우리나라 신대체 요법의 현황

– 인산 민병석 교수 기념 말기 신부전 환자 등록사업 2013 –

Current Renal Replacement Therapy in Korea

-Insan Memorial Dialysis Registry 2013-

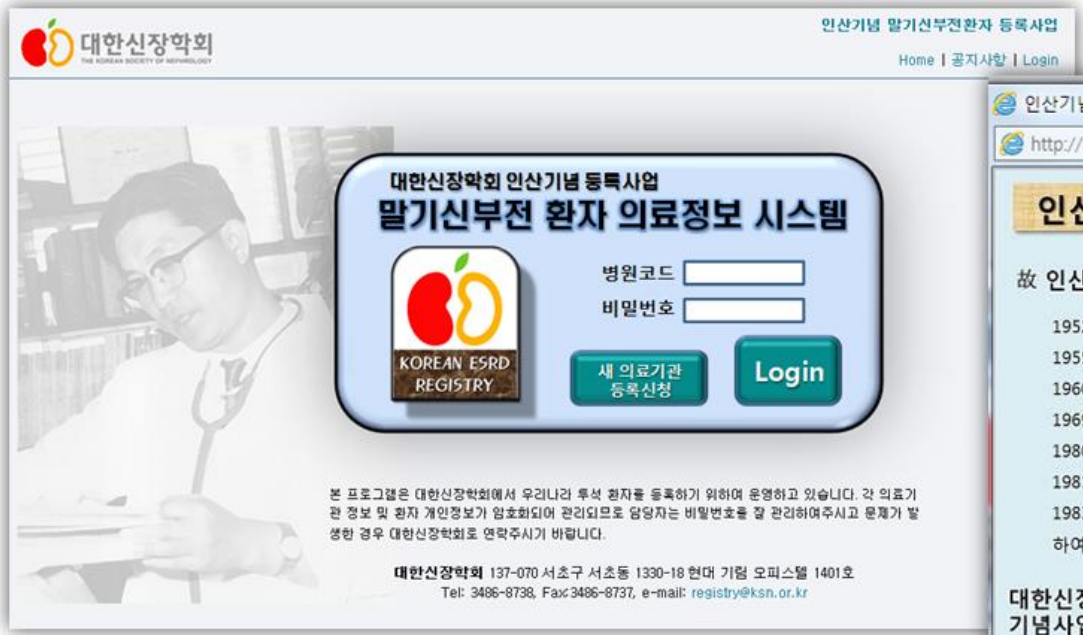
대한신장학회 등록위원회

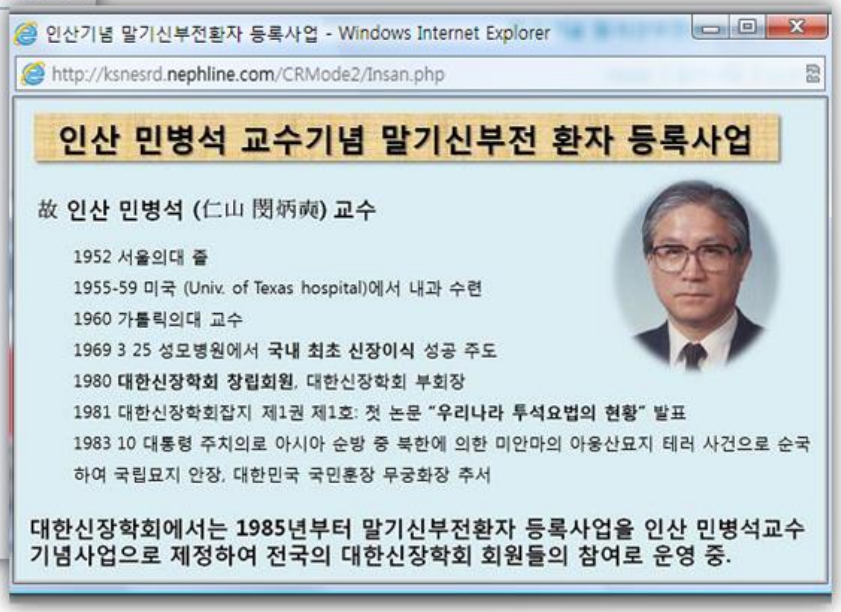
ESRD Registry Committee, Korean Society of Nephrology

May 2014

새 등록사업 프로그램

- 2013년 7월 사용 시작
- 개인 정보 보호법 적용 및 투석 의료기관 인증제 프로그램과 통합
- 추가 항목 : 투석 방법, 합병증, 검사 수치, 재활상태 추가 등재
- 과거 자료 모두 이전



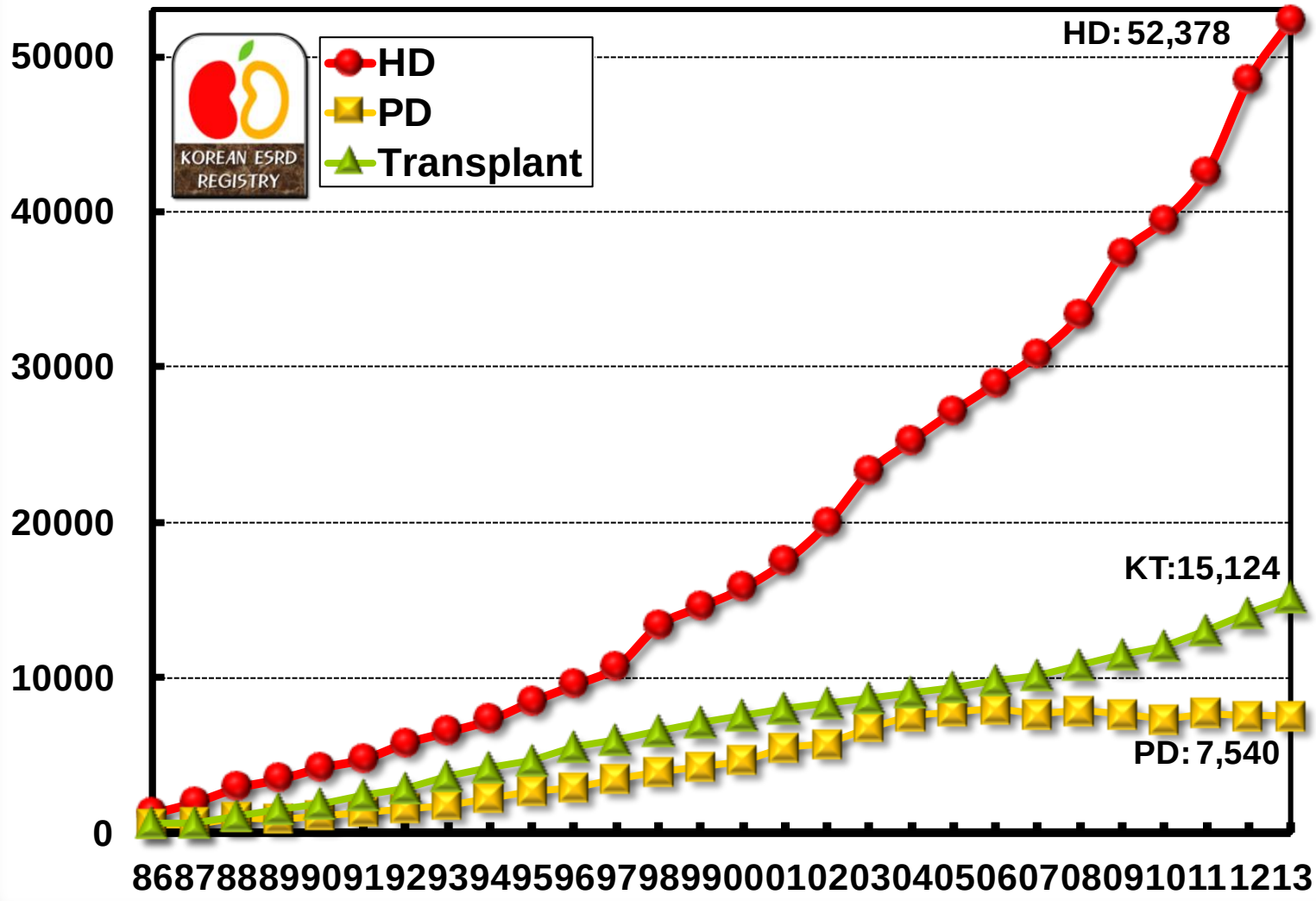


Prevalence of Renal Replacement Therapy

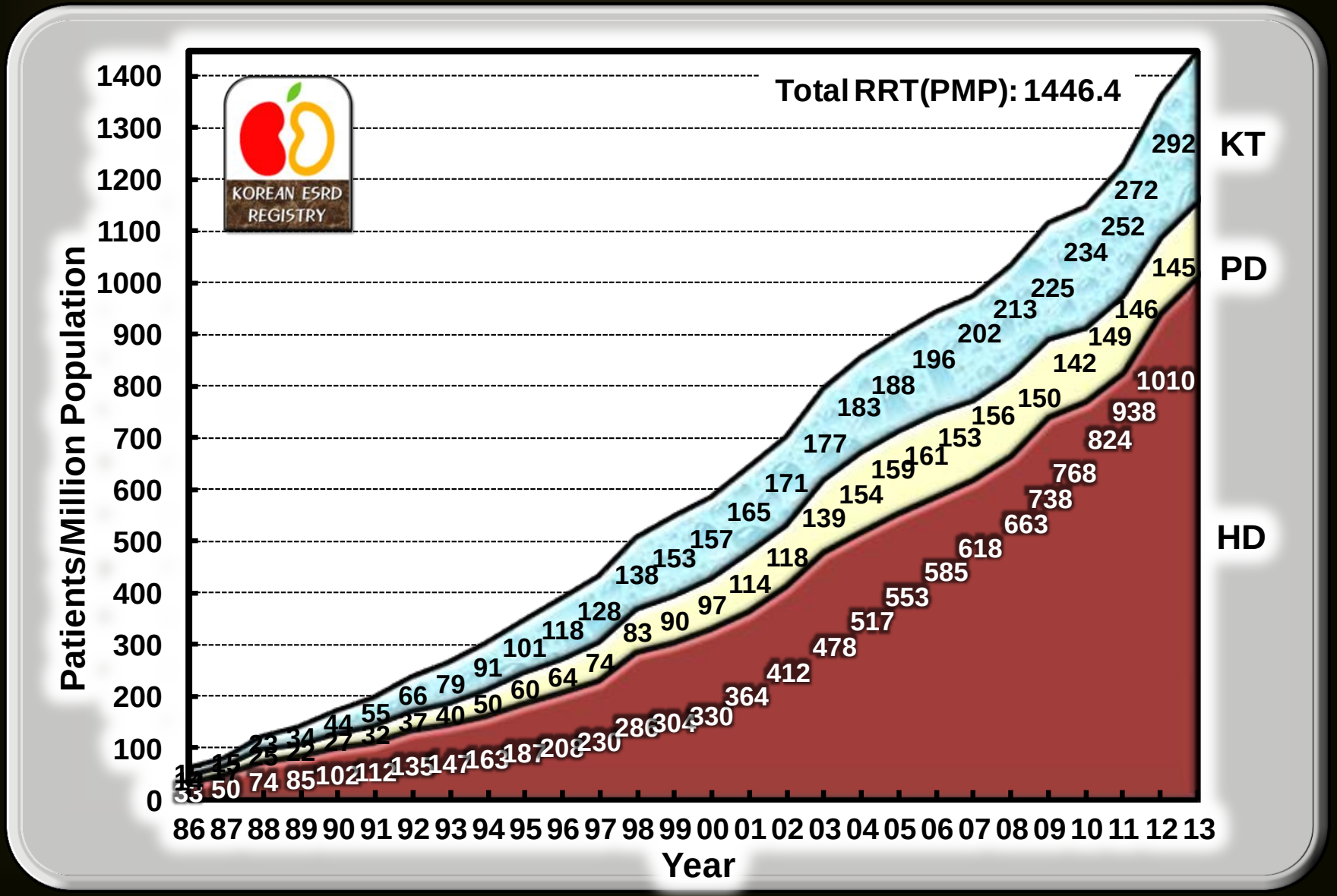
Year	HD		PD		Transplant		Total	
1986	1,335	(32.6)	573	(13.9)	621	(15.1)	2,534	(61.7)
1988	3,012	(74.0)	1,058	(25.2)	982	(23.4)	5,142	(122.7)
1990	4,311	(101.8)	1,130	(26.7)	1,866	(44.1)	7,307	(172.6)
1992	5,890	(135.3)	1,599	(36.7)	2,862	(65.8)	10,351	(237.8)
1994	7,387	(162.7)	2,284	(50.3)	4,116	(90.6)	13,787	(303.6)
1996	9,635	(207.5)	2,976	(64.1)	5,461	(117.6)	18,072	(389.2)
1998	13,473	(285.6)	3,912	(82.9)	6,515	(138.1)	23,900	(506.7)
2000	15,853	(330.4)	4,671	(97.4)	7,522	(156.8)	28,046	(584.5)
2001	17,568	(363.8)	5,489	(113.7)	7,957	(164.8)	31,014	(642.3)
2002	20,010	(412.4)	5,712	(117.7)	8,271	(170.5)	33,993	(700.6)
2003	23,348	(478.2)	6,807	(139.4)	8,635	(176.9)	38,790	(794.5)
2004	25,335	(516.5)	7,569	(154.3)	8,987	(183.2)	41,891	(854.0)
2005	27,246	(553.0)	7,816	(158.6)	9,271	(188.2)	44,333	(899.8)
2006	29,031	(585.0)	7,990	(161.0)	9,709	(195.7)	46,730	(941.7)
2007	30,907	(617.7)	7,649	(152.9)	10,119	(202.2)	48,675	(972.8)
2008	33,427	(663.3)	7,840	(155.6)	10,722	(212.8)	51,989	(1031.6)
2009	37,391	(738.3)	7,618	(150.4)	11,387	(224.8)	56,396	(1113.6)
2010	39,509	(768.1)	7,309	(142.1)	12,042	(234.1)	58,860	(1144.4)
2011	42,596	(823.6)	7,694	(148.8)	13,051	(252.4)	63,341	(1224.8)
2012	48,531	(938.4)	7,552	(146.0)	14,128	(273.2)	70,211	(1357.6)
2013	52,378	(1009.6)	7,540	(145.3)	15,124	(291.5)	75,042	(1446.4)

( ): number of patients per million population, Population in Korea at the end of in 2013: 52,058,370.

Patient Number of RRT



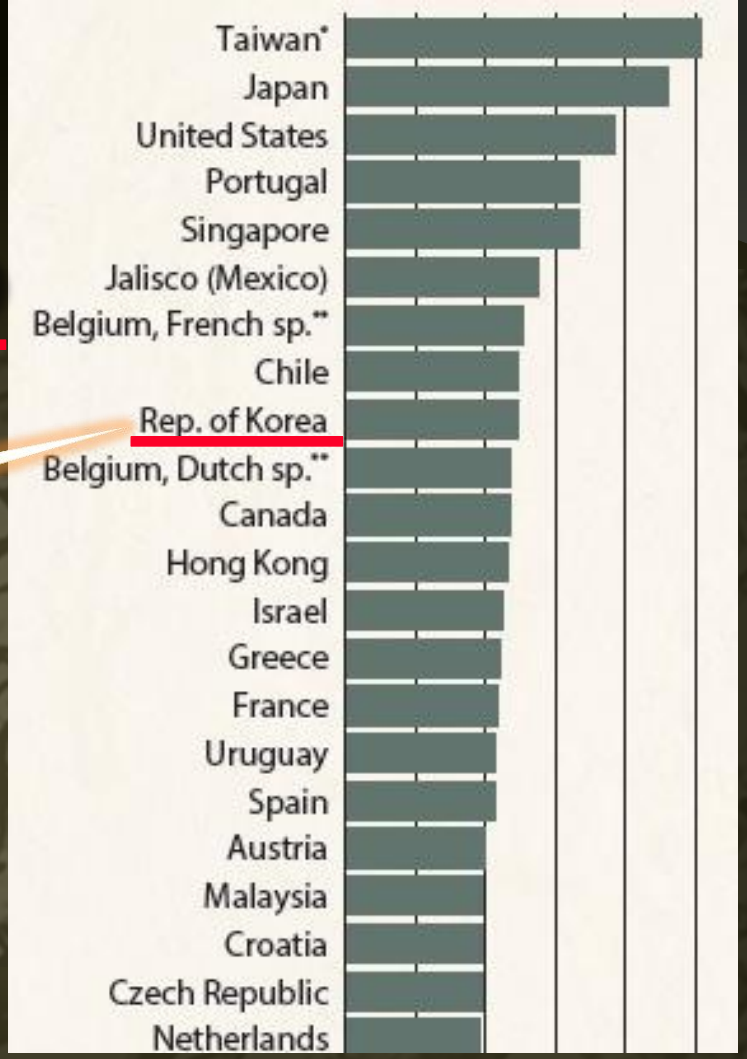
Point Prevalence of RRT

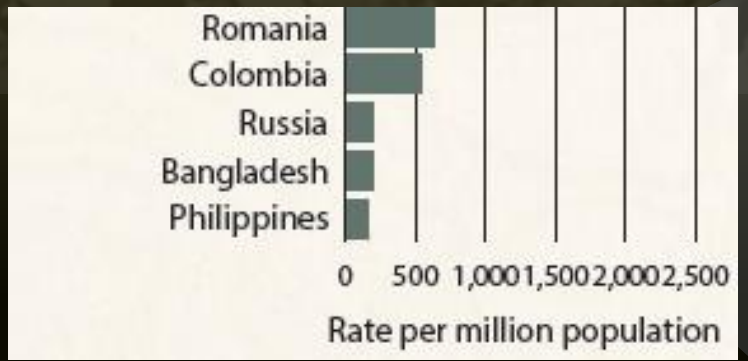


KOREAN ESRD REGISTRY

Prevalence of ESRD

1,225 PMP
End of 2011



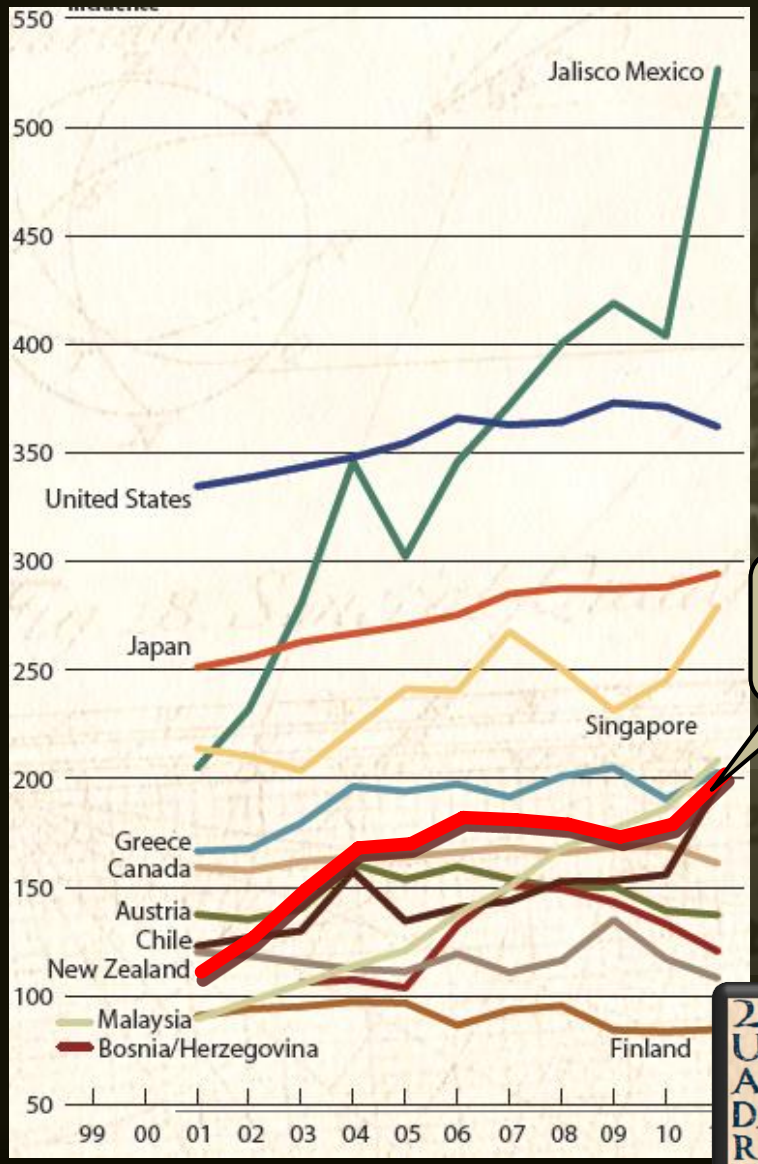


2013 USRDS ANNUAL DATA REPORT

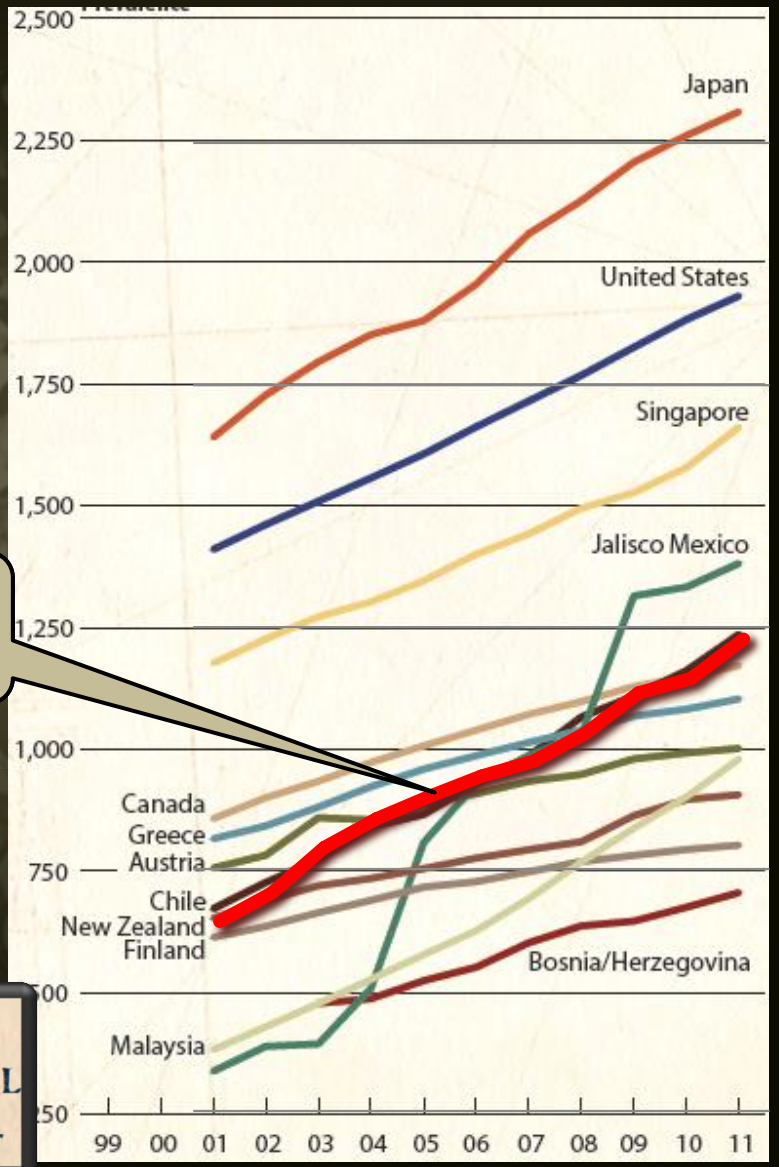
U.S. Renal Data System, USRDS 2013 Annual Data Report: Atlas of Chronic Kidney Disease and End-Stage Renal Disease in the United States, National Institutes of Health, National Institute of Diabetes and Digestive and Kidney Diseases, Bethesda, MD, 2013.

KOREAN ESRD REGISTRY

Incidence of ESRD



Prevalence of ESRD



Rep. of Korea

2013 USRDS ANNUAL DATA REPORT

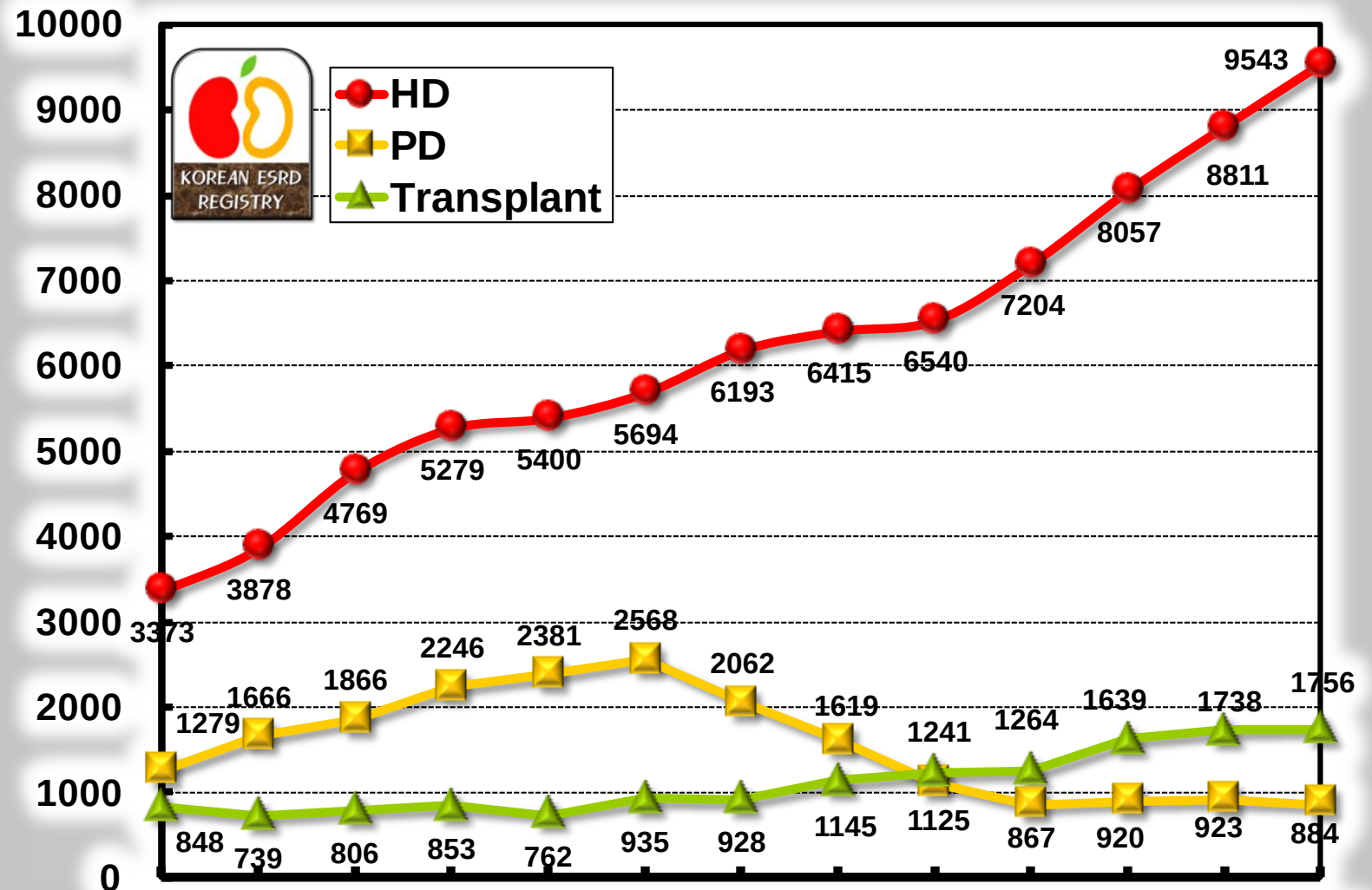
May 2014

Number of New RRT Patients

	HD		PD		Transplant		Total	
1986	670	(16.3)	287	(7.0)	221	(5.4)	1,173	(28.7)
1988	1,516	(36.2)	375	(8.9)	428	(10.2)	2,319	(55.3)
1990	2,418	(57.1)	530	(12.5)	624	(14.7)	3,572	(84.3)
1992	3,083	(70.8)	705	(16.2)	765	(17.6)	4,553	(104.6)
1994	2,999	(66.0)	907	(19.9)	685	(15.1)	4,591	(101.1)
1996	3,670	(79.0)	1,388	(29.9)	919	(19.8)	5,977	(128.7)
1998	2,463	(52.2)	753	(15.9)	994	(21.1)	4,210	(89.3)
2000	2,736	(57.0)	1,021	(21.3)	683	(14.2)	4,440	(92.5)
2001	3,373	(69.9)	1,279	(26.5)	848	(17.6)	5,500	(113.9)
2002	3,878	(79.9)	1,666	(34.3)	739	(15.2)	6,283	(129.5)
2003	4,769	(97.7)	1,866	(38.2)	806	(16.5)	7,441	(152.4)
2004	5,279	(107.6)	2,246	(45.8)	853	(17.4)	8,378	(170.8)
2005	5,400	(109.6)	2,381	(48.3)	762	(15.5)	8,543	(173.4)
2006	5,694	(114.7)	2,568	(51.7)	935	(18.8)	9,197	(185.3)
2007	6,193	(123.8)	2,062	(41.2)	928	(18.5)	9,183	(183.5)
2008	6,415	(127.3)	1,619	(32.1)	1,145	(22.7)	9,179	(182.1)
2009	6,540	(129.1)	1,125	(22.2)	1,241	(24.5)	8,906	(175.9)
2010	7,204	(140.1)	867	(16.9)	1,264	(24.6)	9,335	(181.5)
2011	8,057	(155.8)	920	(17.8)	1,639	(31.7)	10,616	(205.3)
2012	8,811	(169.8)	923	(17.8)	1,738	(33.5)	11,472	(221.1)
2013	9,543	(183.3)	884	(17.0)	1,756	(33.7)	12,183	(234.0)

( ): number of patients per million population. The population of Korea in 2013: 52,058,370.

