Transplantation in Korea

Curie Ahn, MD

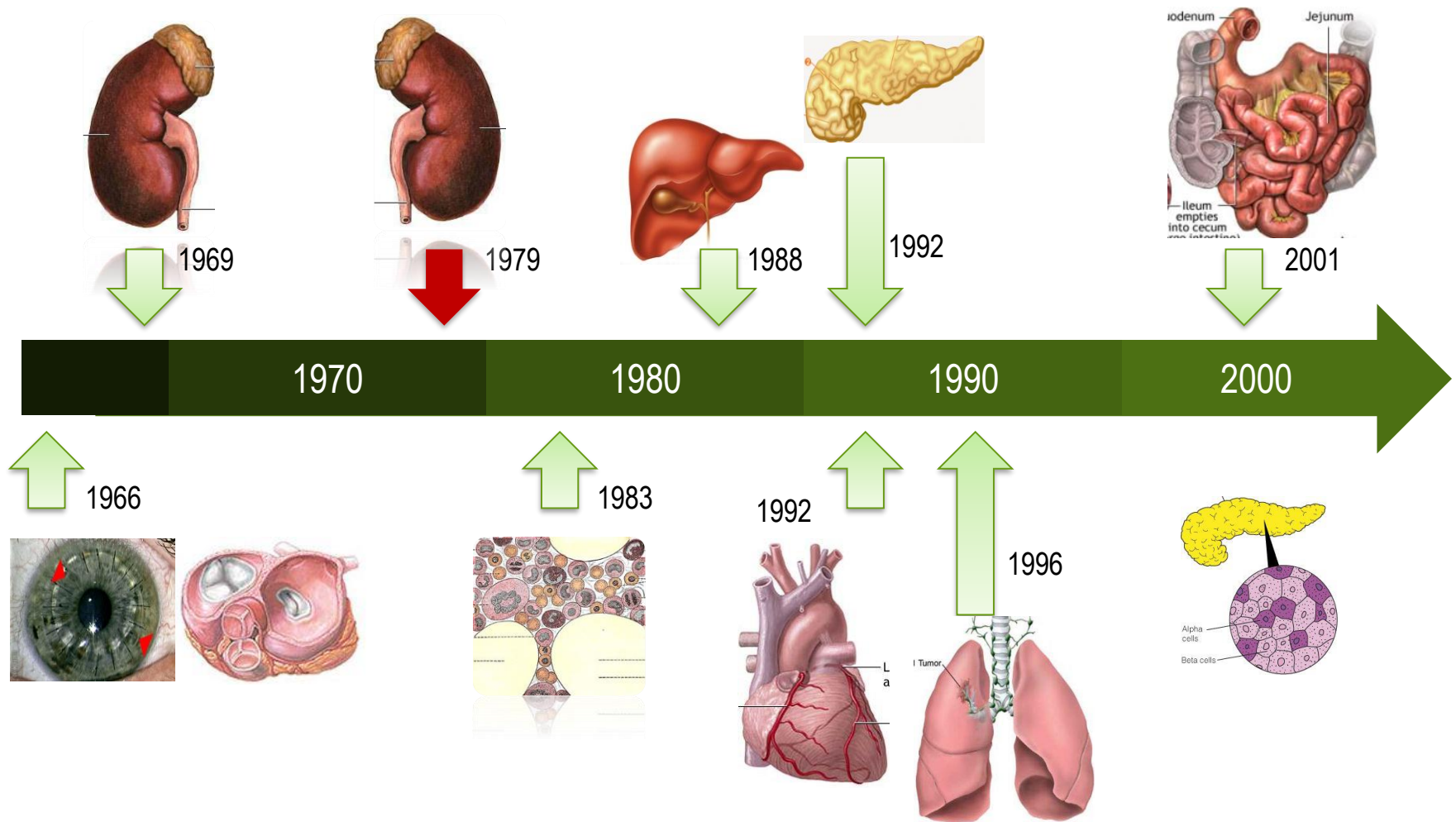


Chair, Vitallink

Division of Nephrology, Seoul National Univ. Hospital

Transplantation Center, Seoul National Univ. Hospital

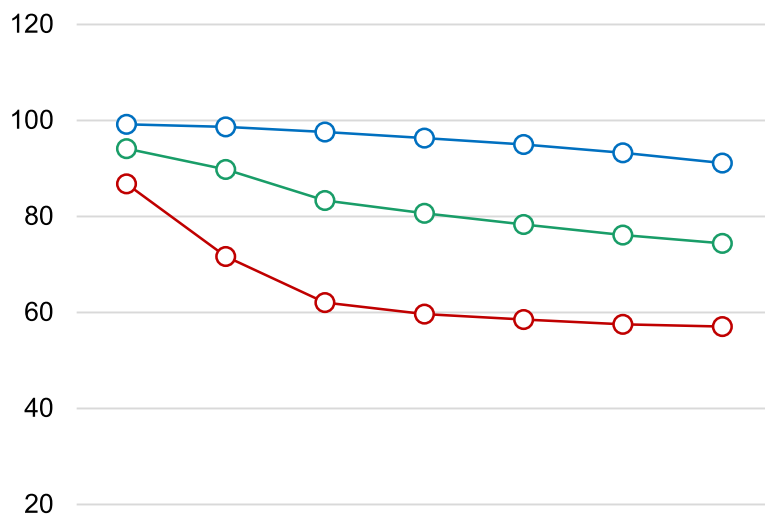
Organ Transplantations in Korea



Patient Survival Rate after Transplantation (2017)

Patient survival rate of living donor transplantation

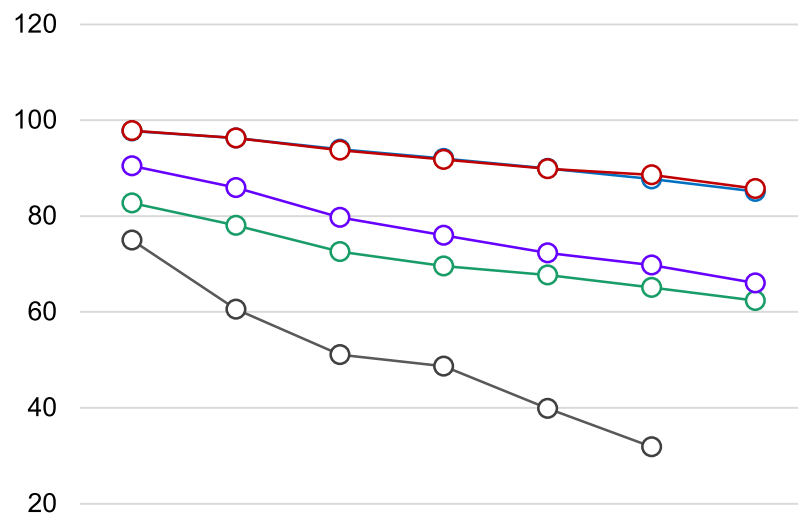
(Unit : %)



	3 months	1 years	3 years	5 years	7 years	9 years	11 years
Kidney	99.21	98.64	97.62	96.34	94.96	93.27	91.11
Liver	94.11	89.78	83.33	80.65	78.3	76.1	74.39
Bone marrow	86.79	71.66	62.09	59.66	58.55	57.51	57.06

Patient survival rate of deceased donor transplantation

(Unit : %)



	3 months	1 years	3 years	5 years	7 years	9 years	11 years
Kidney	97.71	96.27	93.94	92.02	89.94	87.73	85.13
Liver	82.75	78.03	72.57	69.58	67.68	65.1	62.36
Pancreas	97.82	96.3	93.75	91.78	89.87	88.62	85.74
Heart	90.44	85.95	79.75	75.96	72.28	69.75	66.03
Lung	74.96	60.54	51.1	48.71	39.86	31.89	

Economic Aspect of Organ Transplantation



Freedom from Patient Caring



Reduction of Medical Expenses

Table 1. Comparison of Medical Expenses

	ESRD	Cancer
Total # of Patients	54,000 Pt's	213,000 Pt's
Total Medical Cost	KW 781.6Bil	KW 1.107Tril.
Medical Cost/Pt's	KW 14.5Mil.	KW 4.7Mil.

Table 2. Health Insurance Cost & ESRD Pt's

	Total	ESRD Pt's
Population	40Mil.	54,000 Pt's
Medical Cost	KW 28 Tril.	KW 782 Mil.



Increasing Number of Patients on Waiting!

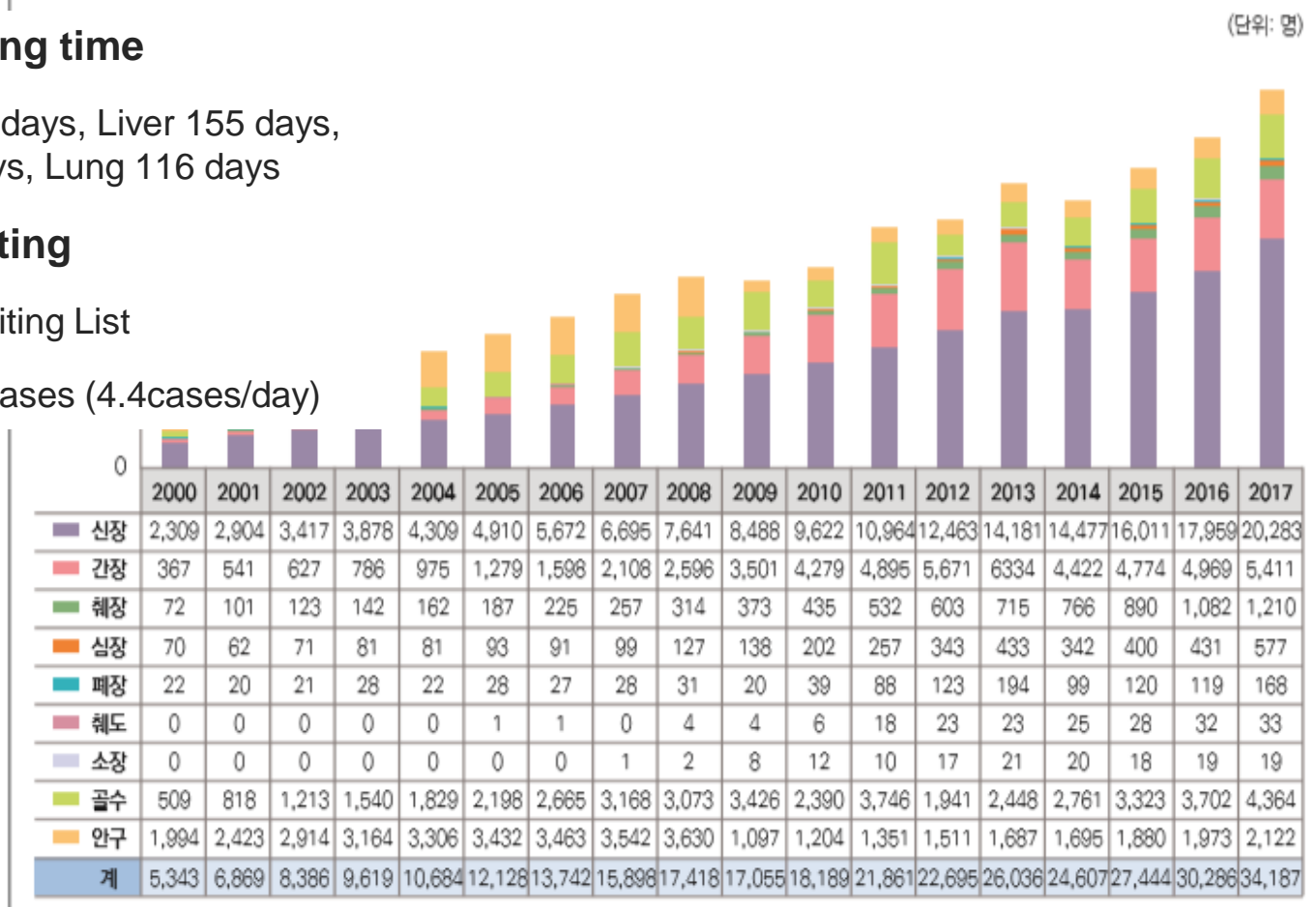
Number of Patients on the Waiting List

Increasing waiting time

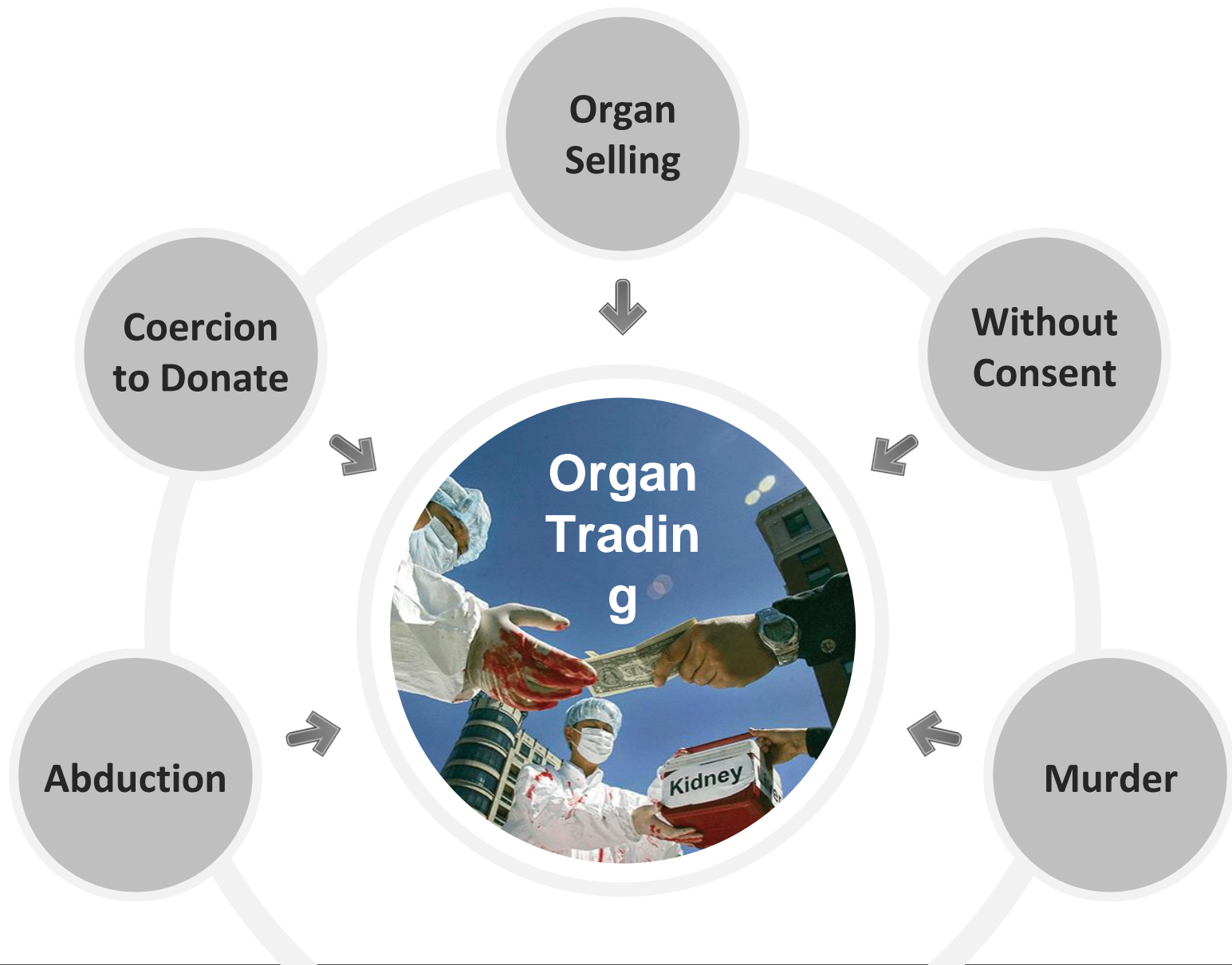
- Kidney 1,955 days, Liver 155 days, Heart 234 days, Lung 116 days

