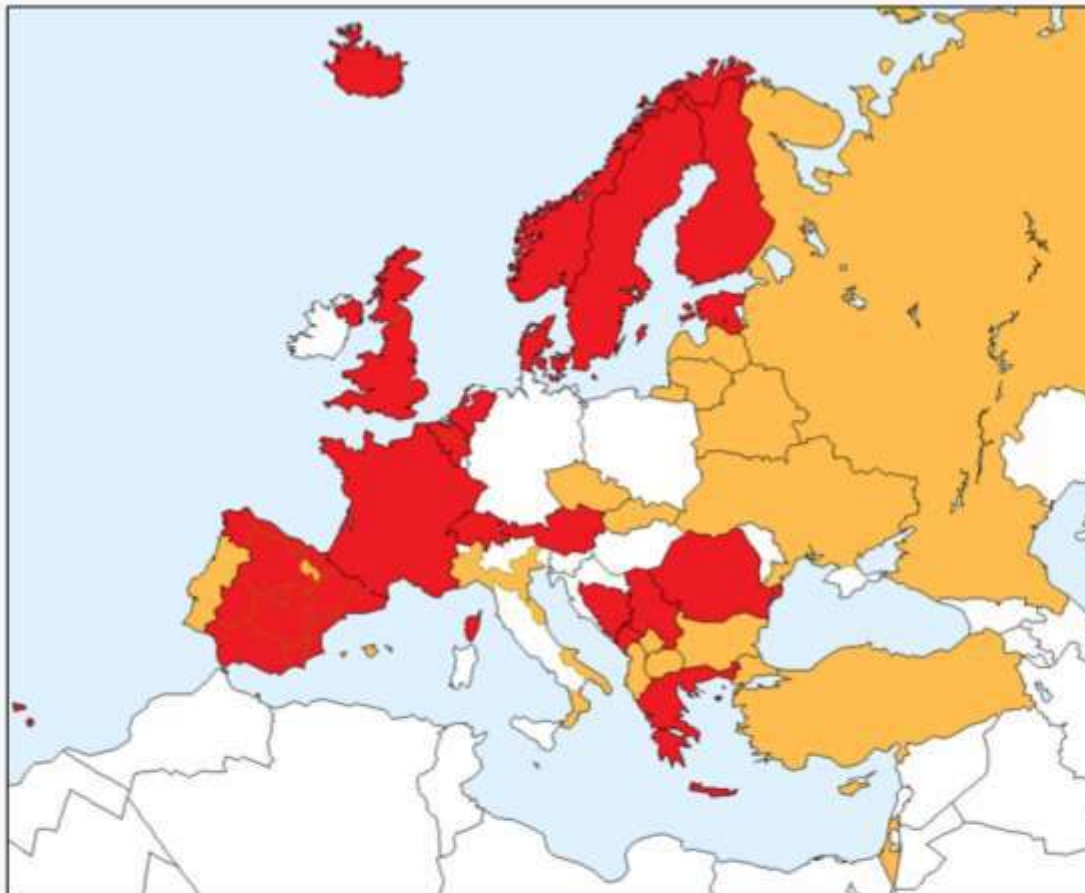# Summary of the 2018 ERA-EDTA Registry Annual Report
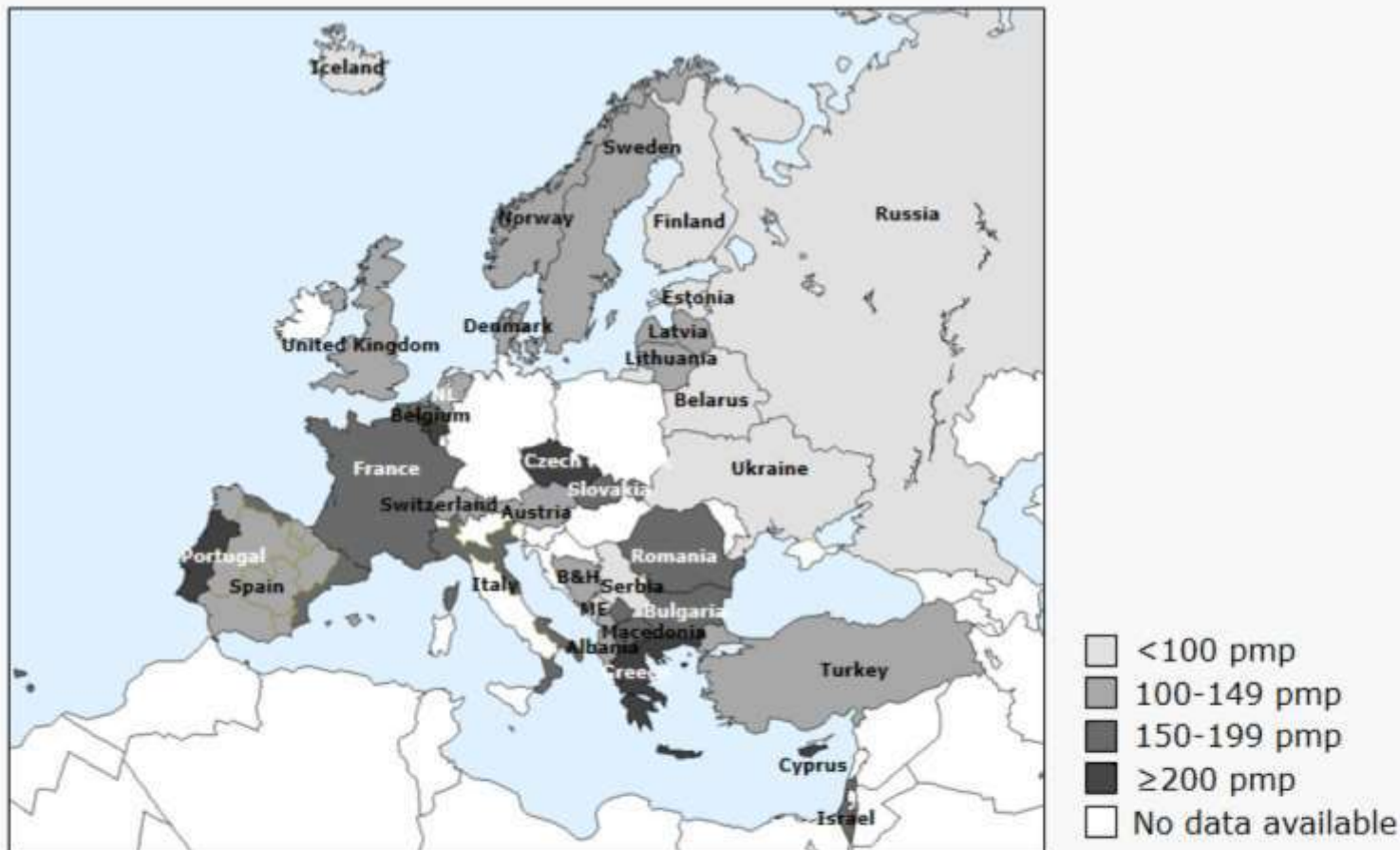
National and regional renal registries that contributed data to the 2018 ERA-EDTA Registry Annual Report