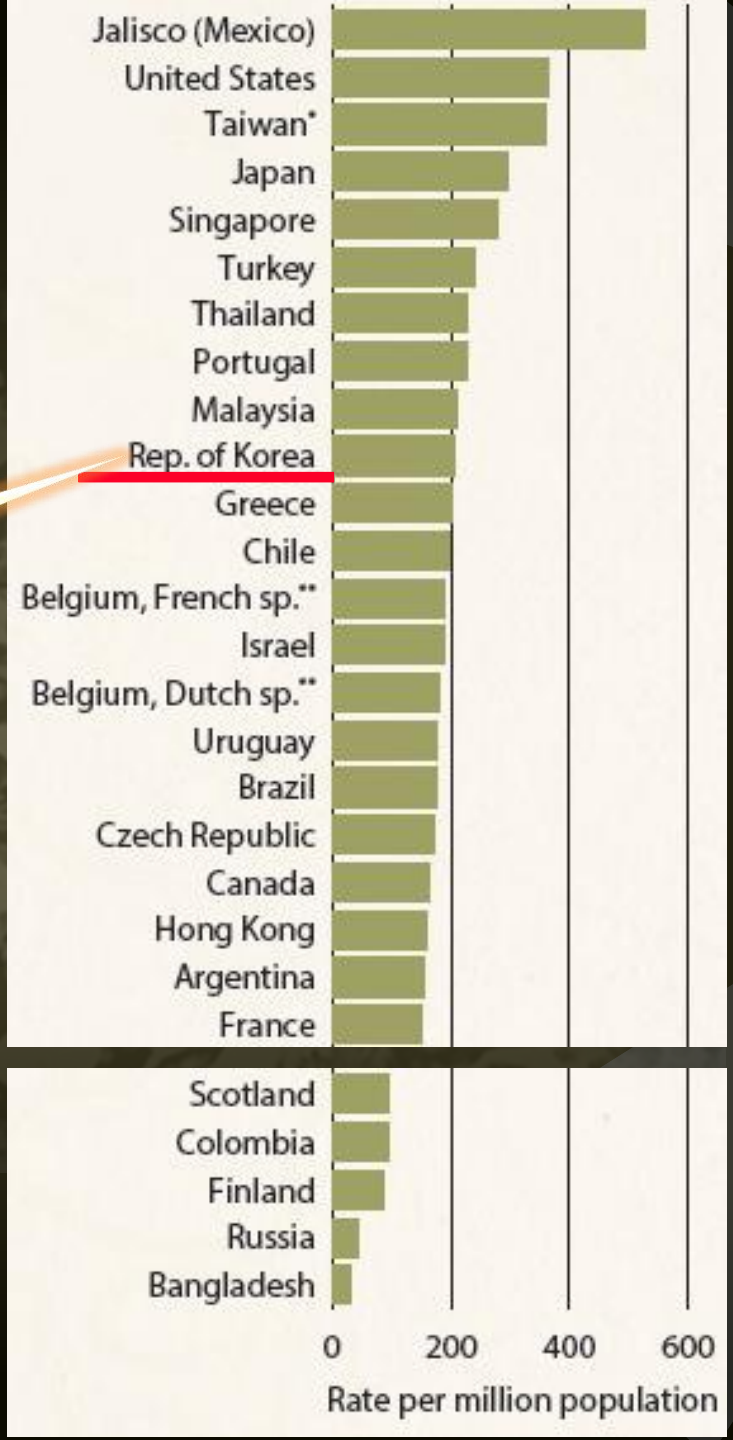
Number of New RRT Patients



KOREAN ESRD REGISTRY

Incidence of ESRD

205 PMP
End of 2011



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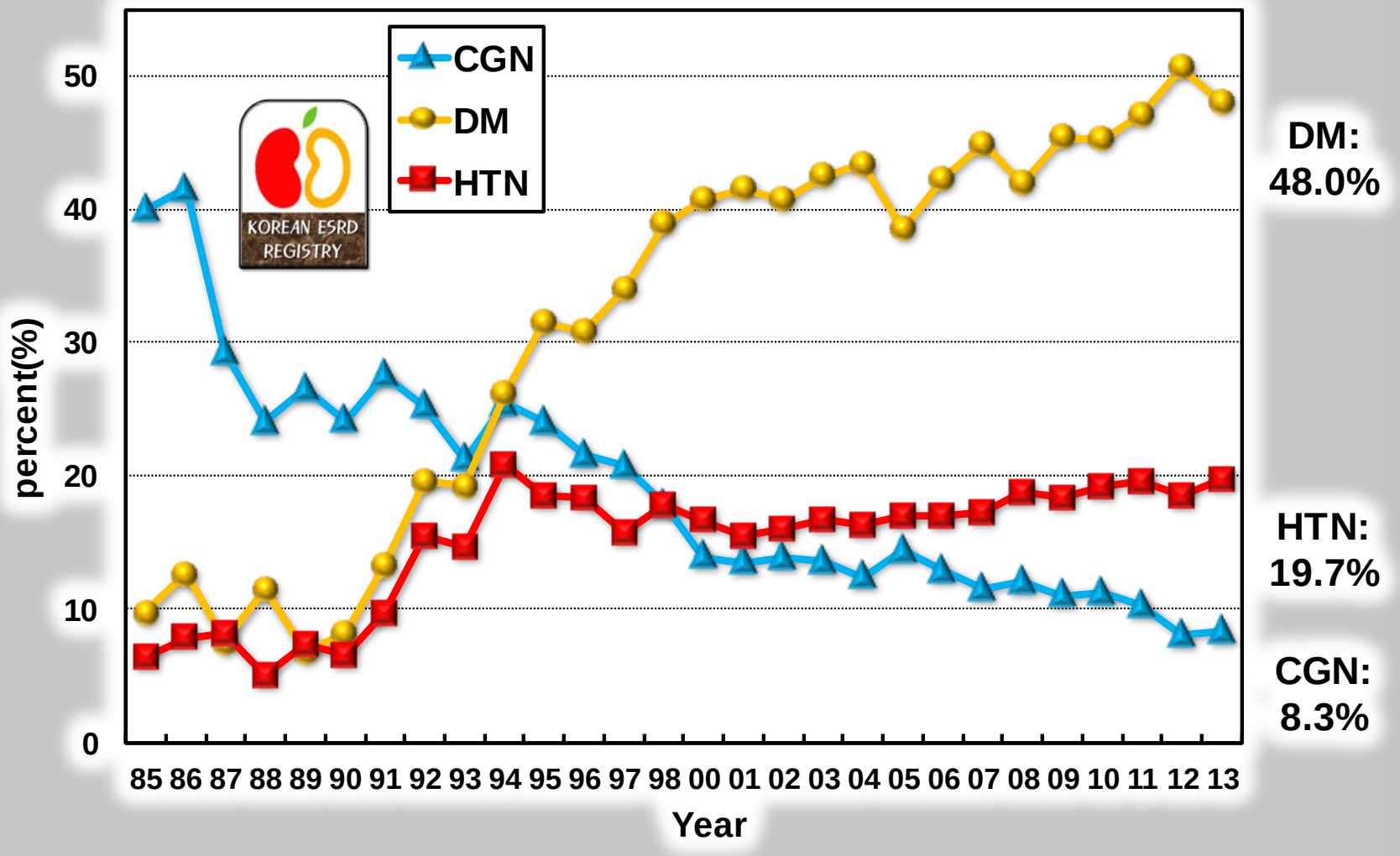
Causes of ESRD in New Patients

Causes	Percent (%)												
	1992	1994	1996	1998	2000	2002	2004	2006	2008	2010	2011	2012	2013
Chronic Glomerulonephritis	25.3	25.5	21.6	17.9	14	13.9	12.5	13.0	12.1	11.3	10.4	8.1	8.3
Not Histologically confirmed	19.7	20.4	16.7	13.6	10.6	10	8.6	9.0	8.2	7.7	6.9	4.5	4.3
Histologically confirmed	5.6	5	4.9	4.3	3.4	3.9	3.9	3.9	3.8	3.6	3.5	3.6	4.0
Diabetic nephropathy	19.5	26.1	30.8	38.9	40.7	40.7	43.4	42.3	41.9	45.2	47.1	50.6	48.0
Hypertensive nephrosclerosis	15.4	20.8	18.3	17.8	16.6	16	16.2	16.9	18.7	19.2	19.6	18.5	19.7
Cystic kidney disease	2.1	2.2	1.8	1.7	2.2	1.6	1.4	1.7	1.7	1.7	1.6	1.8	1.5
Renal tuberculosis	1.1	1.5	1.2	0.5	0.4	0.5	0.3	0.3	0.2	0.2	0.2	0.0	0.1
Pyelo/interstitial nephritis	1.3	1.1	0.7	1	0.8	0.6	0.6	0.6	0.5	0.4	0.4	0.5	0.5
Drugs or nephrotoxic agents	1.3	0.1	0.6	0.3	0.3	0.4	0.2	0.3	0.3	0.3	0.5	0.4	0.3
Lupus nephritis	0.8	0.7	1	0.5	0.9	0.8	0.6	0.6	0.6	0.5	0.5	0.6	0.6
Gouty nephropathy	0.7	0.7	0.6	0.5	0.7	0.4	0.5	0.3	0.3	0.4	0.2	0.3	0.3
Hereditary nephropathy	0.3	0.7	0.4	0.2	0.1	0.2	0.3	0.3	0.3	0.2	0.2	0.5	0.4
Kidney tumor	0.1	0.1	0.2	0.2	0.2	0.3	0.3	0.2	0.2	0.2	0.3	0.3	0.5
Other	4.1	2.7	2.8	3.9	3	5.6	5.9	6.0	5.8	5.1	5.0	6.8	7.2
Uncertain	28.6	17.8	15.9	16.6	20.2	19	17.8	17.5	17.6	15.3	14.3	11.4	12.7

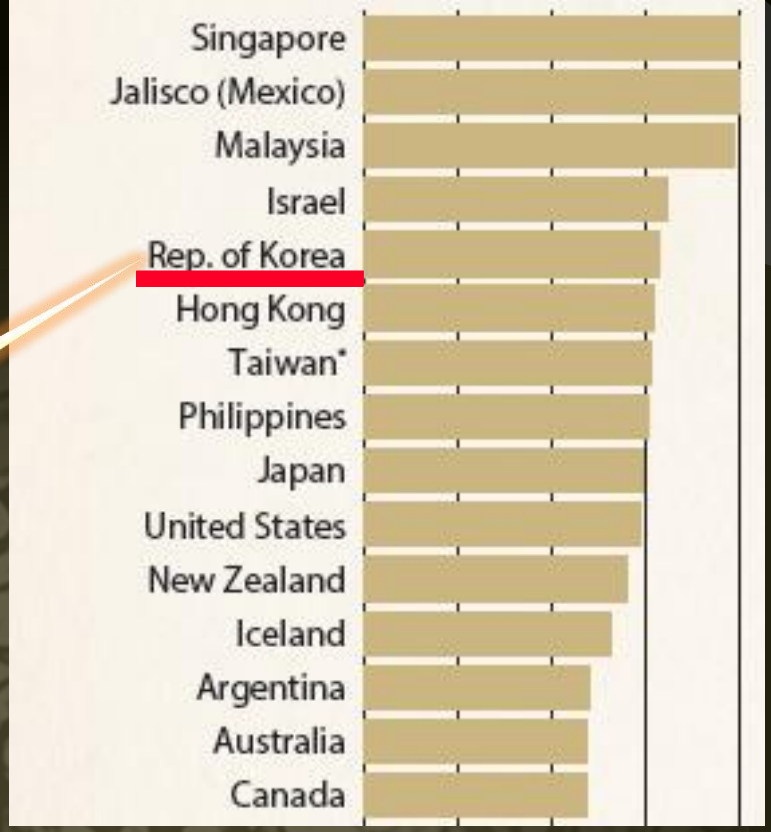
Three Major Causes of ESRD

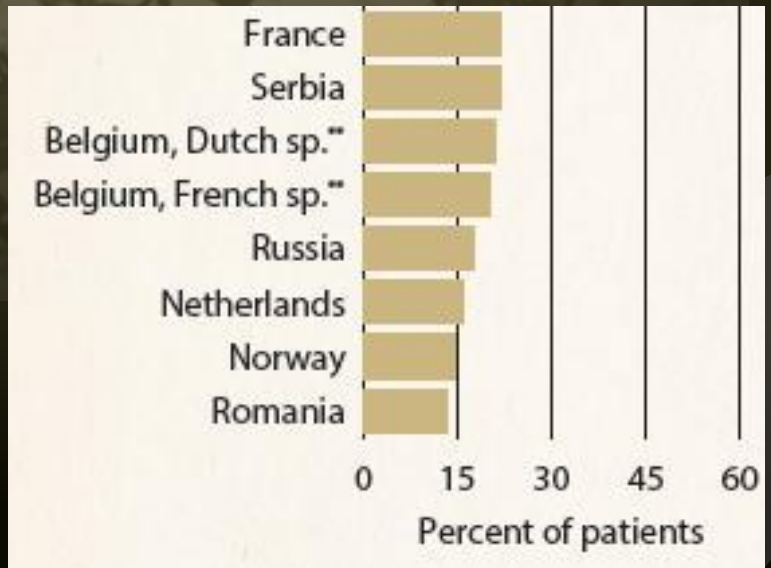


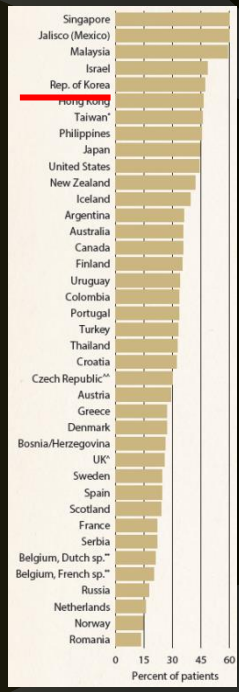
KOREAN ESRD REGISTRY

Diabetic ESRD

47.1%
in 2011







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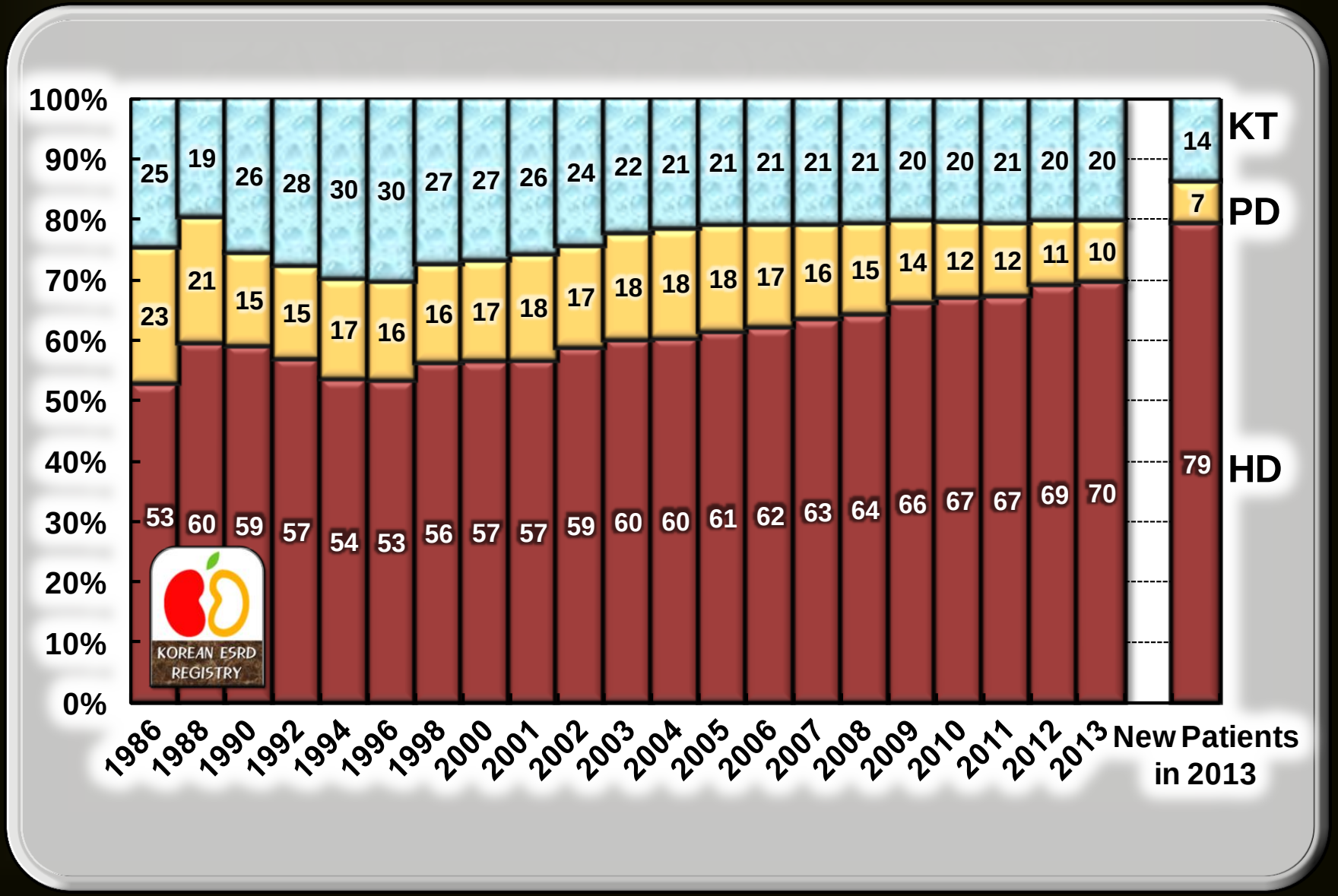
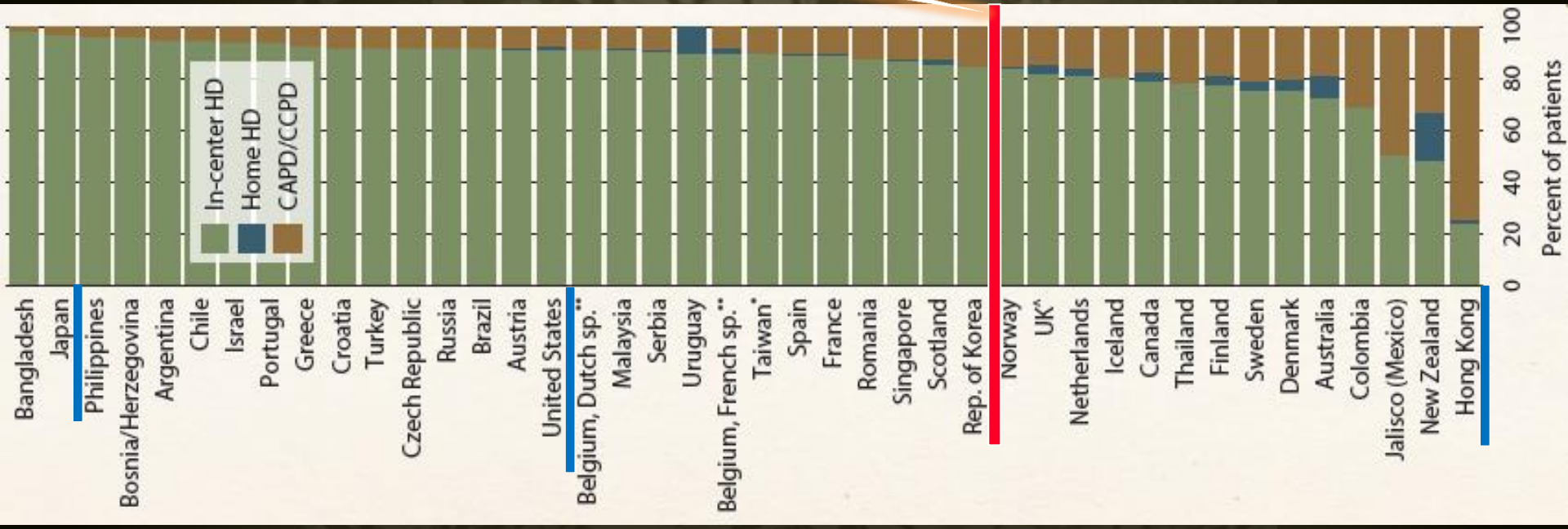
Proportion of RRT Modalities



Percent Distribution of Dialysis Modalities

HD:PD = 84.7% : 15.3%
End of 2011



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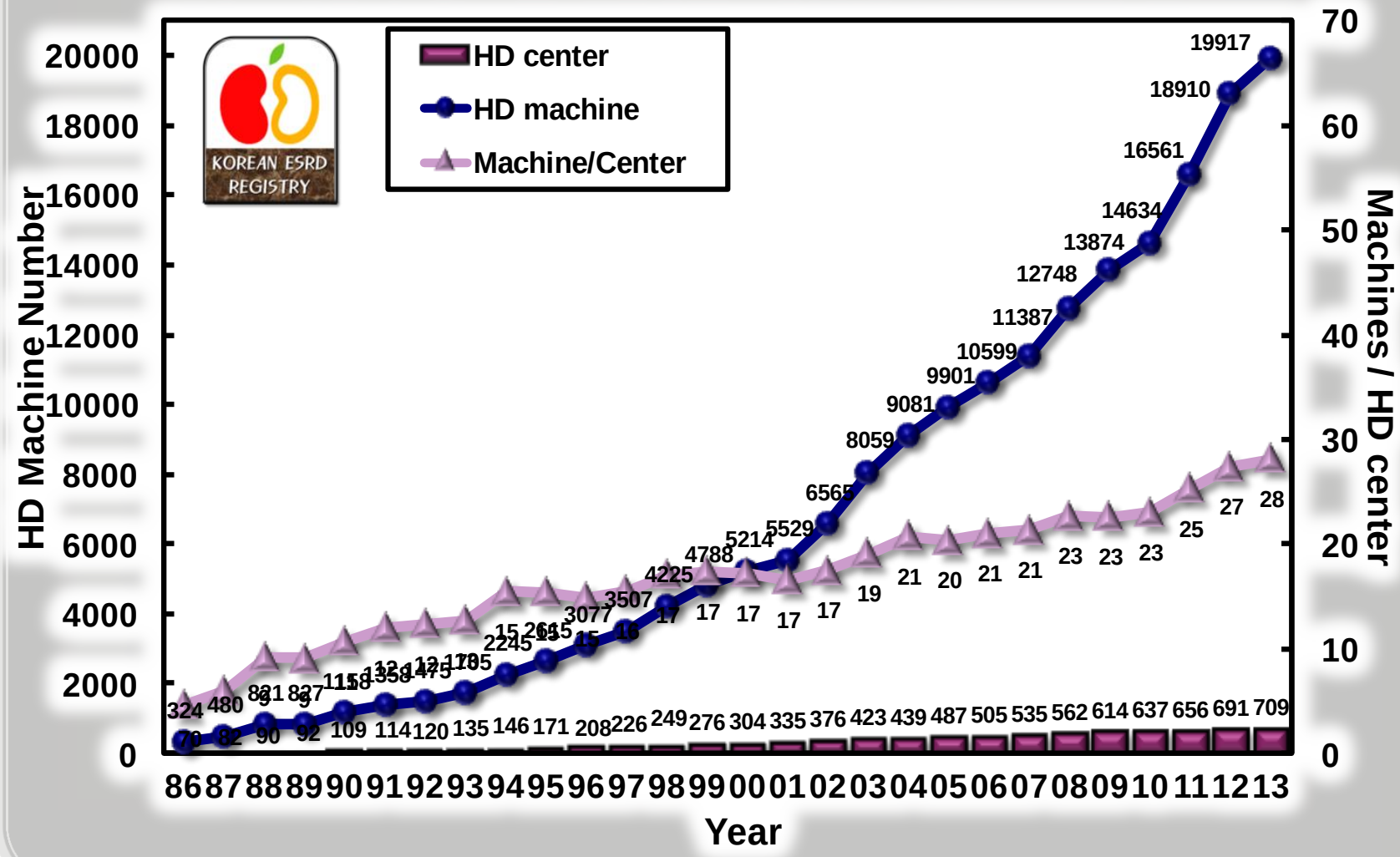
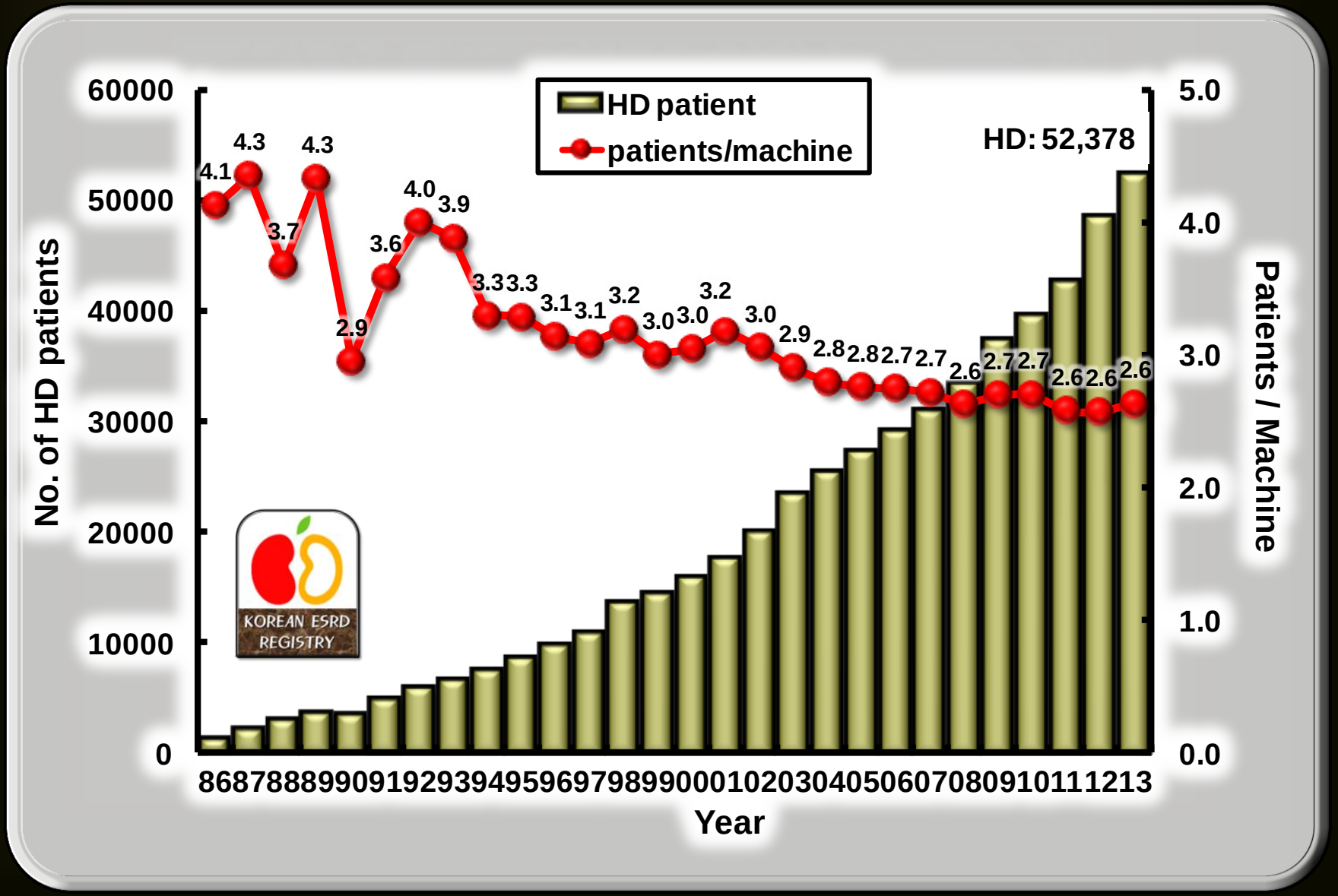
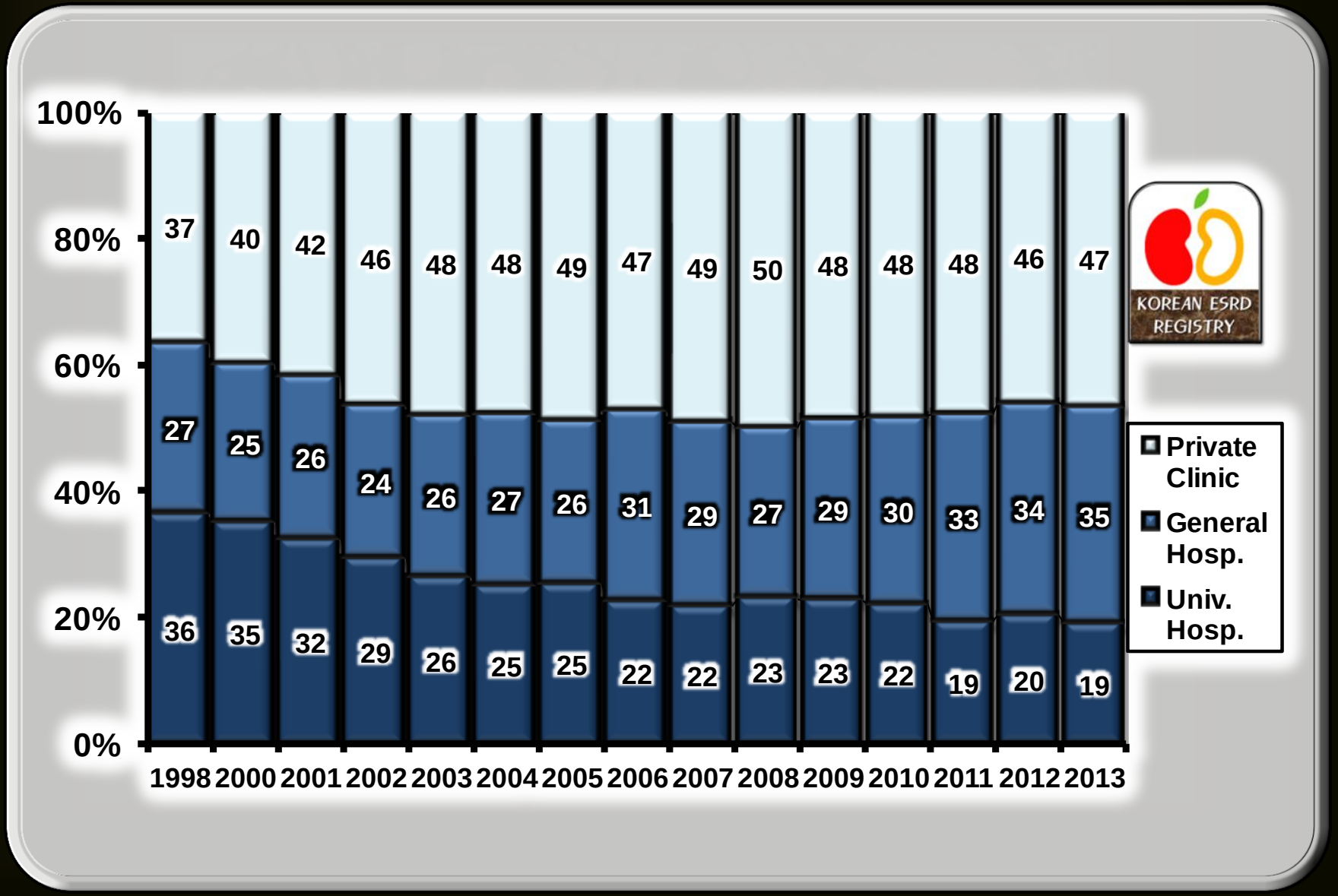
Number of HD Centers & HD Machines



Ratio of HD Machine & HD Patients



HD Pts Proportion by Dialysis Center Type



행정구역별 투석환자 및 혈액투석기 분포

(2013년 12월말 기준)

	HD pts	PD pts	Total Dialysis pts	Dialysis pts. / Million pop.	Dialysis Centers	HD machines	HD pts./ HD machine
서울 Seoul	10,438	2,352	12,790	1,232	156	3,983	2.6
부산 Busan	4,245	877	5,122	1,439	46	1,496	2.8
대구 Daegu	3,529	707	4,236	1,678	36	1,101	3.2
인천 Incheon	2,850	315	3,165	1,079	32	1,040	2.7
광주 Gwangju	1,532	236	1,768	1,185	33	703	2.2
대전 Daejeon	1,388	364	1,752	1,131	14	593	2.3
울산 Ulsan	864	56	920	781	13	327	2.6
경기 Gyeonggi	12,416	1,323	13,739	1,096	145	4,728	2.6
강원 Gangwon	1,675	364	2,039	1,311	26	671	2.5
충북 Chungbuk	1,676	87	1,763	1,102	28	658	2.5
충남 Chungnam	2,128	90	2,218	1,023	33	769	2.8
전북 Jeonbuk	1,842	162	2,004	1,055	22	813	2.3
전남 Jeonnam	1,768	160	1,928	999	34	798	2.2
경북 Gyeongbuk	2,272	157	2,429	885	36	874	2.6
경남 Gyeongnam	3,017	214	3,231	950	45	1,115	2.7
제주 Jeju	738	76	814	1,355	10	248	3.0
Total	52,378	7,540	59,918	1,151	709	19,917	2.6

생활권역별 투석환자 및 혈액투석기 분포

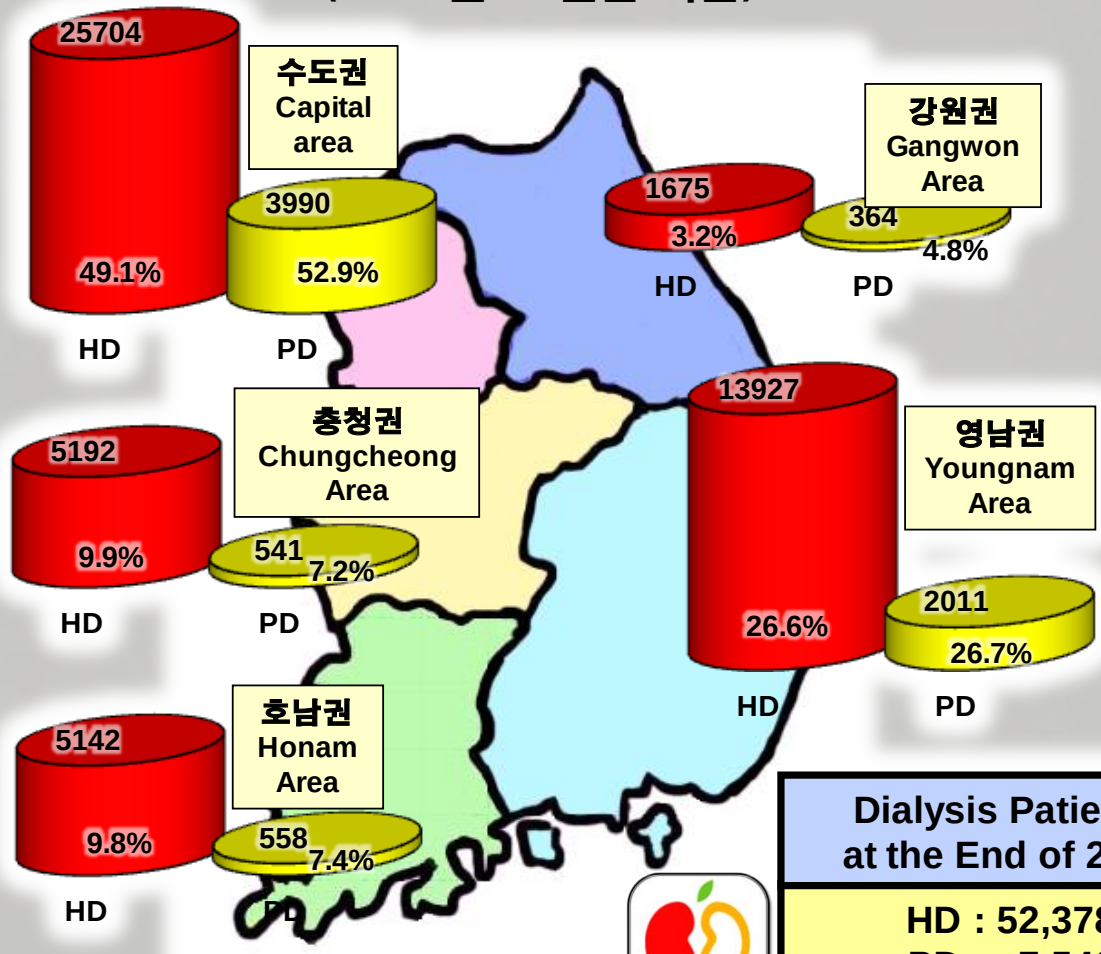
(2013년 12월말 기준)

	Population (%)	HD patients	PD patients	Total Dialysis patients	Dialysis pts /Million pop.	Dialysis centers	Dialysis machine	HD pts / HD machine
수도권 Capital area	25,854,554	25,704	3,990	29,694	1,149	333	9,751	2.6
(Seoul, Incheon, Gyeonggi)	49.7%	49.1%	52.9%	49.6%		47.0%	49.0%	
충청권 Chungchung	5,318,005	5,192	541	5,733	1,078	75	2,020	2.6
(Daejeon, Chungnam, Chungbuk)	10.2%	9.9%	7.2%	9.6%		10.6%	10.1%	
호남권 Honam	5,321,135	5,142	558	5,700	1,071	89	2,314	2.2
(Gwangju, Jeonnam, Jeonbuk)	10.2%	9.8%	7.4%	9.5%		12.6%	11.6%	
영남권 Youngnam	13,408,952	13,927	2,011	15,938	1,189	176	4,913	2.8
(Busan, Daegu, Gyeongnam, Gyeongbuk, Ulsan)	25.8%	26.6%	26.7%	26.6%		24.8%	24.7%	
강원권 Gangwon	1,554,984	1,675	364	2,039	1,311	26	671	2.5
	3.0%	3.2%	4.8%	3.4%		3.7%	3.4%	
Total	52,058,370	52,378	7,540	59,918	1,151	709	19,917	2.6

* 제주 표시 제외. Data of Jeju-do is not shown.