Death while waiting

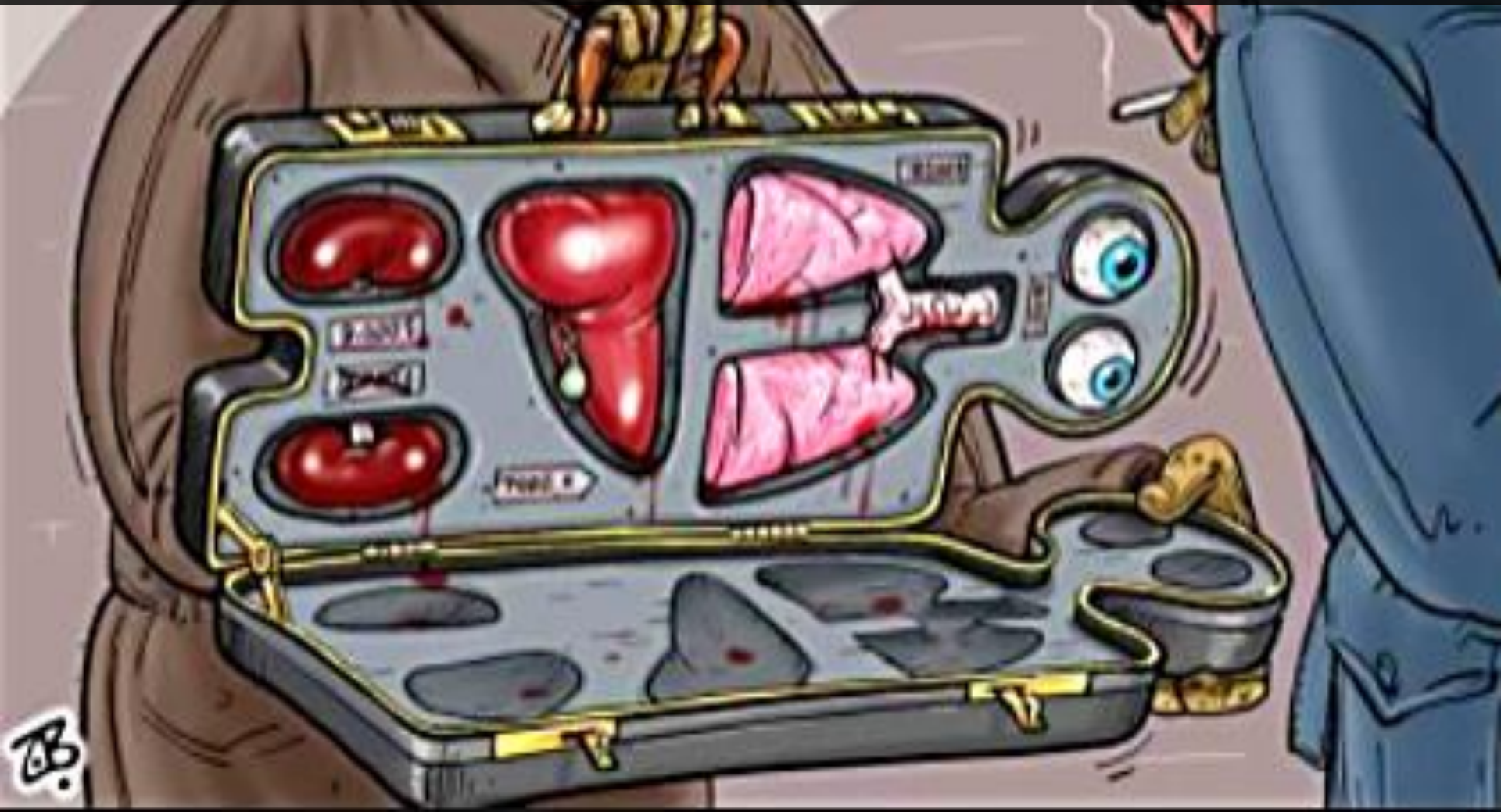
- 8~10% of Waiting List
- 2017: 1,596 cases (4.4cases/day)



Patterns of Organ Trading



**2nd Class Citizen, Children, Female,
Immigrant workers, Homeless, etc.!**



Changing Patterns of Organ Trading



Individual
Marketing



Low-income
individuals



Systemize
d



Underground
organization



Web-based

해외 '장기 매매' 일선 조직이 관련된 인터넷 카페

포털 사이트	카페 이름	카페 ID	닉네임	개설일	문의 전화
NAVER	간 신장 장기이식카페?	hmg62782	kjm60233	2009. 8.5	010-xxxx-2386 010-xxxx-3477
NAVER	중국 장기이식카페	jmg13679	kjm60233	2009.7.20	010-xxxx-2386 010-xxxx-3477
Daum	장기 카페	hmg6789	비밀의 도시	2009.7.18	010-xxxx-8562 010-xxxx-2386
NAVER	중국 홍콩 장기로 장기이식 전문병원	hmg11	중국홍콩전문병원	2010.8.16	010-xxxx-3216
Daum 카페		hmg11			
Daum	중국 홍콩 장기로 장기이식 전문병원	navercom	간담자기	2009.10.14	010-xxxx-3216
NAVER	장기로 장기이식 병원	gym788	gym788	2010.8.16	010-xxxx-8562
Daum	중국 장기이식 카페	hmg13234	비밀의 도시	2009.2.24	010-xxxx-8562
Daum	북경병원간담	hmg11	간담자기	2011.10.11	010-xxxx-2386
Daum	간담한 장기이식	hmg8195	간담자기	2009.7.24	010-xxxx-8562
Daum	내 고향은 아랍과 못 지는 산골	hmgkang011	홍은소리	2011.10.11	010-xxxx-2386

Crime Syndicate
Organ Sale



Overseas

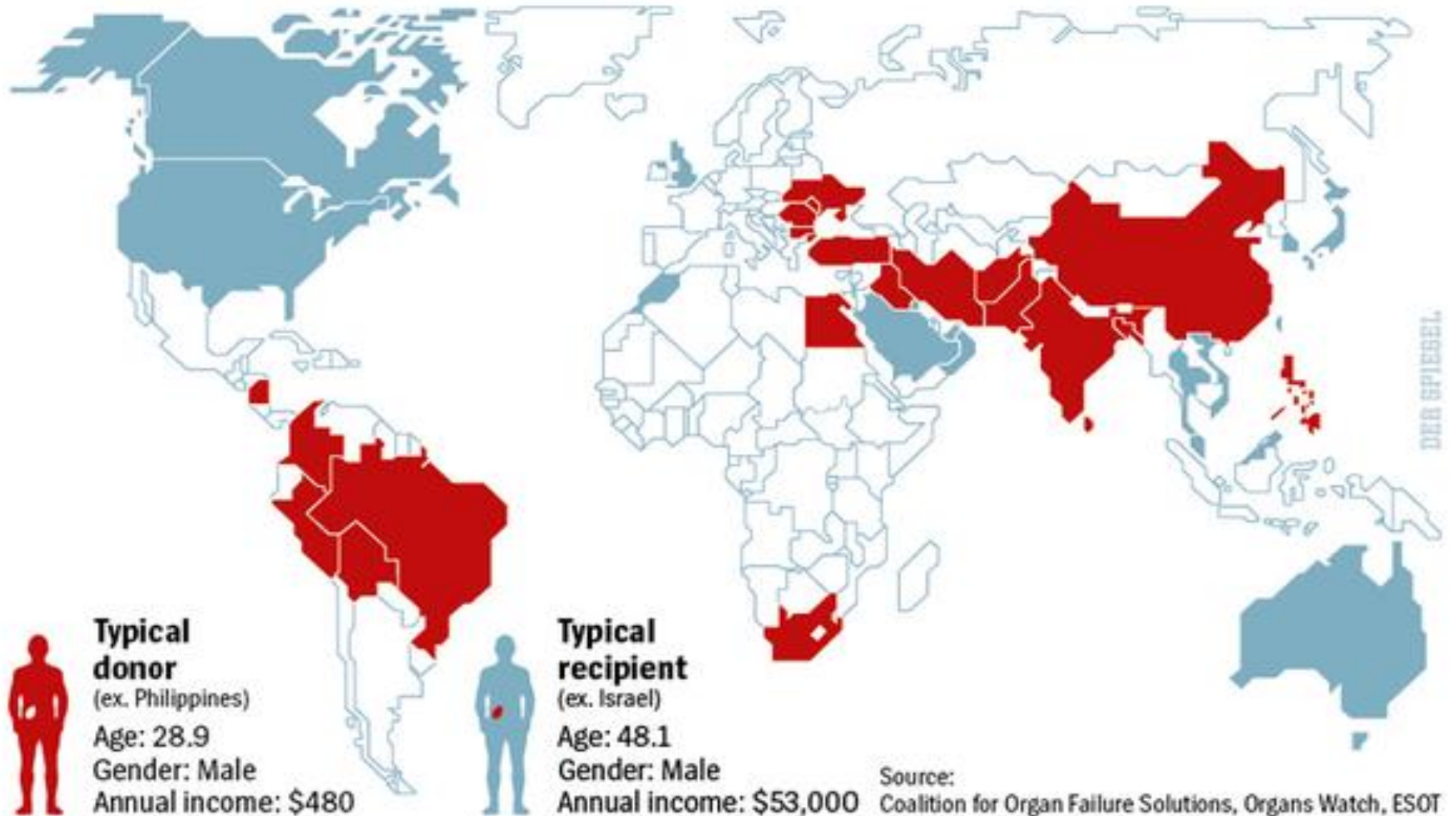


Overseas Organ
Trade

Solid Organ Transplantation (2015, GODT)

The Kidney World Order

■ Donor countries ■ Recipient countries



Is organ trading one
of many personal
problems?

NO!

**Organ trading is a Societal,
National, and Global
Problem**



Lack
of
Organ
s

Death
during
waiting
period



Istanbul Declaration



Indifferenc
e
Ego-
Centrism



Kidnap
?
Murder
?

National Responsibility & Global Cooperation



Hospital



Bioethics



Government



☒ Protection from organ selling

☒ Stop Organ Trading

☒ National Self Sufficiency



Status of Organ Transplantation in Korea

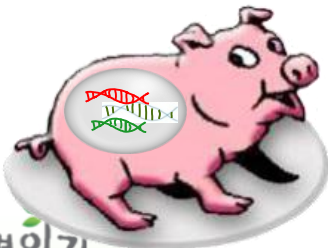
Increasing No. of
Patients

Stable or decreasing
Sources of
Living Donors

A few
Deceased Donors

Increase

Sig. n



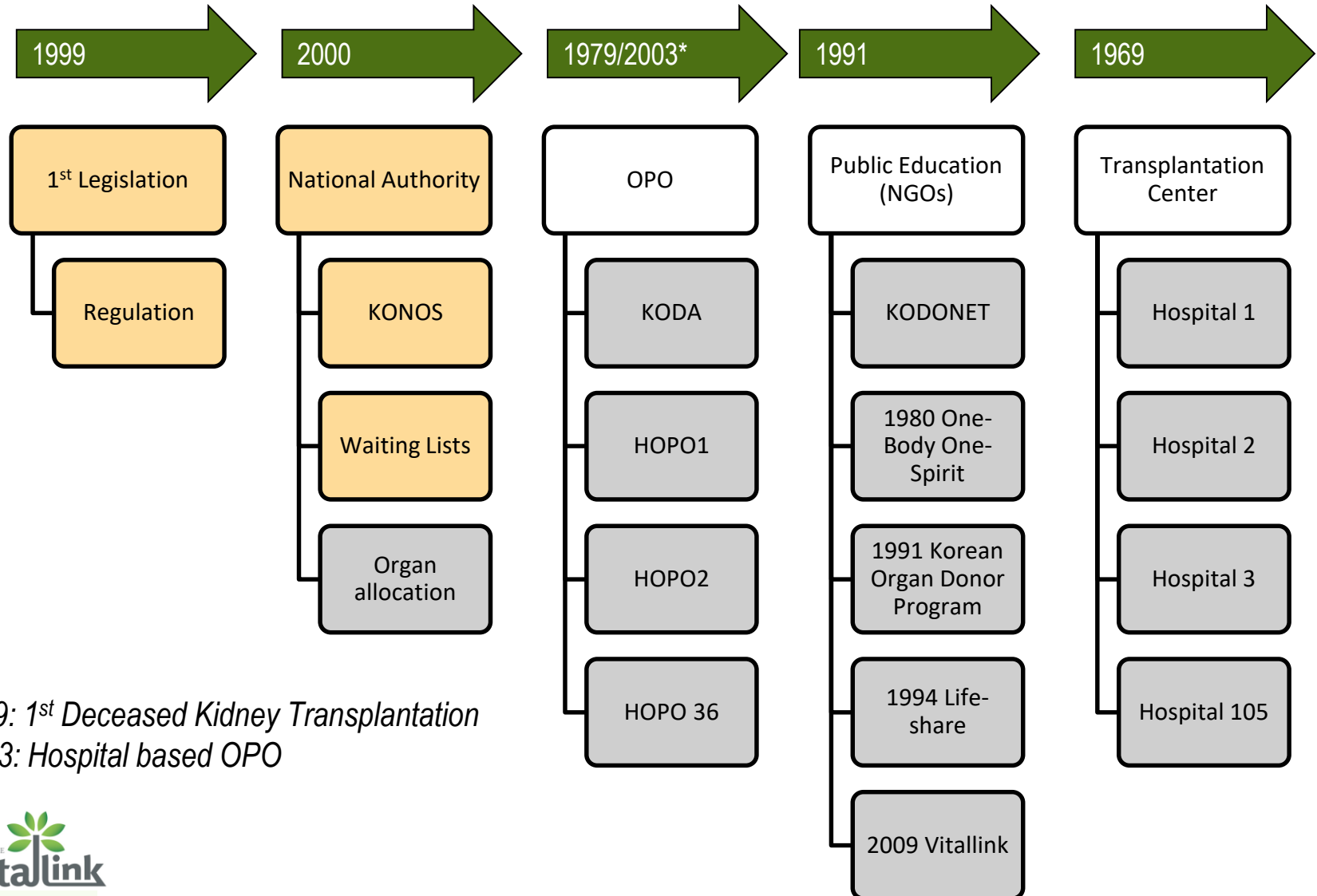
생명잇기

The Madrid Resolution



Courtesy by Jeremy Chapman

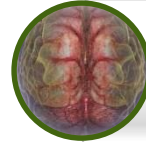
System Development of Organ Transplantation in Korea