Renal registries contributing with individual patient data

Renal registries contributing with aggregated data

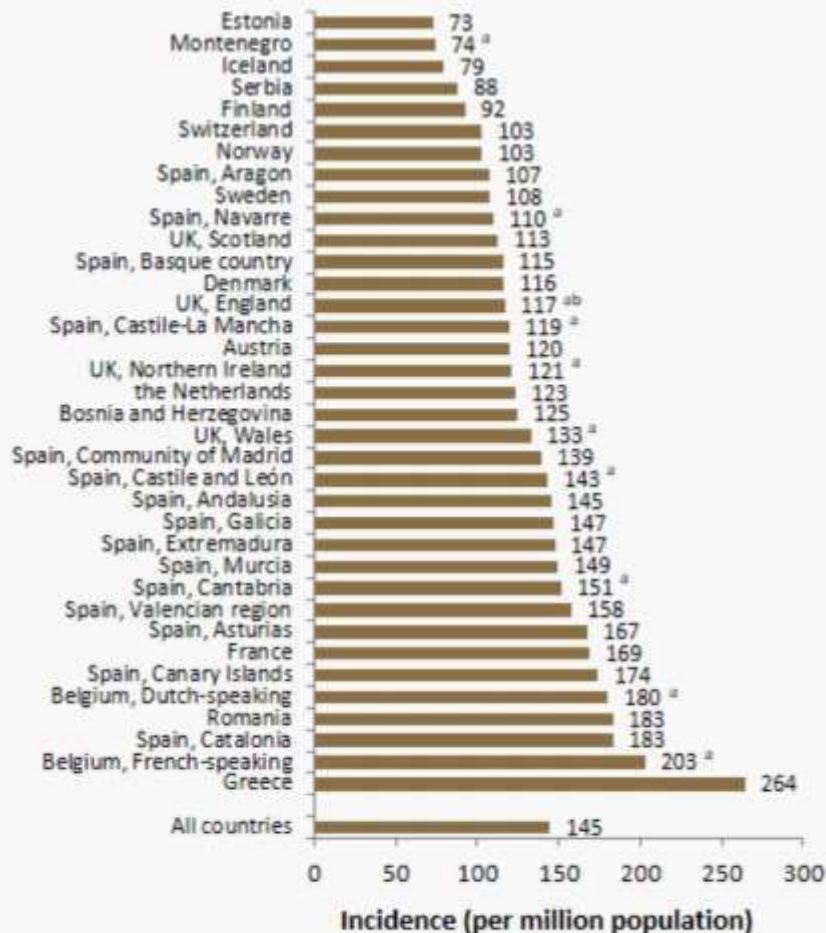# Incident patients accepted for RRT in 2018, at day 1

by country

Legend:
- <100 pmp
- 100-149 pmp
- 150-199 pmp
- ≥200 pmp
- No data available

Incident patients accepted for RRT in 2018 at day 1

by country

Unadjusted incidence
renal registries providing individual patient data

Country	Incidence
Estonia	73
Montenegro	74 [a]
Iceland	79
Serbia	88
Finland	92
Switzerland	103
Norway	103
Spain, Aragon	107
Sweden	108
Spain, Navarre	110 [a]
UK, Scotland	113
Spain, Basque country	115
Denmark	116
UK, England	117 [ab]
Spain, Castile-La Mancha	119 [a]
Austria	120
UK, Northern Ireland	121 [a]
the Netherlands	123
Bosnia and Herzegovina	125
UK, Wales	133 [a]
Spain, Community of Madrid	139
Spain, Castile and León	143 [a]
Spain, Andalusia	145
Spain, Galicia	147
Spain, Extremadura	147
Spain, Murcia	149
Spain, Cantabria	151 [a]
Spain, Valencian region	158
Spain, Asturias	167
France	169
Spain, Canary Islands	174
Belgium, Dutch-speaking	180 [a]
Romania	183
Spain, Catalonia	183
Belgium, French-speaking	203 [a]
Greece	264
All countries	145

Incidence (per million population)

Unadjusted incidence
renal registries providing aggregated data

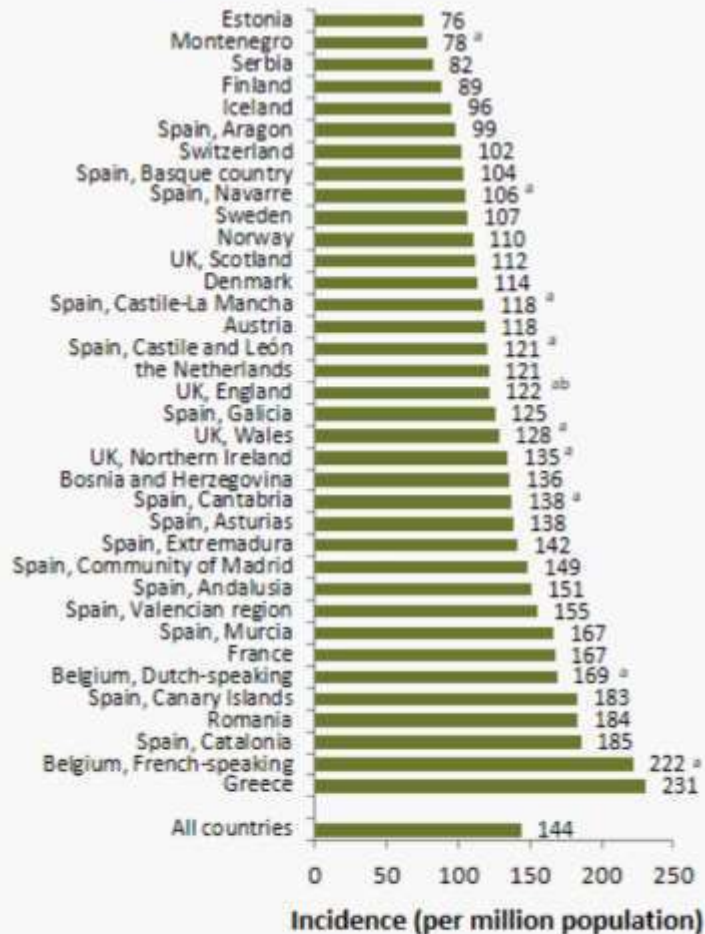| Country	Incidence
Ukraine	37 [a]
Belarus	83
Russia	83 [c]
Latvia	107
Lithuania	112
Albania	140
Spain (All)	148
Turkey	149
Bulgaria	156
Italy (7 of 20 regions)	157
Slovakia	165 [c]
North Macedonia	168
Kosovo	175
Israel	194
Czech Republic	227 [c]
Portugal	256
Cyprus	256
All countries	119

Incidence (per million population)

[a] patients younger than 20 years of age are not included; [b] the incidence is underestimated by 2%; [c] data includes patients receiving dialysis only