생활권역별 투석환자 분포

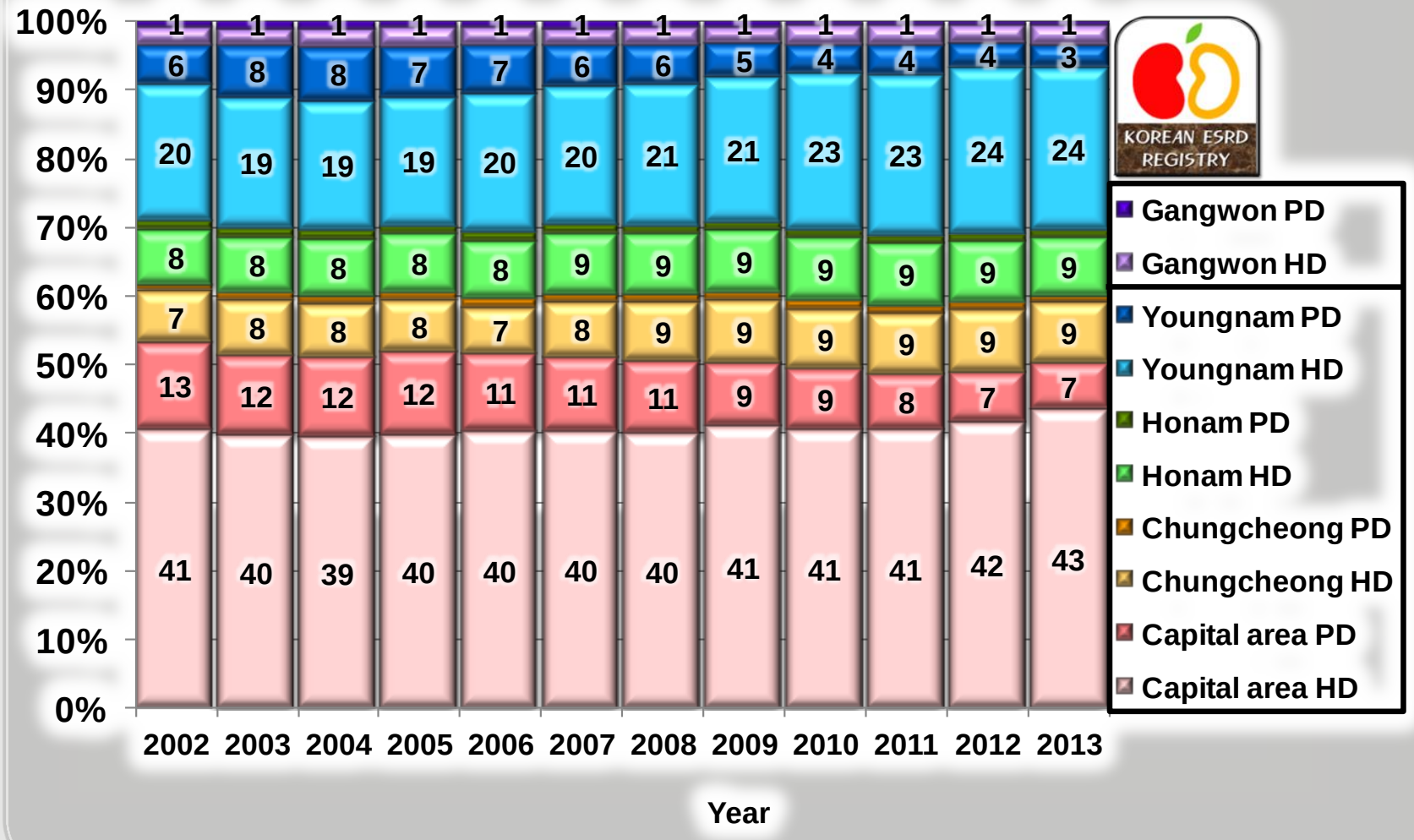
(2013년 12월말 기준)



Dialysis Patients at the End of 2013

HD : 52,378
PD : 7,540
Total : 59,918

생활권역별 투석환자 비율의 연도별 변화

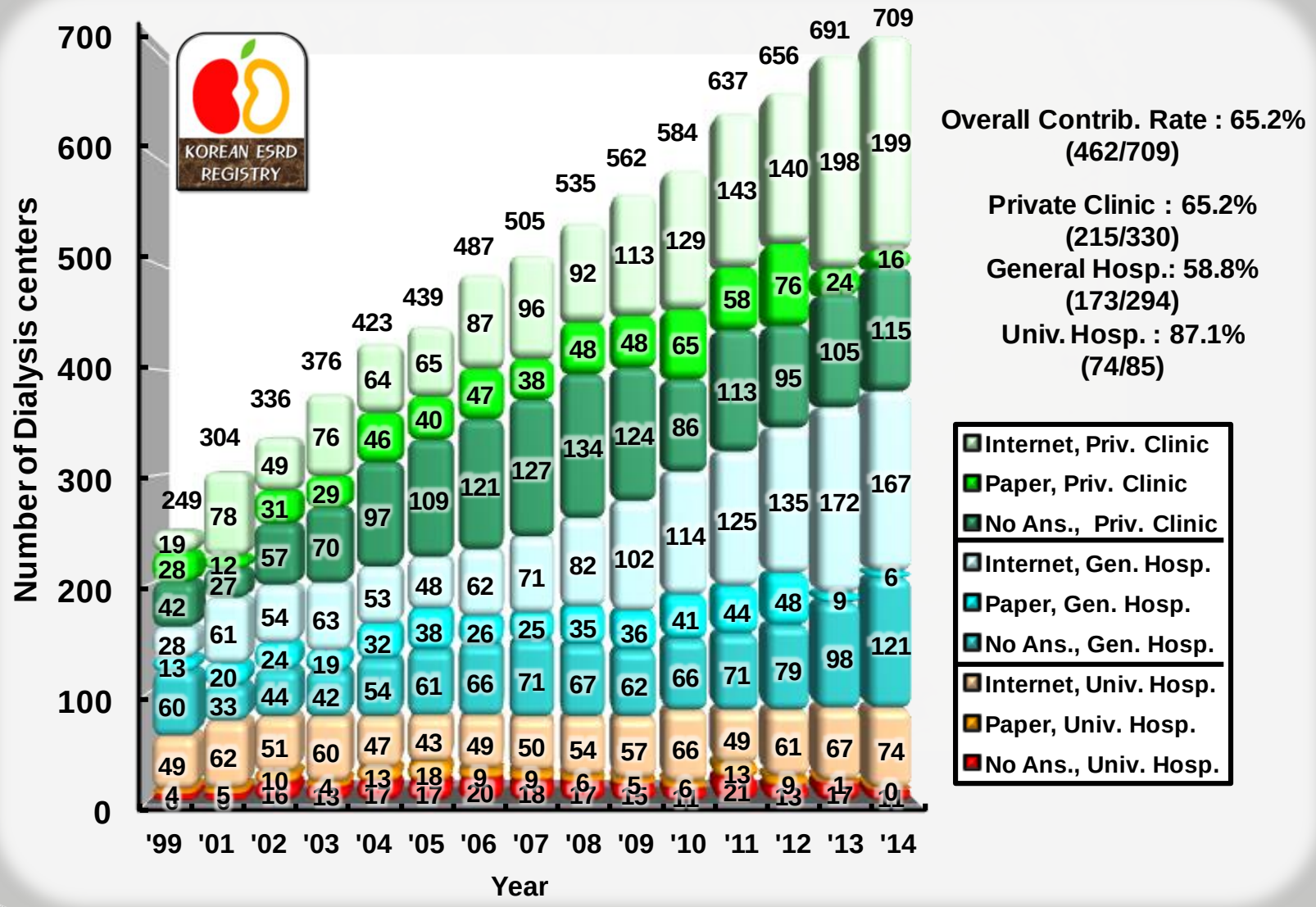


등록사업에 참여한 의료기관 수 및 응답률

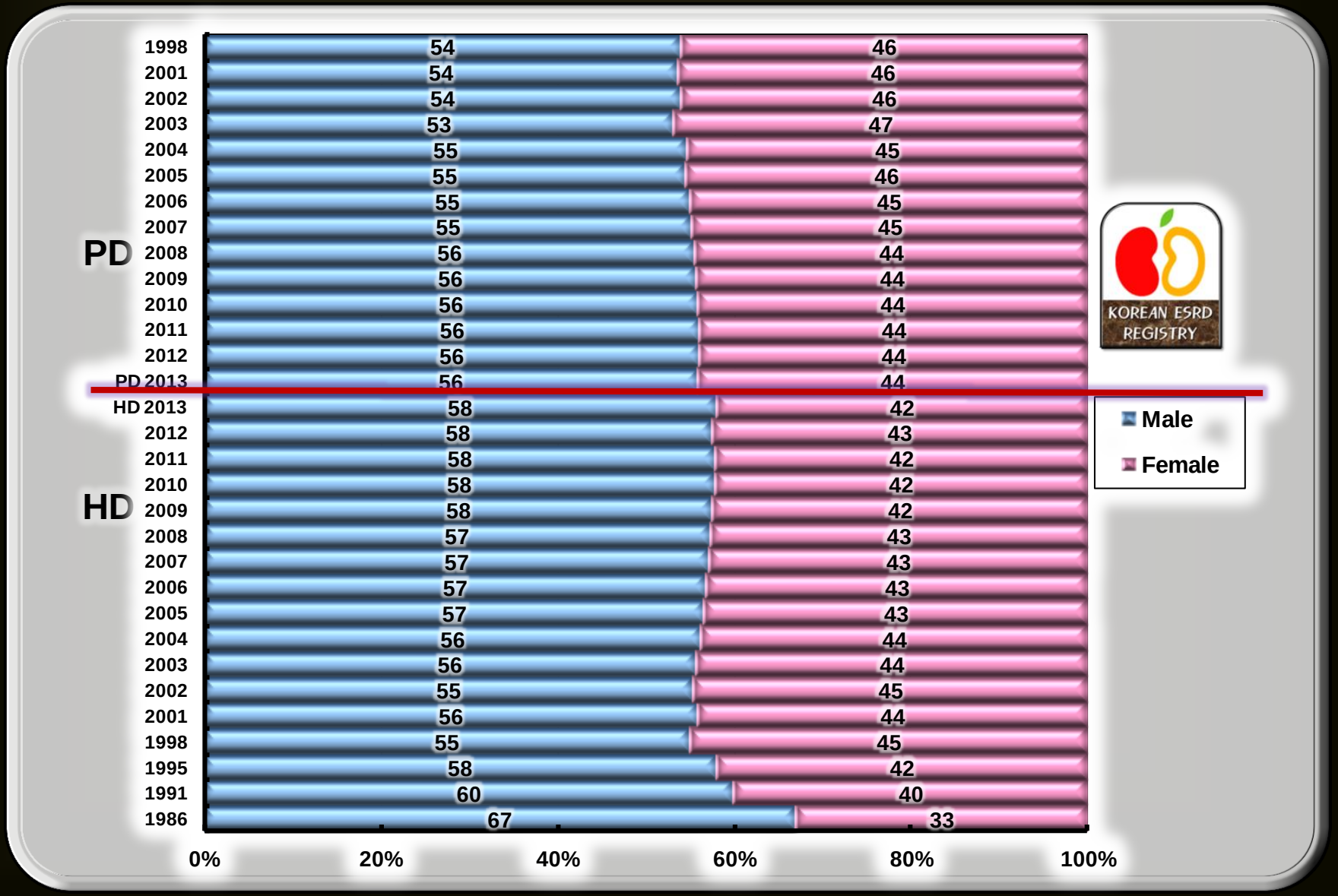
	Dialysis centers*	Internet Input	Paper data	Total contributed center	Contributing rate (%)
서울 Seoul	156	105	5	110	70.5
부산 Busan	46	26	2	28	60.9
대구 Daegu	36	23	1	24	66.7
인천 Incheon	32	21	1	22	68.8
광주 Gwangju	33	21	0	21	63.6
대전 Daejeon	14	10	0	10	71.4
울산 Ulsan	13	6	1	7	53.8
경기 Gyeonggi	145	84	6	90	62.1
강원 Gangwon	26	14	1	15	57.7
충북 Chungbuk	28	19	0	19	67.9
충남 Chungnam	33	18	1	19	57.6
전북 Jeonbuk	22	12	0	12	54.5
전남 Jeonnam	34	21	0	21	61.8
경북 Gyeongbuk	36	20	3	23	63.9
경남 Gyeongnam	45	32	1	33	73.3
제주 Jeju	10	8	0	8	80.0
Total	709	440	22	462	65.2

* 투석의료기관 수에서 비윤리 의료기관(약 50개소)은 제외함.

의료기관의 증가와 의료기관별 등록률

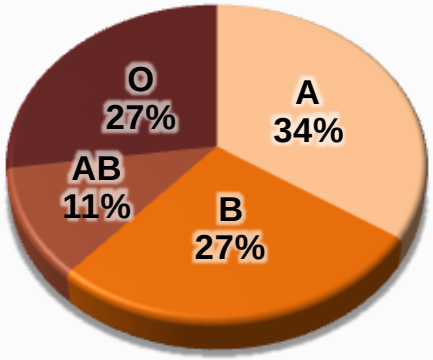


Gender Ratio of Dialysis Patients

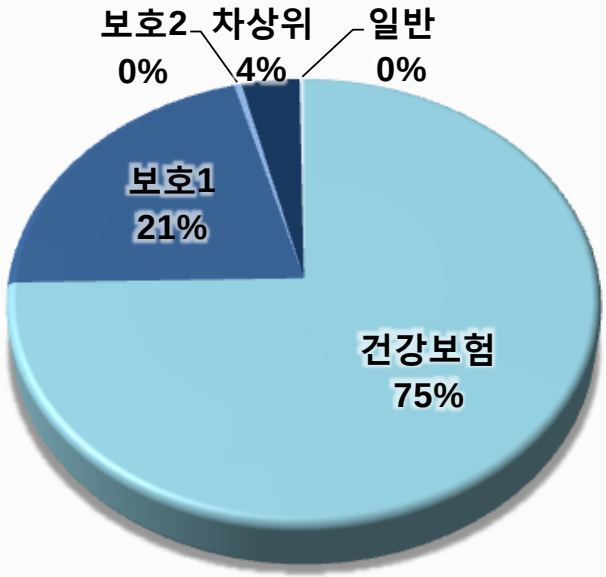


ABO Blood type, Hepatitis virus, Insurance

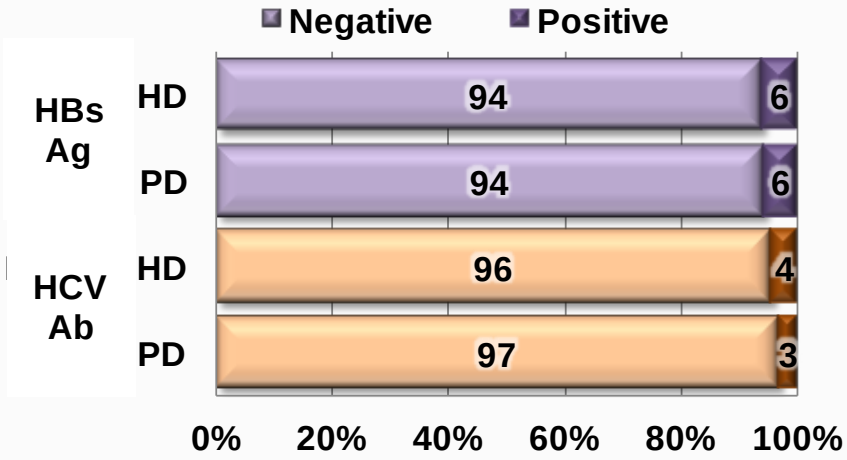
ABO Blood type



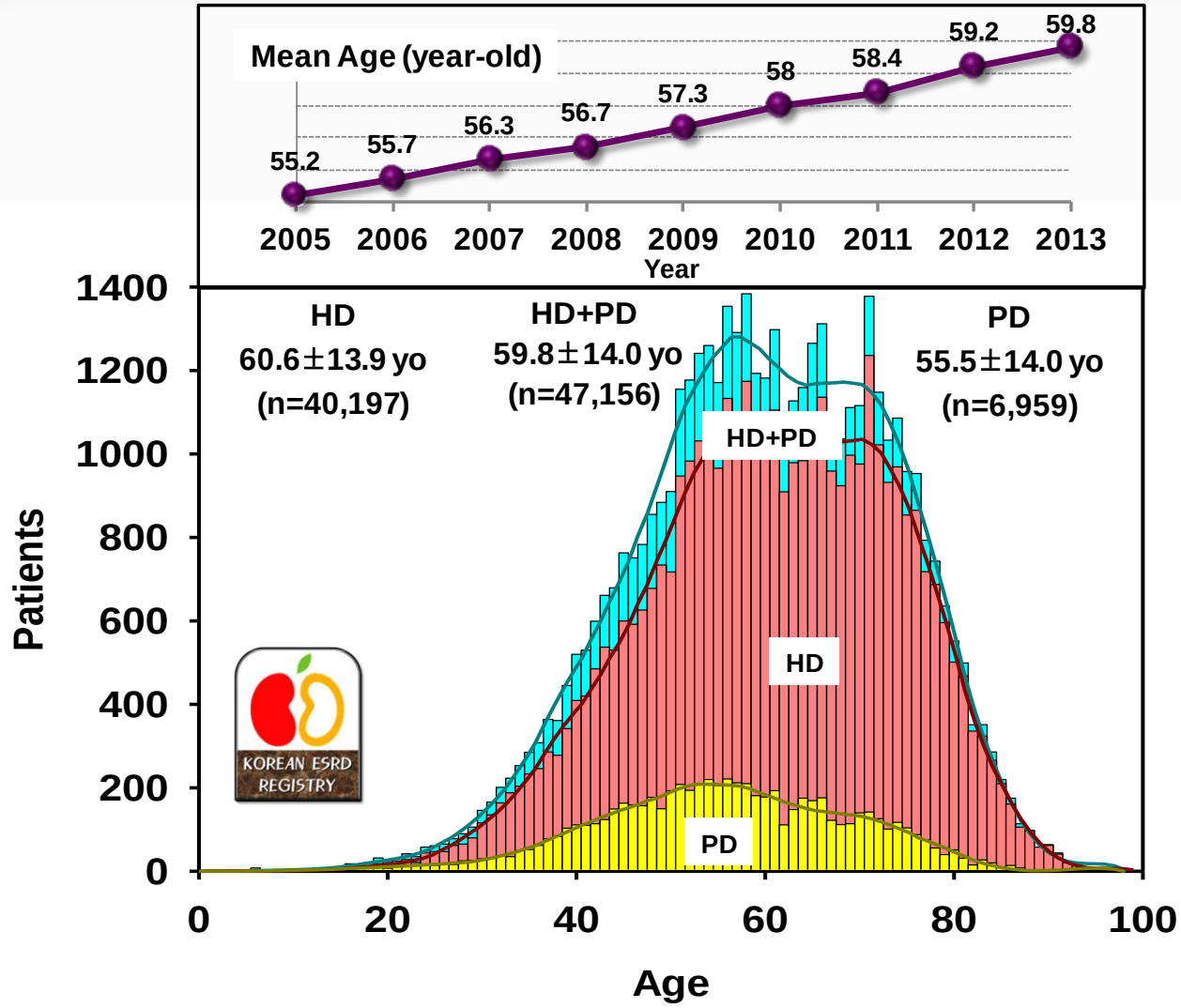
Insurance



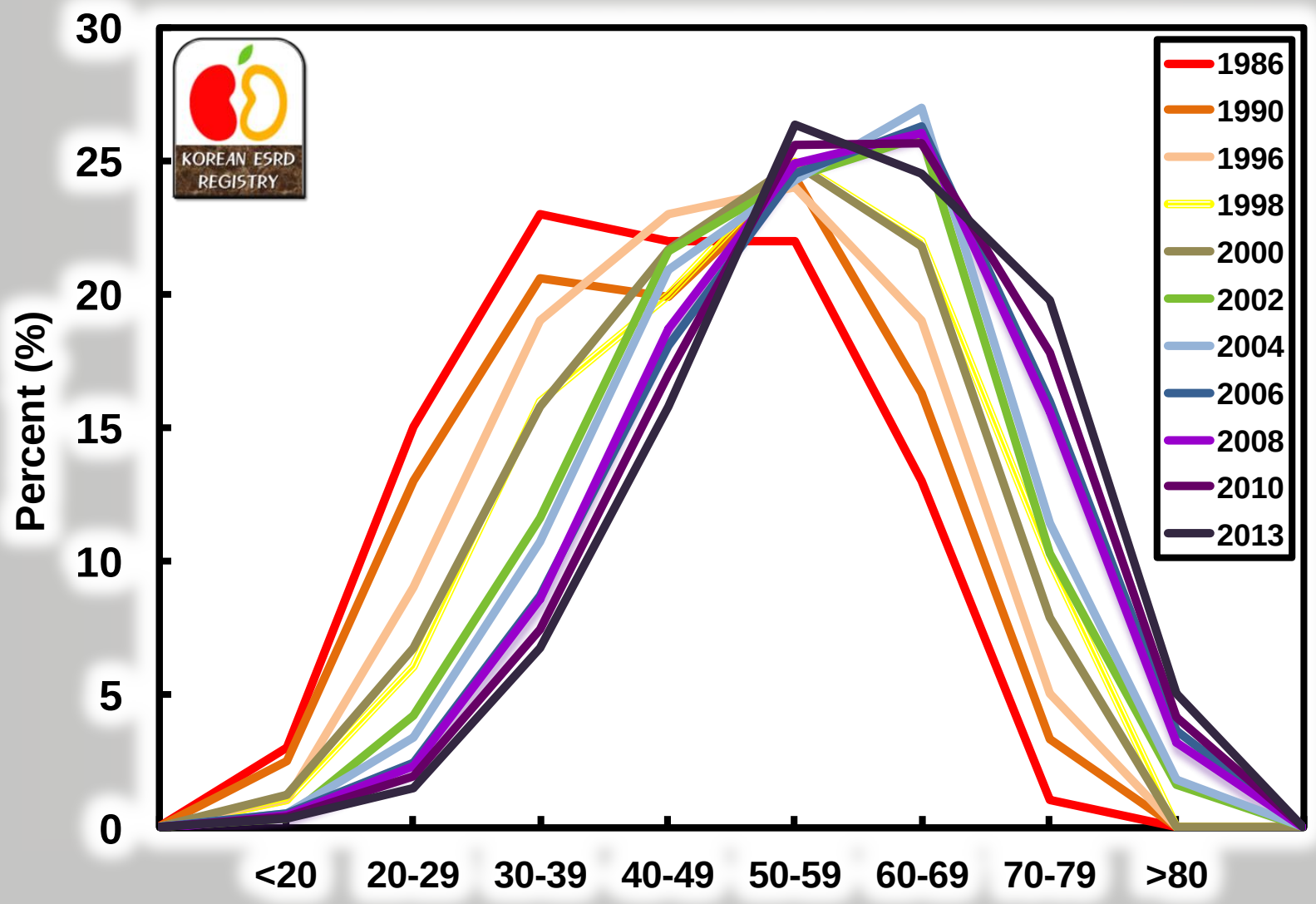
Hepatitis Virus



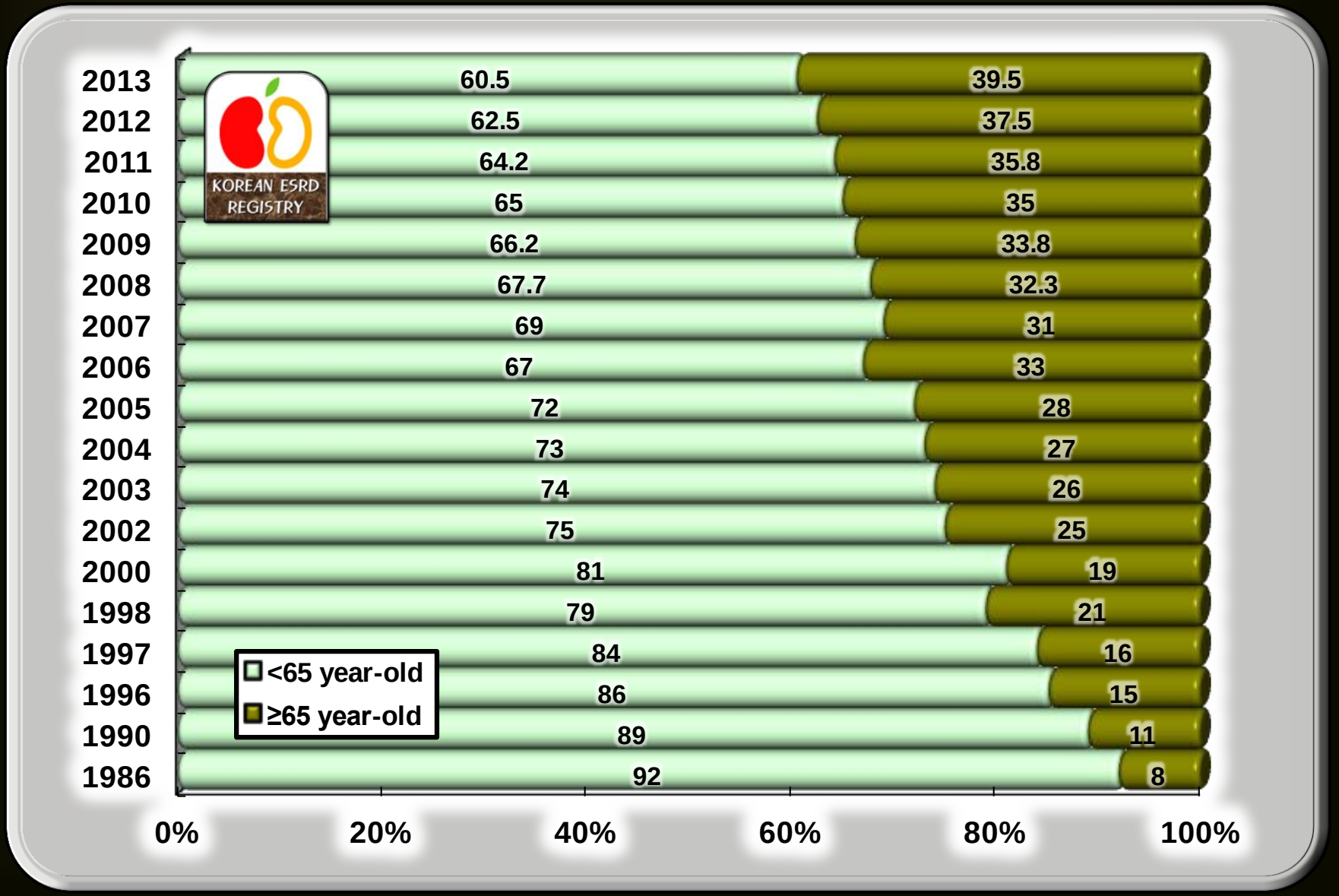
Age Distribution of Dialysis Patients



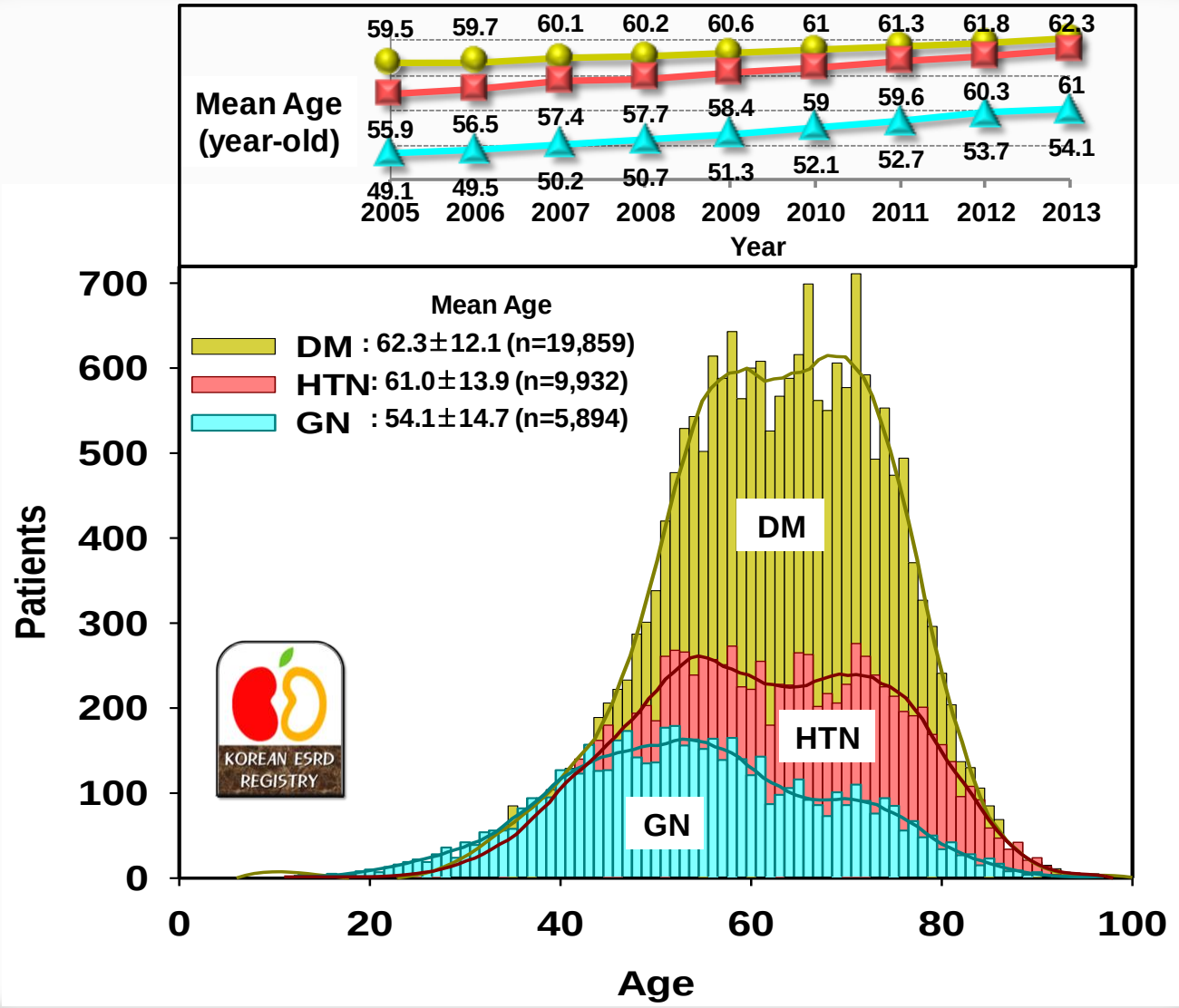
Age Distribution of HD Pts according to Year