**1979: 1st Deceased Kidney Transplantation
2003: Hospital based OPO*

Revision of “Organ Transplantation Law”

- >> **1988**
Legislative proposal for brain death by the Korean Society for Transplantation & the Korean Society of Nephrology
- >> **1993**
Design legislation of brain death
- >> **1996**
Organize promotion committee for “Organ Transplantation Law”
- >> **1999.2**
Establishment of “Organ Transplantation Law”



Definitions of brain death



Legislation concerning trafficking



National Organ Transplantation Authority



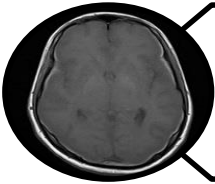
Critical issues in determining the basis of decree on Human Organ, Tissue and Cell Transplantation



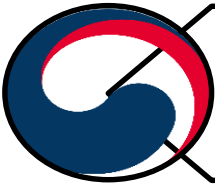
The extent of inclusion of all medical products of human origin



Basis of Consent – Opt in or Opt out?



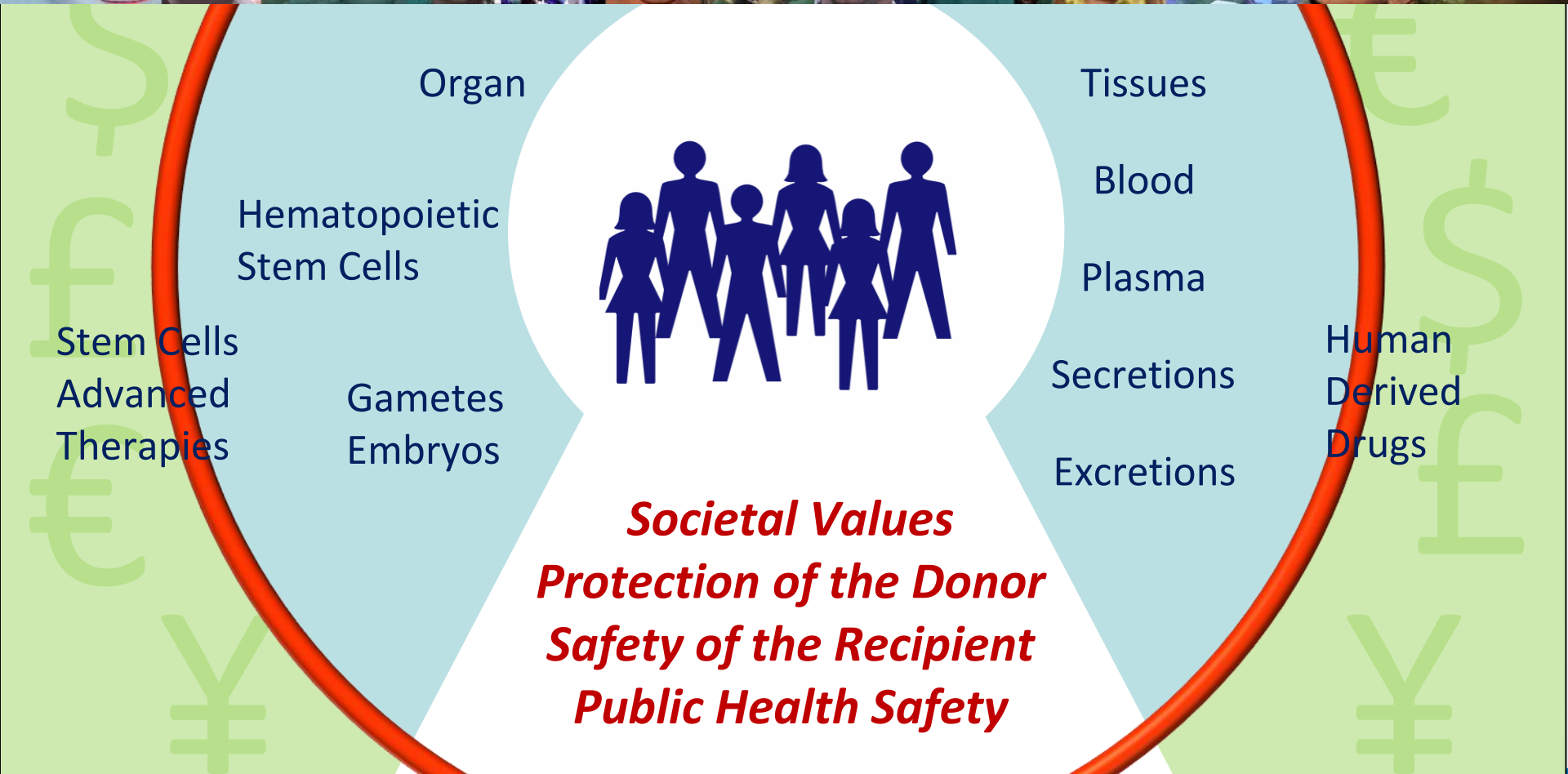
The Definitions of Death



Structure of National Authority



The extent of inclusion of all medical products of human origin → **ORGAN**





Basis of Consent : Opt in or Opt out? →

OPT IN



대한이식학회
The Korean Society for Transplantation

⦿ Explicit Consent = OPT IN

⦿ Presumed Consent = OPT OUT

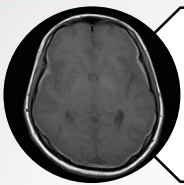
- The legal authority to recover organs from deceased adult individuals unless a refusal to donate was registered
- Spain, Portugal, France, Italy, Belgium, Greece, Croatia, South America, Czech Republic, Poland, Hungary, Norway, Finland, ...

Courtesy: Prof. Jeremy
Chapman

Organ Donor
(See inside for details)