Incident patients accepted for RRT in 2018 at day 1
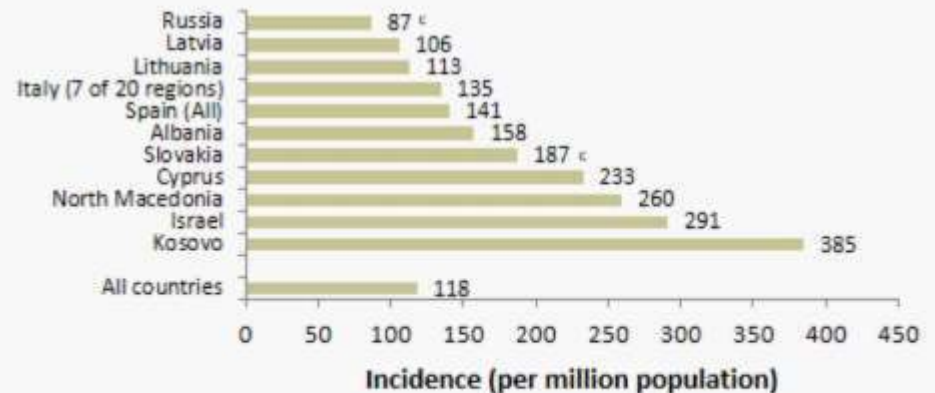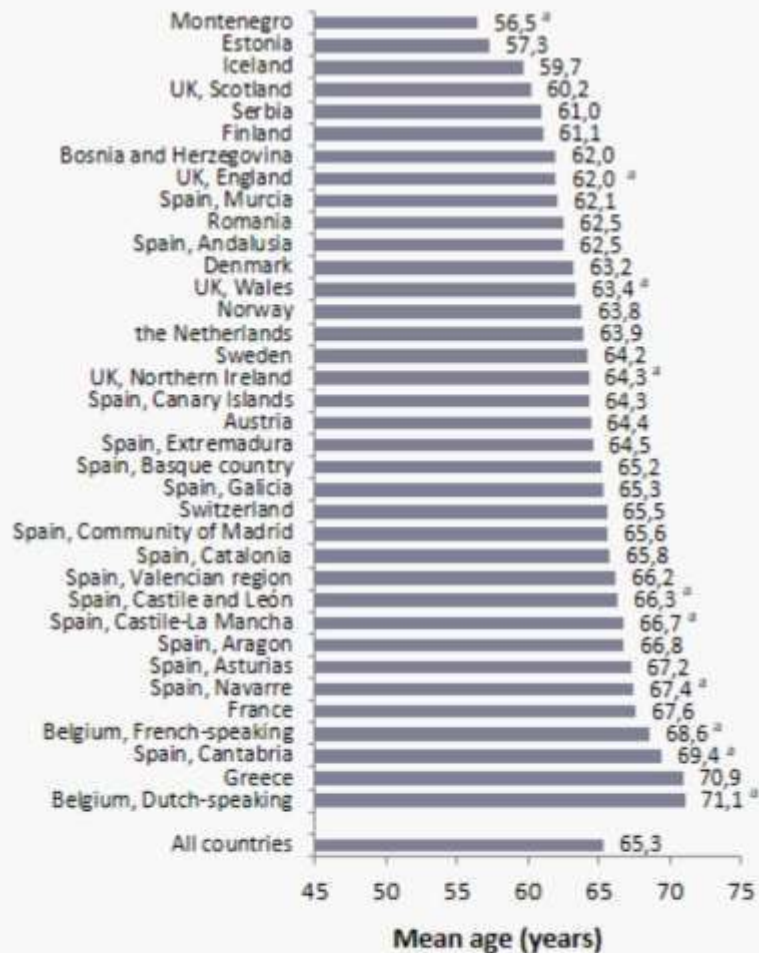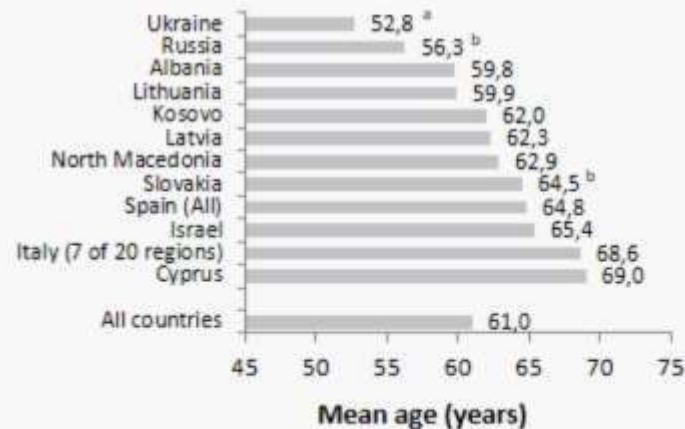
by country
adjusted for age and sex

Adjusted incidence
renal registries providing individual patient data

Country	Incidence
Estonia	76
Montenegro	78 [a]
Serbia	82
Finland	89
Iceland	96
Spain, Aragon	99
Switzerland	102
Spain, Basque country	104
Spain, Navarre	106 [a]
Sweden	107
Norway	110
UK, Scotland	112
Denmark	114
Spain, Castile-La Mancha	118 [a]
Austria	118
Spain, Castile and León	121 [a]
the Netherlands	121
UK, England	122 [ab]
Spain, Galicia	125
UK, Wales	128 [a]
UK, Northern Ireland	135 [a]
Bosnia and Herzegovina	136
Spain, Cantabria	138 [a]
Spain, Asturias	138
Spain, Extremadura	142
Spain, Community of Madrid	149
Spain, Andalusia	151
Spain, Valencian region	155
Spain, Murcia	167
France	167
Belgium, Dutch-speaking	169 [a]
Spain, Canary Islands	183
Romania	184
Spain, Catalonia	185
Belgium, French-speaking	222 [a]
Greece	231
All countries	144

Adjusted incidence
renal registries providing aggregated data

Country	Incidence
Russia	87 [c]
Latvia	106
Lithuania	113
Italy (7 of 20 regions)	135
Spain (All)	141
Albania	158
Slovakia	187 [c]
Cyprus	233
North Macedonia	260
Israel	291
Kosovo	385
All countries	118

Incidence (per million population)

[a] patients younger than 20 years of age are not included; [b] the incidence is underestimated by 2%; [c] data includes patients receiving dialysis only

Mean age at start of RRT

renal registries providing individual patient data

Country	Mean age (years)
Montenegro	56,5 [a]
Estonia	57,3
Iceland	59,7
UK, Scotland	60,2
Serbia	61,0
Finland	61,1
Bosnia and Herzegovina	62,0
UK, England	62,0 [a]
Spain, Murcia	62,1
Romania	62,5
Spain, Andalusia	62,5
Denmark	63,2
UK, Wales	63,4 [a]
Norway	63,8
the Netherlands	63,9
Sweden	64,2
UK, Northern Ireland	64,3 [a]
Spain, Canary Islands	64,3
Austria	64,4
Spain, Extremadura	64,5
Spain, Basque country	65,2
Spain, Galicia	65,3
Switzerland	65,5
Spain, Community of Madrid	65,6
Spain, Catalonia	65,8
Spain, Valencian region	66,2
Spain, Castile and León	66,3 [a]
Spain, Castile-La Mancha	66,7 [a]
Spain, Aragon	66,8
Spain, Asturias	67,2
Spain, Navarre	67,4 [a]
France	67,6
Belgium, French-speaking	68,6 [a]
Spain, Cantabria	69,4 [a]
Greece	70,9
Belgium, Dutch-speaking	71,1 [a]
All countries	65,3

Mean age (years)

Mean age at start of RRT

renal registries providing aggregated data

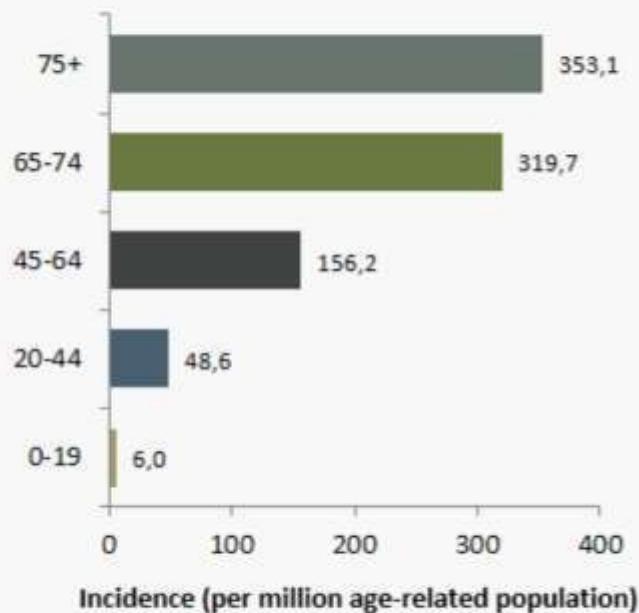| Country	Mean age (years)
Ukraine	52,8 [a]
Russia	56,3 [b]
Albania	59,8
Lithuania	59,9
Kosovo	62,0
Latvia	62,3
North Macedonia	62,9
Slovakia	64,5 [b]
Spain (All)	64,8
Israel	65,4
Italy (7 of 20 regions)	68,6
Cyprus	69,0
All countries	61,0