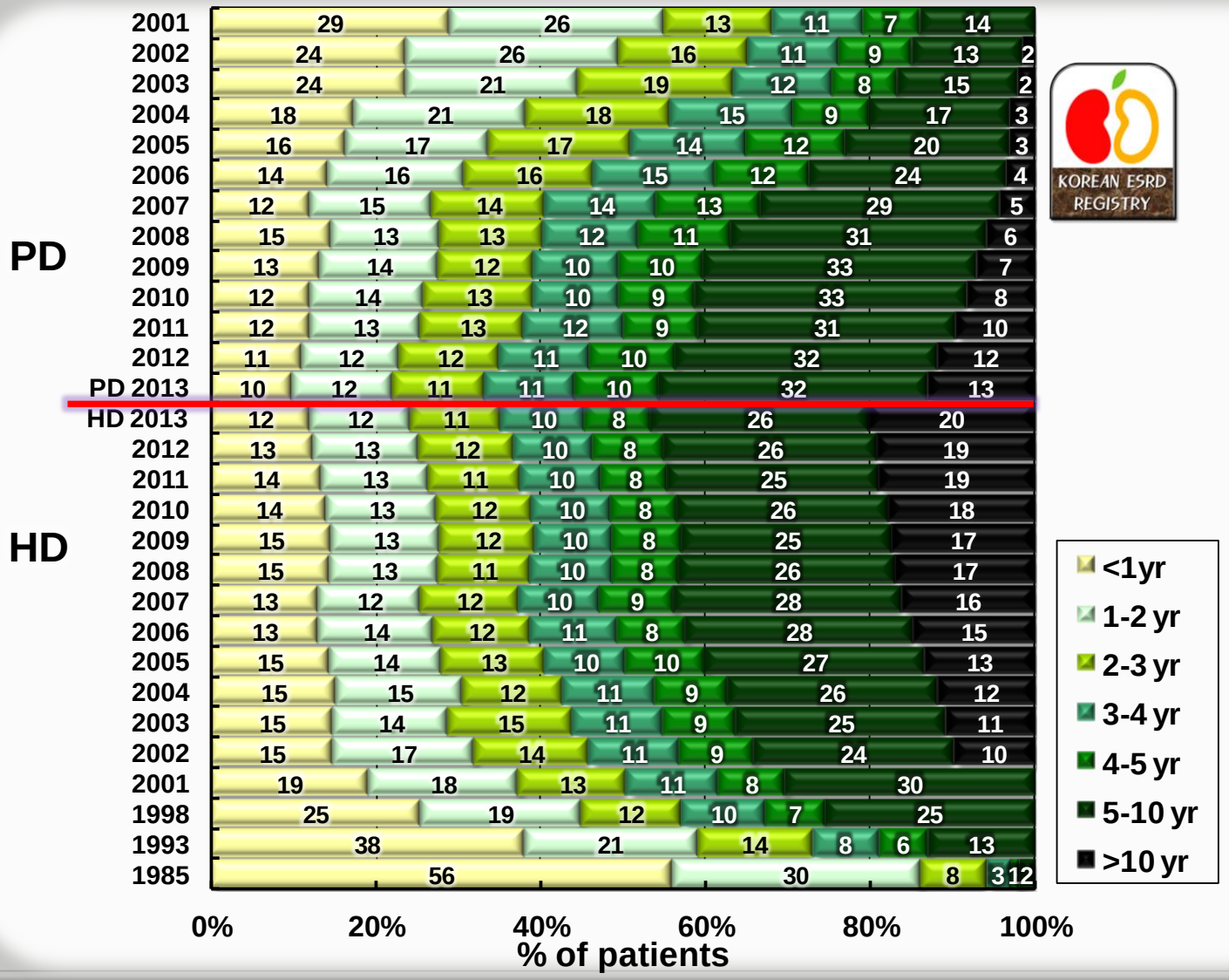
Percent of Elderly Dialysis Patients



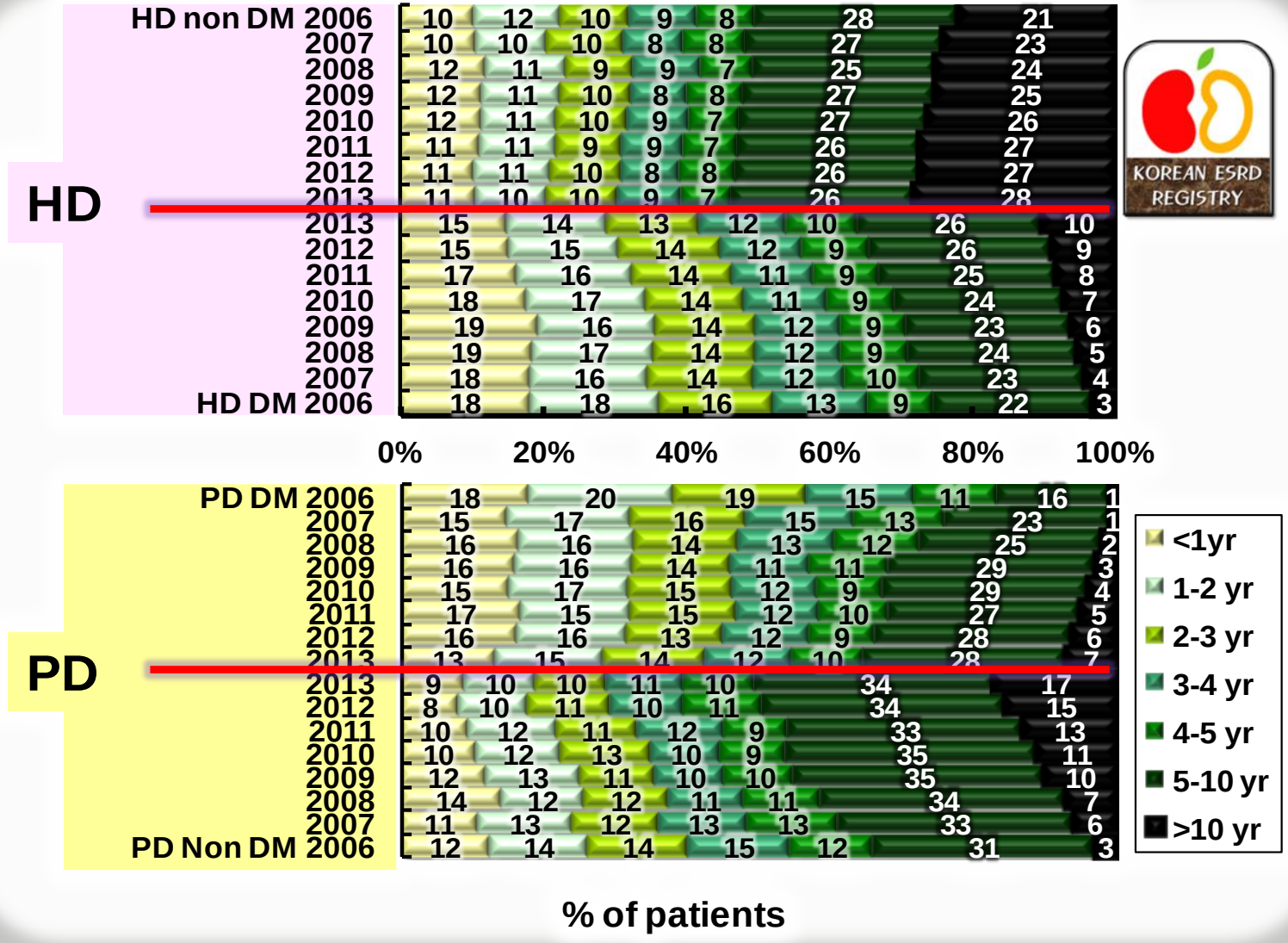
Age Distribution according to ESRD Causes