❖ First Person Authorization Consent



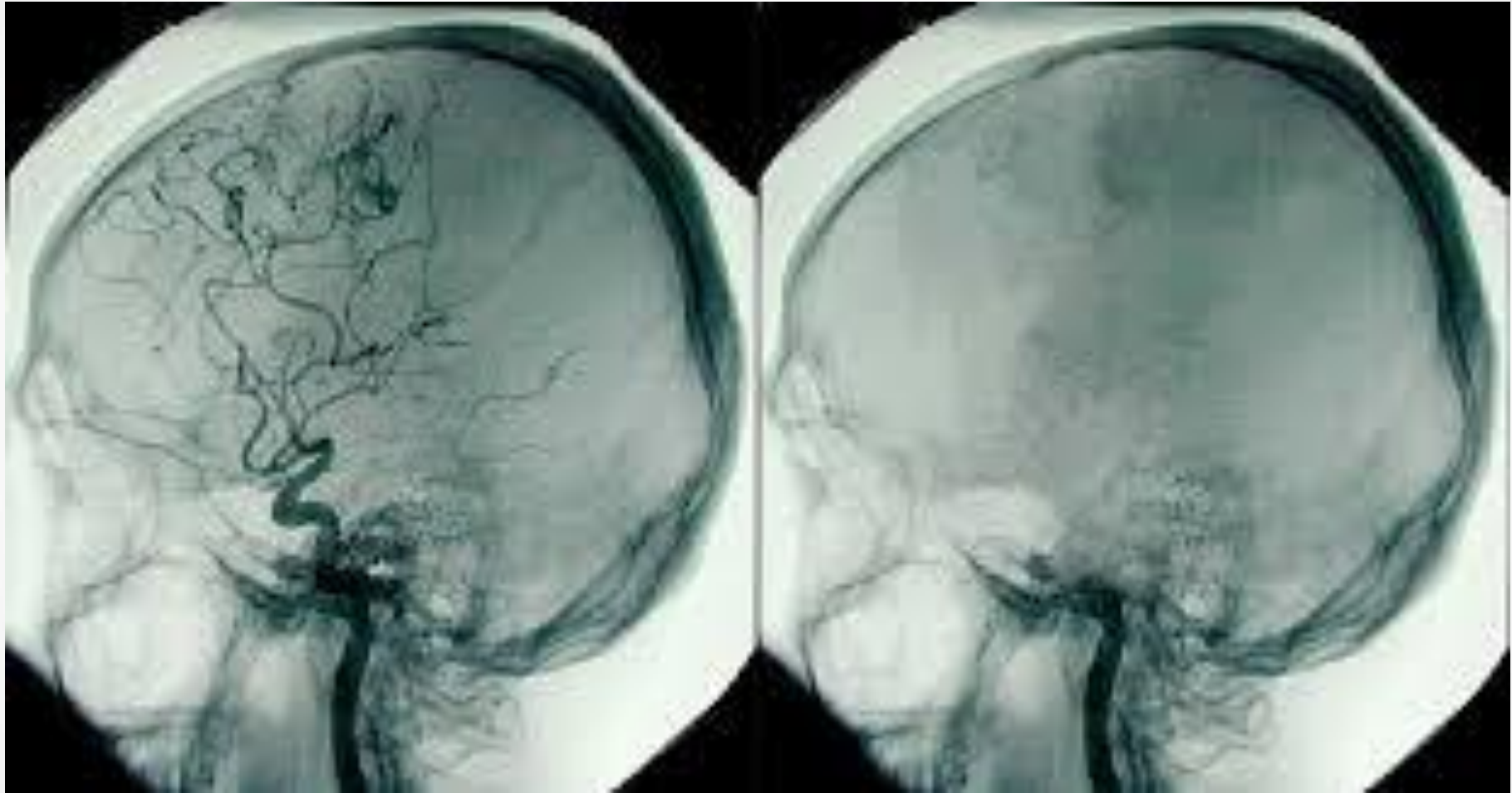


Definition of Death and Brain Death

→TOTAL BD



대한이식학회
The Korean Society for Transplantation

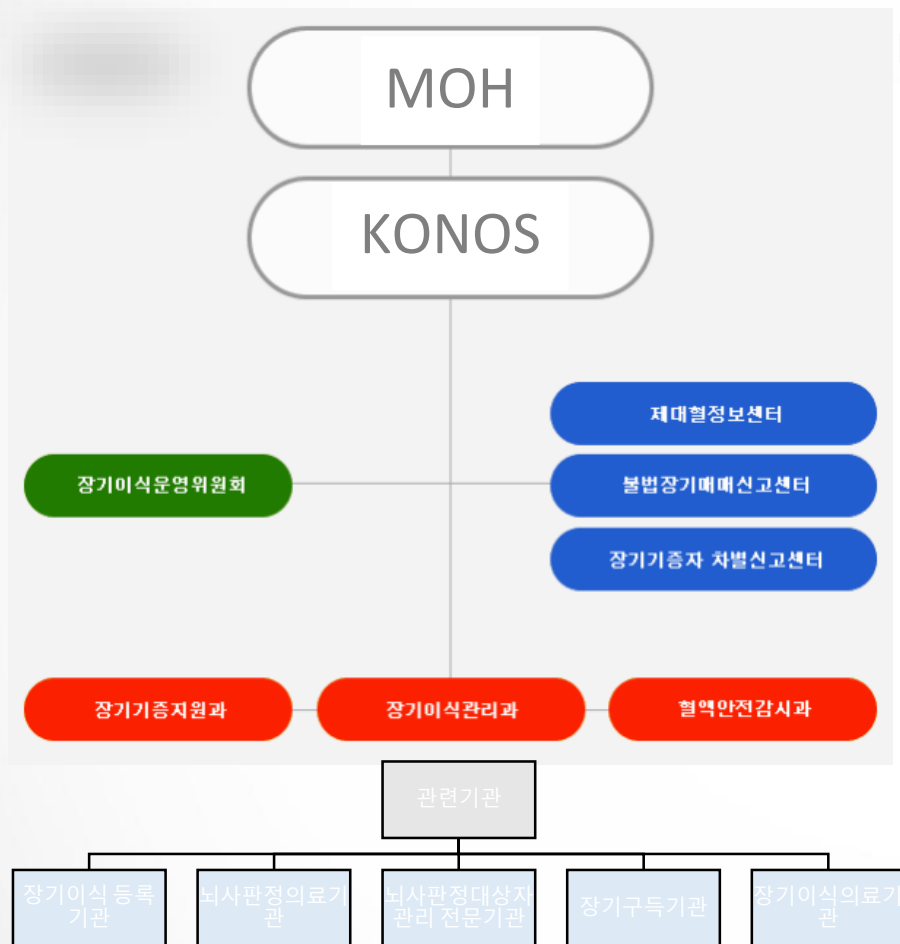




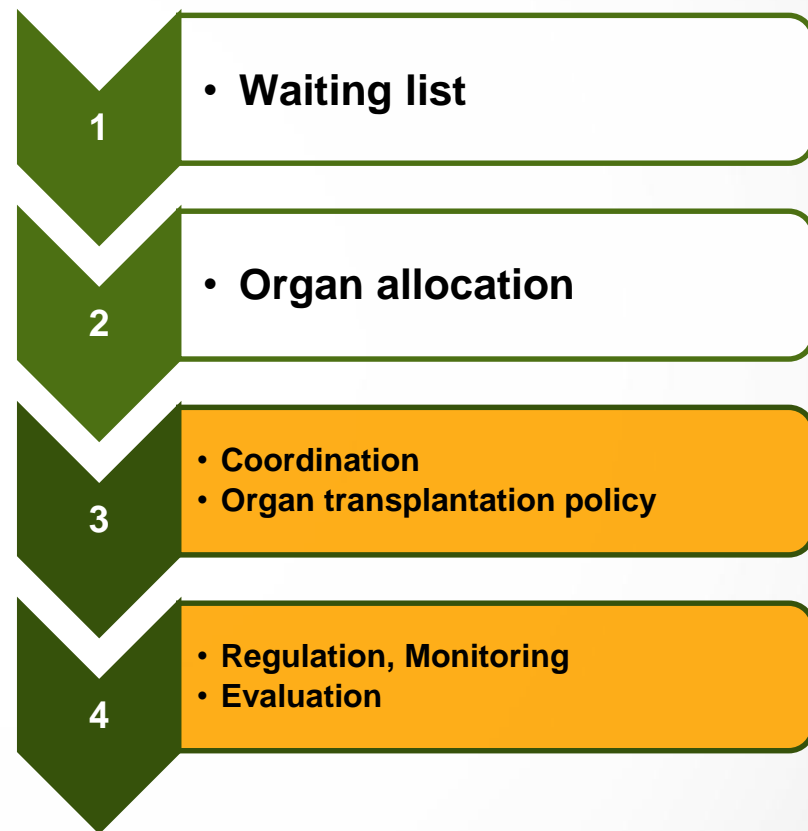
Structure of National Authority → **KONOS**



대한이식학회
The Korean Society for Transplantation



Korean Network for Organ Sharing (KONOS, 2000)



<http://konos.go.kr/>

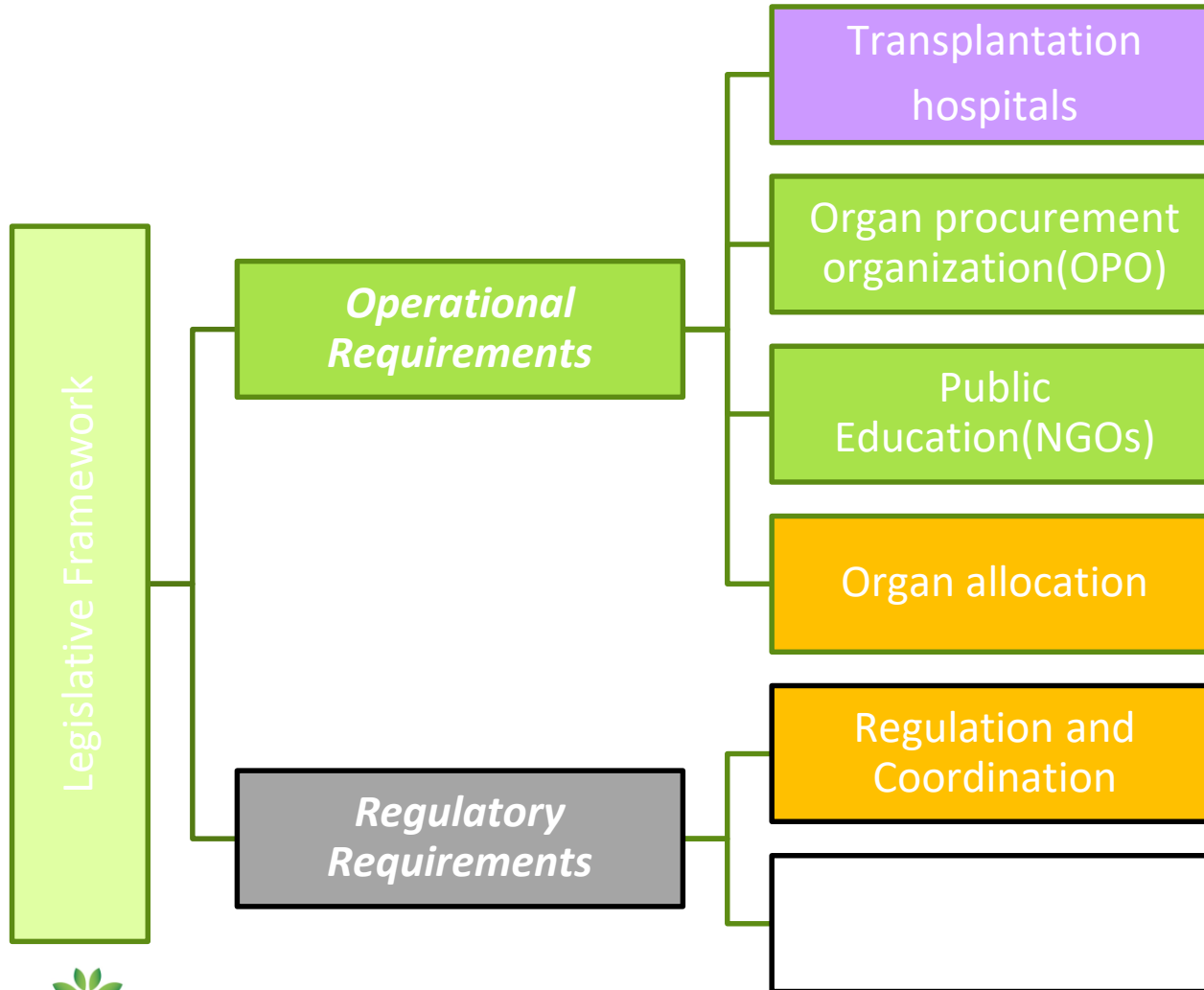


질병관리본부
KCDC



장기이식관리센터

Infrastructures for Successful Organ Transplantation



국립장기이식관리센터

KONOS



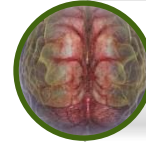
Annual Number of Deceased Donors



Yr	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
No	162	52	52	36	68	86	91	141	148	256	261	268	368	409	416	446	501	573	515

Revision of “Organ Transplantation Law”

- >> **1988**
Legislative proposal for brain death by the Korean Society for Transplantation & the Korean Society of Nephrology
- >> **1993**
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Establishment of “Organ Transplantation Law”
- >> **2010.5**
Revision of “Organ Transplantation Law”



Definitions of brain death



Legislation concerning trafficking



National Organ Transplantation Authority



Establishment of independent IOPO



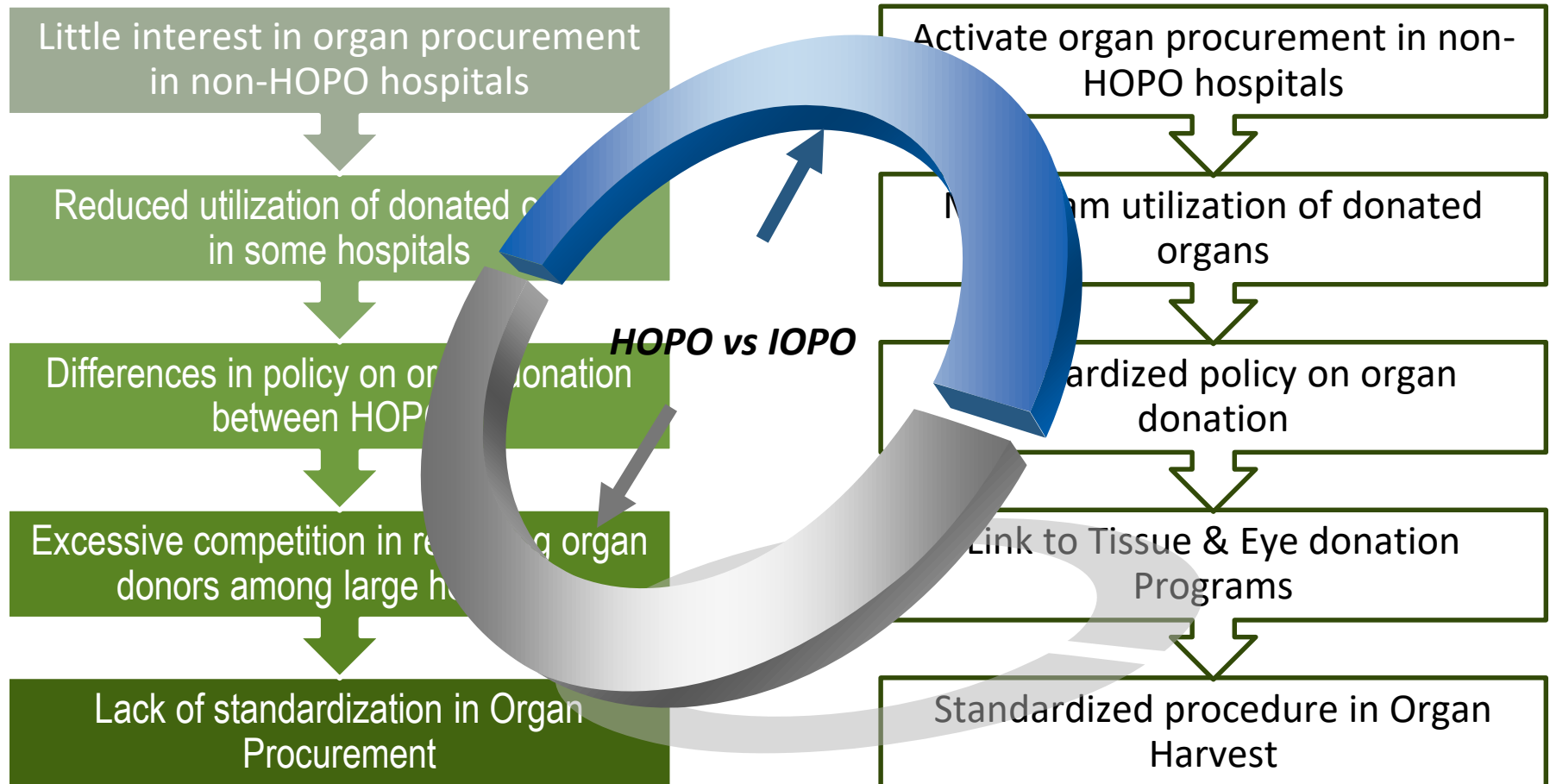
Reporting system of candidate deceased donors



Establishment of National Database(post-TPL)

IOPO : Status of Organ Procurement Organization in Korea

- In 2012, there were 36 hospital based OPO(HOPO) in Korea

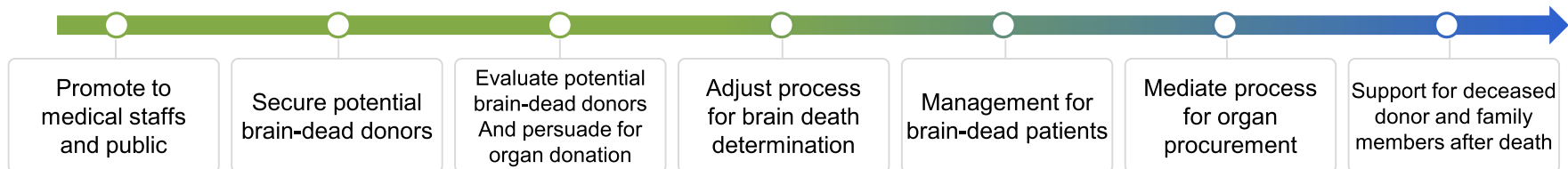
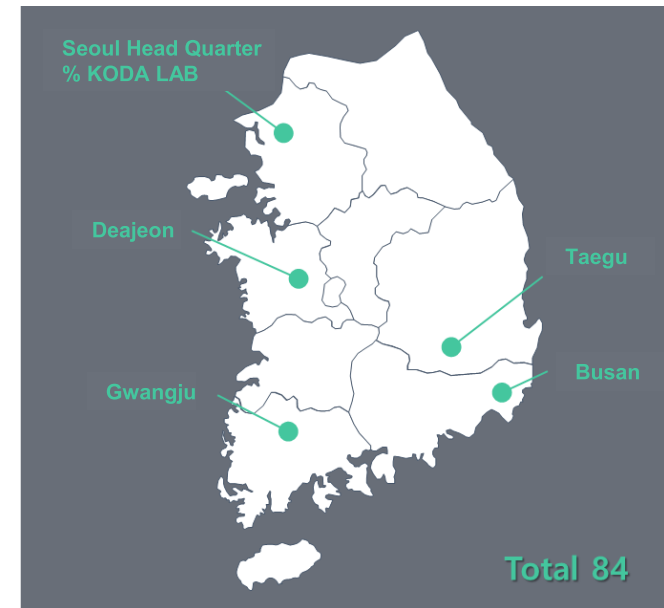
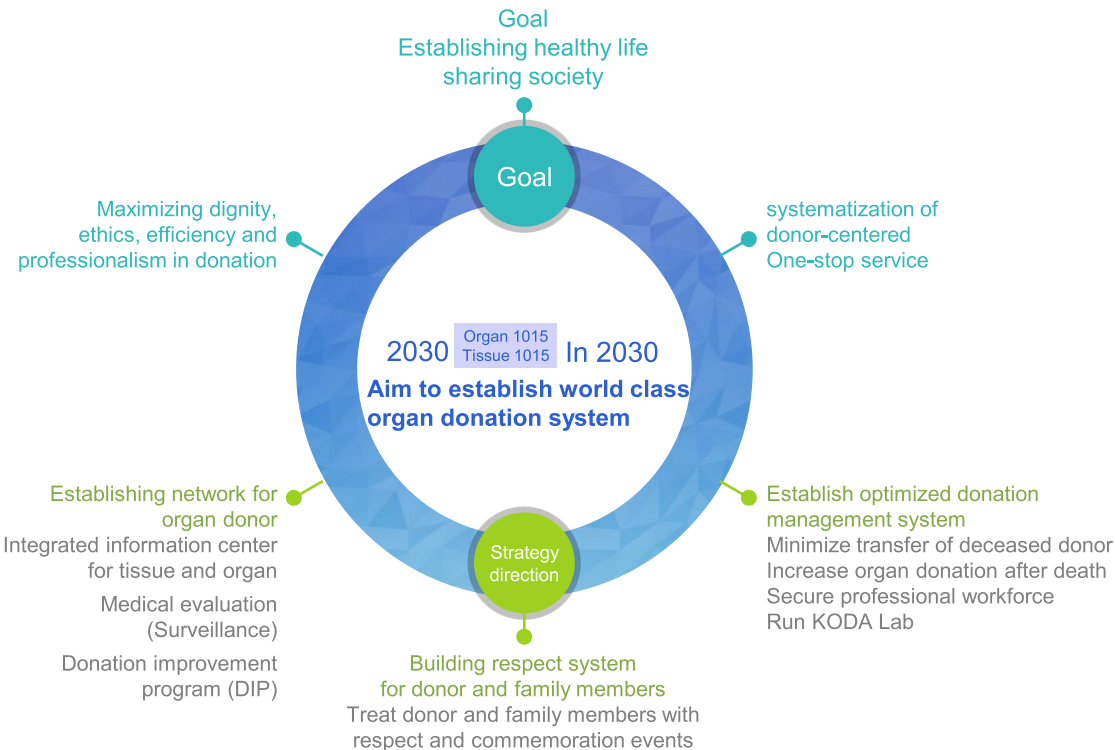