Mean age (years)

[a] patients younger than 20 years of age are not included; [b] data includes patients receiving dialysis only

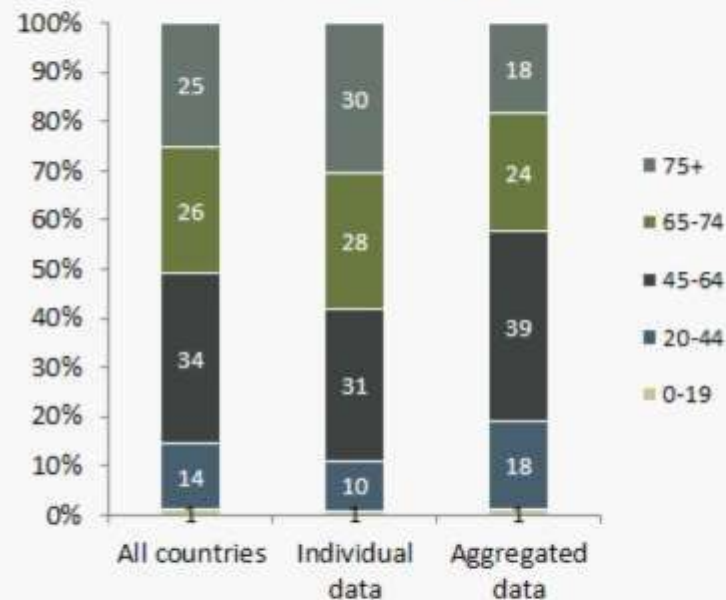# Incident patients accepted for RRT in 2018, at day 1

registries providing individual patient data only

Mean age at start of RRT

male patients

Country	Mean age
Montenegro	57.7 [a]
Estonia	58.4
Iceland	58.8
Serbia	60.3
UK, Scotland	60.5
Finland	61.6
Bosnia and Herzegovina	61.6
Romania	61.6
Spain, Murcia	62.4
UK, England	62.6 [a]
Spain, Andalusia	63.2
Spain, Extremadura	63.3
Denmark	63.5
UK, Wales	63.7 [a]
the Netherlands	64.4
Sweden	64.6
Austria	64.7
Spain, Basque country	64.8
Norway	65.0
Spain, Canary Islands	65.0
Spain, Catalonia	65.4
UK, Northern Ireland	65.7 [a]
Spain, Castile-La Mancha	65.7 [a]
Spain, Galicia	65.7
Switzerland	65.9
Spain, Castile and León	66.0 [a]
Spain, Valencian region	66.4
Spain, Community of Madrid	66.4
Spain, Aragon	67.4
Belgium, French-speaking	67.9 [a]
France	67.9
Spain, Asturias	68.1
Spain, Navarre	68.1 [a]
Spain, Cantabria	69.5 [a]
Greece	70.4
Belgium, Dutch-speaking	71.1 [a]
All countries	65.5

Mean age (years)

Mean age at start of RRT

female patients

Country	Mean age
Montenegro	54.6 [a]
Estonia	55.1
UK, Scotland	59.6
Finland	60.1
UK, England	61.0 [a]
Spain, Andalusia	61.4
Spain, Murcia	61.6
Norway	61.6
Iceland	61.9
UK, Northern Ireland	62.4 [a]
Serbia	62.4
Bosnia and Herzegovina	62.5
Denmark	62.7
UK, Wales	62.8 [a]
Spain, Canary Islands	62.9
the Netherlands	63.2
Sweden	63.6
Romania	63.7
Austria	63.9
Spain, Community of Madrid	64.0
Spain, Galicia	64.3
Switzerland	64.8
Spain, Asturias	64.9
Spain, Aragon	65.3
Spain, Navarre	65.4 [a]
Spain, Valencian region	65.8
Spain, Basque country	66.0
Spain, Catalonia	66.5
Spain, Extremadura	66.6
France	67.0
Spain, Castile and León	67.1 [a]
Spain, Castile-La Mancha	68.8 [a]
Spain, Cantabria	69.1 [a]
Belgium, French-speaking	69.5 [a]
Belgium, Dutch-speaking	70.9 [a]
Greece	71.9
All countries	65.0

Mean age (years)

[a] patients younger than 20 years of age are not included; [b] data includes patients receiving dialysis only

Incident patients accepted for RRT in 2018, at day 1

by age category

Incidence by age category
for all registries

Incidence by age category
by type of data provided by registry

Incident patients accepted for RRT in 2018, at day 1

by primary renal disease

Incidence by primary renal disease
for all registries

Incidence by primary renal disease
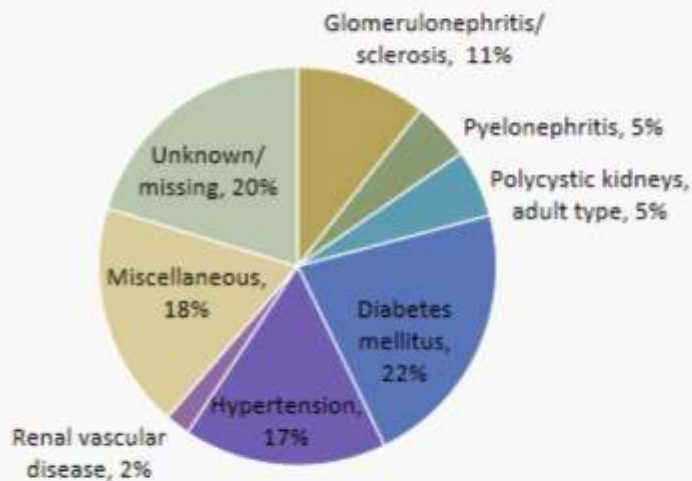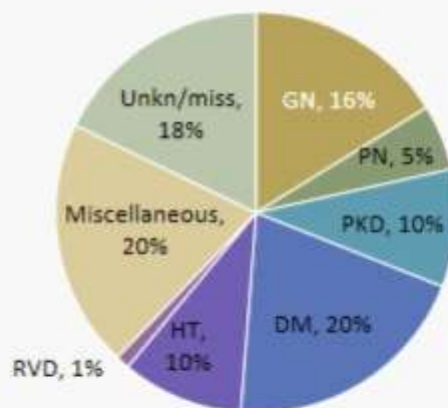*by type of data provided by registry*