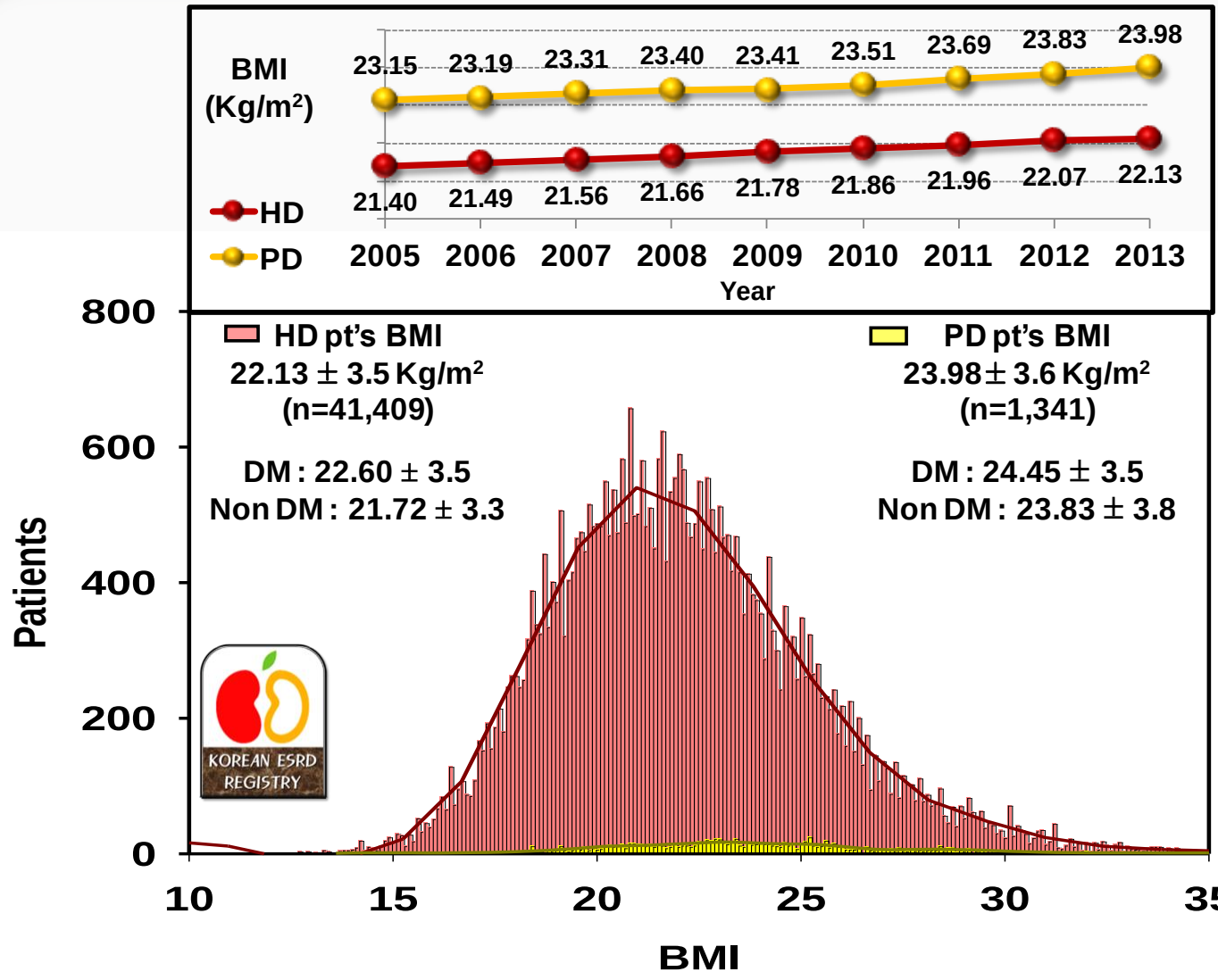
Duration of Dialysis Maintenance



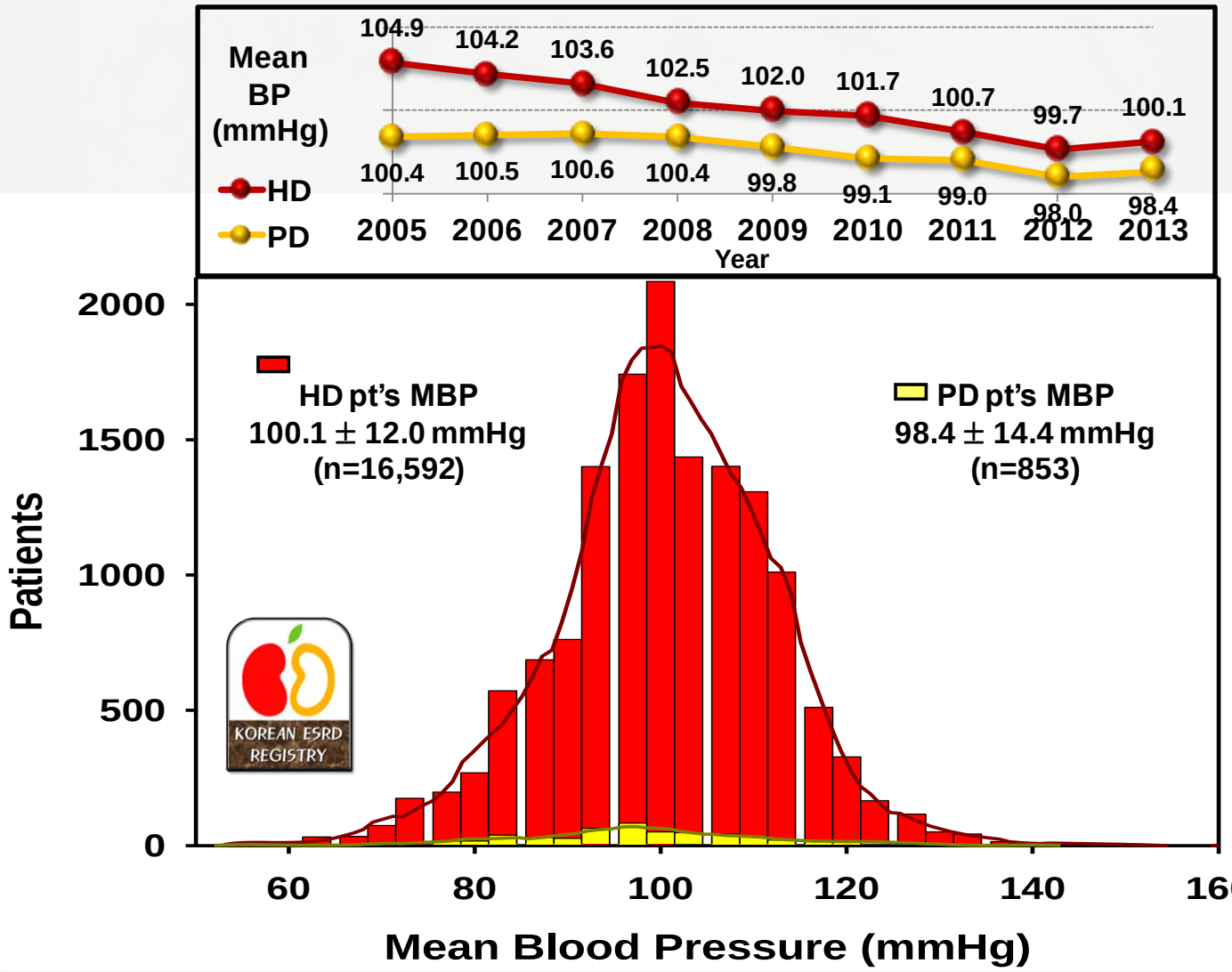
Duration of Dialysis : DM & Non-DM



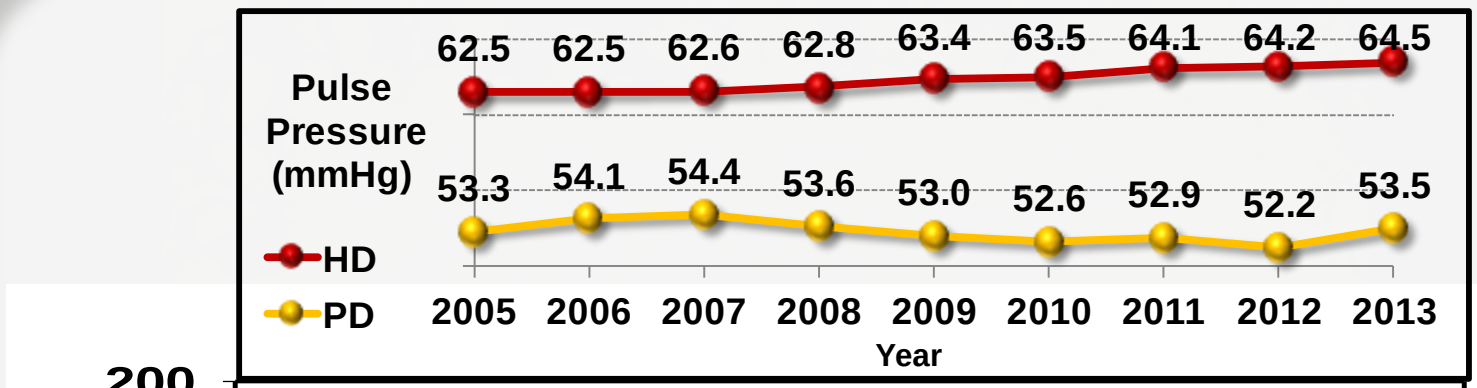
Body Mass Index : HD & PD

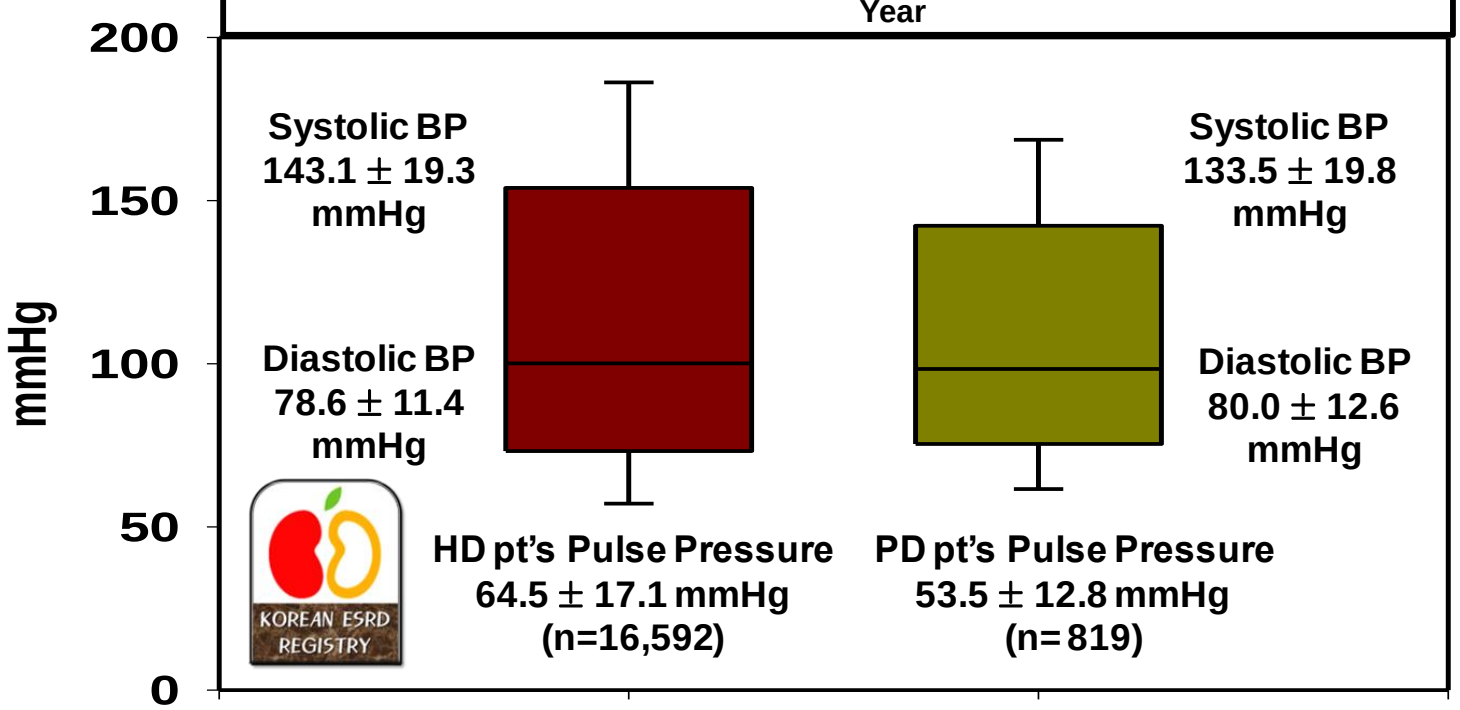


Mean Blood Pressure : HD & PD

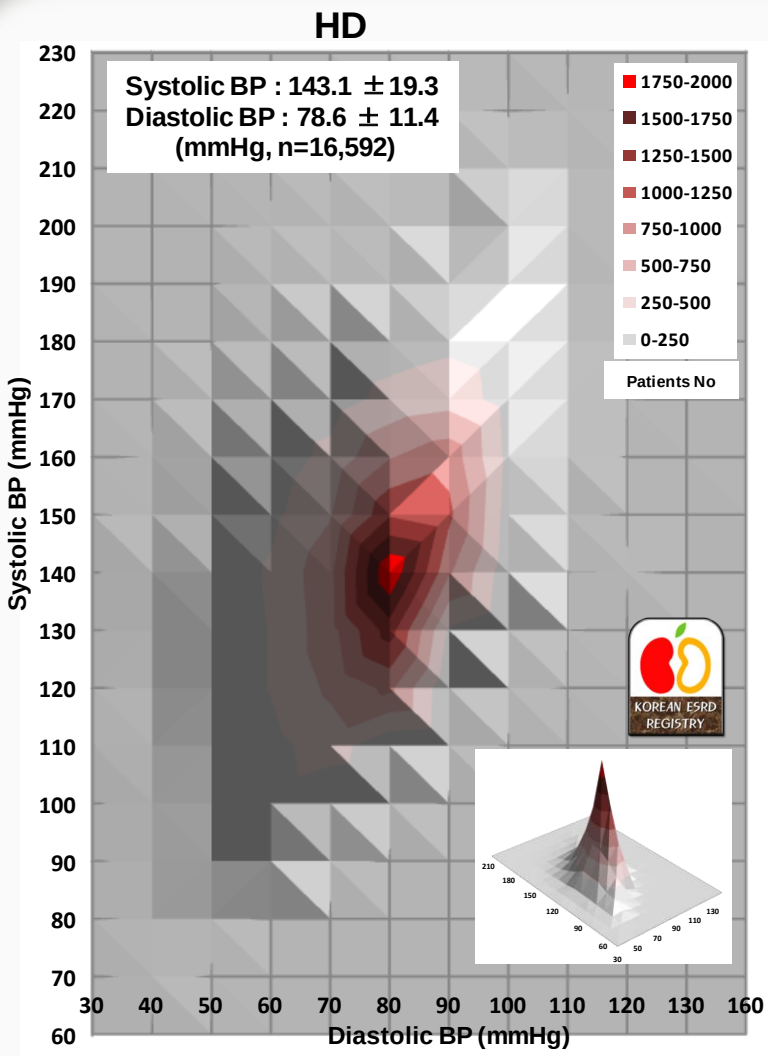


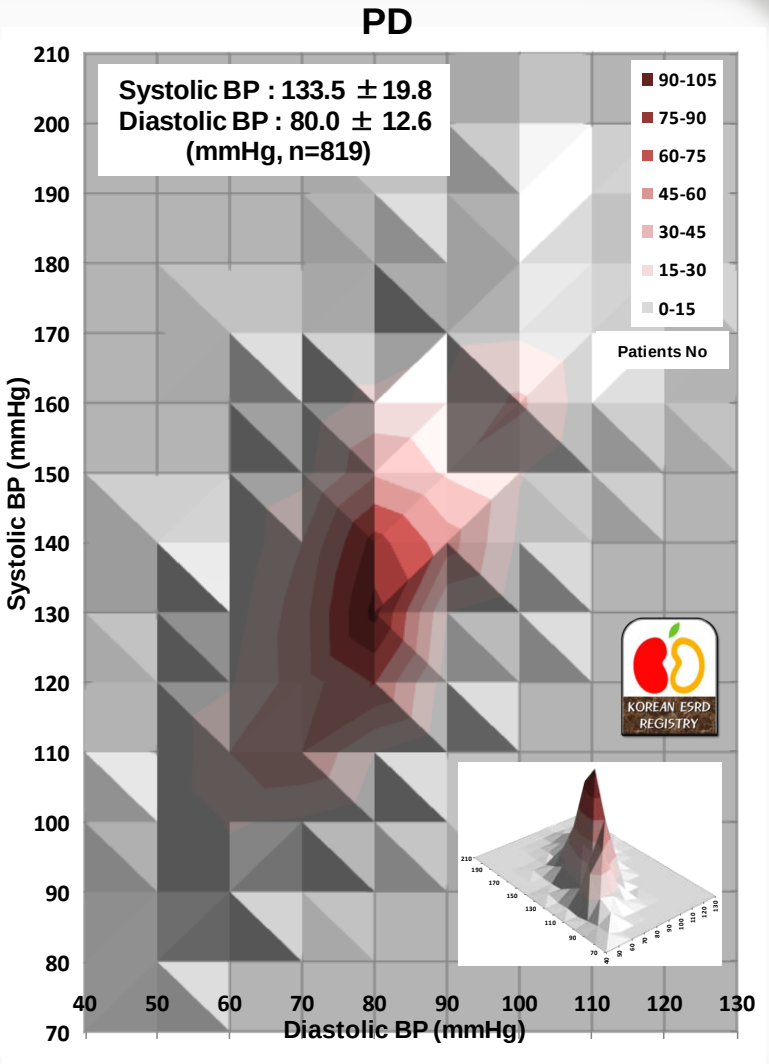
Pulse Pressure : HD & PD



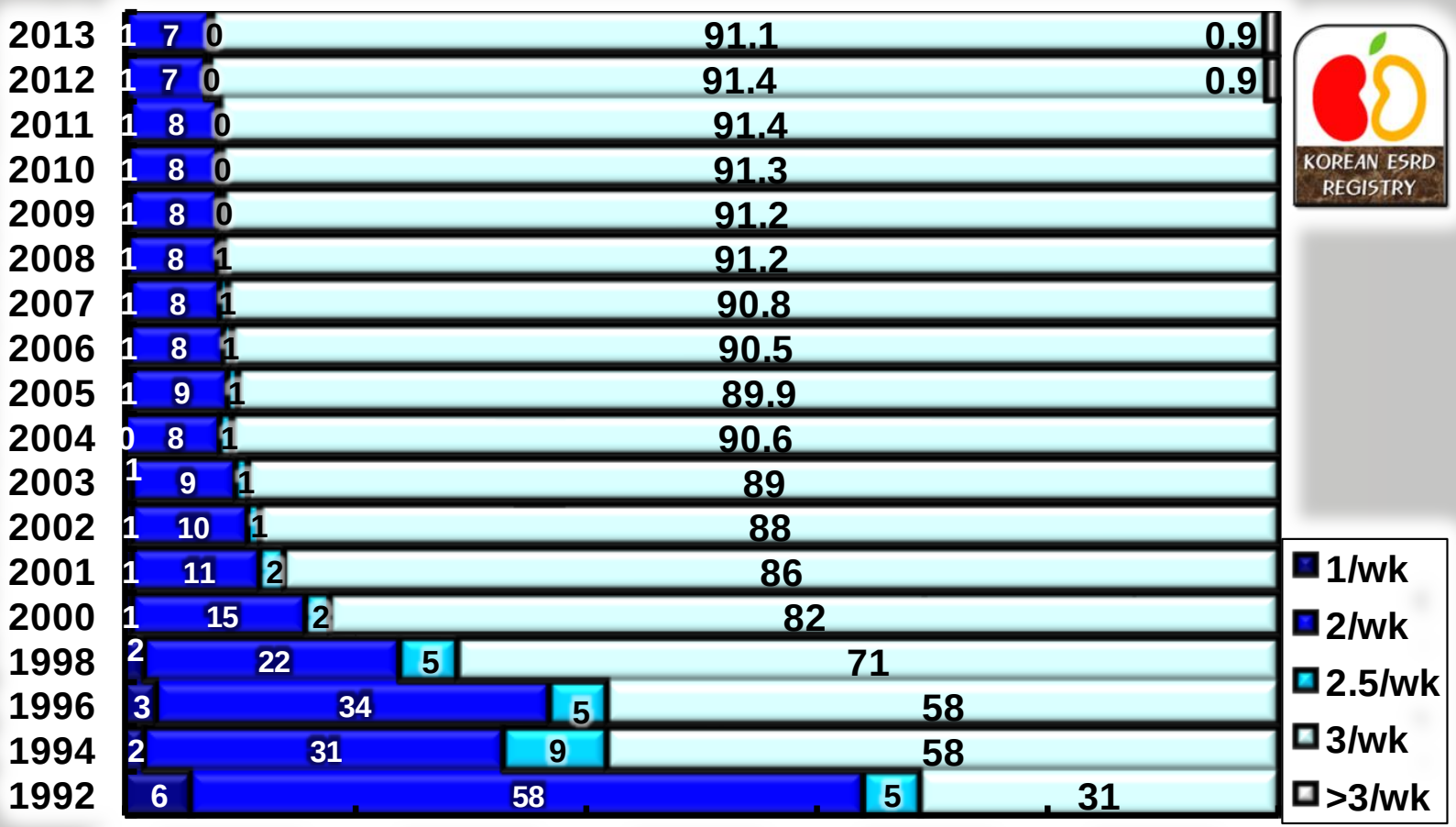


Patients' Distribution according to BP

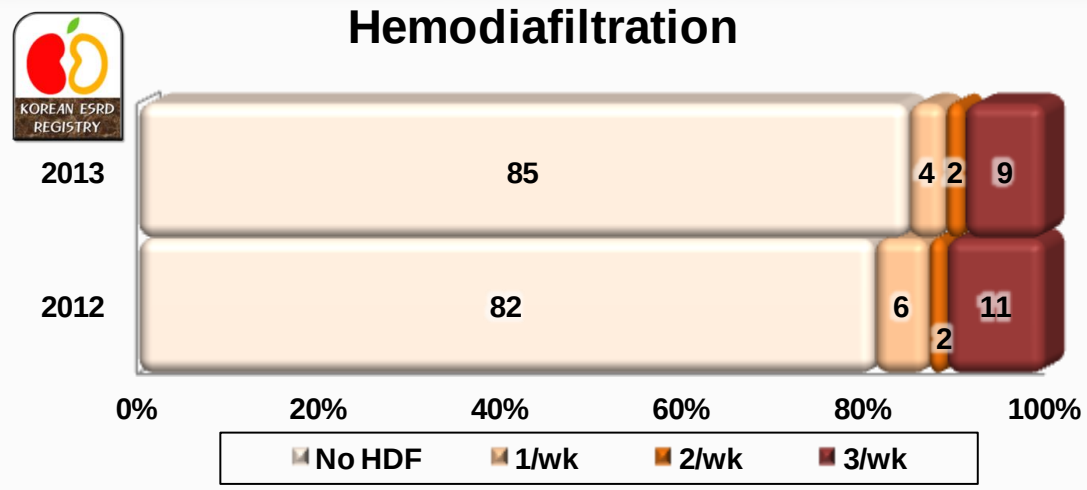


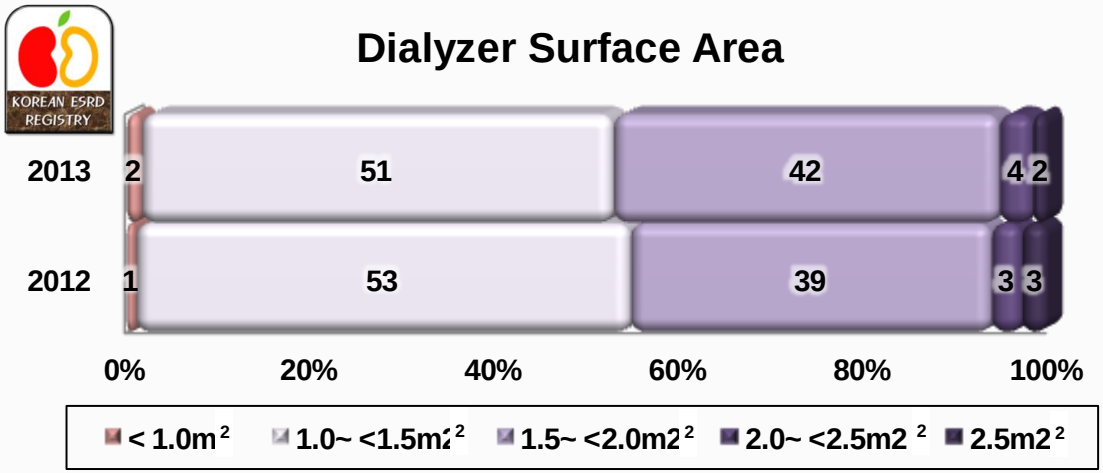


Frequency of HD per Week

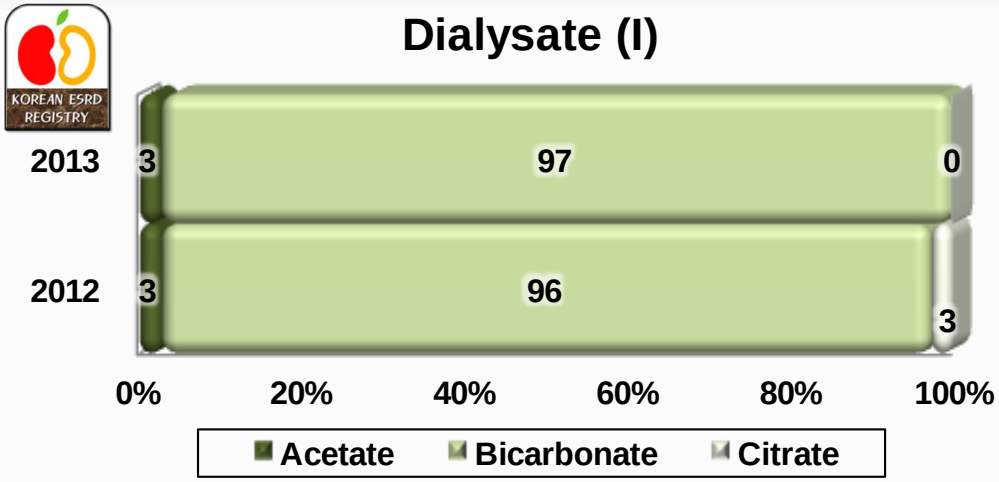


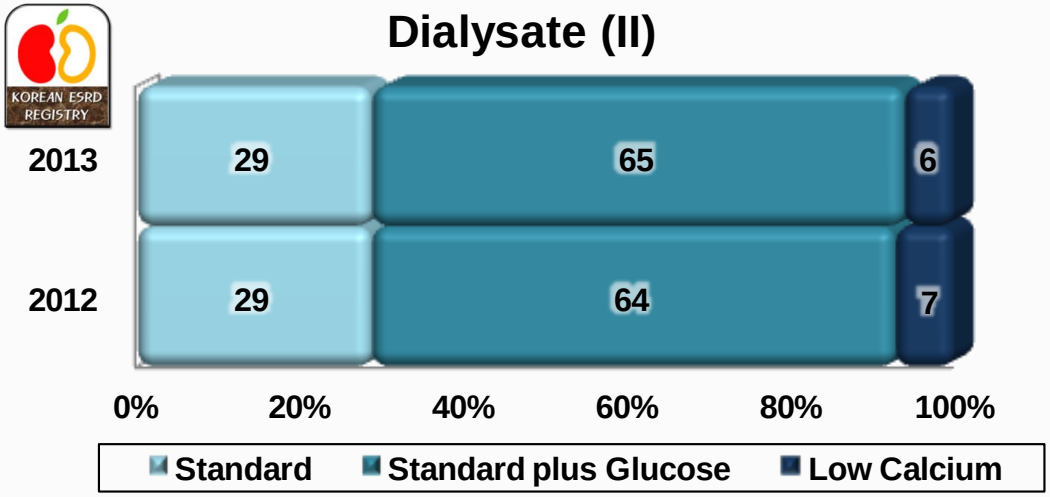
Hemodiafiltration & Dialyzer



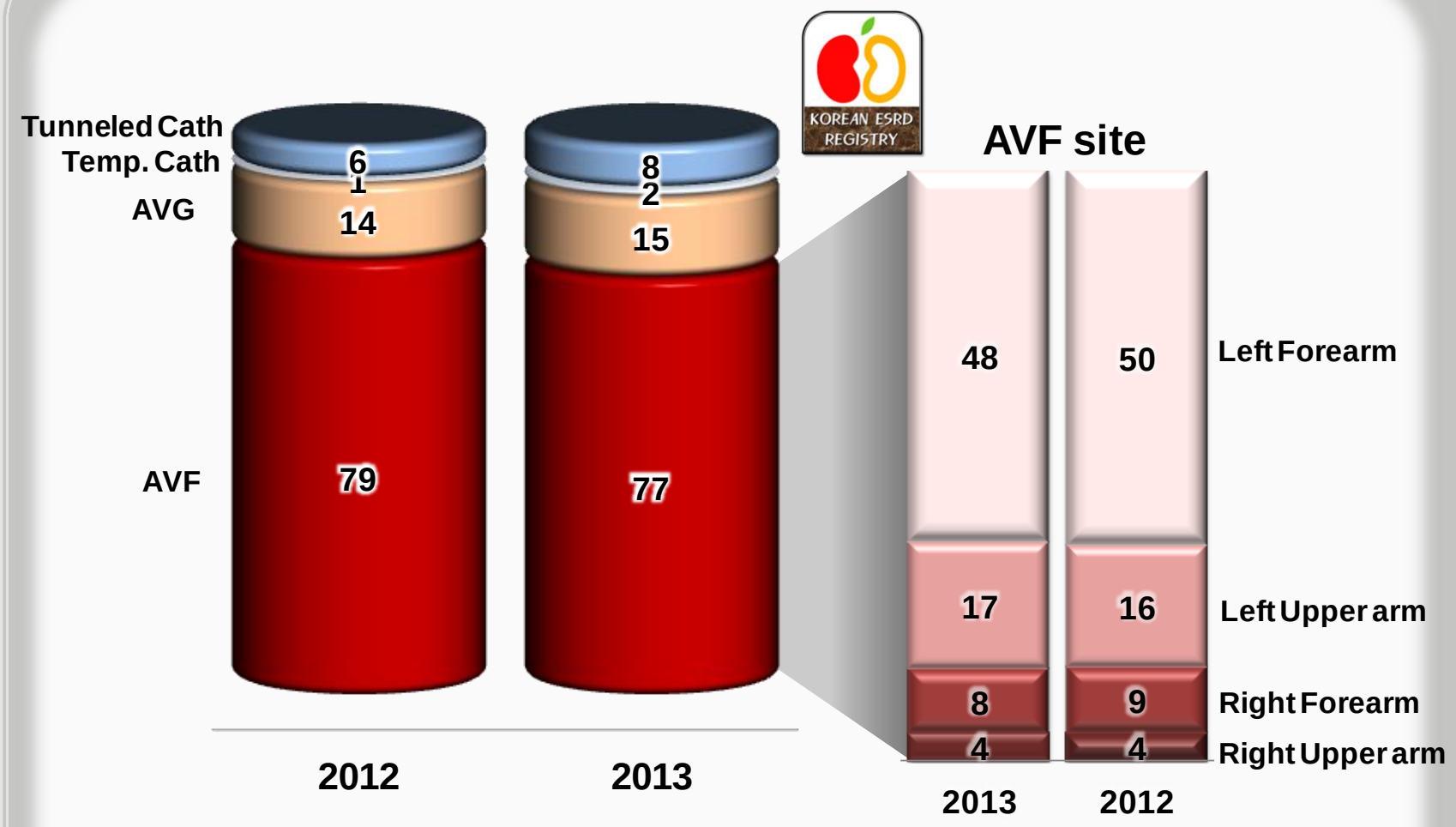


HD Dialysate



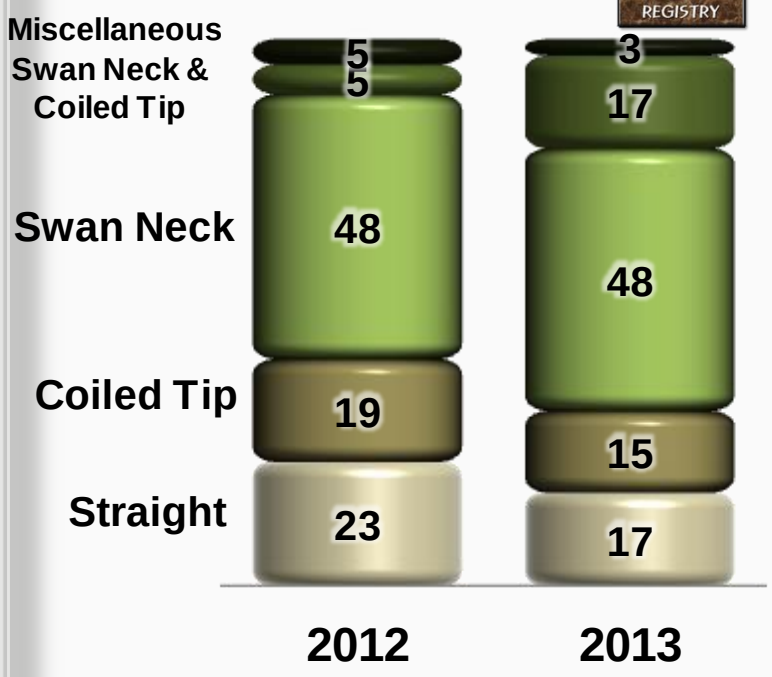


Vascular Access

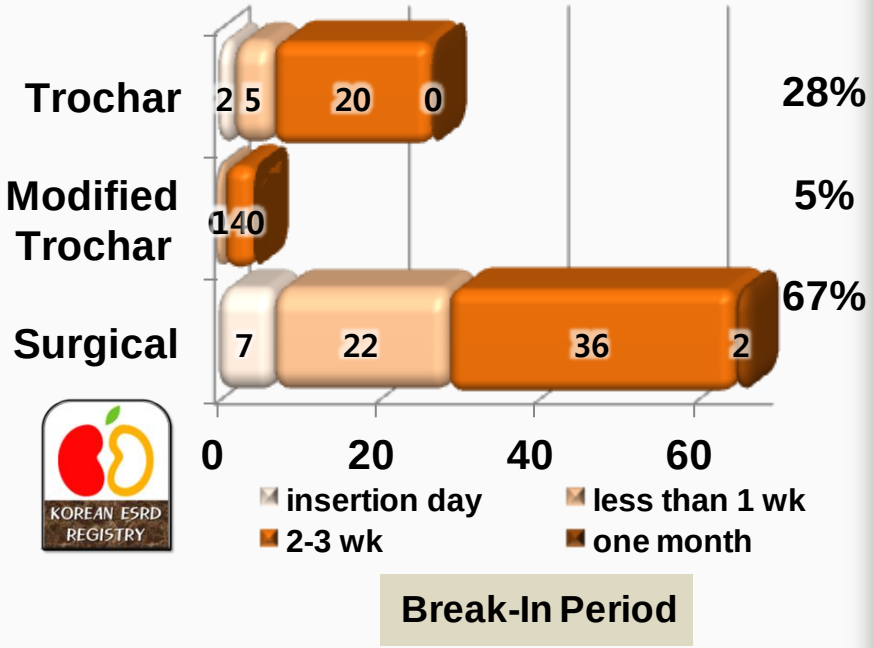


PD Catheter

PD Catheter Type

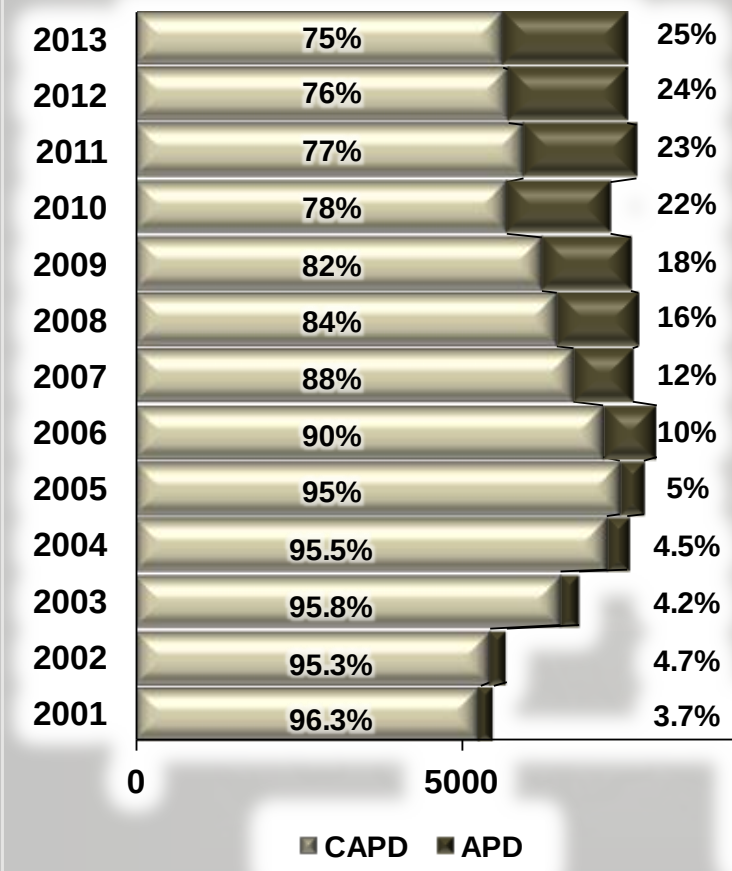


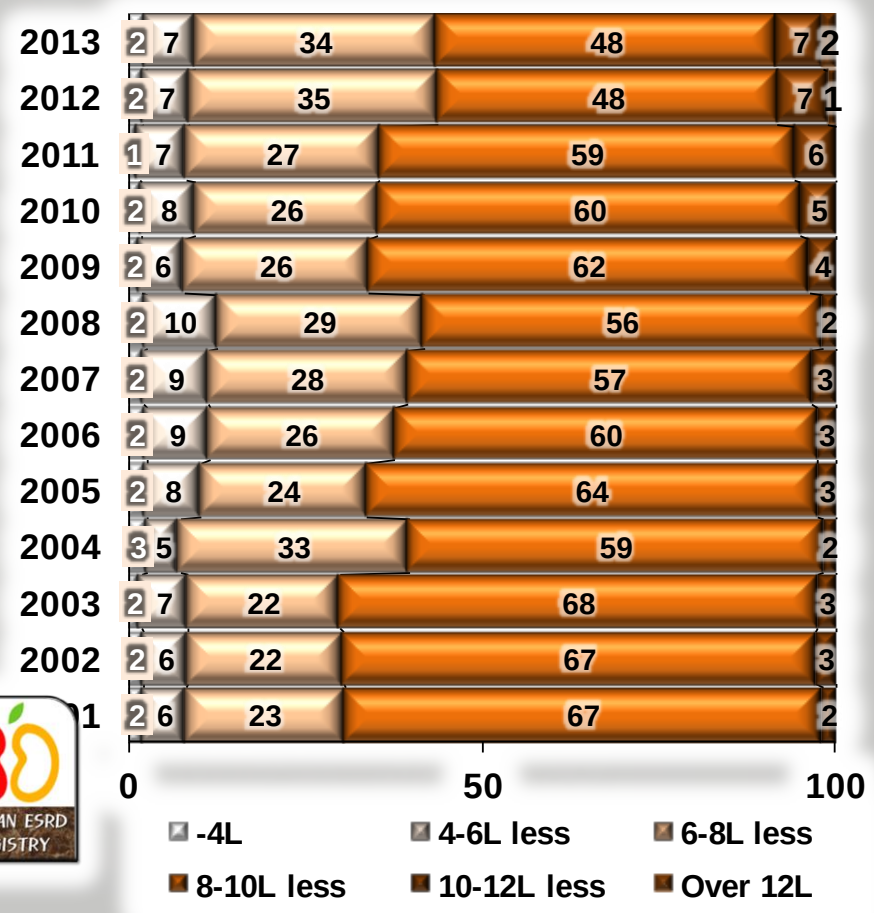
PD Catheter Insertion Method 2013



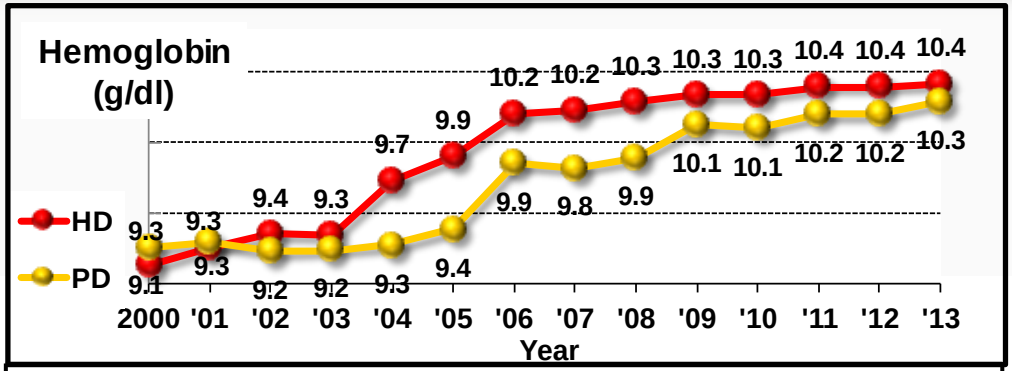
Break-In Period

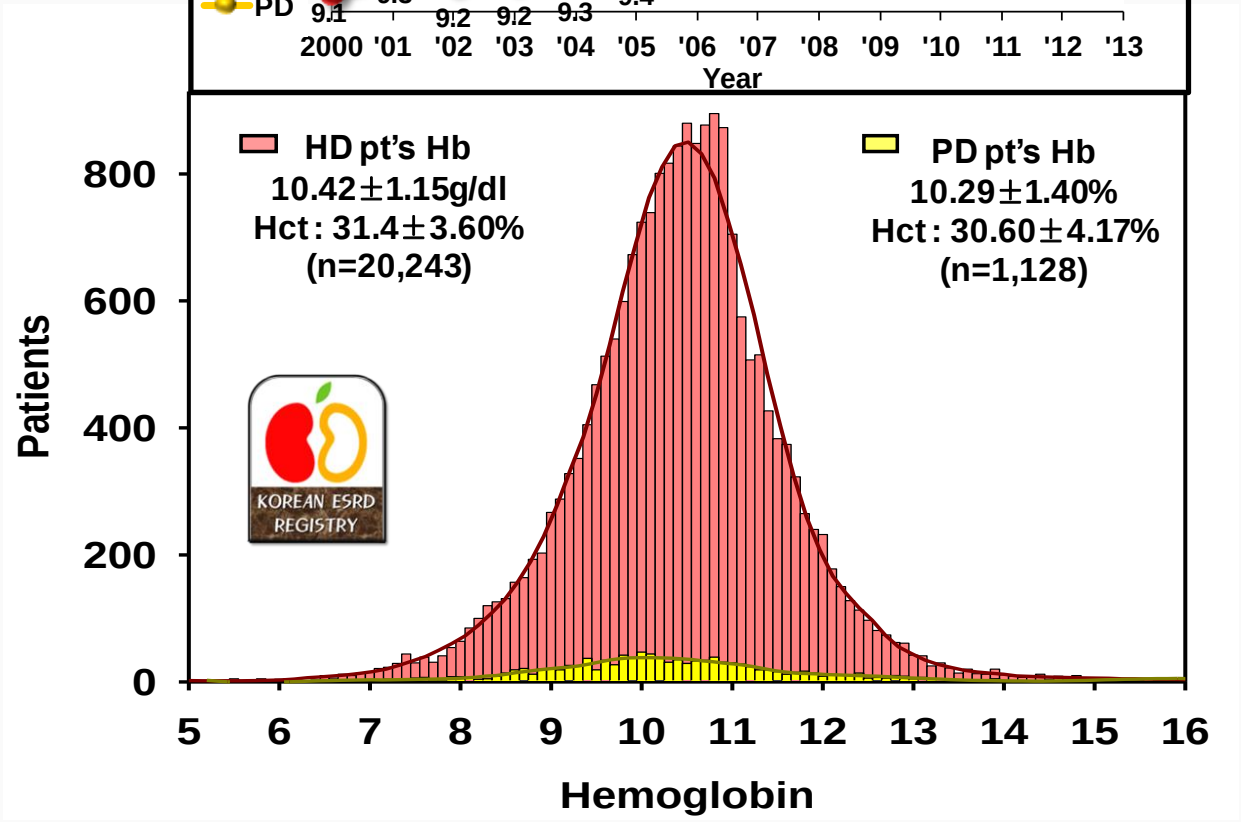
PD Type & Doses



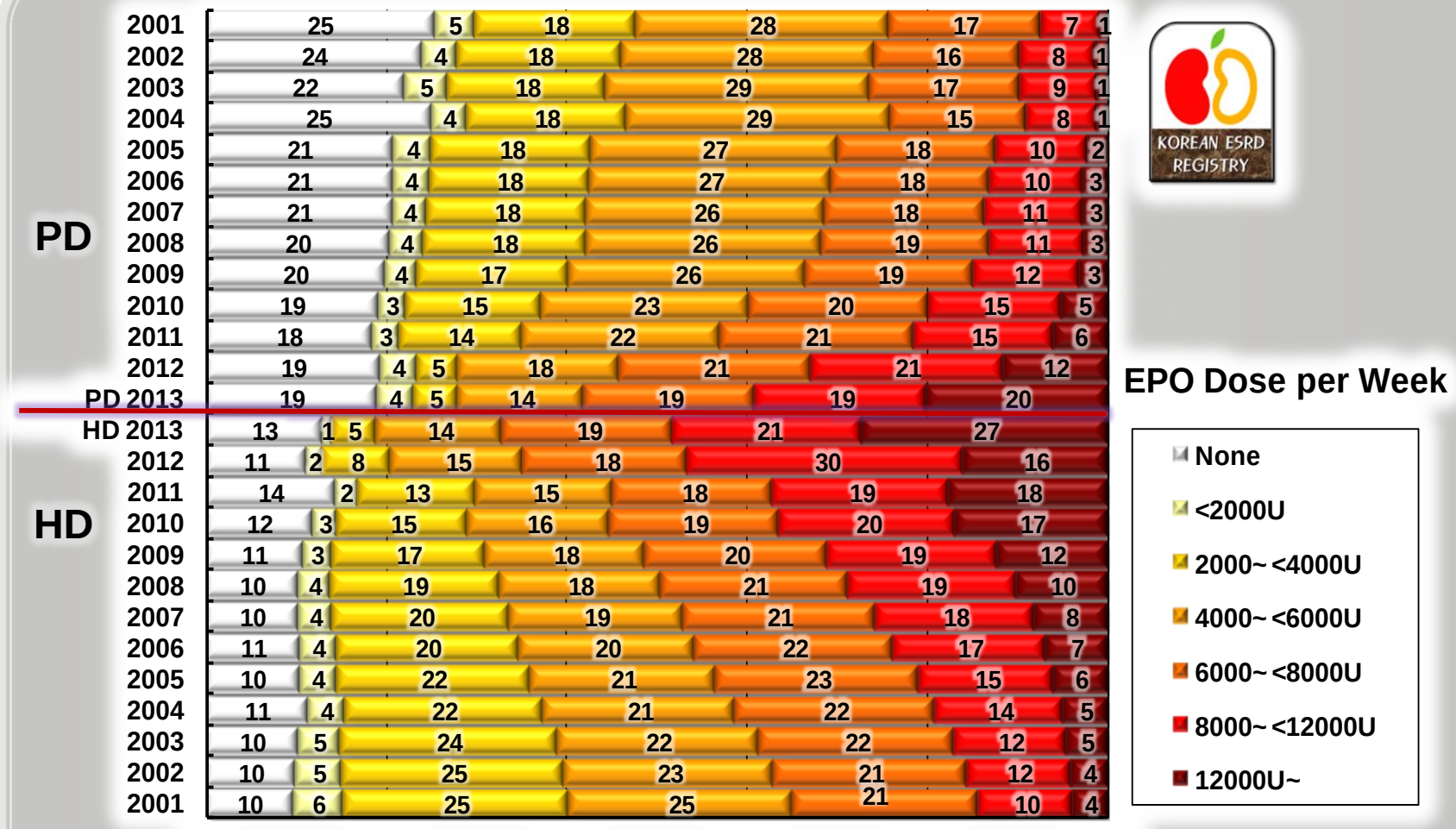


Hemoglobin : HD & PD





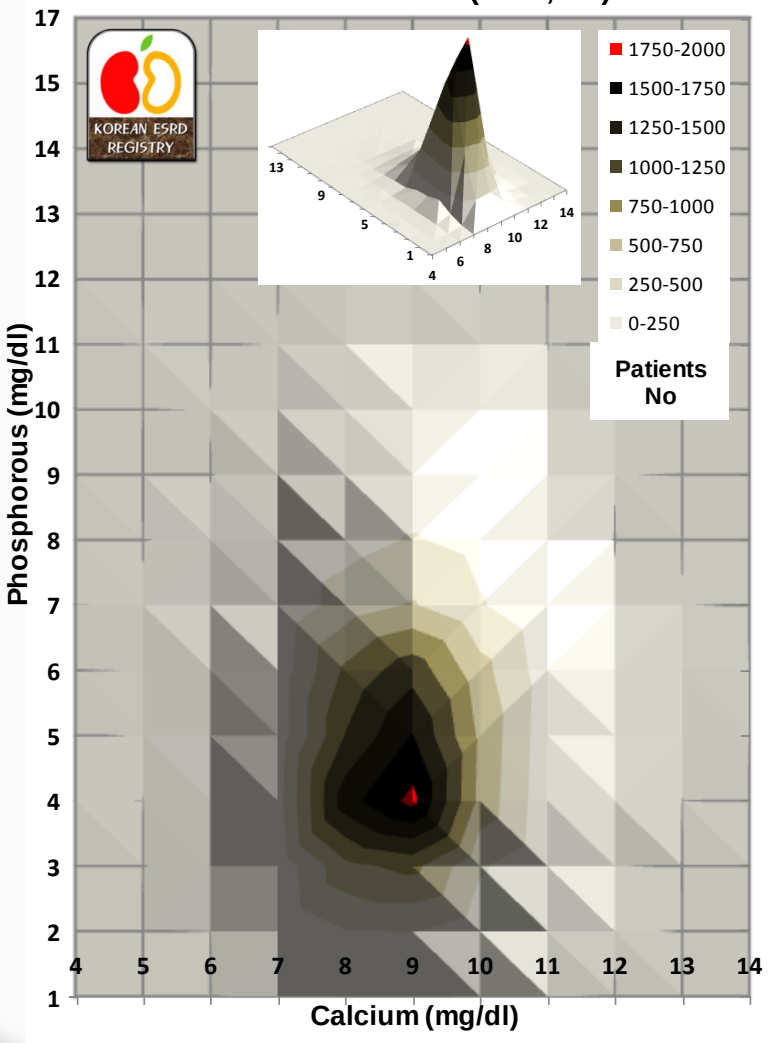
Erythropoietin Doses



Calcium & Phosphorous

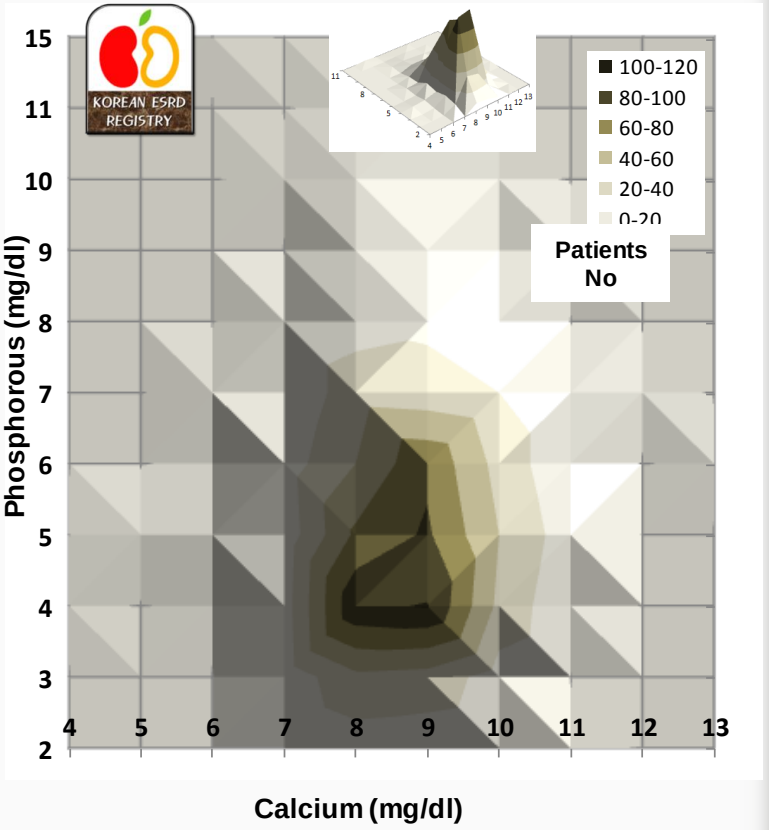
HD

Ca : 8.87 ± 0.89 (n=15,450)
P : 4.94 ± 1.63 (n=15,457)

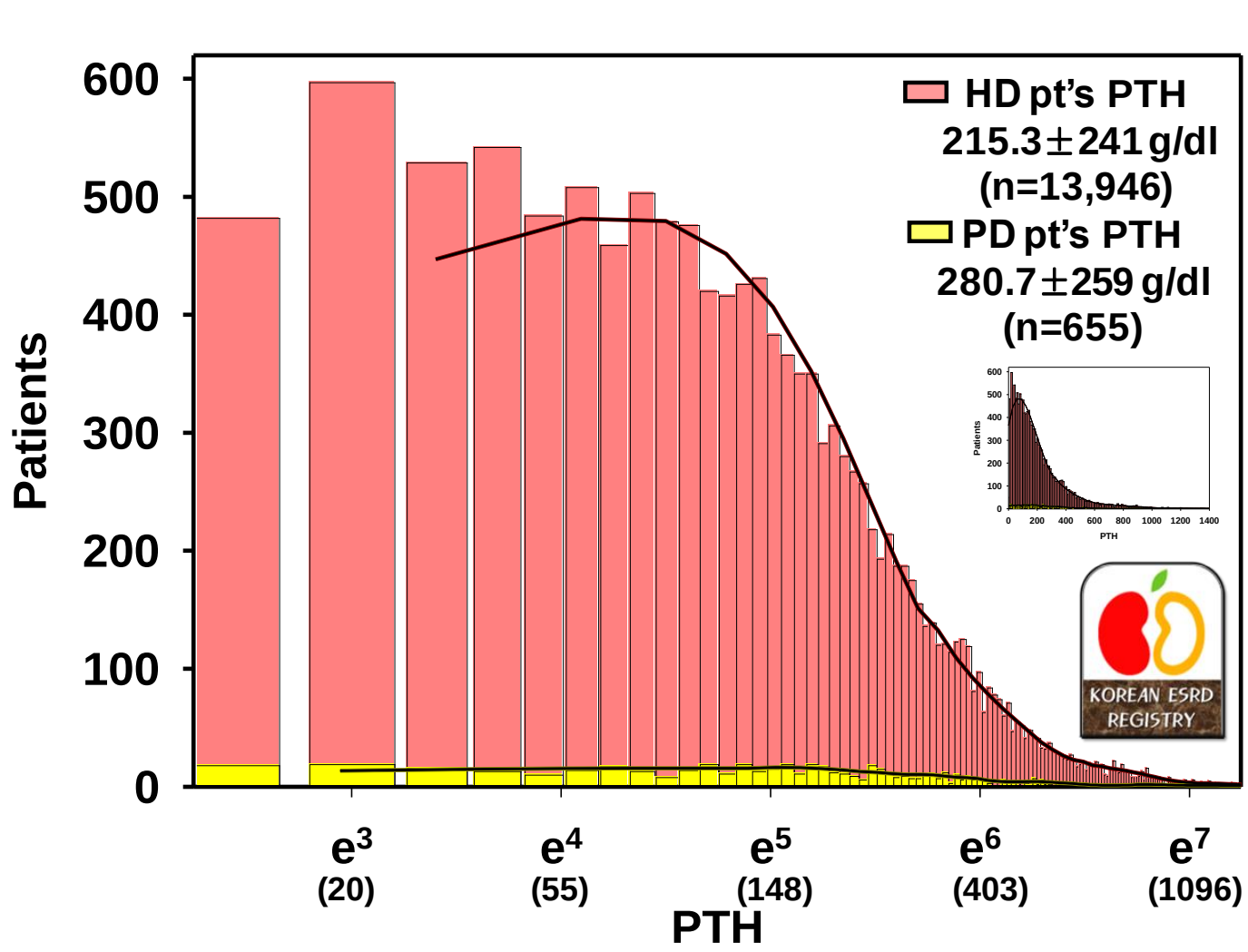


PD

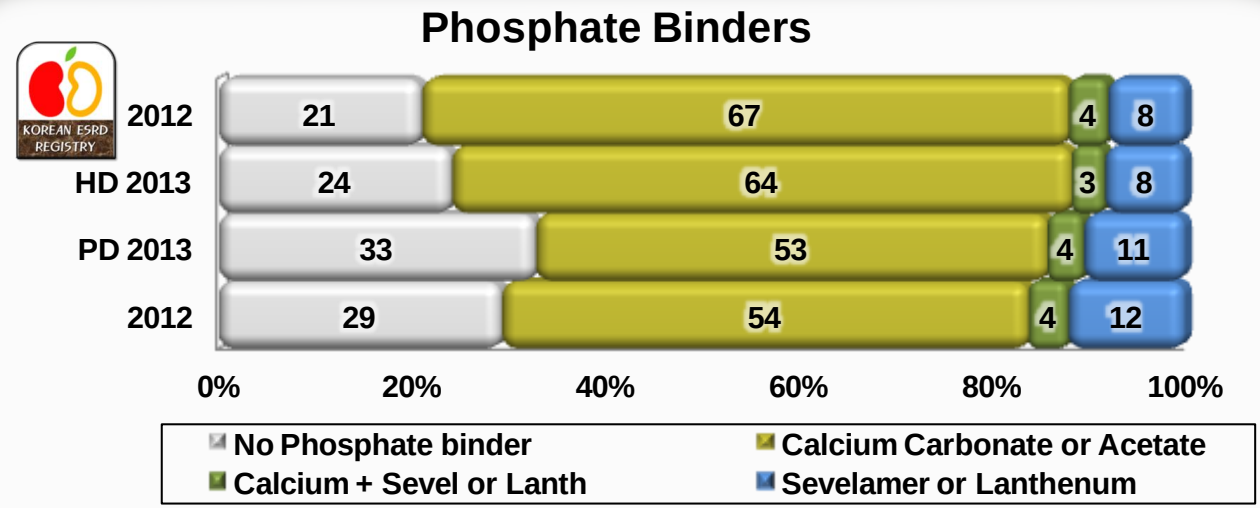
Ca : 8.74 ± 0.91 (n=880)
P : 5.05 ± 1.56 (n=880)