IOPO : Korean Organ Donation Agency (KODA) (2009)



IOPO : Korean Organ Donation Agency (KODA) (2009)

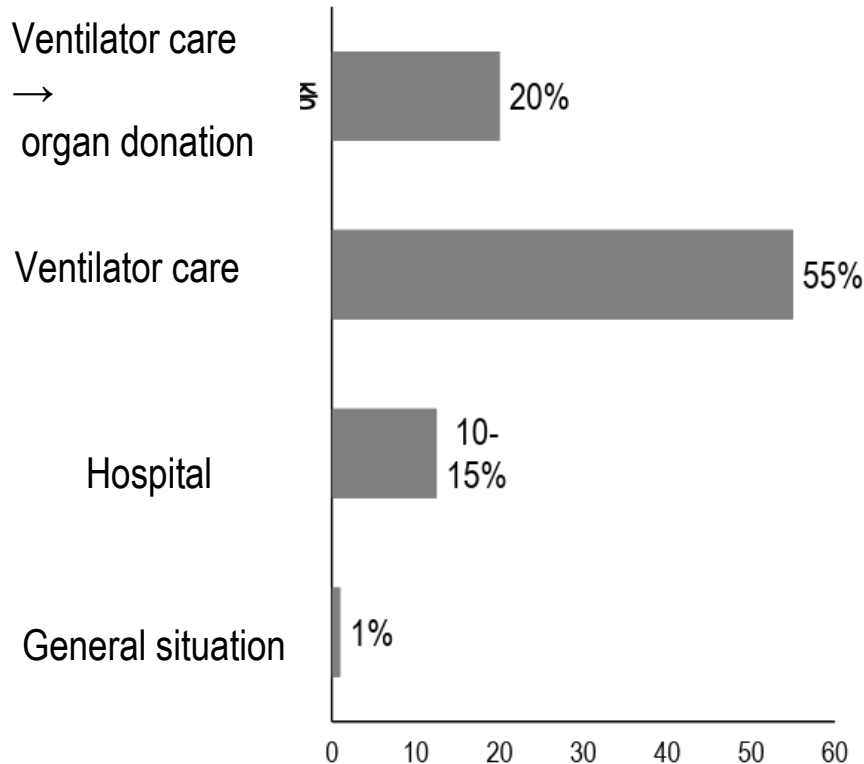
(Korea Organ Donation Agency KODA) (2009)



Medical Personnel : Emergency Unit, ICU, Neurosurgery

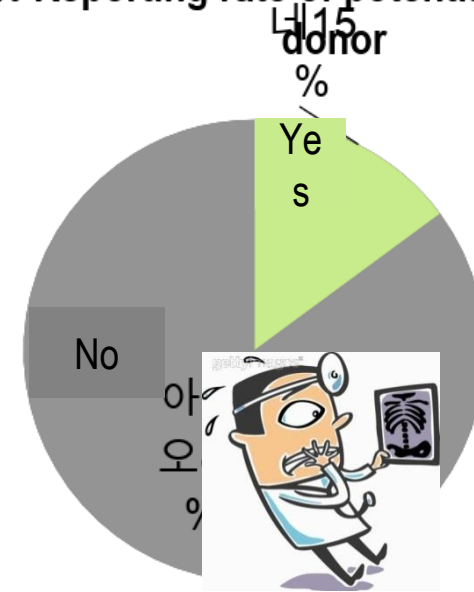


The incidence rate of brain deaths



Oh MS . Research & research; 2009

% Reporting rate of potential deceased donor



- Risk of conflict with family of potential donor

- Poor knowledge regarding organ donation (32% had history of education about organ donation)

I. Identification & Referral Step

Donation Improvement Program

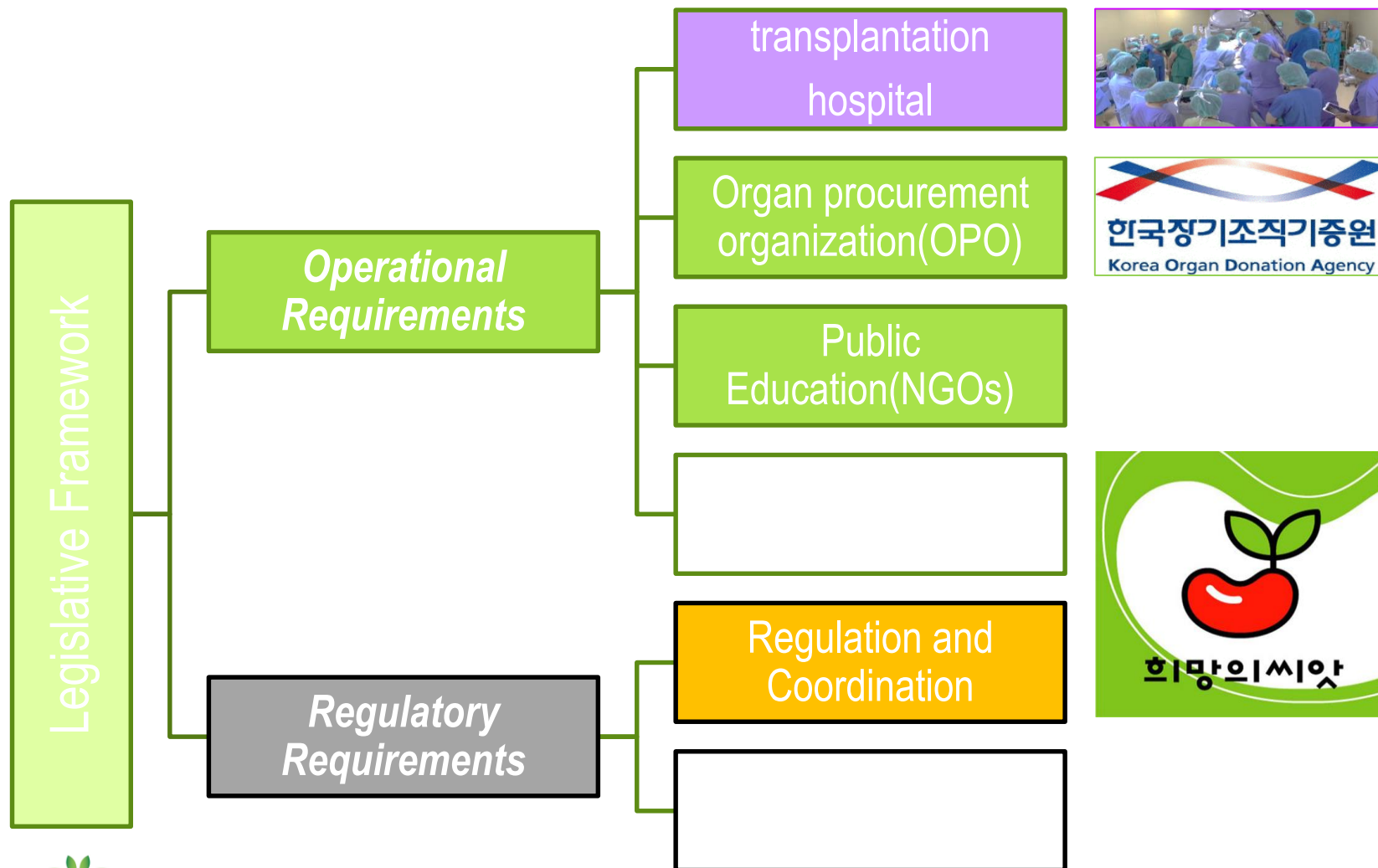


- Early point donor referral system Set up
- Save the time medical monitoring & the donor's family support

Courtesy: Prof. JW Ha and KODA



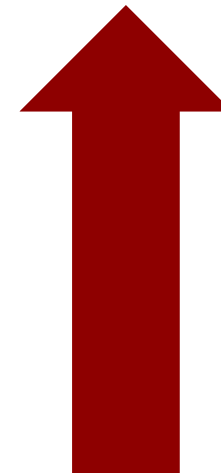
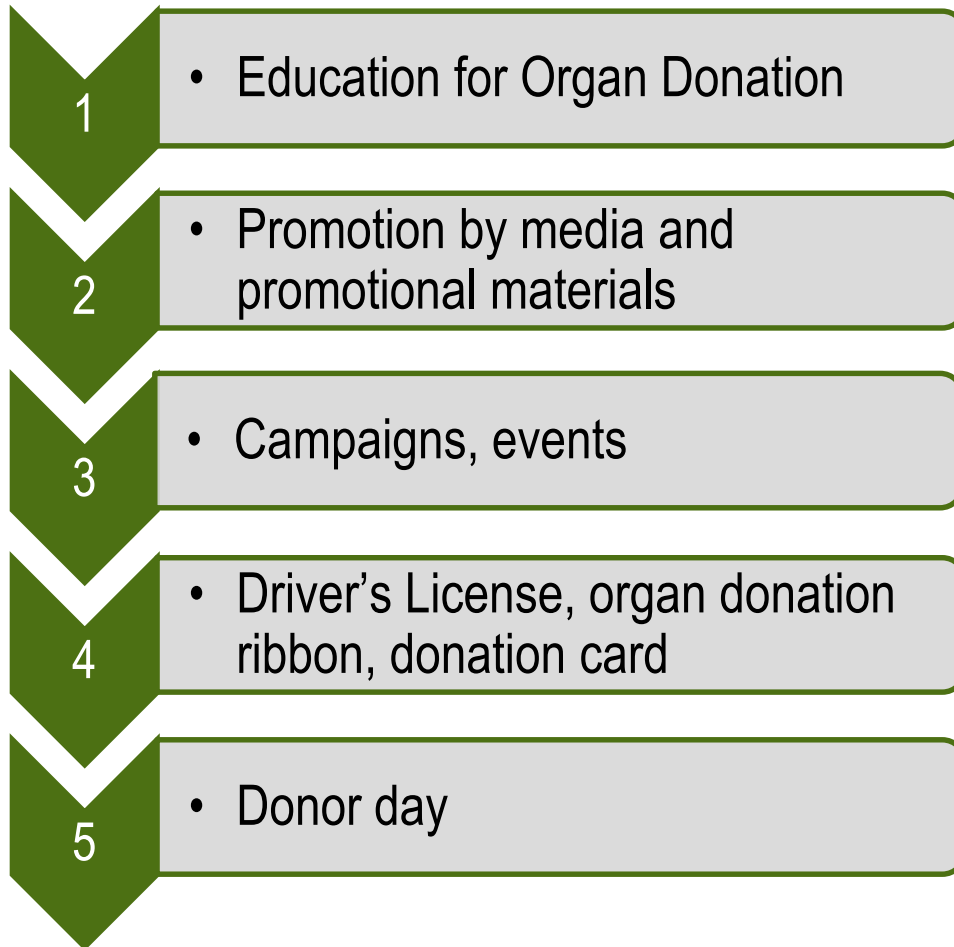
Infrastructures for Successful Organ Transplantation