Incident patients accepted for RRT in 2018, at day 91

by established modality

Incidence at day 91 by established modality
for all registries

Incidence at day 91 by established modality
by type of data provided by registry
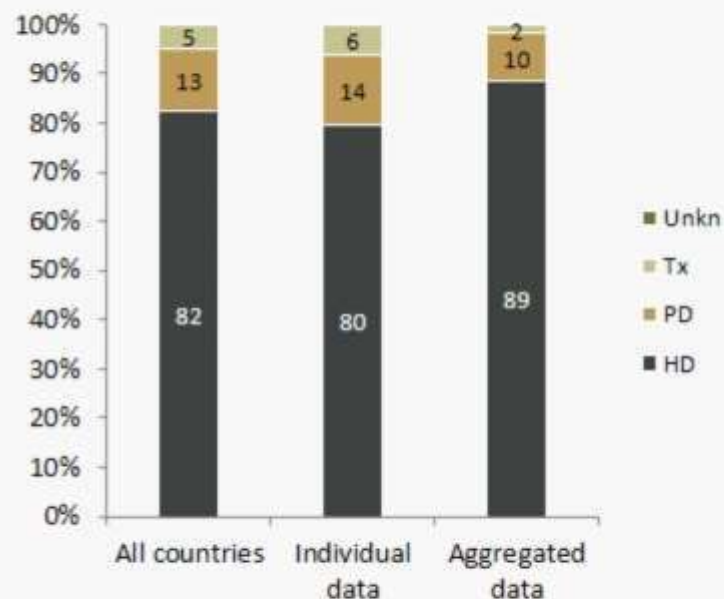
Incident patients accepted for RRT in 2018, at day 91

by established modality and age category

Incidence at day 91 by established modality
patients from registries providing individual patient data only

all patients

Transplant, 5%

Peritoneal dialysis, 13%

Haemodialysis, 82%
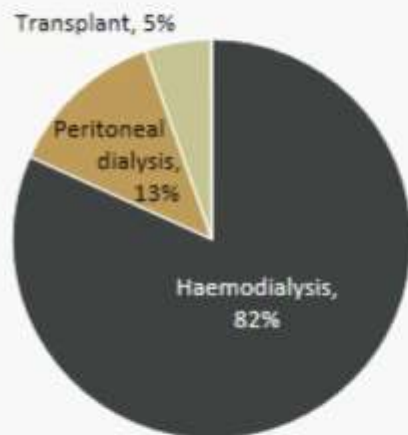
patients younger than 65 years of age at the start of RRT

Transplant, 10%

Peritoneal dialysis, 15%

Haemodialysis, 75%
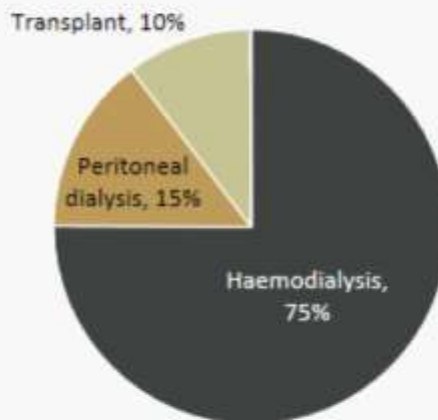
patients aged 65 years or older at the start of RRT
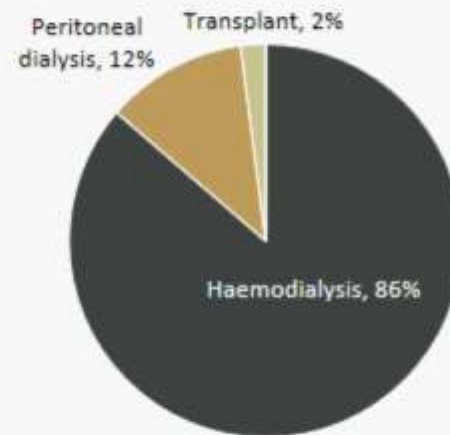
Peritoneal dialysis, 12%

Transplant, 2%

Haemodialysis, 86%

Incident patients accepted for RRT, at day 1

last 15 years (2004-2018)

Unadjusted incidence over time
all patients starting RRT

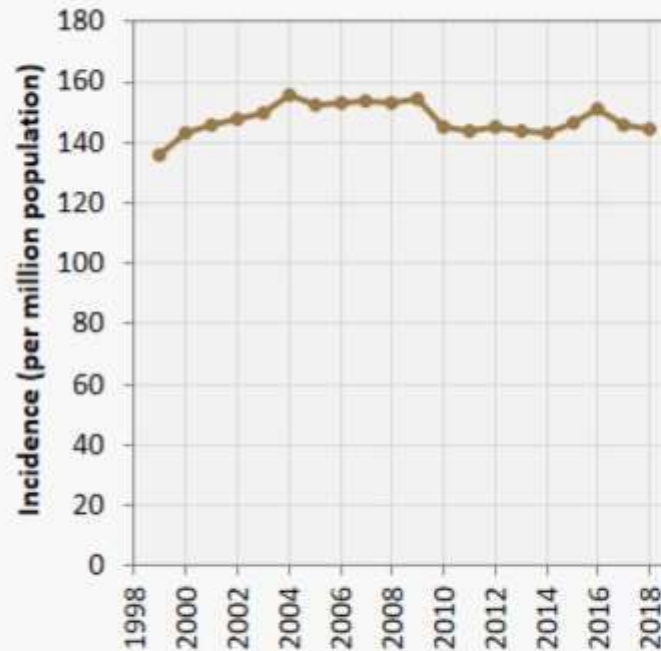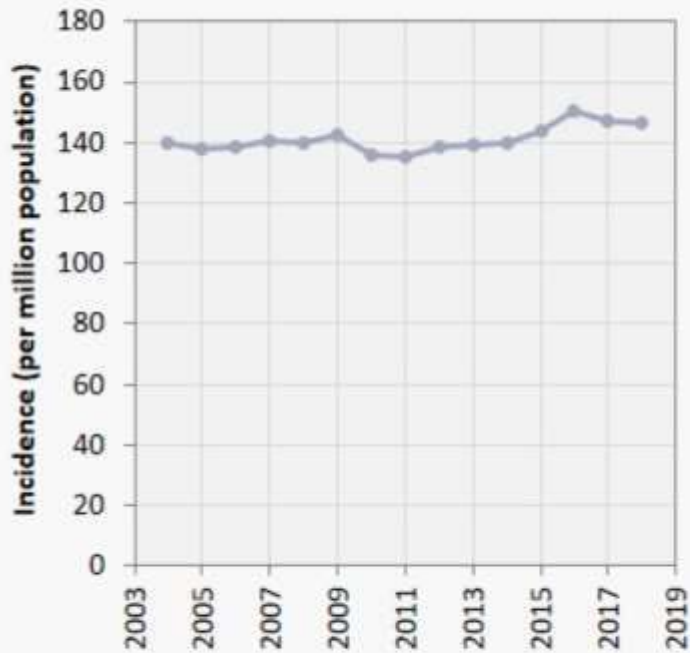## Adjusted incidence over time
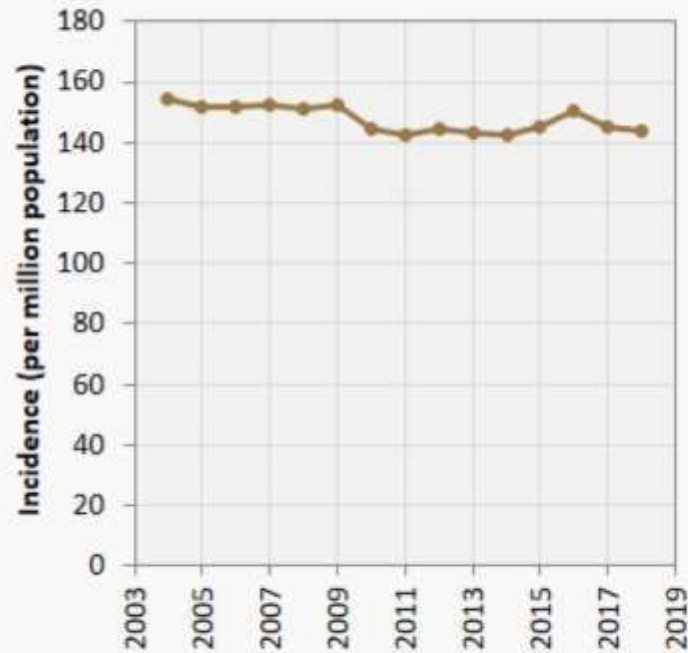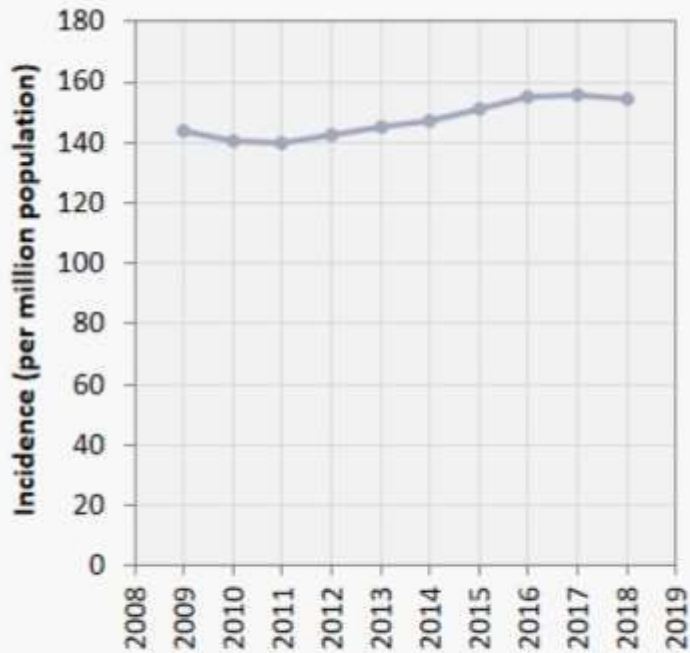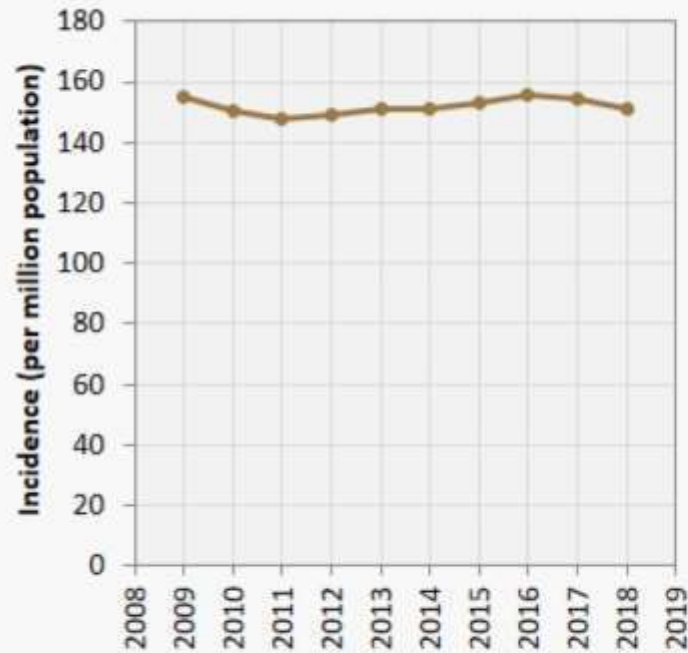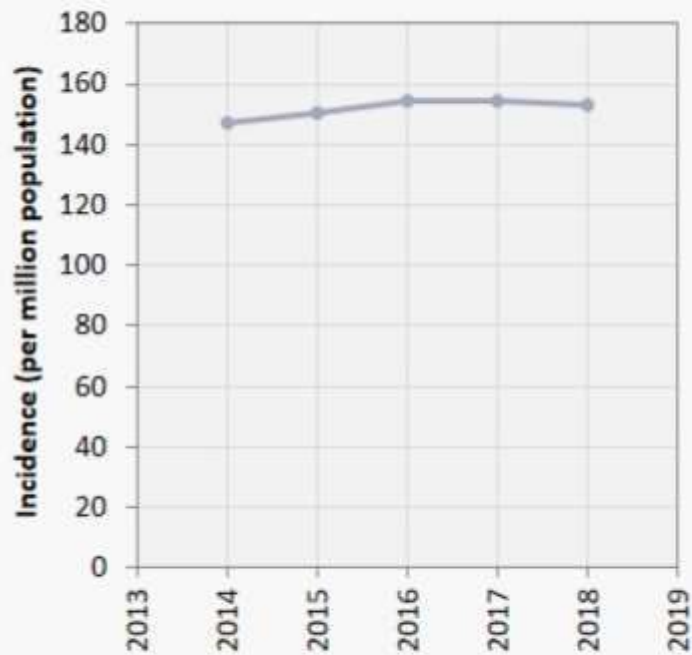*all patients starting RRT*