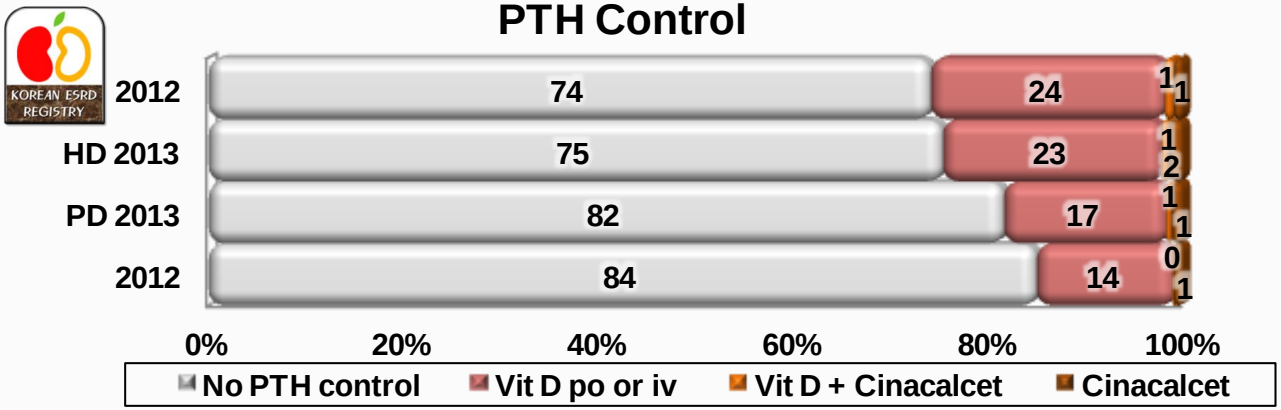


PTH

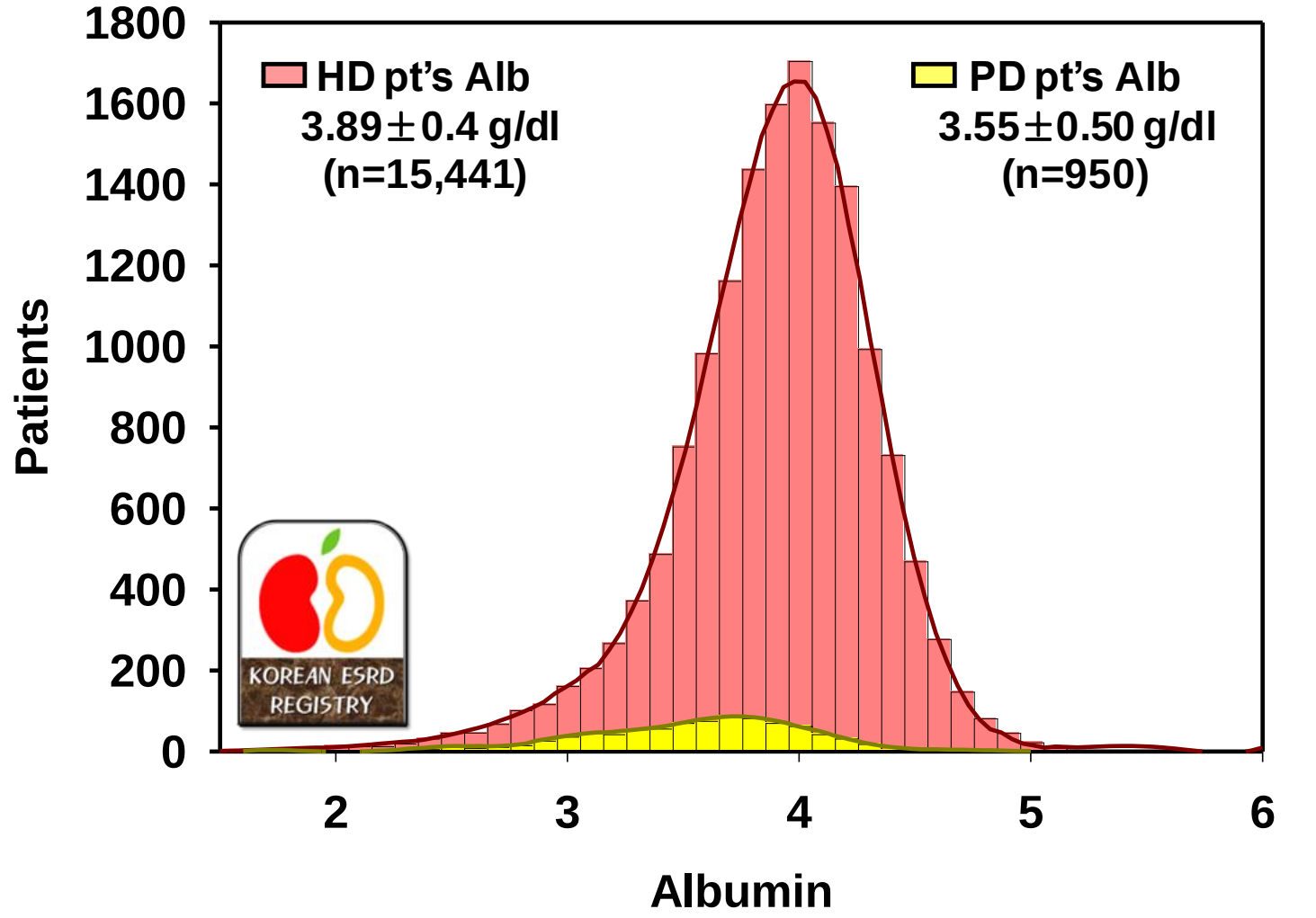

HD pt's PTH
215.3±241 g/dl
(n=13,946)
PD pt's PTH
280.7±259 g/dl
(n=655)
Patients
600
500
400
300
200
100
0
e3 (20)
e4 (55)
e5 (148)
e6 (403)
e7 (1096)
PTH
KOREAN ESRD REGISTRY

Phosphate Binders & PTH Control

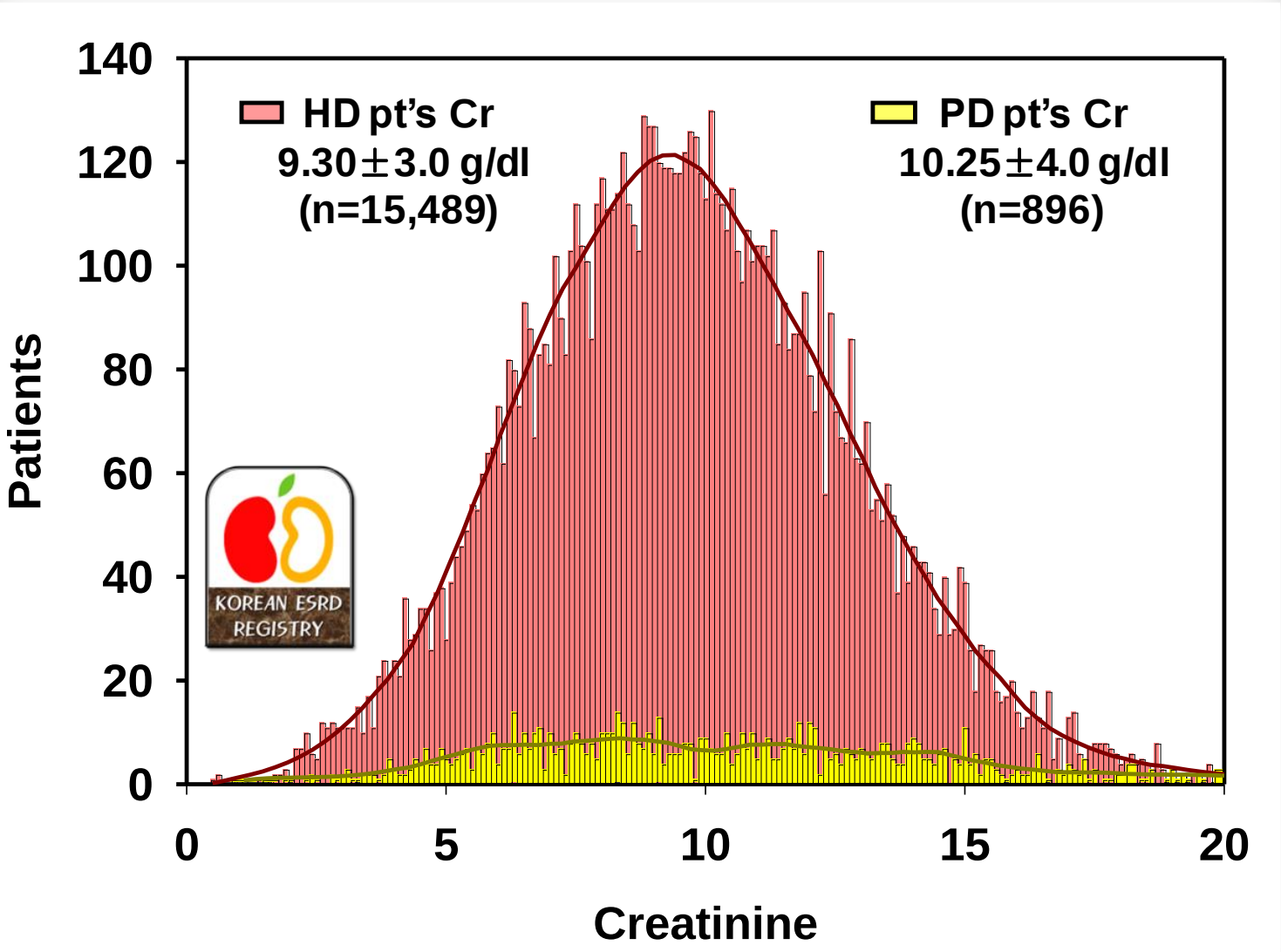




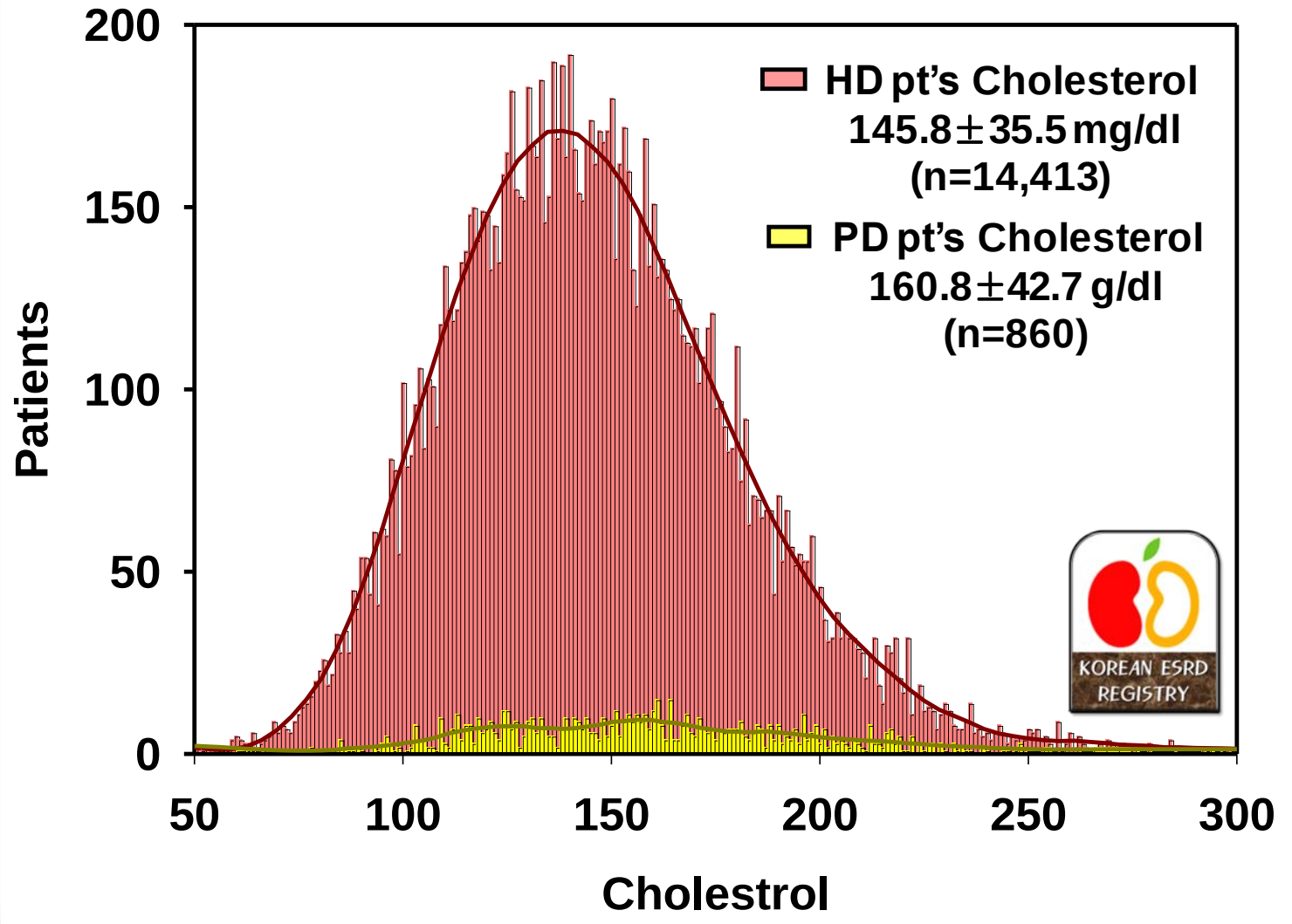
Serum Albumin



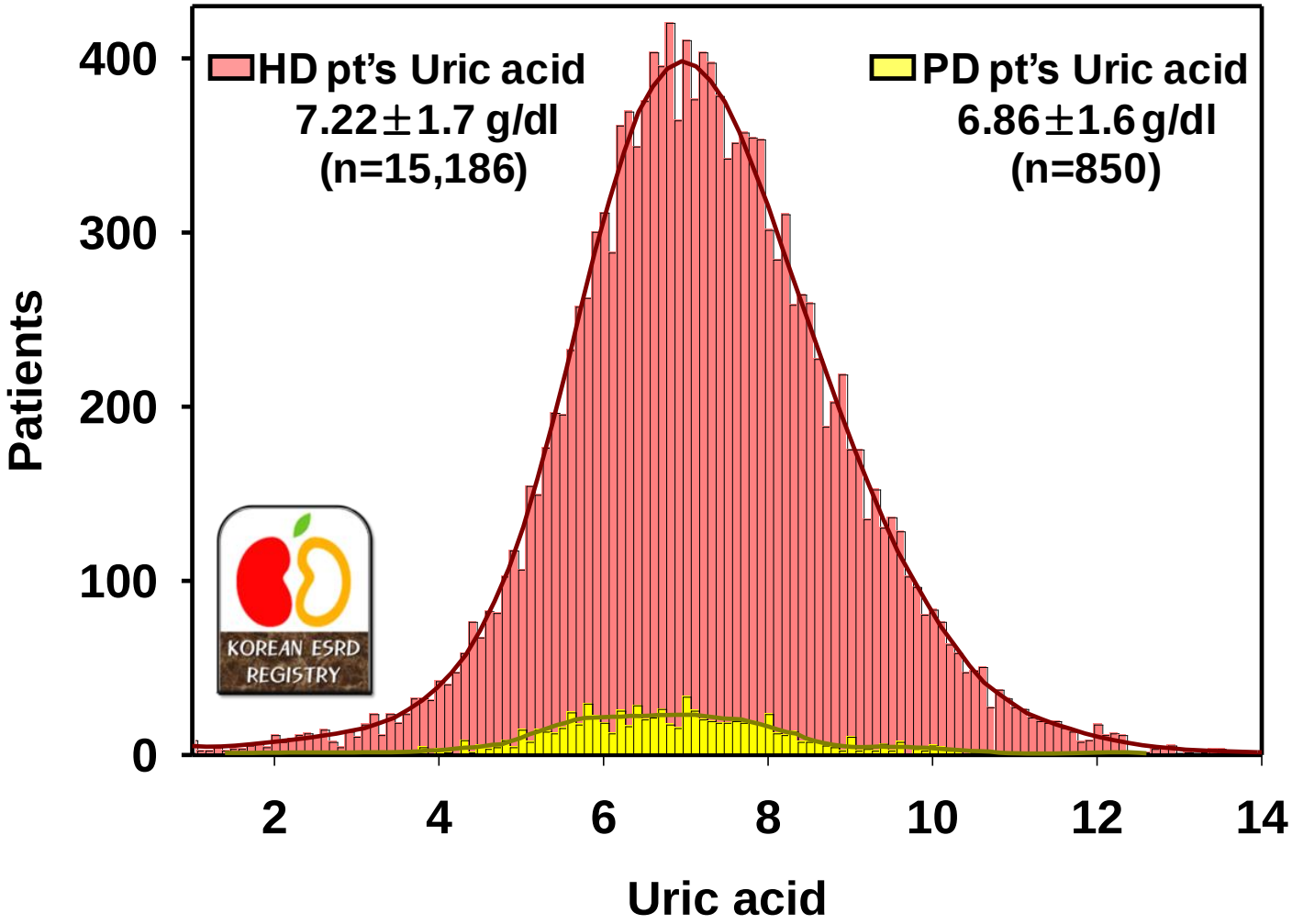
Serum Creatinine



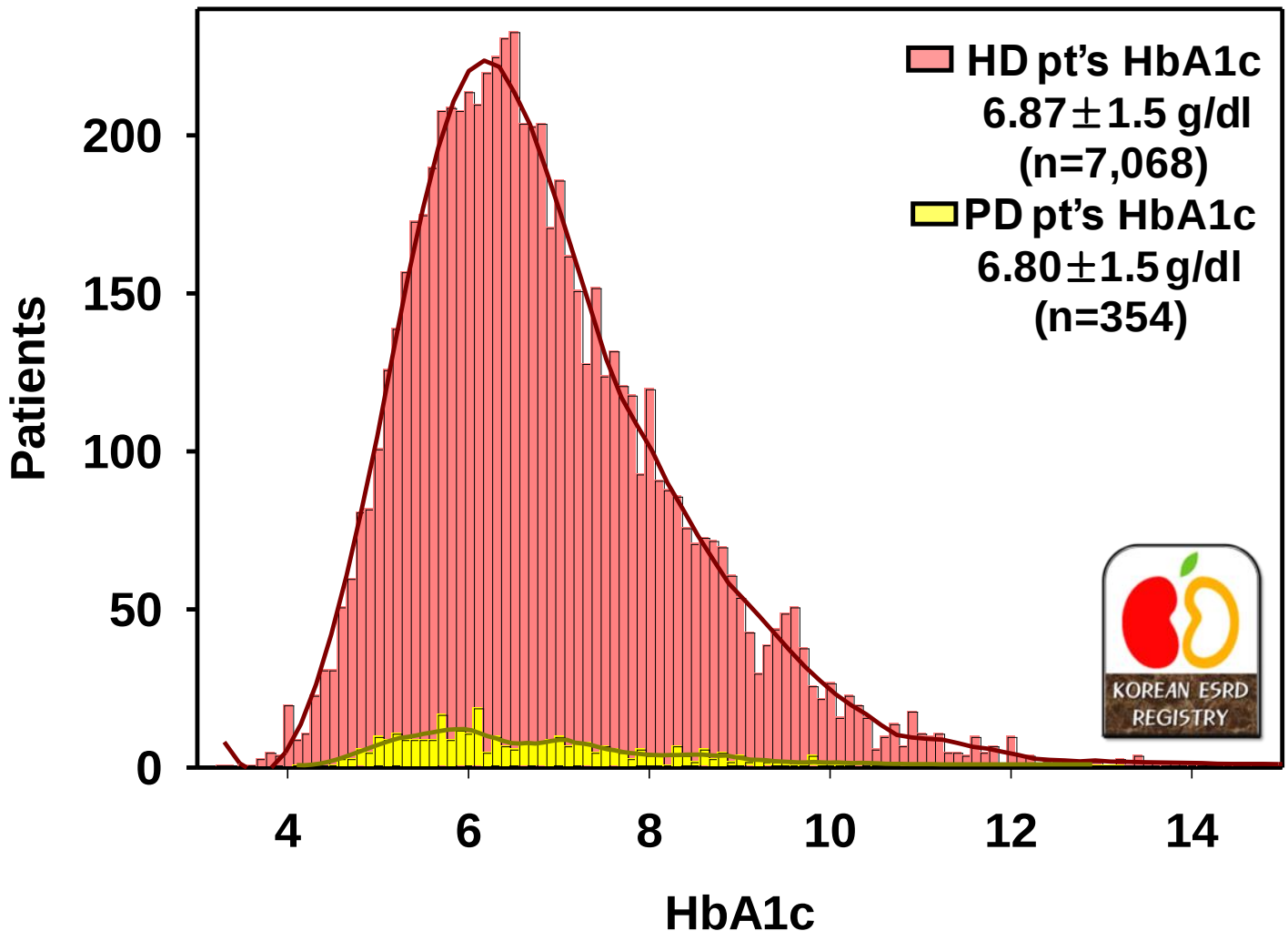
Total Cholesterol



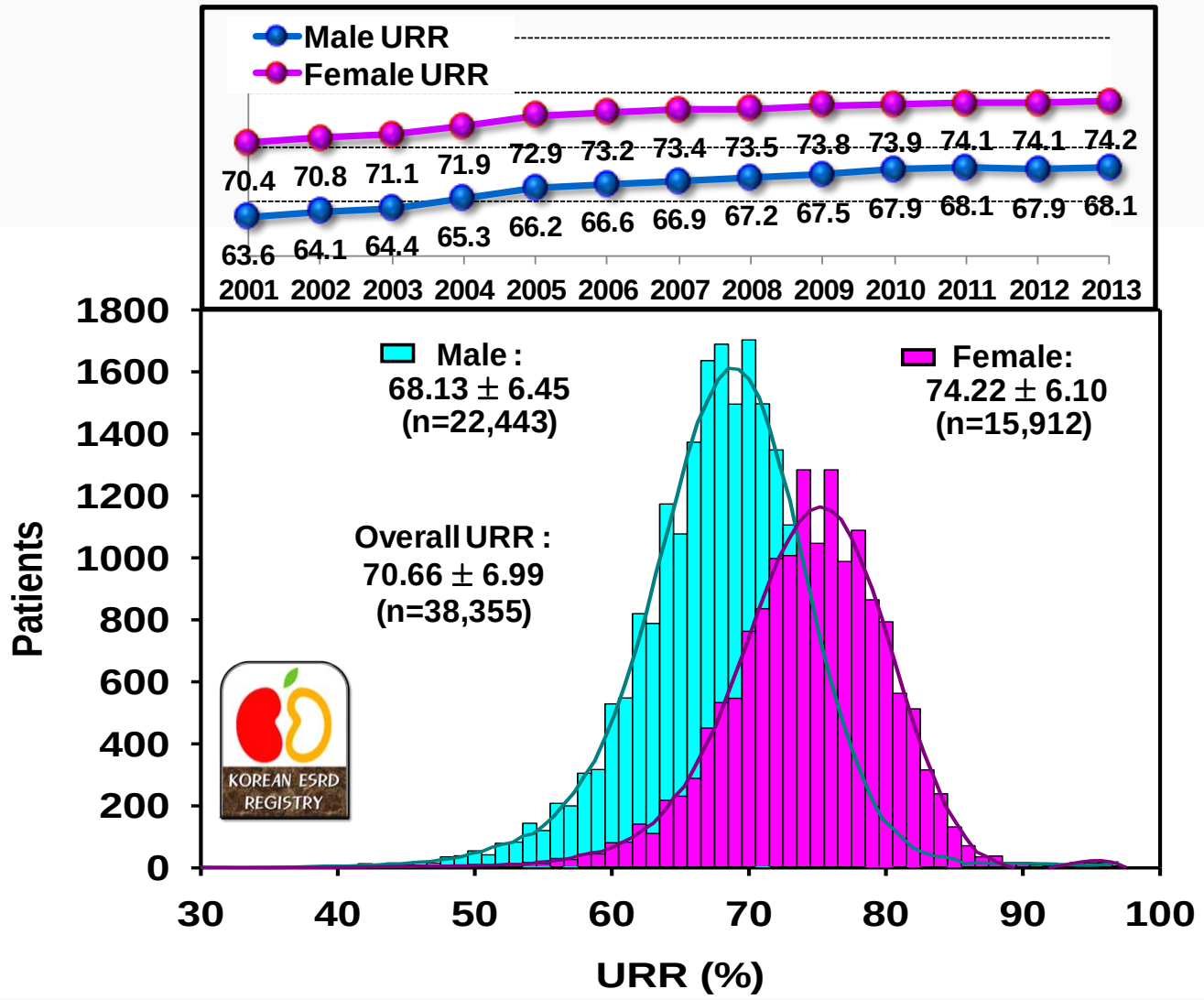
Uric Acid


HD pt's Uric acid
7.22±1.7 g/dl
(n=15,186)
PD pt's Uric acid
6.86±1.6 g/dl
(n=850)
Patients
400
300
200
100
0
2
4
6
8
10
12
14
Uric acid
KOREAN ESRD REGISTRY

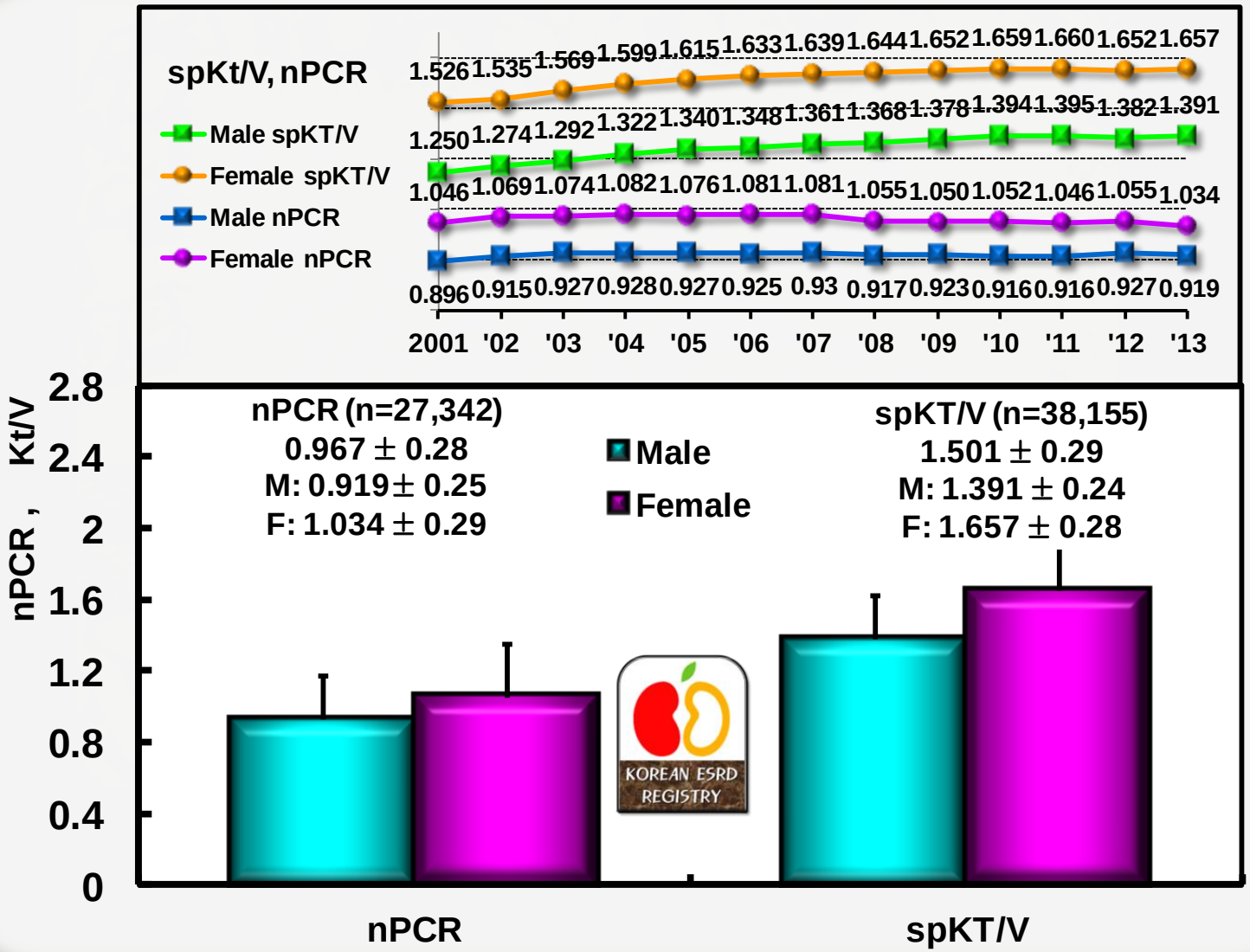
Hb A1c


HD pt's HbA1c
6.87±1.5 g/dl
(n=7,068)
PD pt's HbA1c
6.80±1.5 g/dl
(n=354)
Patients
0
50
100
150
200
4
6
8
10
12
14
HbA1c
KOREAN ESRD REGISTRY