Public Education for Organ Donation: Status for Organ Donation



Public Education for Organ Donation: Level of Understanding



I have heard about organ donation: 97.6%



Level of Community Awareness



I understand about organ donation : 11%

Roadmap for Effective Education for Organ Donation

I. SET UP THE ORDER OF PRIORITY

1. Health professional
2. School
3. Family members of donor
4. General public



III. COORDINATION

1. Organized Networking
2. Communication



V. PLANNING

Short- and long-term policies

Step 1

Step 2

Step 3

Step 4

Step 5

II. DEVELOPMENT OF TEACHING AIDS

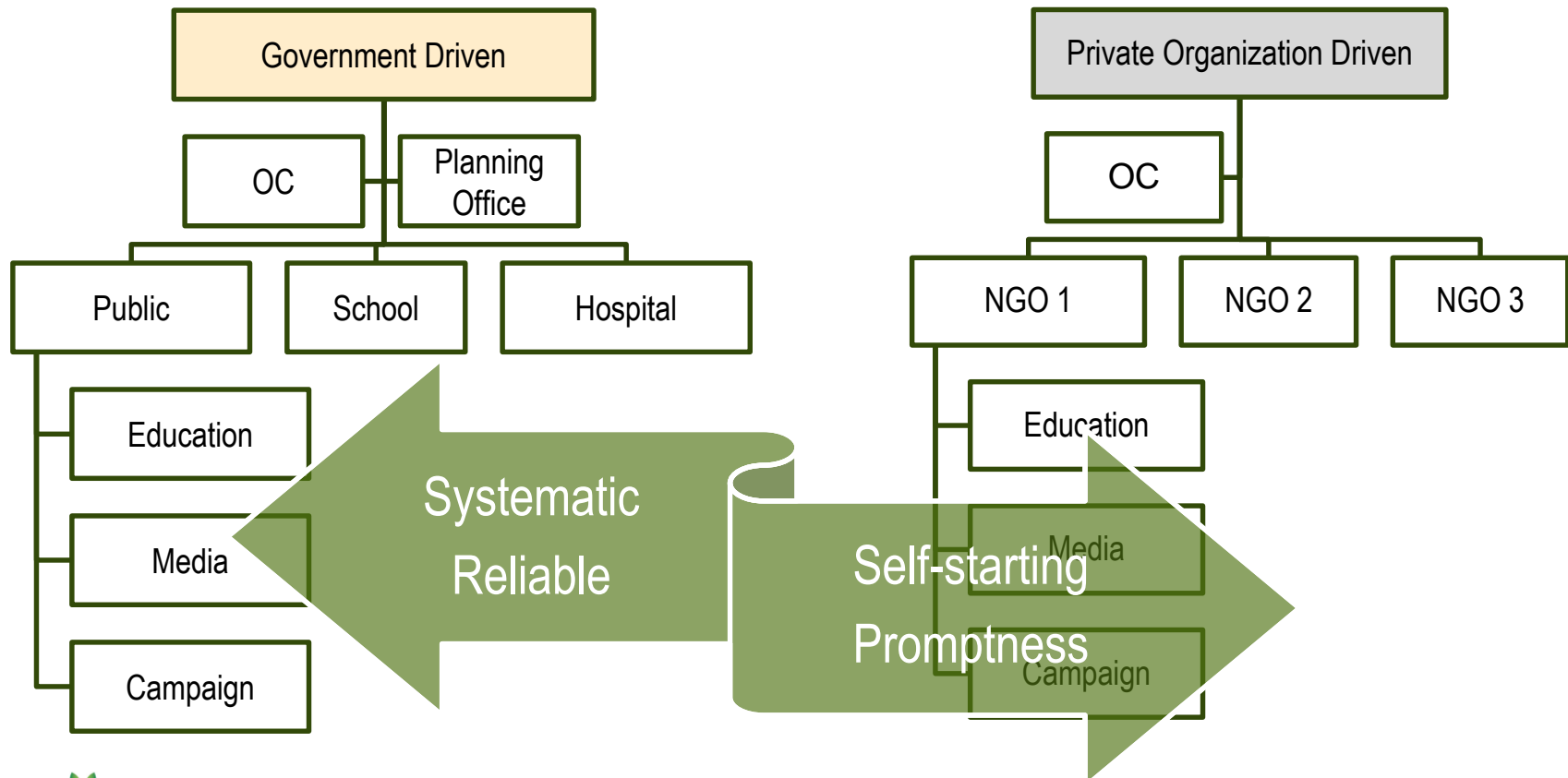
1. Target specific
2. Consistent and Correlated
3. Adequate degree of difficulty
4. Standardized information
5. Education skill

IV. EVALUATION

1. Index of evaluation
2. Regular monitoring
3. Impact of Incentive

COORDINATION

Organ Donation Education Structures



COORDINATION : Alliance of NGOs : Donate Life America



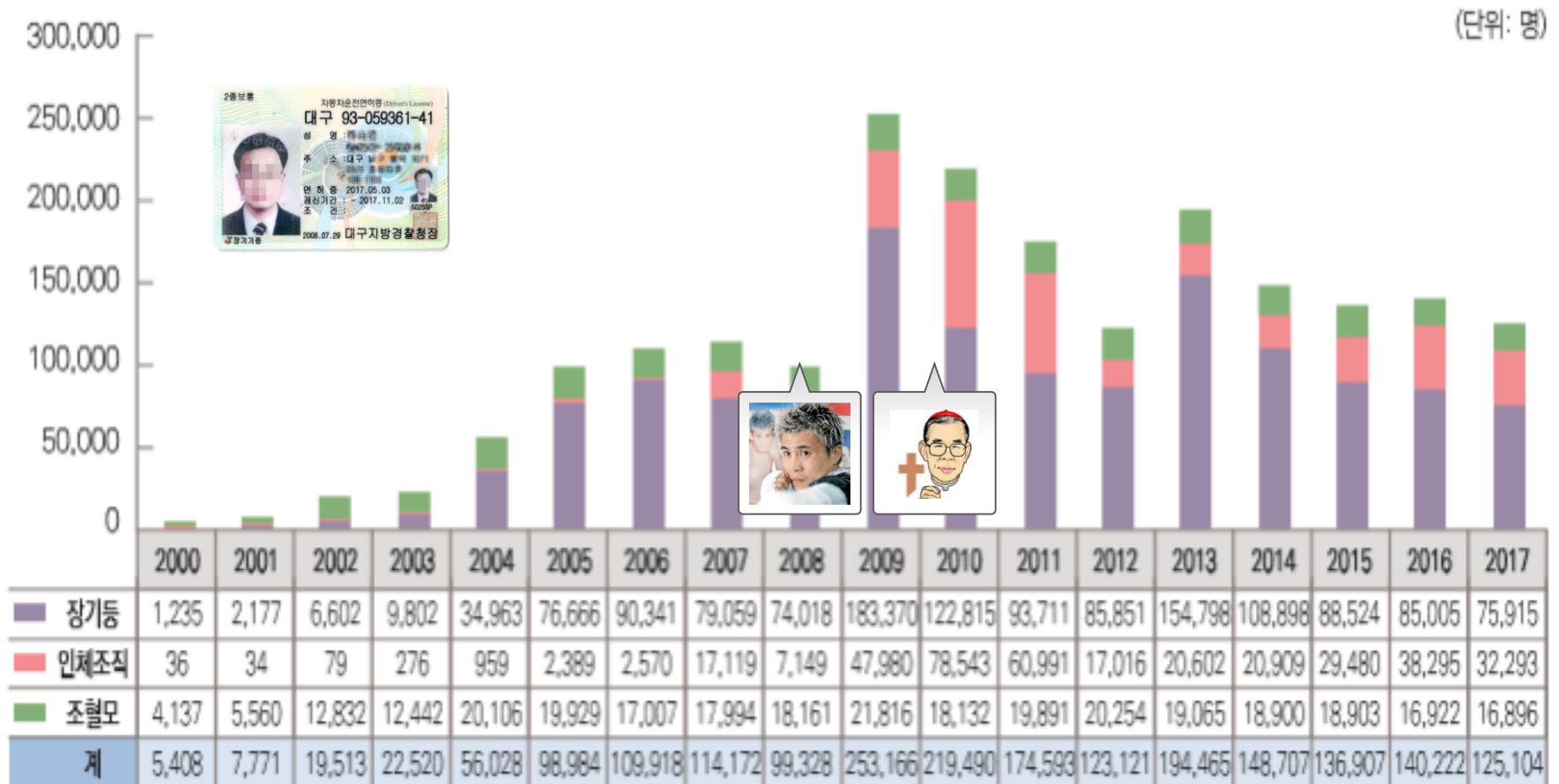
Korean Organ Donation Network (KODONET 2010.9.11)



Number of Organ Donation Card Holders

Donor Card

2-4-1. 기증희망자 추이(당해연도) : 2000 - 2017



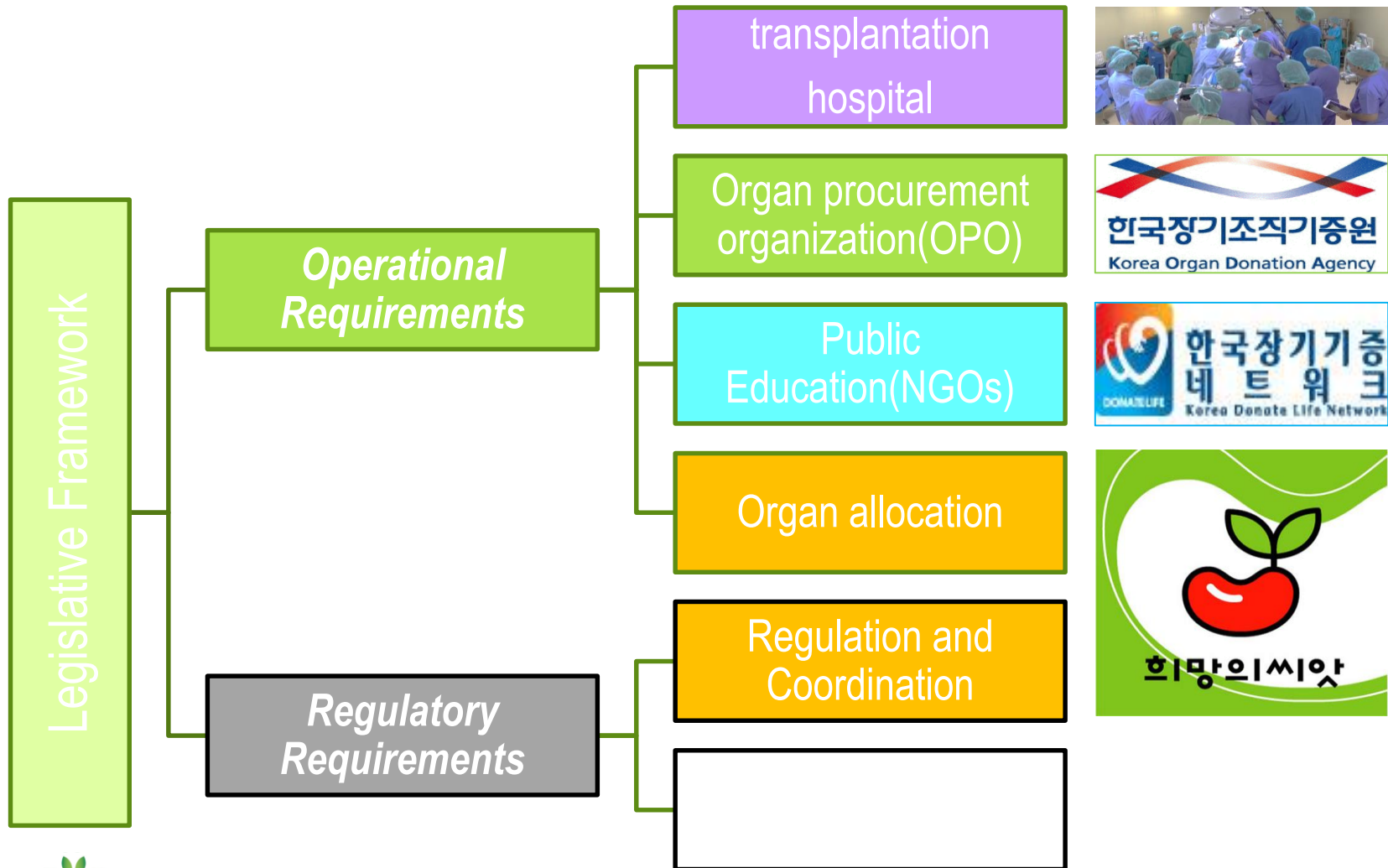
※ 출처 : 2017 장기등 이식 및 인체 조직 기증 통계연보



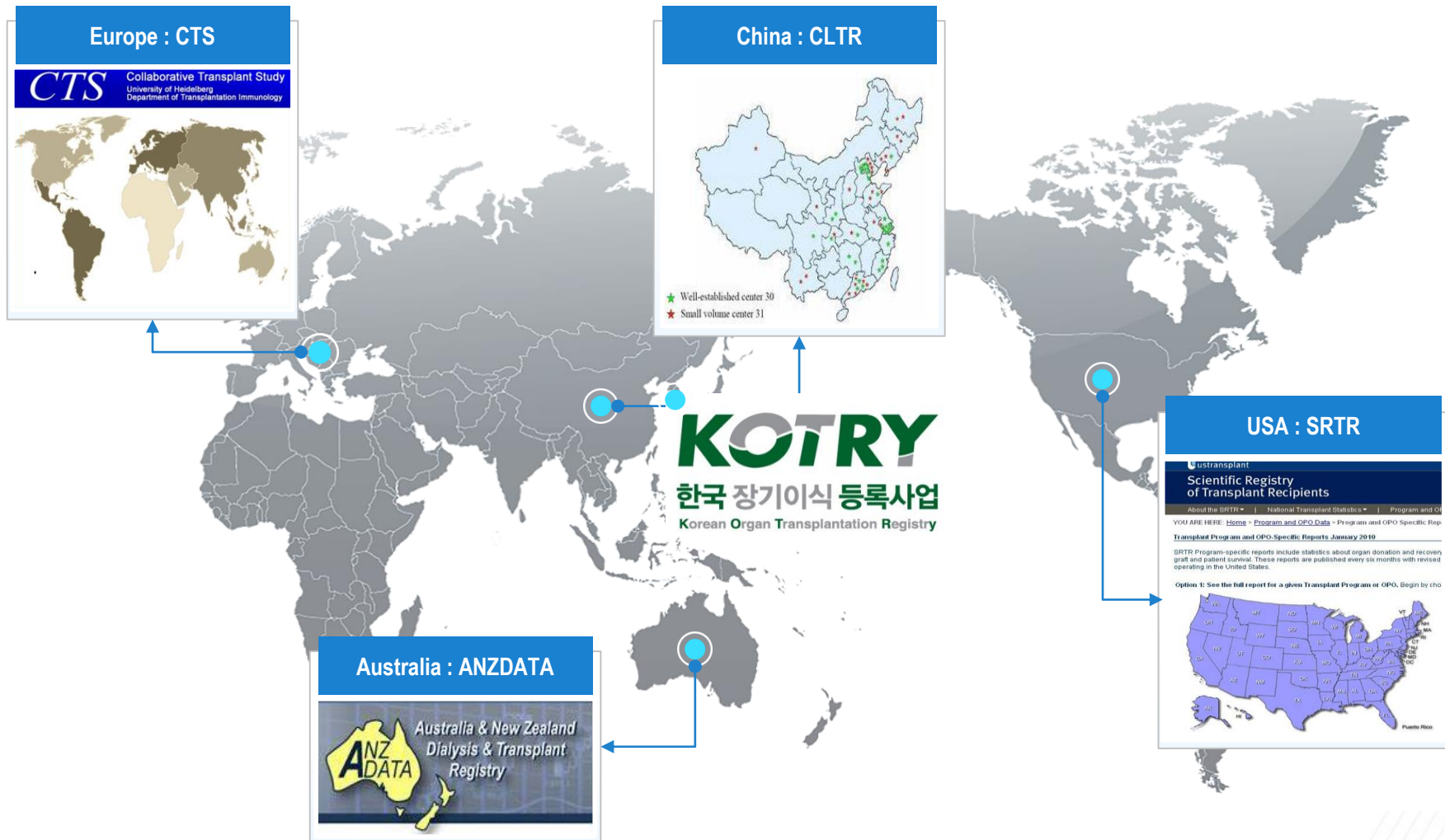
Life Sharing Week & Memorial Park Law(2017.10.24)