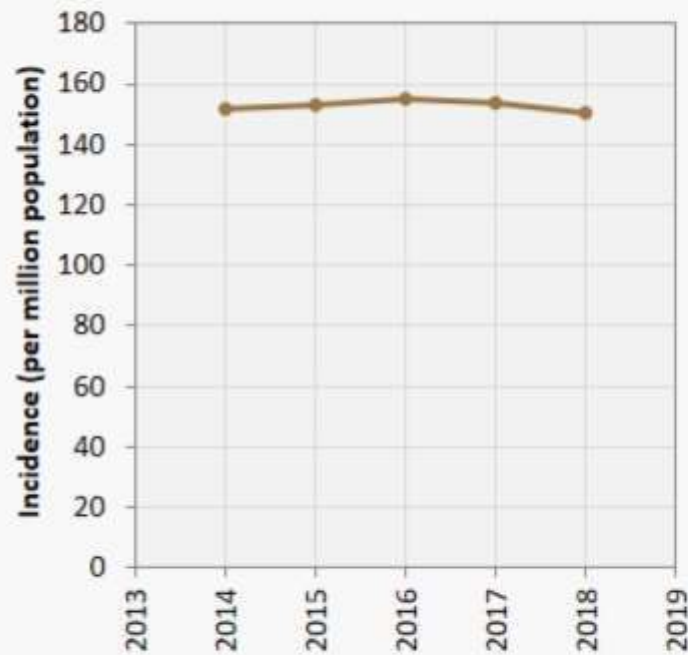# Incident patients accepted for RRT, at day 1
last 10 years (2009-2018)

Unadjusted incidence over time
all patients starting RRT

Adjusted incidence over time
all patients starting RRT
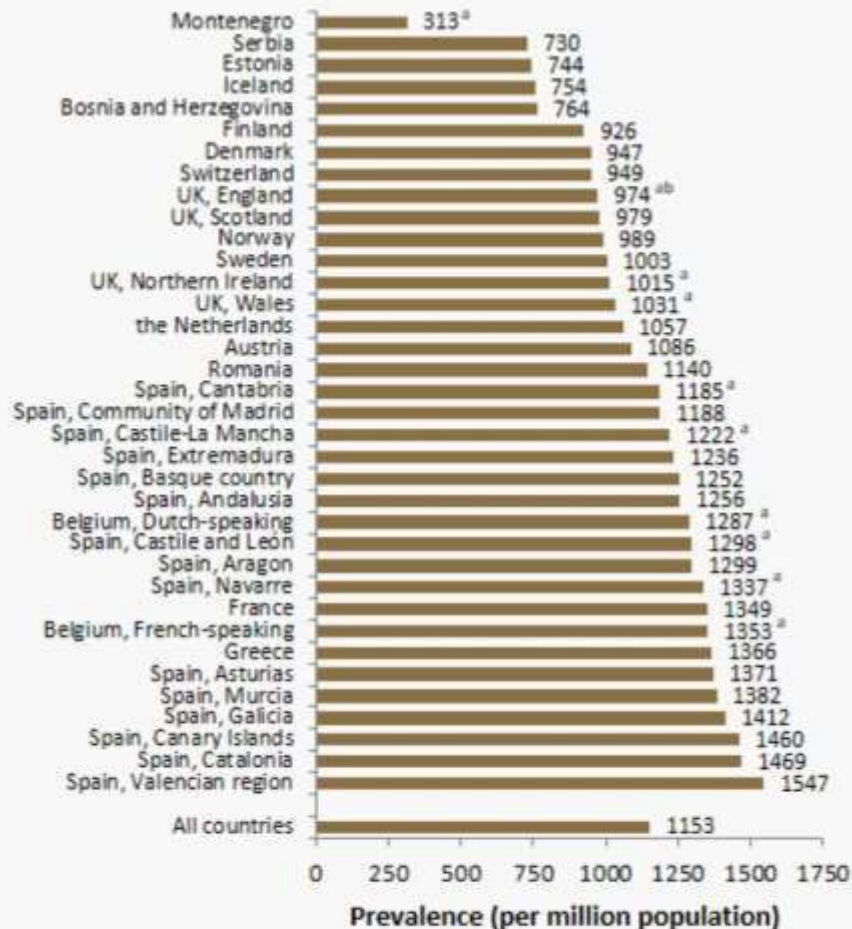
Prevalent patients on RRT in 2018