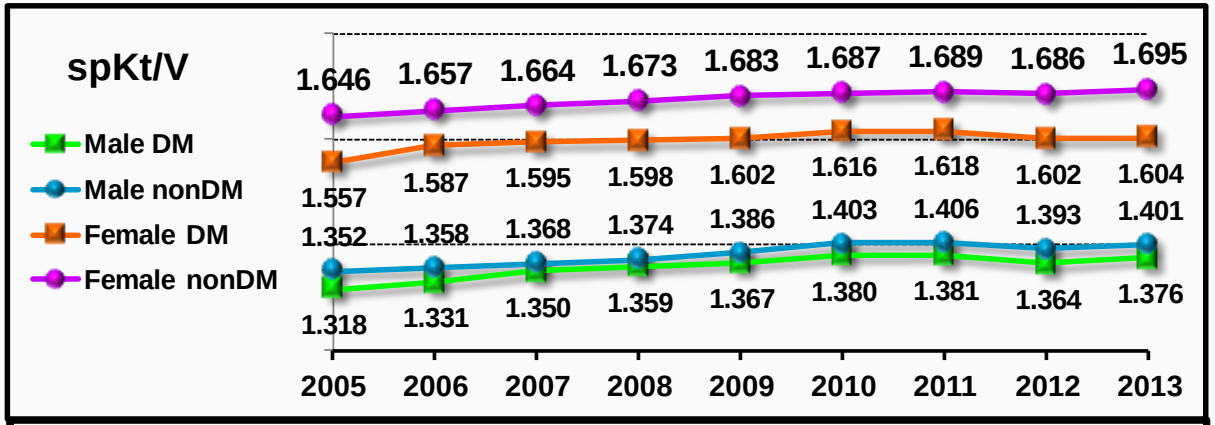
Urea Reduction Ratio

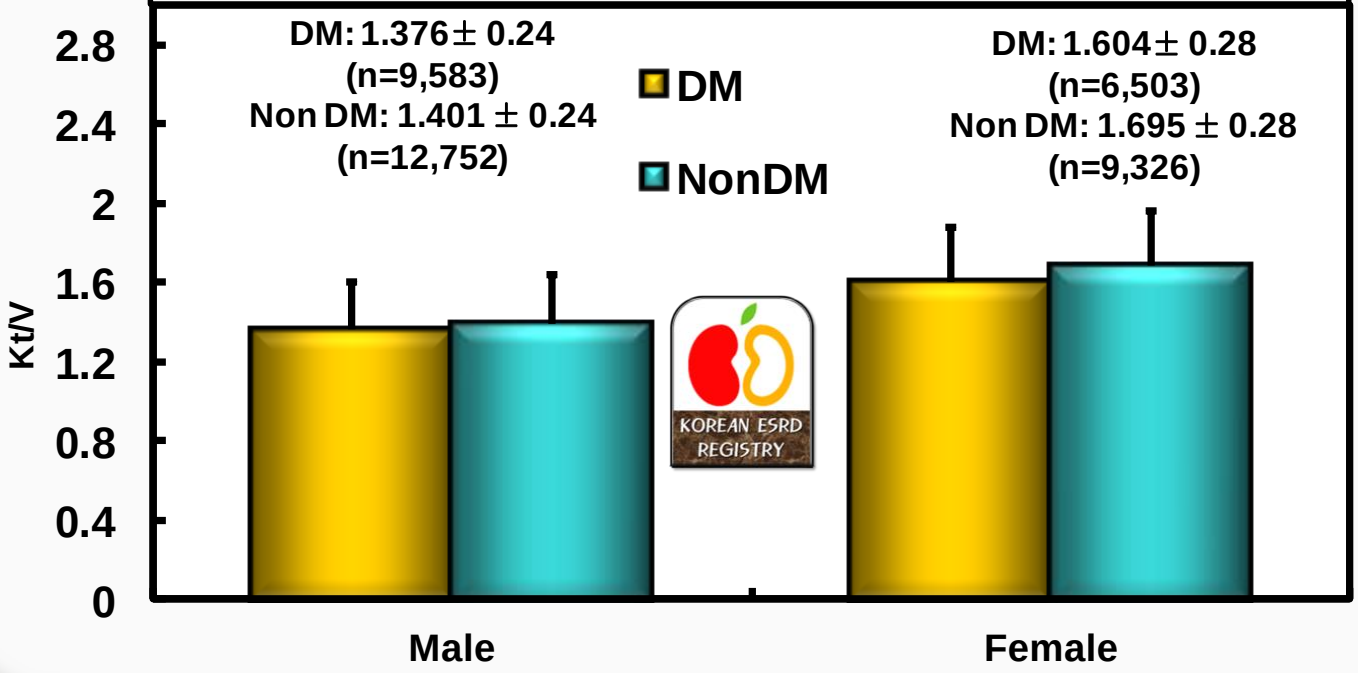


HD Adequacy

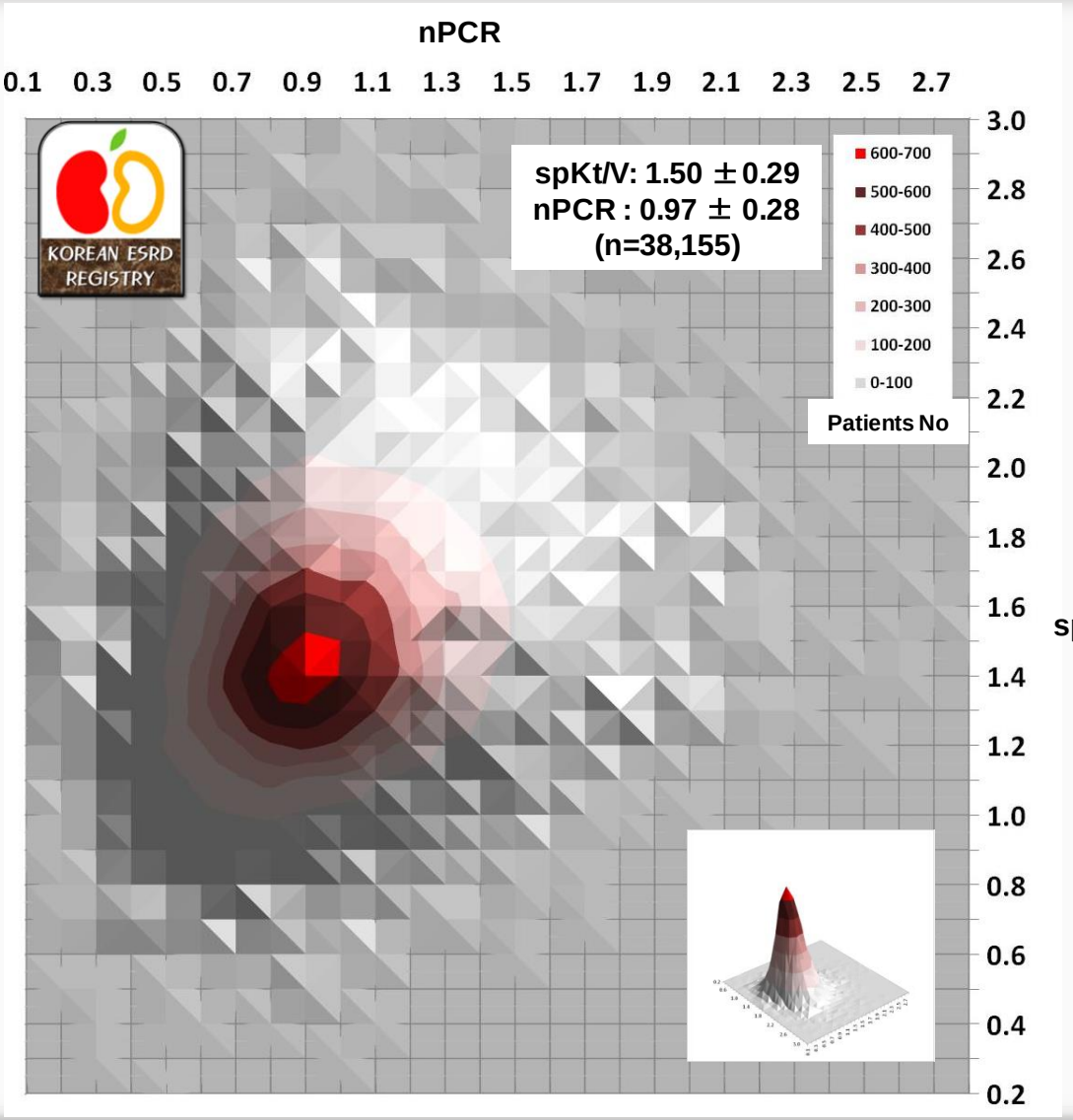

spKt/V, nPCR
Male spKT/V
Female spKT/V
Male nPCR
Female nPCR
1.526 1.535 1.569 1.599 1.615 1.633 1.639 1.644 1.652 1.659 1.660 1.652 1.657
1.250 1.274 1.292 1.322 1.340 1.348 1.361 1.368 1.378 1.394 1.395 1.382 1.391
1.046 1.069 1.074 1.082 1.076 1.081 1.081 1.055 1.050 1.052 1.046 1.055 1.034
0.896 0.915 0.927 0.928 0.927 0.925 0.93 0.917 0.923 0.916 0.916 0.927 0.919
2001 '02 '03 '04 '05 '06 '07 '08 '09 '10 '11 '12 '13
nPCR (n=27,342)
0.967 ± 0.28
M: 0.919± 0.25
F: 1.034 ± 0.29
Male
Female
spKT/V (n=38,155)
1.501 ± 0.29
M: 1.391 ± 0.24
F: 1.657 ± 0.28
nPCR , Kt/V
2.8
2.4
2
1.6
1.2
0.8
0.4
0
KOREAN ESRD REGISTRY
nPCR
spKT/V

HD Adequacy : DM & Non-DM

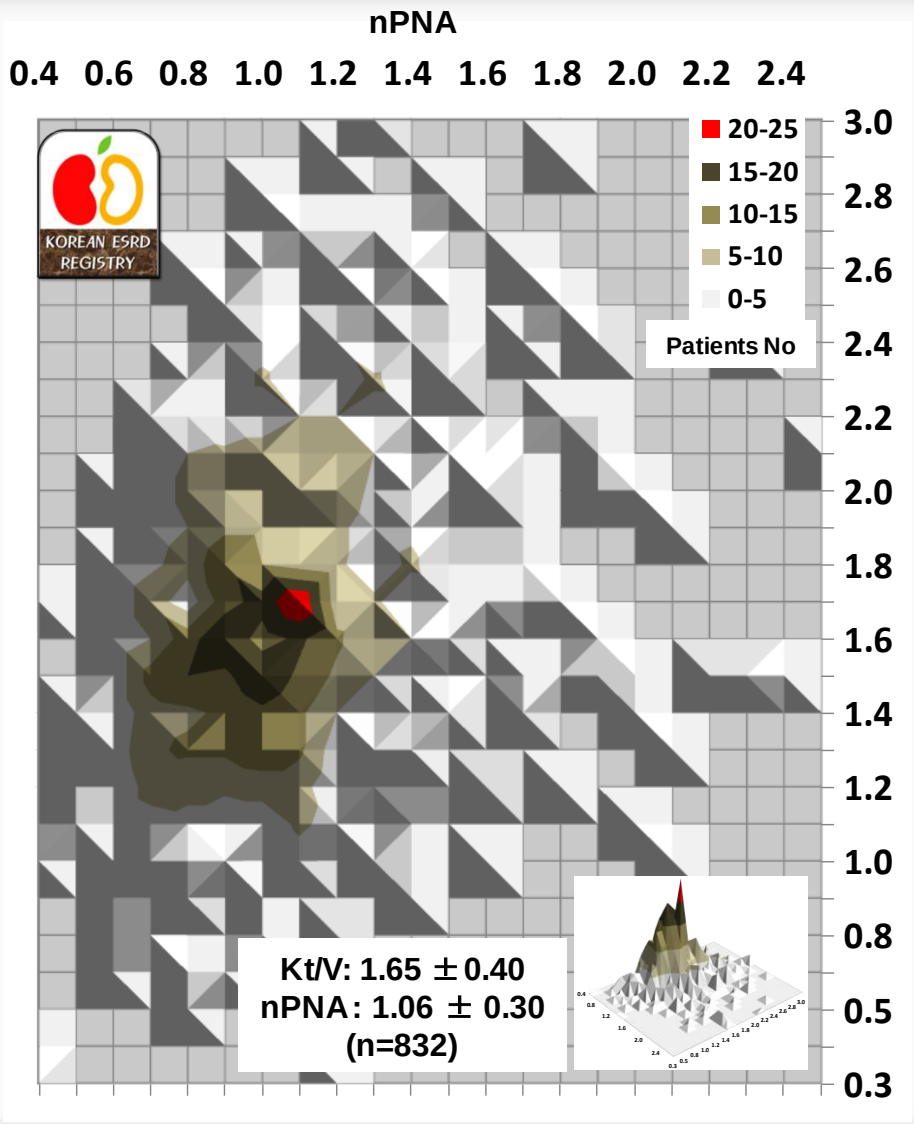




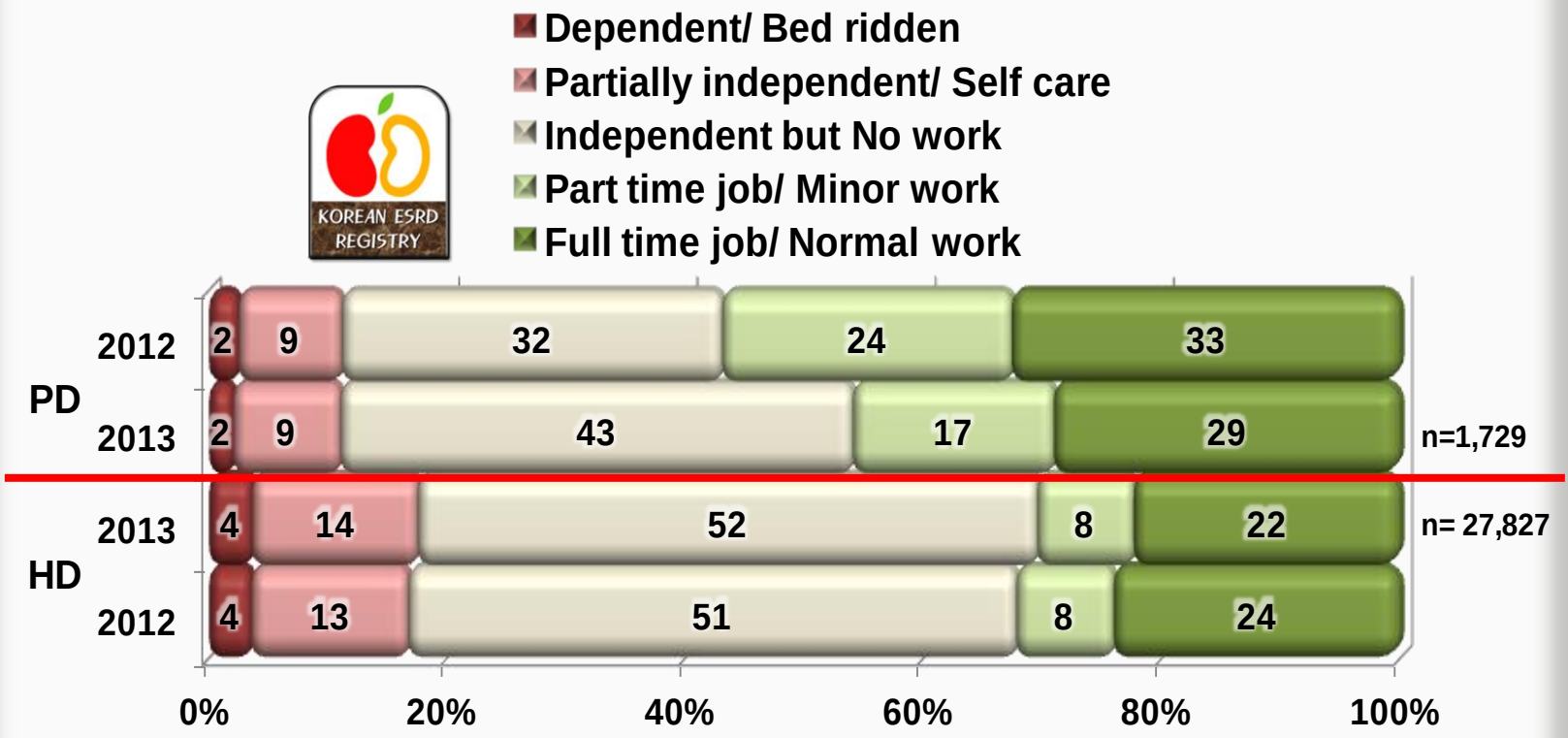
HD Adequacy : spKt/V vs nPCR



PD Adequacy : Kt/V vs nPNA



Rehabilitation of Dialysis Patients



Co-Morbidity of Dialysis Patients

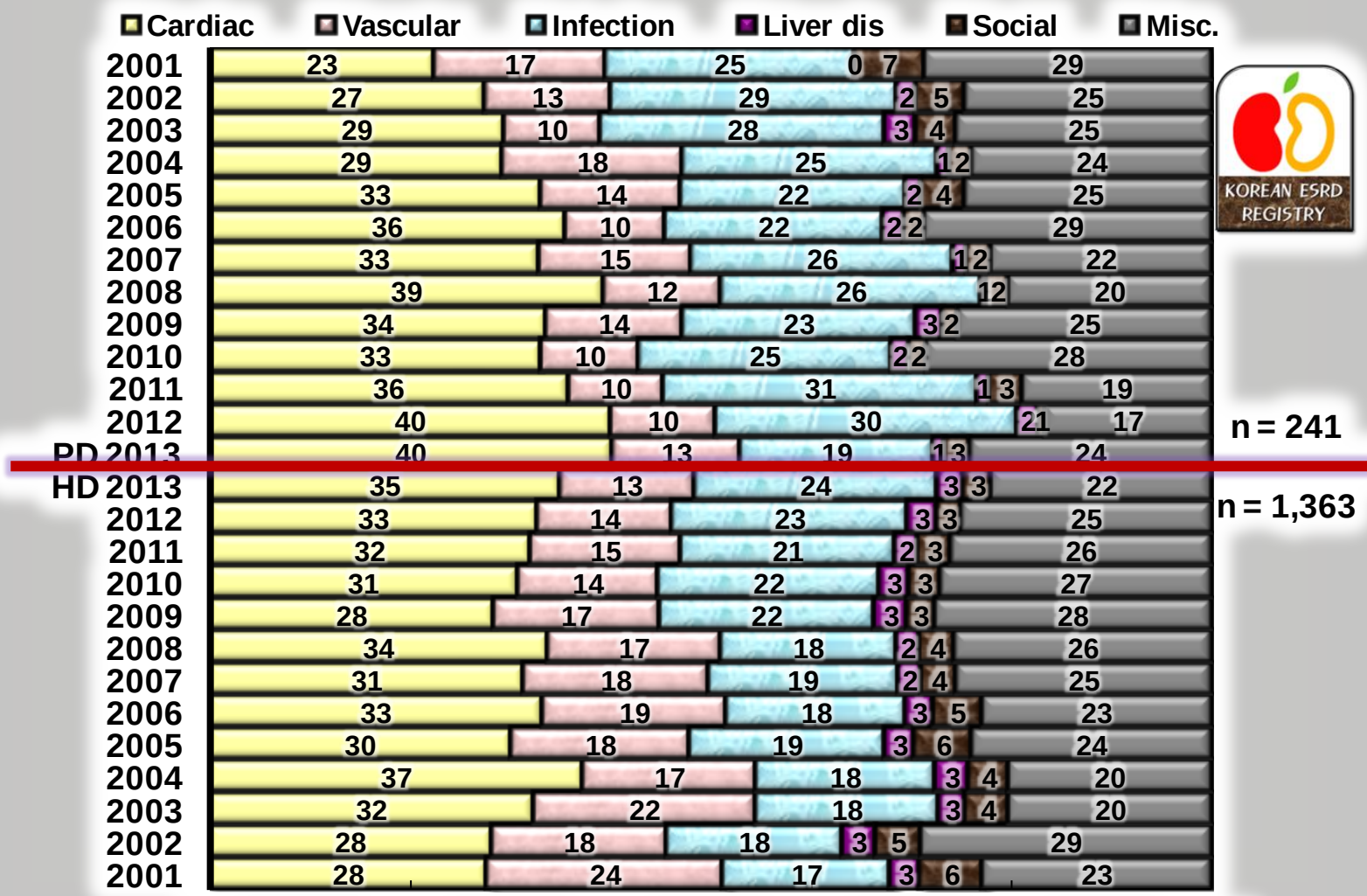
	HD (%, n=53,454)		PD (%, n=4,636)	
Cardiac	**17.4**		**13.9**	
Coronary Artery Disease		9.5		8.0
Congestive Heart Failure		4.1		4.2
Pericardial Effusion		0.4		0.2
Arrythmia		3.3		1.5
Vascular	**49.4**		**61.9**	
Cerebrovascular accident		3.6		4.0
Hypertension		44.3		56.8
Other vascular disease		1.5		1.1
Infection	**5.1**		**8.8**	
Pneumonia		1.5		1.5
Tuberculosis		0.5		0.2
Peritonitis		0.3		4.5
Herpes zoster		0.3		0.2
Access/ exit site infection		0.7		1.1
Other Infection		1.8		1.2
Liver disease	**6.6**		**5.3**	
Hepatitis B		3.9		3.8
Hepatitis C		2.3		0.9
Congestive Liver		0.1		0.2
Hemochromatosis		0.0		0.0
Other liver diseases		0.3		0.4
Gastrointestinal	**13.4**		**5.2**	
Gastric Ulcer		2.0		0.6
Duodenal Ulcer		0.3		0.0
Constipation		4.6		0.8
Other Gastrointestinal Diseases		6.5		3.8
Miscellaneous	**8.1**		**5.0**	
Malnutrition (Alb<2.5g/dl)		0.2		0.2
Malignancy		1.2		1.1
Hypertensive Retinopathy		0.7		0.2
Uremic Dermatitis		1.6		0.4
Uremic Neuritis		0.8		0.2
Uremic Dementia		0.3		0.2
Uremic Ascites / Pleural Effusion		0.2		0.2
Osteodystrophy		0.7		0.1
COPD & other pulm disease		0.4		0.3
Decubitus ulcer/ DM foot		2.0		2.1

Causes of Death (%), 1994-2013

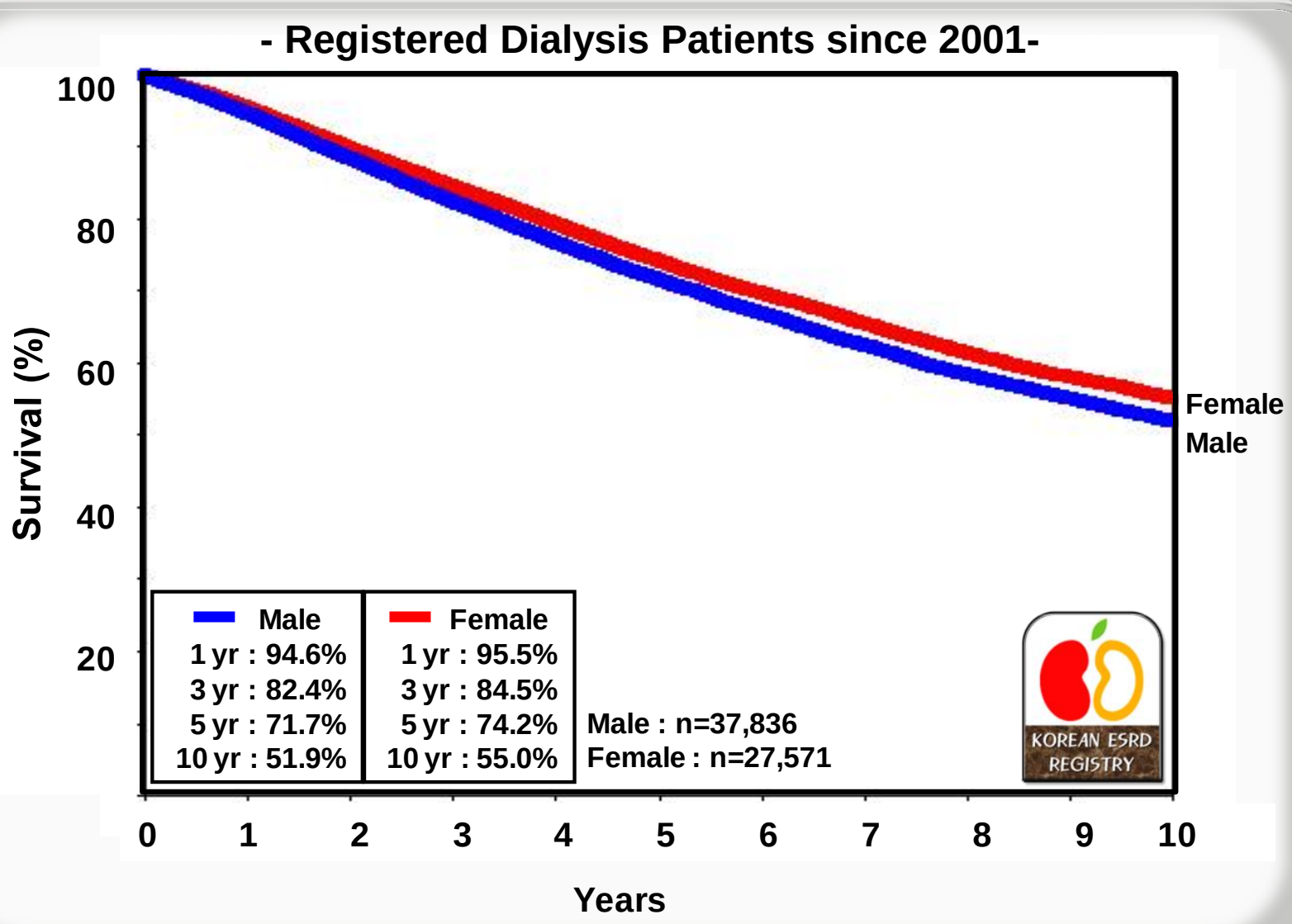
	1994-96	1998	2001	2003	2005	2007	2008	2009	2010	2011	2012	2013
Cardiac	**27.4**	**27.4**	**26.9**	**31.7**	**30.7**	**31.7**	**35.1**	**29.5**	**31.1**	**32.7**	**33.9**	**35.8**
Myocardial infarction	6.4	6.4	7.7	7.4	8	7.5	9.7	8.0	8.3	6.6	6.8	7.5
Cardiac arrest, uremia associated	13.7	13.7	11.2	11.7	10.4	10.8	11	8.5	8.7	11.0	11.1	14.2
Cardiac arrest, other cause	7.2	7.2	8.1	12.5	12.4	13.3	14.4	13	14.2	15.0	16.0	14.2
Vascular	**17.2**	**17.2**	**22.7**	**19.5**	**17**	**17.8**	**16**	**15.9**	**13.3**	**14.1**	**13.0**	**13.3**
Cerebrovascular accident	14.3	14.3	15.1	14.5	12.3	13	12.2	11	8.2	8.7	7.9	8.7
Pulmonary embolus	0.2	0.2	0.5	0.1	0.6	0.5	0.1	0.2	0.1	0.2	0.3	0.2
Gastrointestinal hemorrhage	1.7	1.7	2.7	3.2	1.7	2.7	1.9	2.3	2.6	2.2	2.3	1.2
Gastrointestinal embolism	0.1	0.1	0.1	0	0.5	0.1	0.1	0.5	0.4	0.1	0.6	0.2
Other vascular disease	0.9	0.9	4.3	1.6	1.9	1.6	1.7	1.9	2.2	3.0	1.9	3.0
Infection	**13.5**	**13.5**	**17.8**	**20.5**	**20.1**	**20.2**	**19.5**	**21.9**	**22.6**	**23.1**	**24.5**	**23.5**
Pulmonary infection	2.5	2.5	4.5	3.6	4.5	4.4	4.4	5.9	7.5	8.4	10.8	8.4
Septicemia	6.6	6.6	6.9	9.7	9.6	11.7	9	10.4	10.7	9.7	8.9	11.9
Tuberculosis	0.3	0.3	0.8	0.2	0.3	0.2	0.1	0.3	0.2	0.1	0.7	0.1
Peritonitis	2.1	2.1	1.1	2	1.4	1.1	2	0.8	1.2	1.0	1.0	0.5
Other Infection	2	2	4.5	4.9	4.3	2.9	4	4.5	2.9	4.0	3.0	2.7
Liver disease	**3.4**	**3.4**	**2.6**	**2.8**	**2.7**	**2.2**	**1.9**	**3.1**	**2.7**	**2.1**	**2.8**	**2.4**
Liver failure due to hepatitis B	1.8	1.8	1.6	1.8	1.5	1.3	1	2.2	1.2	1.0	1.4	1.3
Liver failure due to other cause	1.6	1.6	1	1	1.2	0.8	0.8	0.9	1.6	1.1	1.3	1.1
Social	**6.2**	**6.2**	**6.3**	**4.4**	**5.4**	**3.3**	**3.3**	**2.5**	**2.9**	**3.3**	**2.2**	**2.8**
Patient refused further treatment	2.9	2.9	2.1	1	1.1	1.1	0.6	0.5	0.3	0.4	0.6	0.3
Suicide	2.5	2.5	3.3	2.3	3.3	1.5	1.6	1.3	1.9	1.4	1.4	1.3
Therapy ceased for other reason	0.8	0.8	0.9	1	1	0.7	1	0.8	0.7	1.5	0.3	1.2
Miscellaneous	**32**	**32**	**23.7**	**21.3**	**24**	**24.8**	**24.3**	**27.1**	**27.3**	**24.7**	**23.6**	**22.2**
Cachexia	2.9	2.9	8.1	6.6	4	4.4	3.8	3.3	2.8	2.7	2.1	1.6
Malignant disease	2.1	2.1	4.4	3.5	6.4	5.7	4.6	5.7	5.9	6.0	6.7	5.7
Accident	1.2	1.2	0.9	1.1	1.4	1.2	1	1.3	0.6	1.6	1.4	1.4
Uncertain	25.8	25.8	10.3	10.1	12.3	13.4	14.9	16.8	18	14.5	13.3	13.4

*Number of patients :1994-1996=981, 1998=911, 2001=761, 2003=894, 2005=1,256, 2007=1,531, 2008=1,563, 2009=1,727, 2010=1,802, 2011=1,828, 2012=1,745, 2013=1,604.