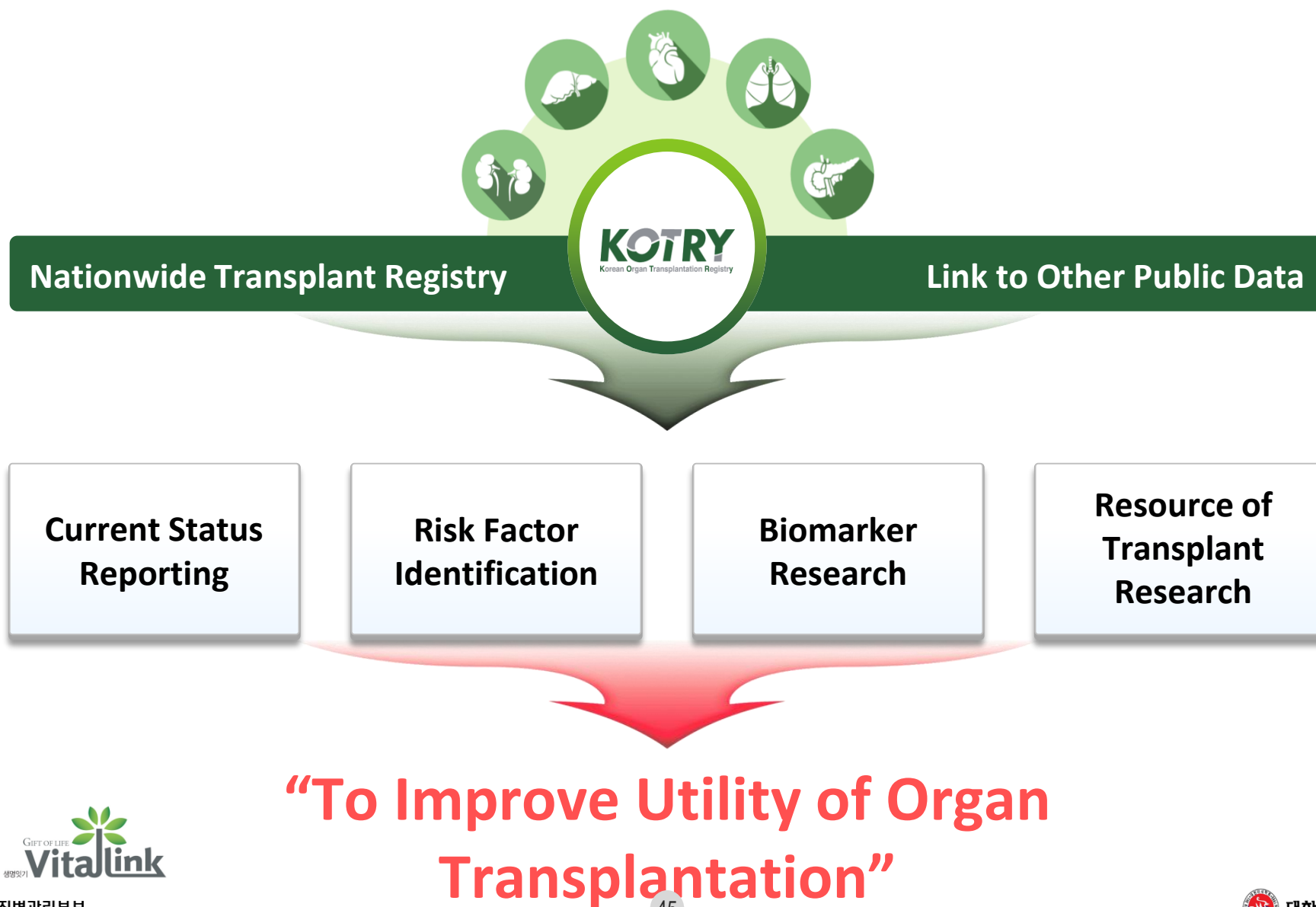
- ① In order to commemorate the love and spirit of the neighbors of long-term registered adults and to spread the culture of sharing, a week is held every year on the second Monday of September.
- ② The state and local governments can conduct commemorative events appropriate to the purpose of the week of life sharing.
- ③ The state and local governments can create parks or construct sculptures to honor the neighbor's love and spirit of sacrifice of long-term registered adults and to use them as educational grounds for spreading a culture of sharing life.

Infrastructures for Successful Organ Transplantation



Global Organ Transplantation Database





✓ Web-based Database on iCReaT



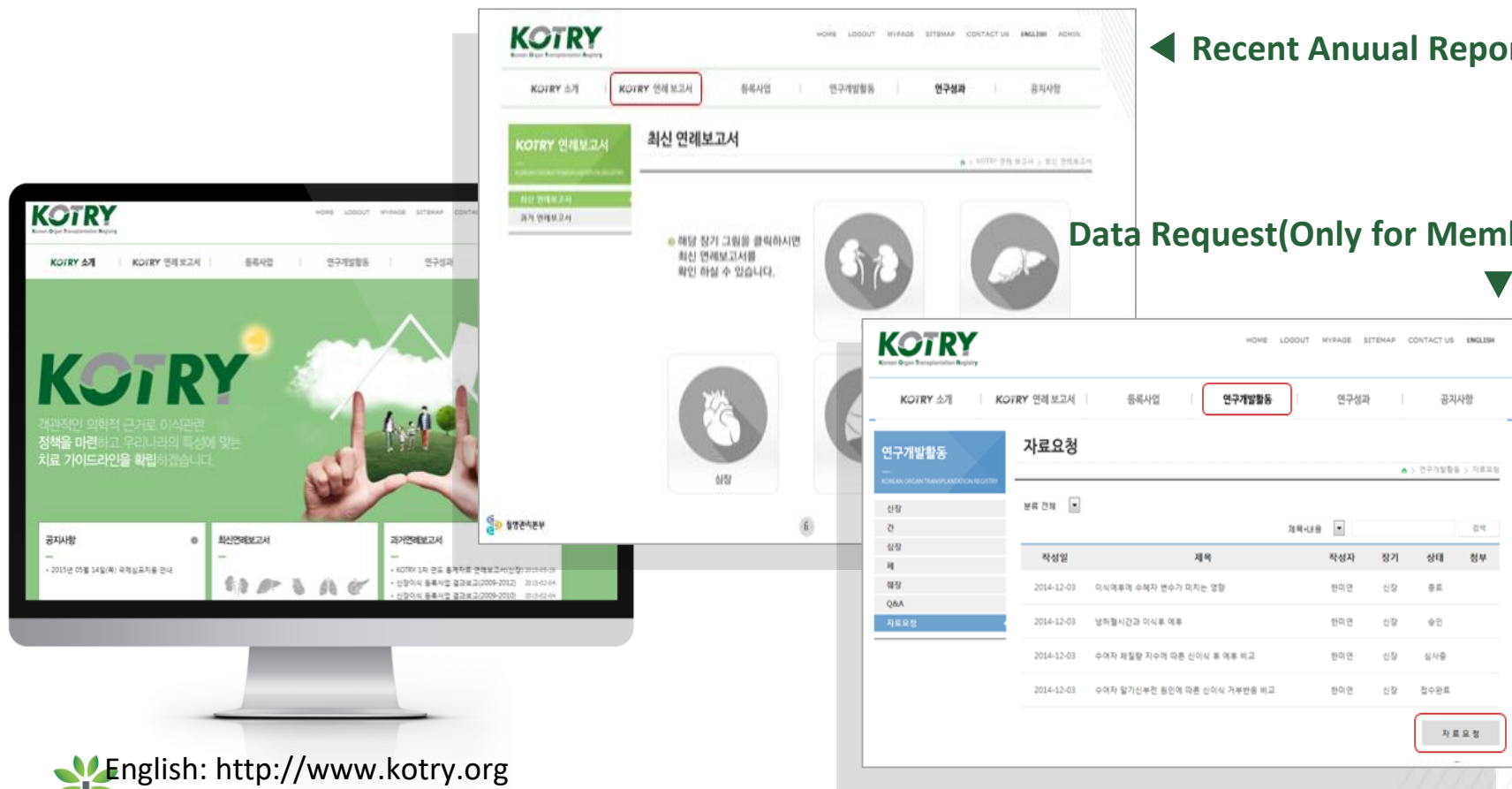
- General information
- Recipient data
- Donor data
- Immunosuppressive regimen
- Transplantation result – graft & patient survival
- Allograft function monitoring
- Acute rejection
- Surgical complication
- PTDM
- Post transplant malignancy
- Post transplant infection
- Post transplant cardiovascular disease
- Post transplant bone disease

✓ Annual report, Discussion board, Data request (Korean)

✓ International Collaboration (English)

◀ Recent Annual Report

Data Request(Only for Members)



Asian Transplantation Registry Homepage

ASTREG
Asian organ Transplantation REGistry

IntroDataReportSearch

ASIA Database

ASIA Database

59:43 Extension | Logout

My Study

Add & Edit Record

E-Signature

Query

Lock

Summary

Operational Support

Add / Edit Record

My Study

Site

Subject ID

Please

Total Views : 0

Sub

My Study - ASIA Database

My Study

Click on the study name, you can change the workspace study.

On-GoingBetaClosed

대표	Study ID	Study Name	Generation Date
		Baseline DB	2018-04-10
		Summary Data	2018-04-10
		ASIA Database	2017-06-13

Current User

User ID	sol00000
User Name	정슬
Organization	서울대학교병원
Role	CRA
Group	미지정

Study Statistics

Site	31
Total Subject	4758
Screening	4755
Screening Failure	0
Enrolled	3
Follow Up	0
Complete	0
Study Off	0
Drop Out	0

7Y F/U

8Y F/U

No such data.

정슬 Last Login : 2018-04-13 08:28:20 Copyright © 2018 Asian Organ Transplant Registry

Asian Transplantation Registry Homepage

Summary Data

[sol00000] 정순 Account Settings | 59:48 Extension | Logout

My Study
Add & Edit Record
Summary

기본 차트 Summary Data

차트 제목

No. 차트 유형

11

10

9

8

7

6

5

4

3

2

1 2 3

My Study
Add & Edit Record
Summary

기본 차트 관리

차트 제목

검색어를 입력해 주세요

검색

No. 차트 유형

11

10

9

8

7

6

5

4

3

2

1 2 3

페이지당 10건

Transplantation Number by Country



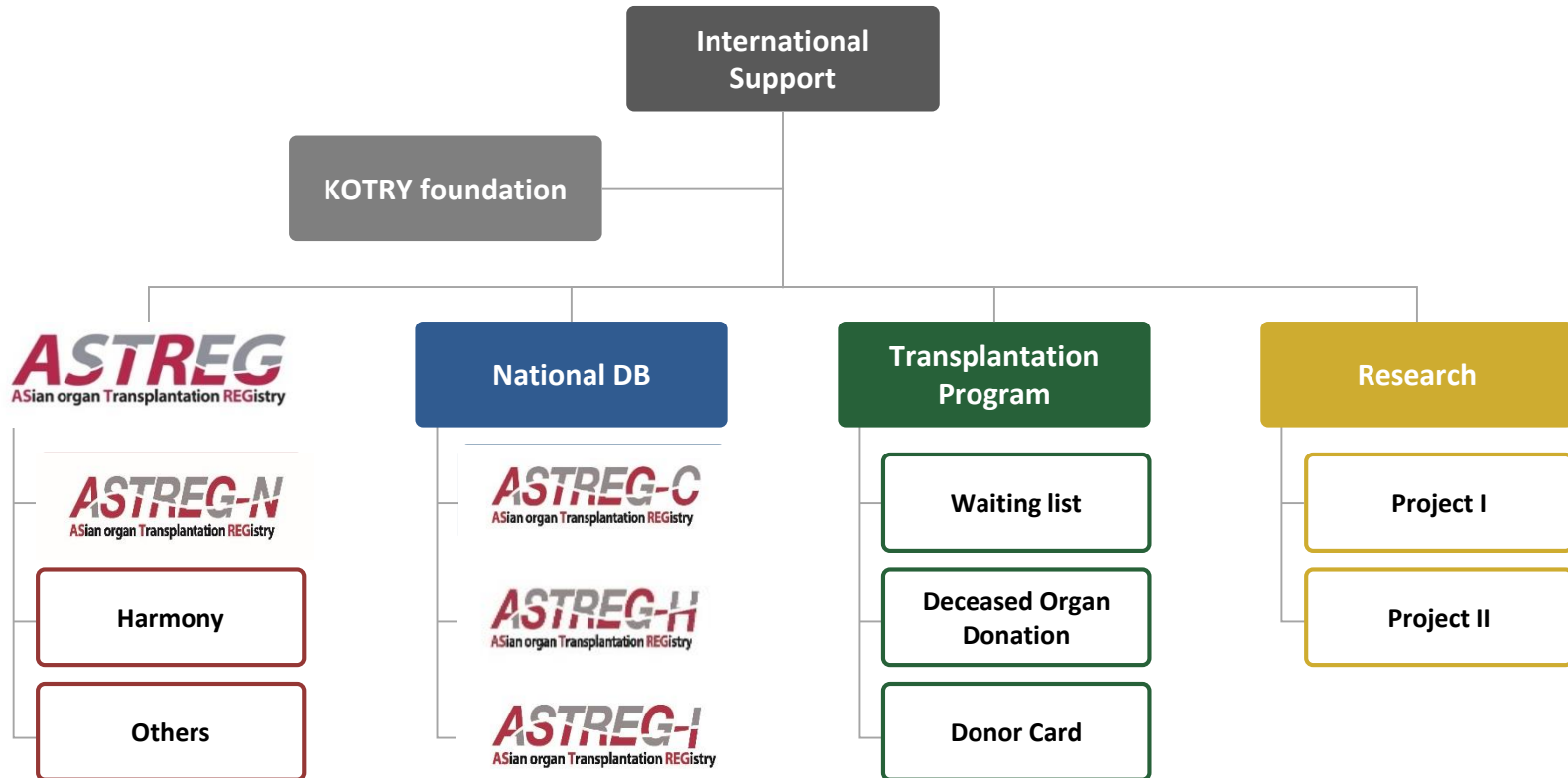
kotry@kotry.org ; Vivian Cho

Philippines Qatar Russia Saudi Arabia Singapore South Korea Sri Lanka Syria
Taiwan(China) Tajikistan Thailand Timor-Leste Turkey Turkmenistan
United Arab Emirates Uzbekistan Vietnam Yemen