by country

Legend:
- <750 pmp
- 750-999 pmp
- 1000-1499 pmp
- ≥ 1500 pmp
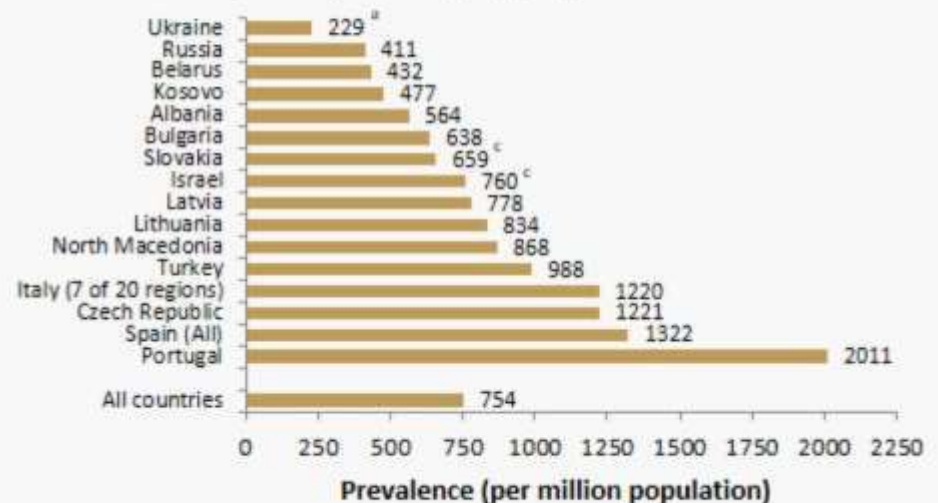- No data available

Prevalent patients on RRT in 2018 *by country*

Unadjusted prevalence
renal registries providing individual patient data

Country	Prevalence (per million population)
Montenegro	313 [a]
Serbia	730
Estonia	744
Iceland	754
Bosnia and Herzegovina	764
Finland	926
Denmark	947
Switzerland	949
UK, England	974 [ab]
UK, Scotland	979
Norway	989
Sweden	1003
UK, Northern Ireland	1015 [a]
UK, Wales	1031 [a]
the Netherlands	1057
Austria	1086
Romania	1140
Spain, Cantabria	1185 [a]
Spain, Community of Madrid	1188
Spain, Castile-La Mancha	1222 [a]
Spain, Extremadura	1236
Spain, Basque country	1252
Spain, Andalusia	1256
Belgium, Dutch-speaking	1287 [a]
Spain, Castile and León	1298 [a]
Spain, Aragon	1299
Spain, Navarre	1337 [a]
France	1349
Belgium, French-speaking	1353 [a]
Greece	1366
Spain, Asturias	1371
Spain, Murcia	1382
Spain, Galicia	1412
Spain, Canary Islands	1460
Spain, Catalonia	1469
Spain, Valencian region	1547
All countries	1153

Unadjusted prevalence
renal registries providing aggregated data

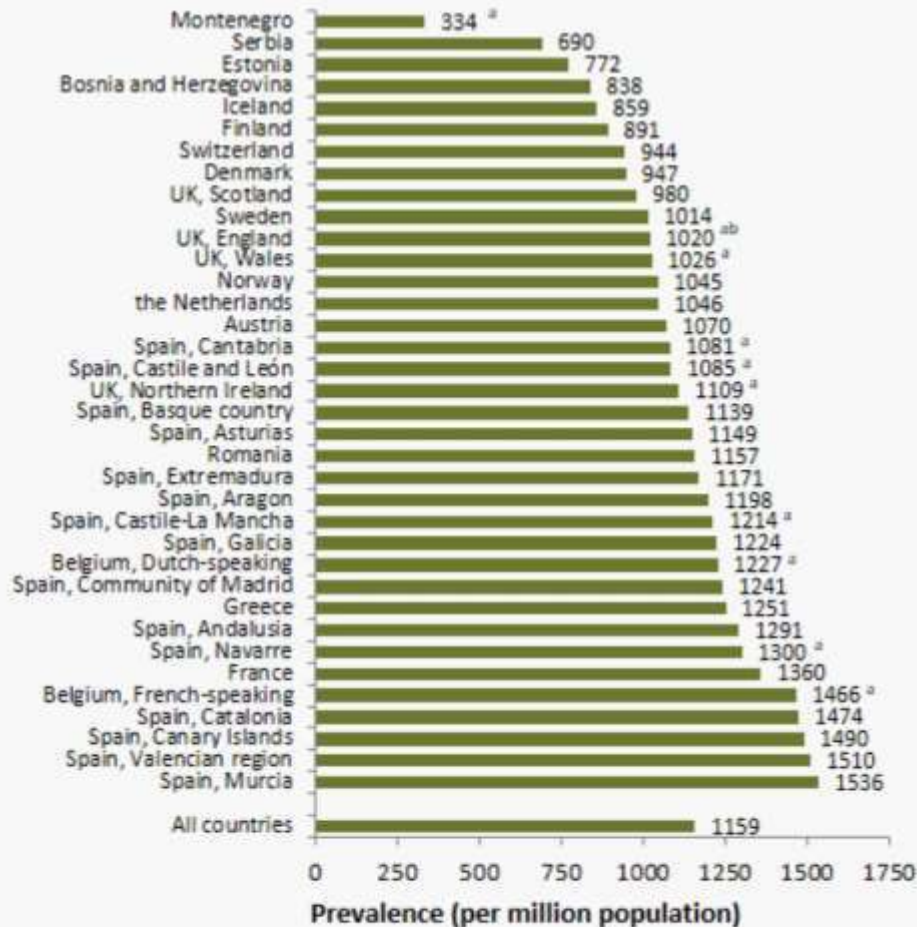| Country	Prevalence (per million population)
Ukraine	229 [a]
Russia	411
Belarus	432
Kosovo	477
Albania	564
Bulgaria	638 [c]
Slovakia	659
Israel	760 [c]
Latvia	778
Lithuania	834
North Macedonia	868
Turkey	988
Italy (7 of 20 regions)	1220
Czech Republic	1221
Spain (All)	1322
Portugal	2011
All countries	754

[a] patients younger than 20 years of age are not included; [b] the prevalence is underestimated by 1%; [c] data includes patients receiving dialysis only