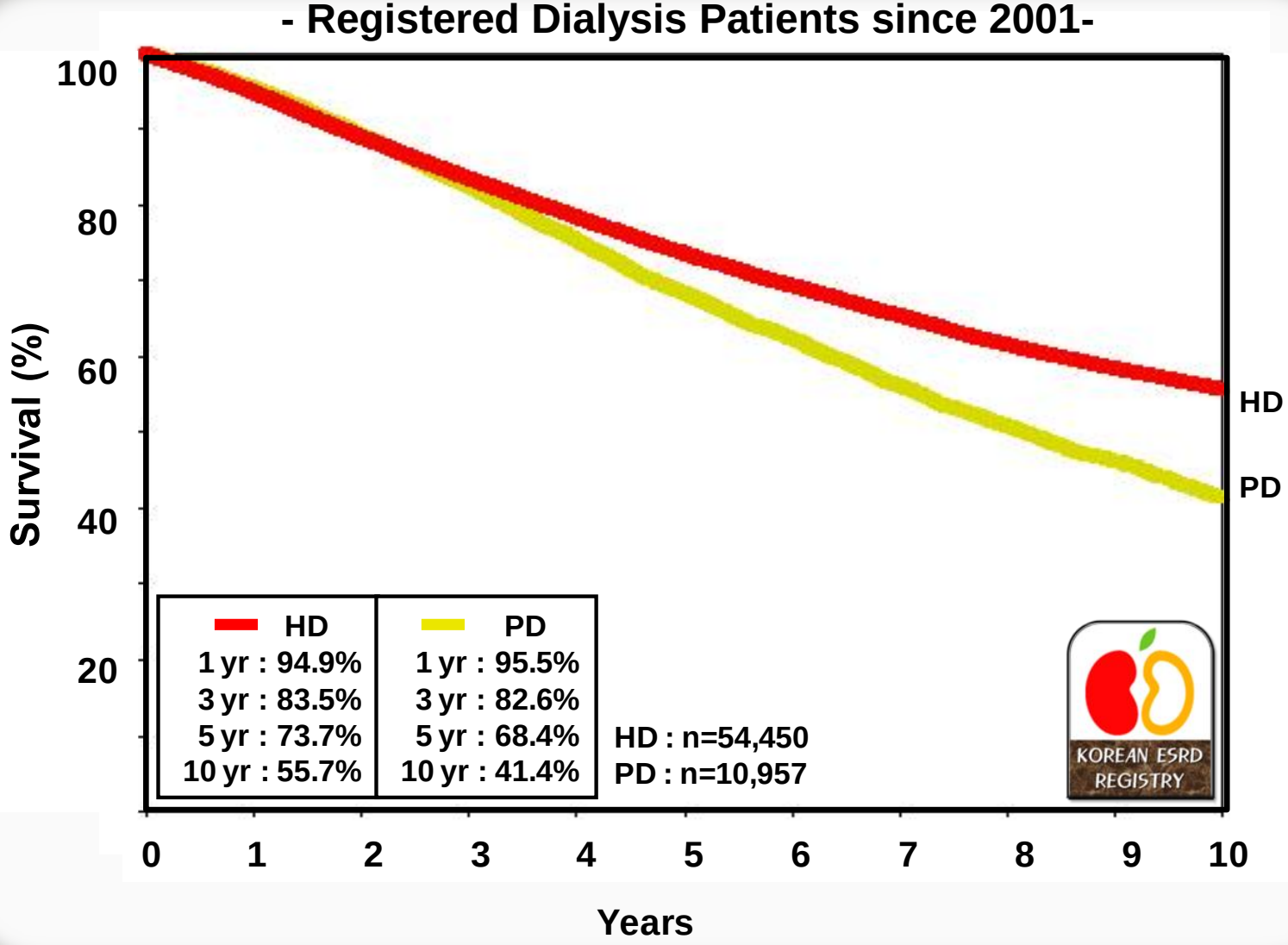
Death Causes, HD & PD



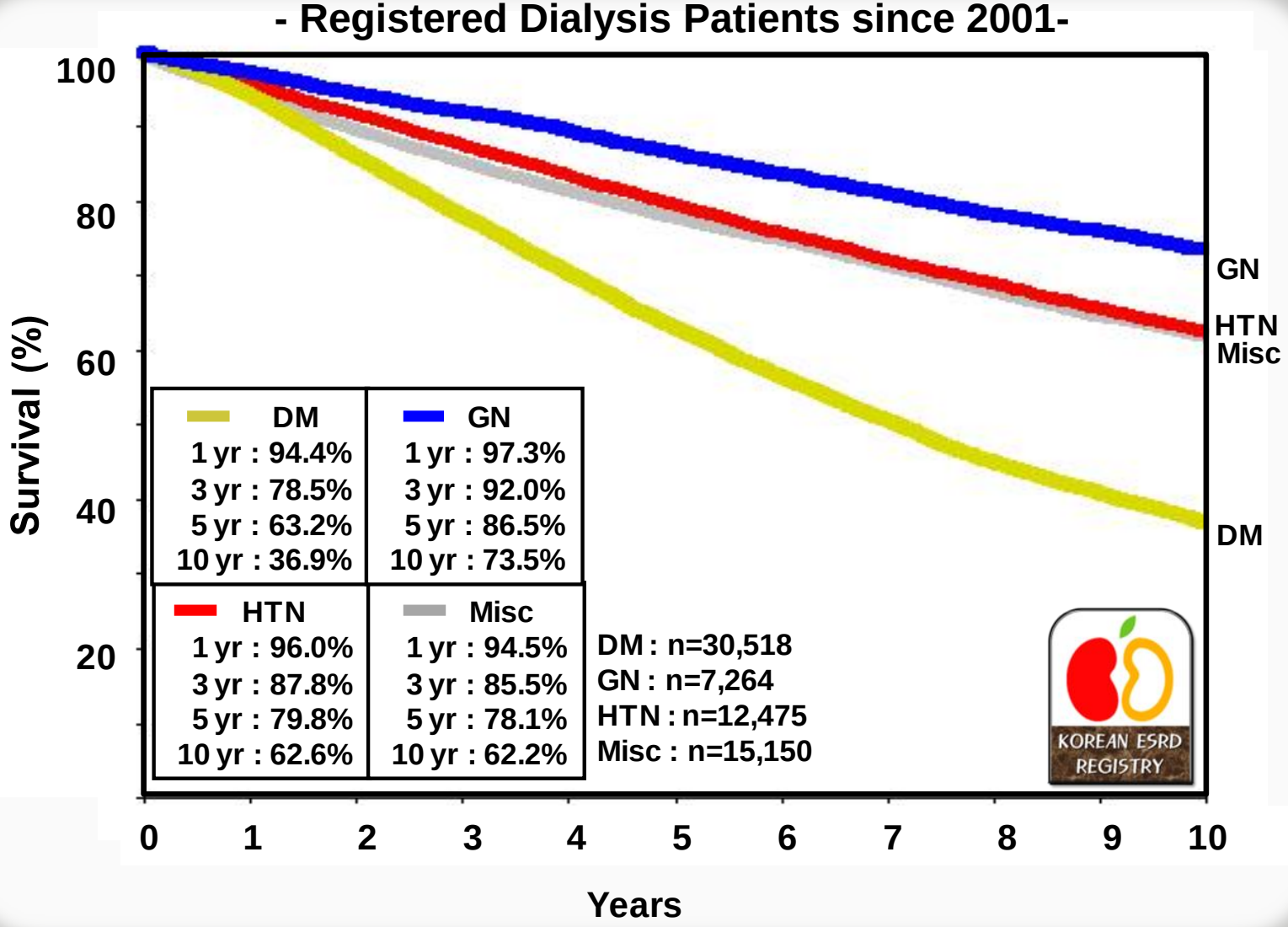
Overall Patient Survival



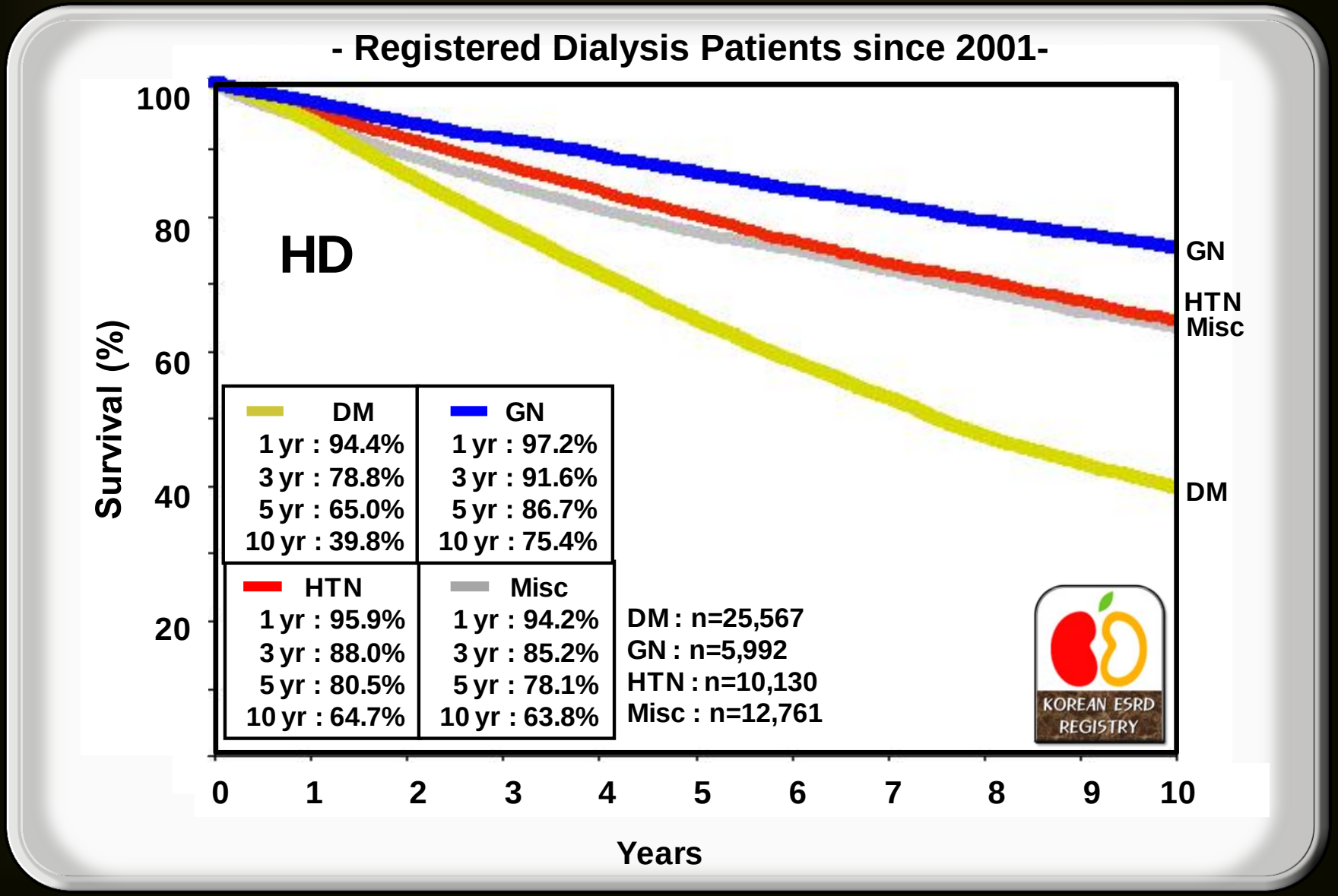
Patient Survival : HD vs PD



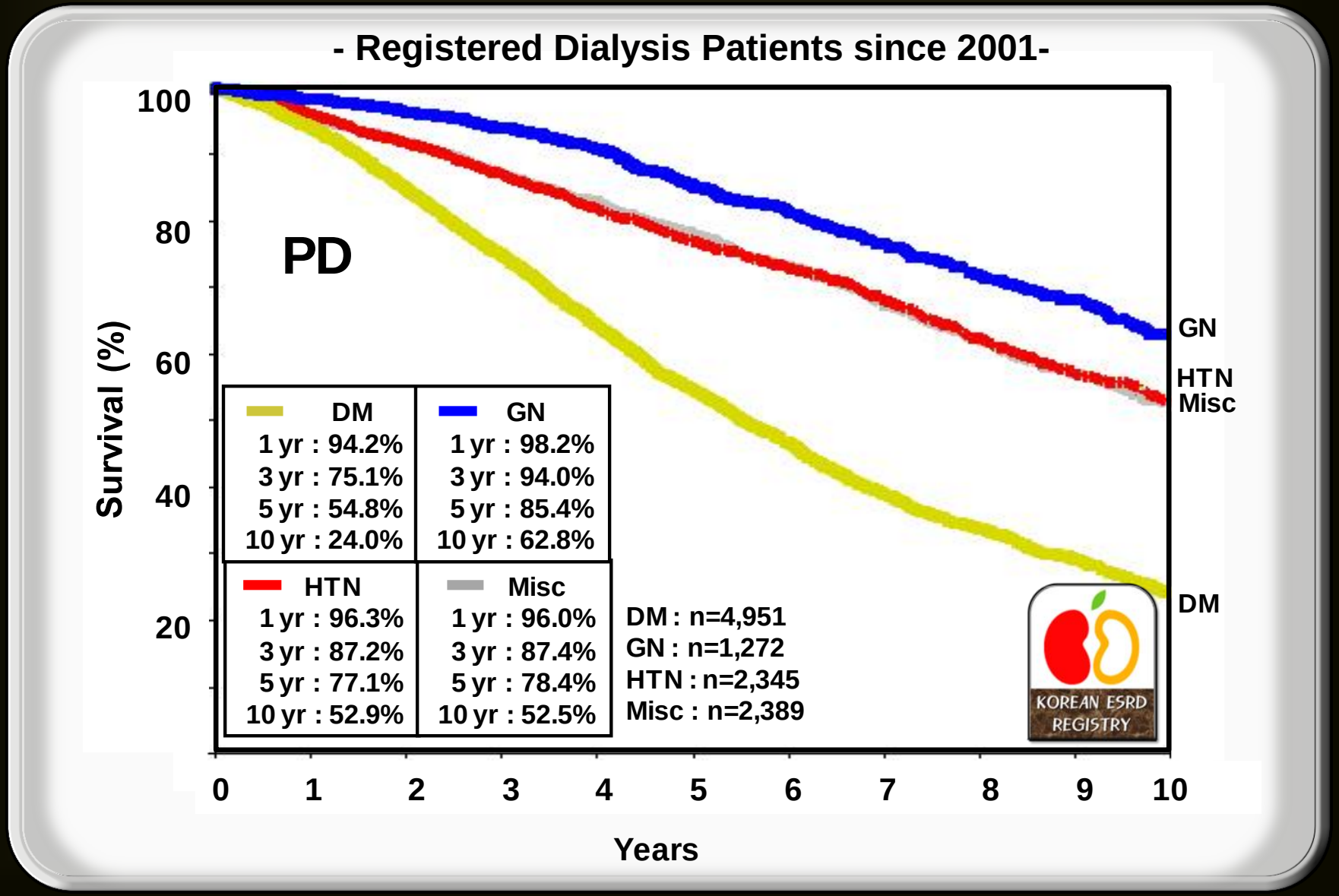
Patients Survival : Cause of ESRD



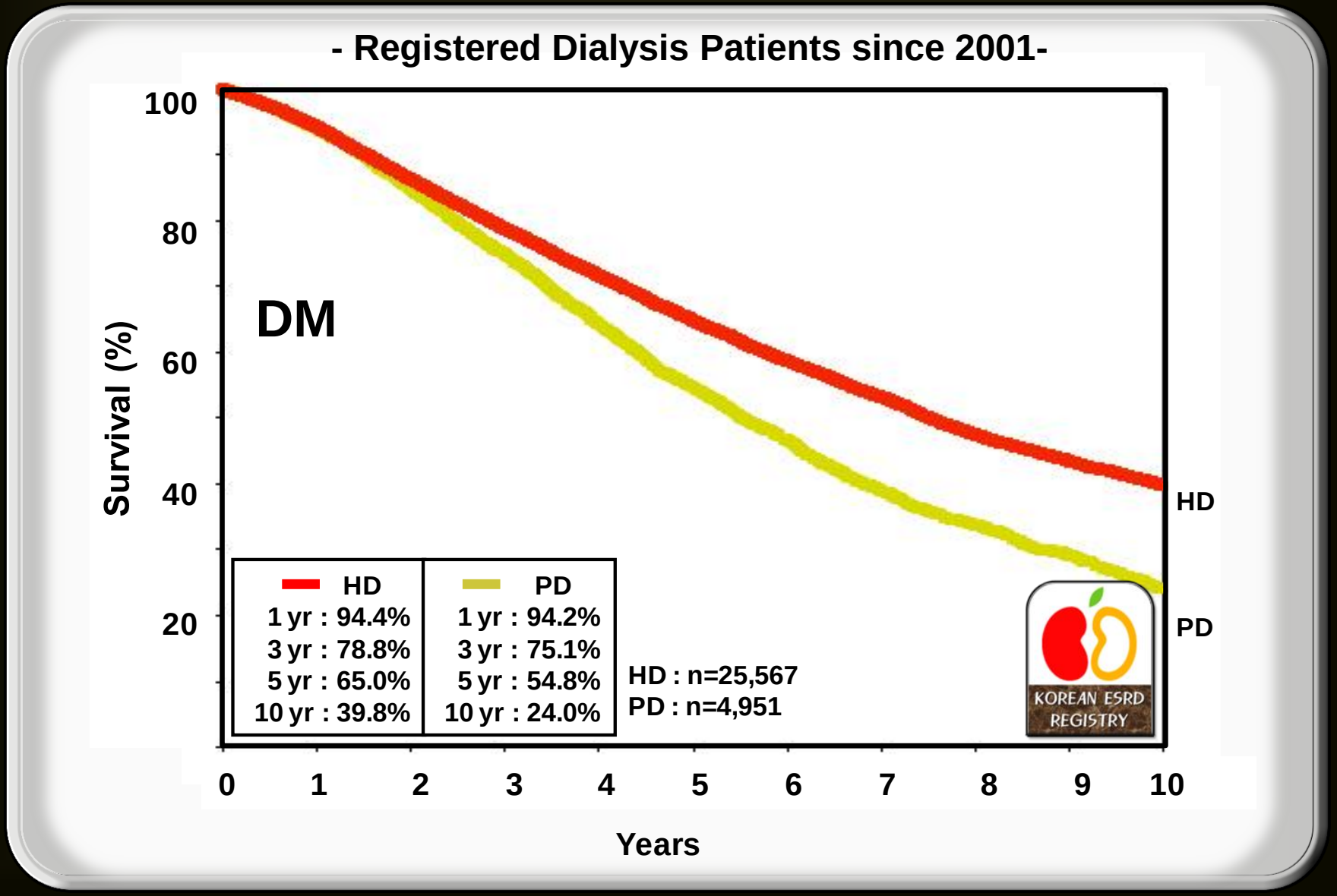
Patients Survival : Cause of ESRD, HD



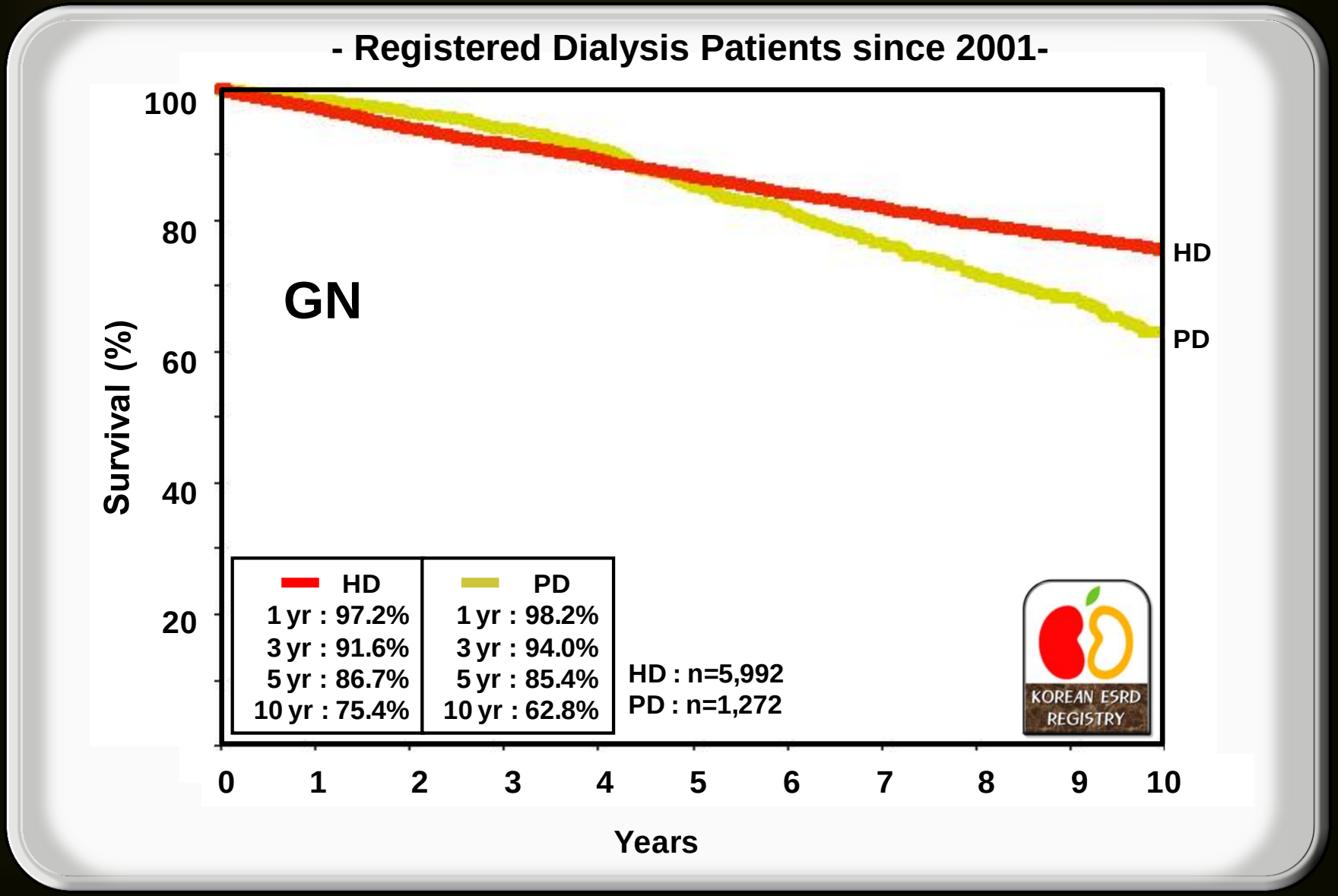
Patients Survival : Cause of ESRD, PD



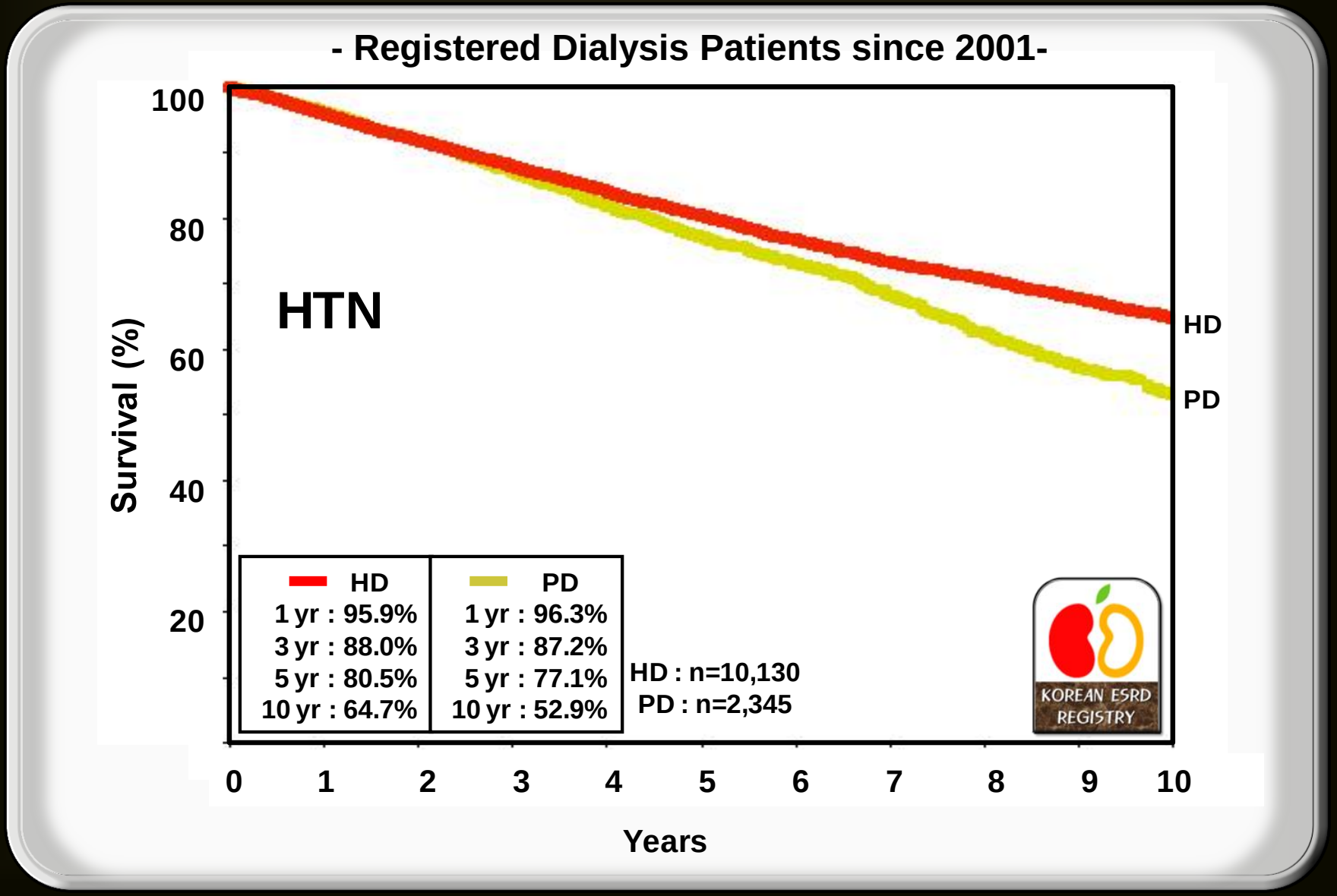
Patients Survival : HD vs PD in DM pts



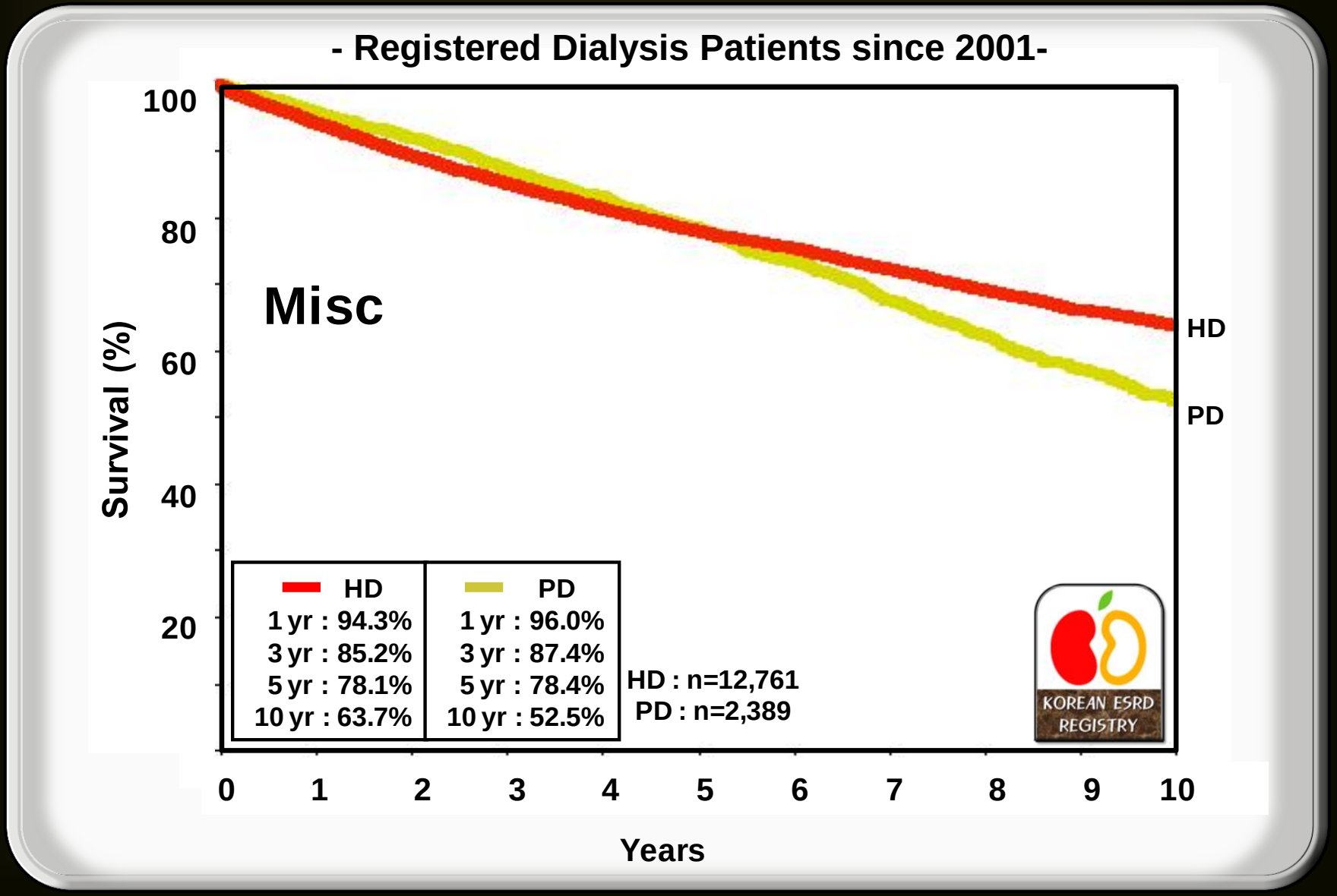
Patients Survival : HD vs PD in GN pts



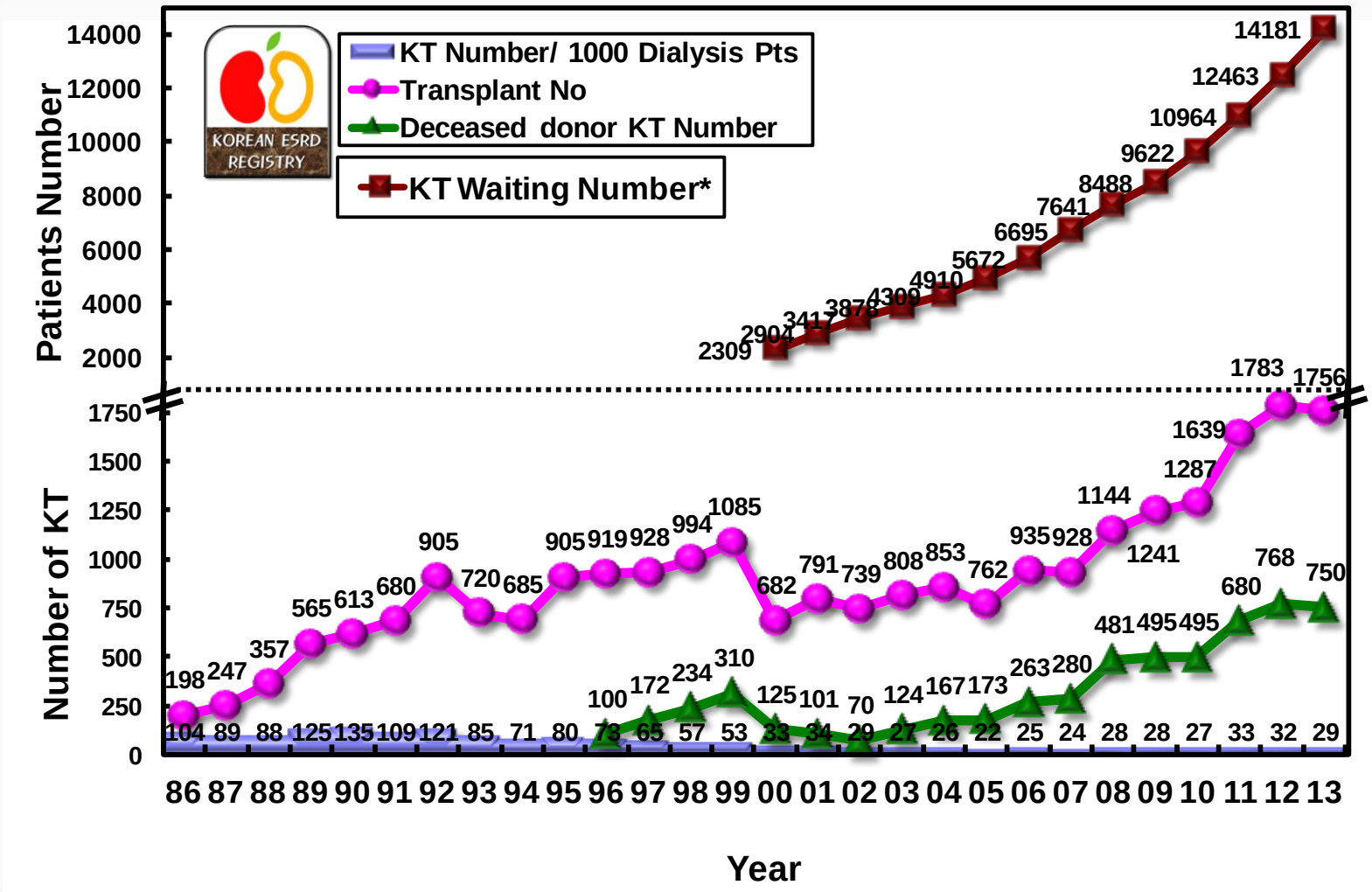
Patients Survival : HD vs PD in HTN pts



Patients Survival : HD vs PD in Misc pts



Kidney Transplantation

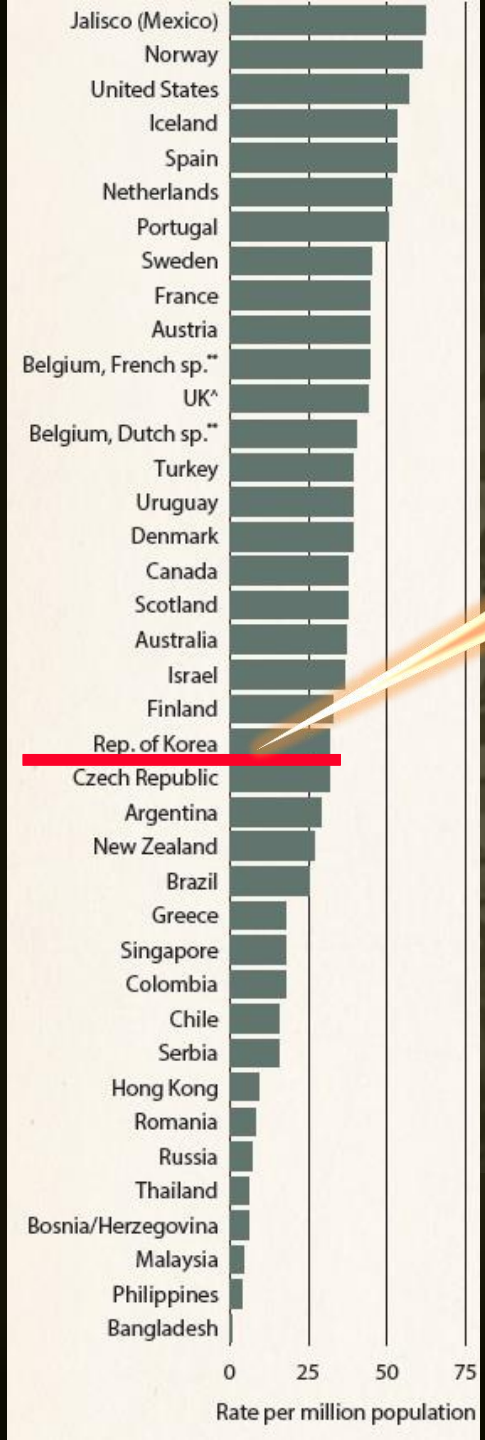


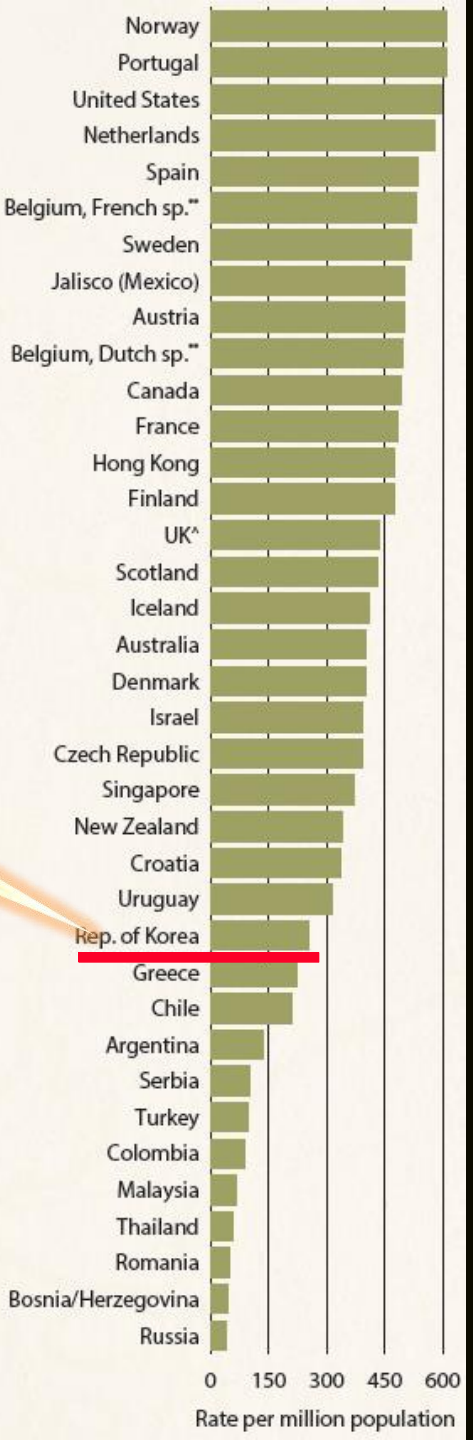
KOREAN ESRD REGISTRY

Kidney Transplantation

Incidence
24.6 PMP
2011

Prevalence
252 PMP
2011





2013 USRDS ANNUAL DATA REPORT

U.S. Renal Data System, USRDS 2013. Annual Data Report: Atlas of Chronic Kidney Disease and End-Stage Renal Disease in the United States, National Institutes of Health, National Institute of Diabetes and Digestive and Kidney Diseases, Bethesda, MD, 2013.

May 2014

특 징 요 약

- 2013년 새로운 등록프로그램 사용시작 : 개인정보 보호
  - 투석 방법, 합병증, 검사 수치, 재활상태 추가 등재
- 전체 투석환자 및 혈액투석기관수의 꾸준한 증가
- 비윤리 의료기관 존재, 요양병원 증가
- 복막투석의 정체 및 상대적 혈액투석 비율의 증가
- 원인 신질환에서 당뇨병성 신증의 비율 증가
- 혈액투석 효율 점진적 향상, 빈혈 개선, 혈압저하
- 신장이식 증가, 특히 뇌사공여 지속적 증가
- 의료보험 심사평가원의 적정성 평가, 대한신장학회의 투석기관 인증제와 약제 비용에 따른 투석 치료의 변화

감사의 글

- 전국의 인공신장실 담당의료진
- 대한신장학회 사무국
- 투석용 의료물품 공급업체 :

  (Gambro Korea, FMC Korea, Baxter Korea, 보령제약)