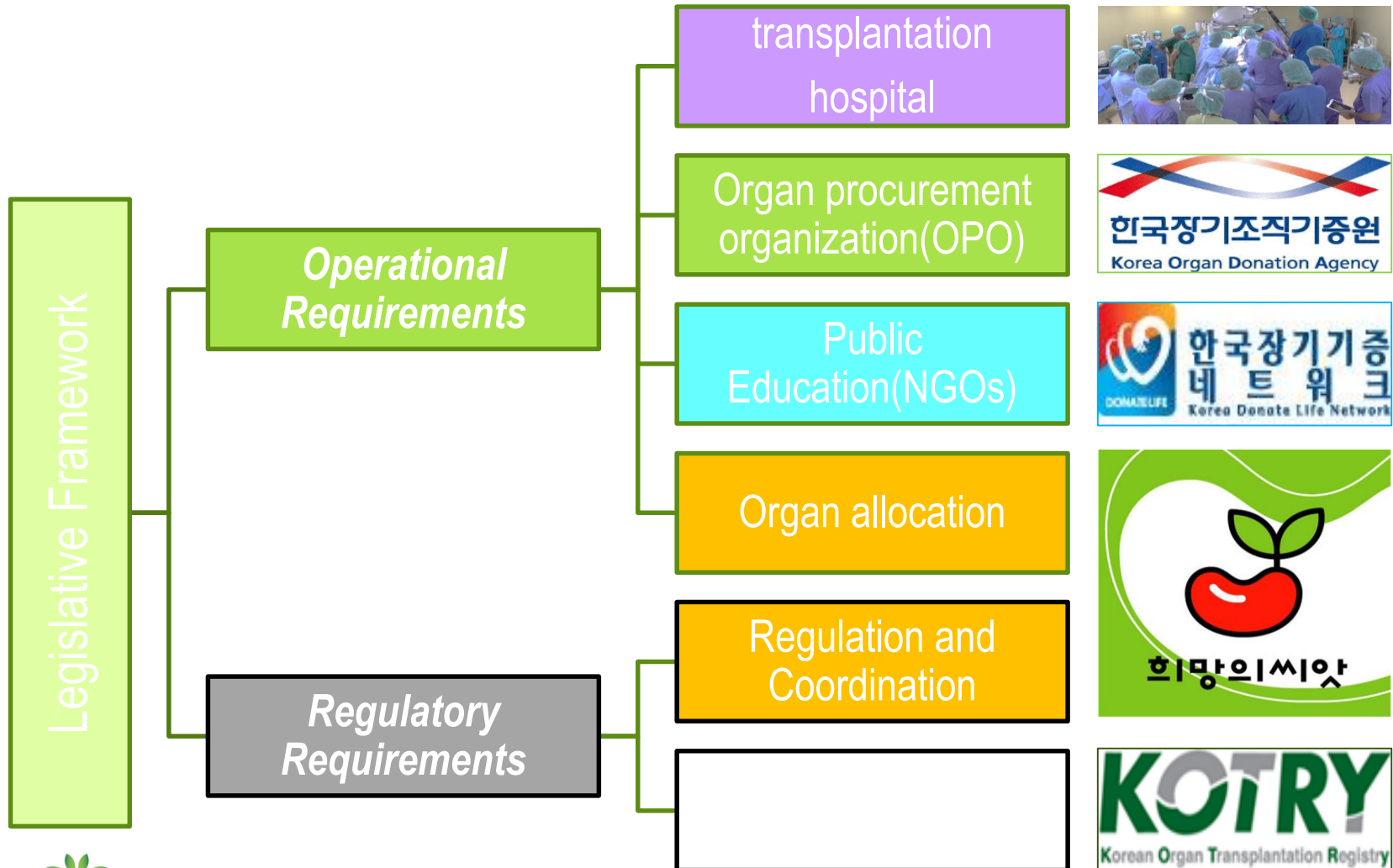
It has been successfully selected.

정순 Last Login : 2018-04-11 11:33:51 Copyright © 2018 Asian Organ Transplant Registry

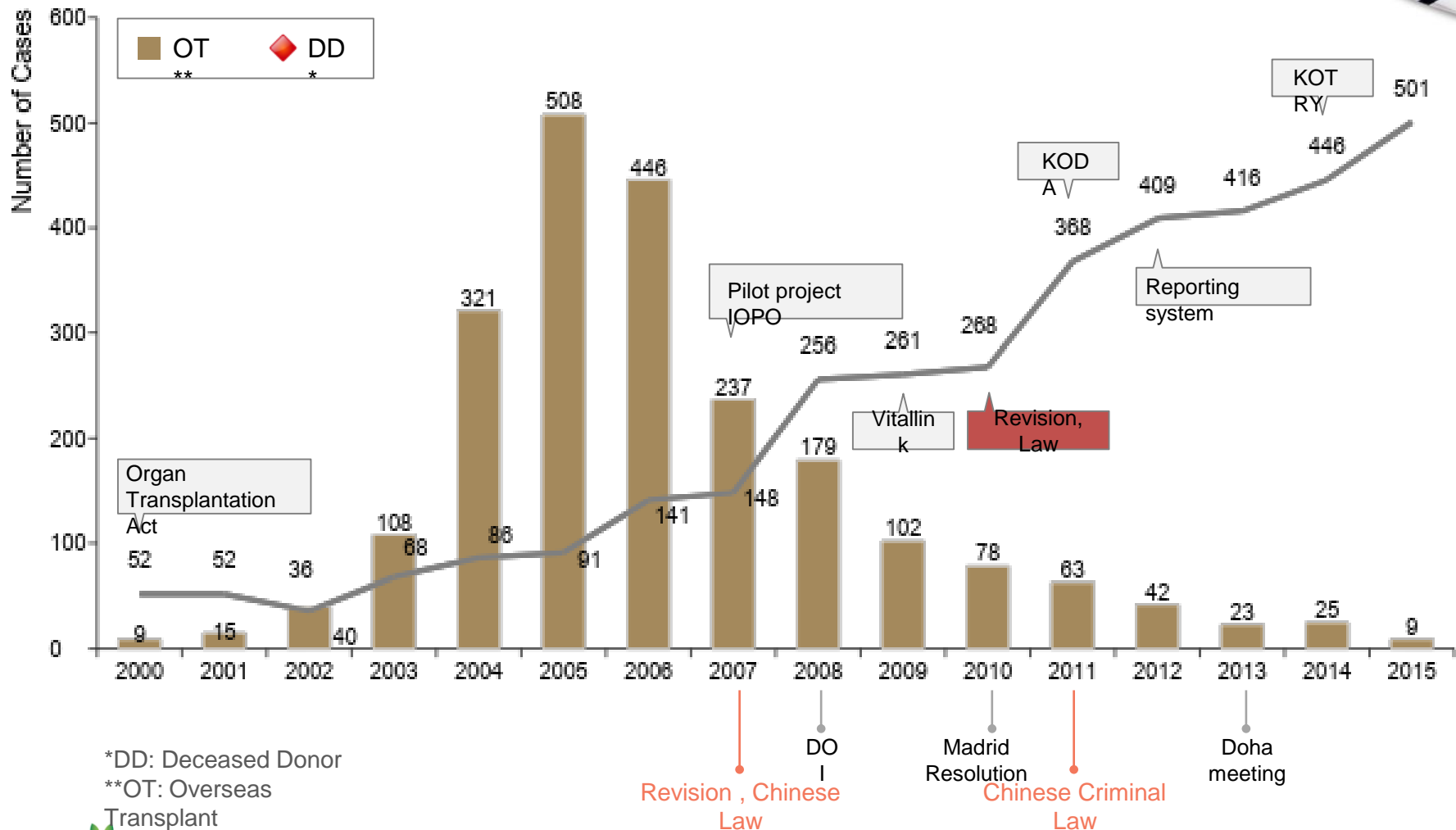
KOTRY Social Contribution Projects



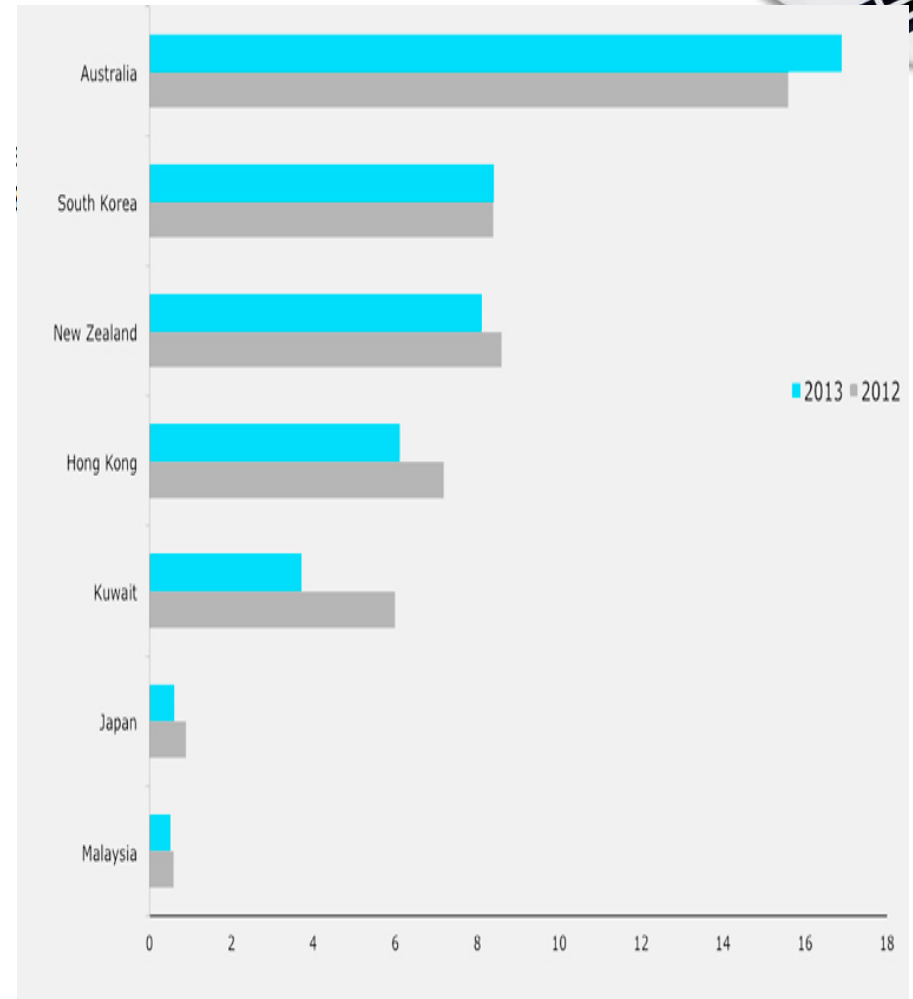
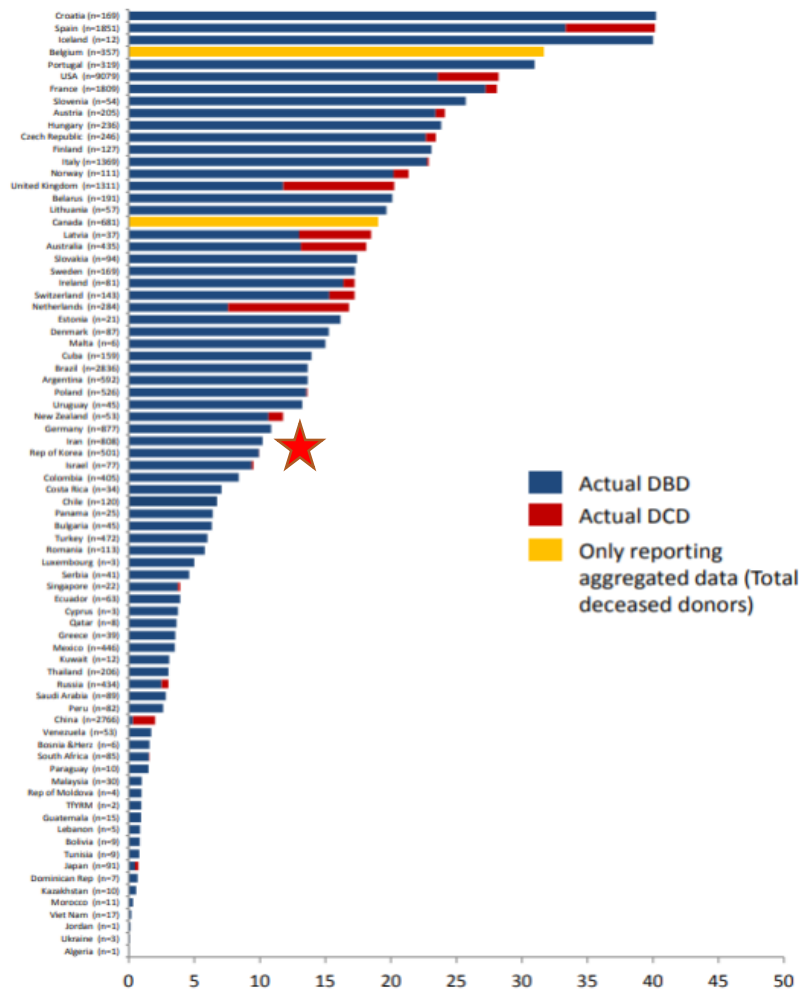
Infrastructures for Successful Organ Transplantation



No. of Transplantation Tourists and Deceased Donor



Number of Brain Death Donors in Korea



<http://www.transplant-observatory.org/>

<http://www.irodat.org/>



Cảm ơn vì đã nghe thì thôi !