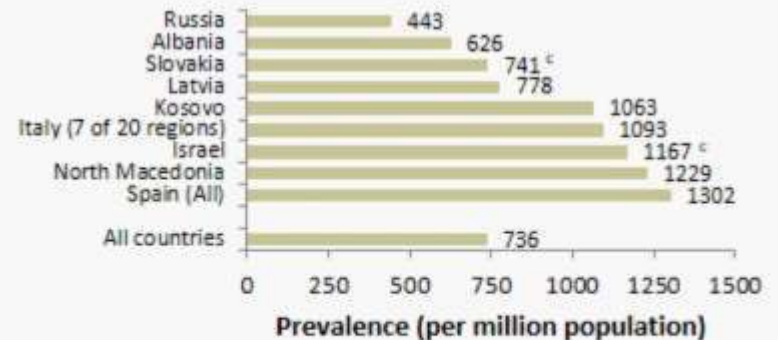Prevalent patients on RRT in 2018 by country adjusted for age and sex

Adjusted prevalence — renal registries providing individual patient data

Country	Prevalence (per million population)
Montenegro	334 [a]
Serbia	690
Estonia	772
Bosnia and Herzegovina	838
Iceland	859
Finland	891
Switzerland	944
Denmark	947
UK, Scotland	980
Sweden	1014
UK, England	1020 [ab]
UK, Wales	1026 [a]
Norway	1045
the Netherlands	1046
Austria	1070
Spain, Cantabria	1081 [a]
Spain, Castile and León	1085 [a]
UK, Northern Ireland	1109 [a]
Spain, Basque country	1139
Spain, Asturias	1149
Romania	1157
Spain, Extremadura	1171
Spain, Aragon	1198
Spain, Castile-La Mancha	1214 [a]
Spain, Galicia	1224
Belgium, Dutch-speaking	1227 [a]
Spain, Community of Madrid	1241
Greece	1251
Spain, Andalusia	1291
Spain, Navarre	1300 [a]
France	1360
Belgium, French-speaking	1466 [a]
Spain, Catalonia	1474
Spain, Canary Islands	1490
Spain, Valencian region	1510
Spain, Murcia	1536
All countries	1159

Adjusted prevalence — renal registries providing aggregated data

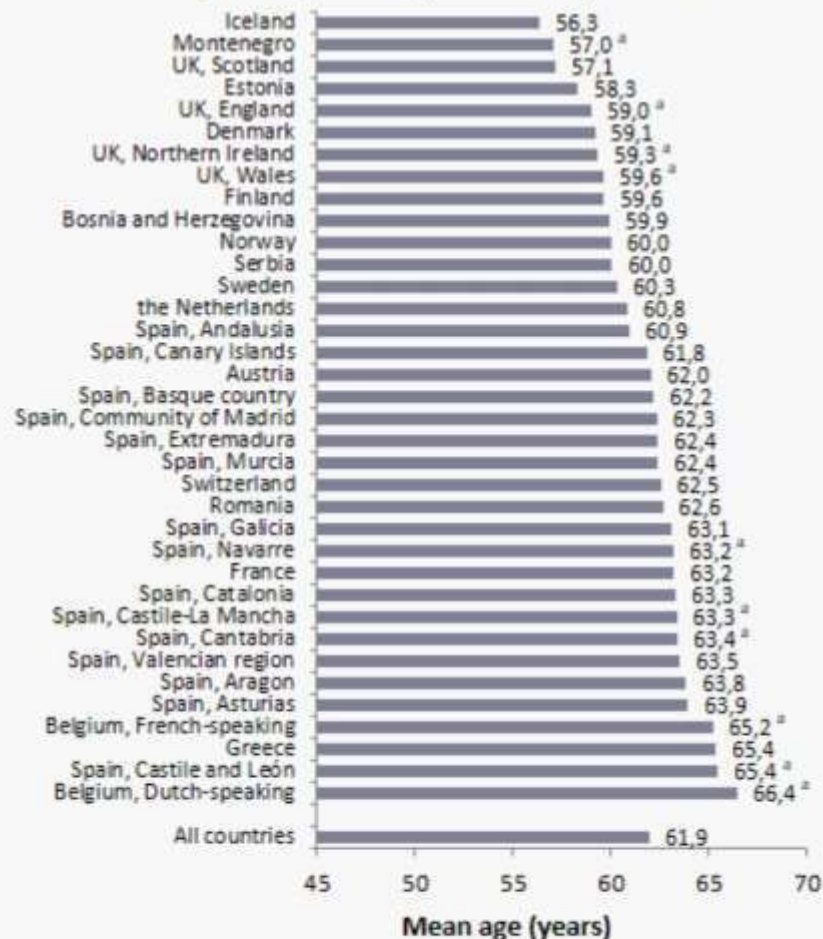| Country	Prevalence (per million population)
Russia	443
Albania	626
Slovakia	741 [c]
Latvia	778
Kosovo	1063
Italy (7 of 20 regions)	1093
Israel	1167 [c]
North Macedonia	1229
Spain (All)	1302
All countries	736

[a] patients younger than 20 years of age are not included; [b] the prevalence is underestimated by 1%; [c] data includes patients receiving dialysis only
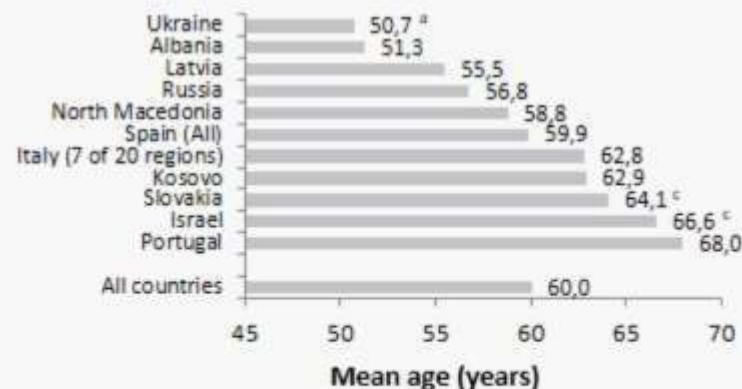
Prevalent patients on RRT in 2018

mean age

Mean age on 31 December 2018

renal registries providing individual patient data

Country	Mean age (years)
Iceland	56,3
Montenegro	57,0 [a]
UK, Scotland	57,1
Estonia	58,3
UK, England	59,0 [a]
Denmark	59,1
UK, Northern Ireland	59,3 [a]
UK, Wales	59,6 [a]
Finland	59,6
Bosnia and Herzegovina	59,9
Norway	60,0
Serbia	60,0
Sweden	60,3
the Netherlands	60,8
Spain, Andalusia	60,9
Spain, Canary Islands	61,8
Austria	62,0
Spain, Basque country	62,2
Spain, Community of Madrid	62,3
Spain, Extremadura	62,4
Spain, Murcia	62,4
Switzerland	62,5
Romania	62,6
Spain, Galicia	63,1
Spain, Navarre	63,2 [a]
France	63,2
Spain, Catalonia	63,3
Spain, Castile-La Mancha	63,3 [a]
Spain, Cantabria	63,4 [a]
Spain, Valencian region	63,5
Spain, Aragon	63,8
Spain, Asturias	63,9
Belgium, French-speaking	65,2 [a]
Greece	65,4
Spain, Castile and León	65,4 [a]
Belgium, Dutch-speaking	66,4 [a]
All countries	61,9

Mean age on 31 December 2018

renal registries providing aggregated data

Country	Mean age (years)
Ukraine	50,7 [a]
Albania	51,3
Latvia	55,5
Russia	56,8
North Macedonia	58,8
Spain (All)	59,9
Italy (7 of 20 regions)	62,8
Kosovo	62,9
Slovakia	64,1 [c]
Israel	66,6 [c]
Portugal	68,0
All countries	60,0

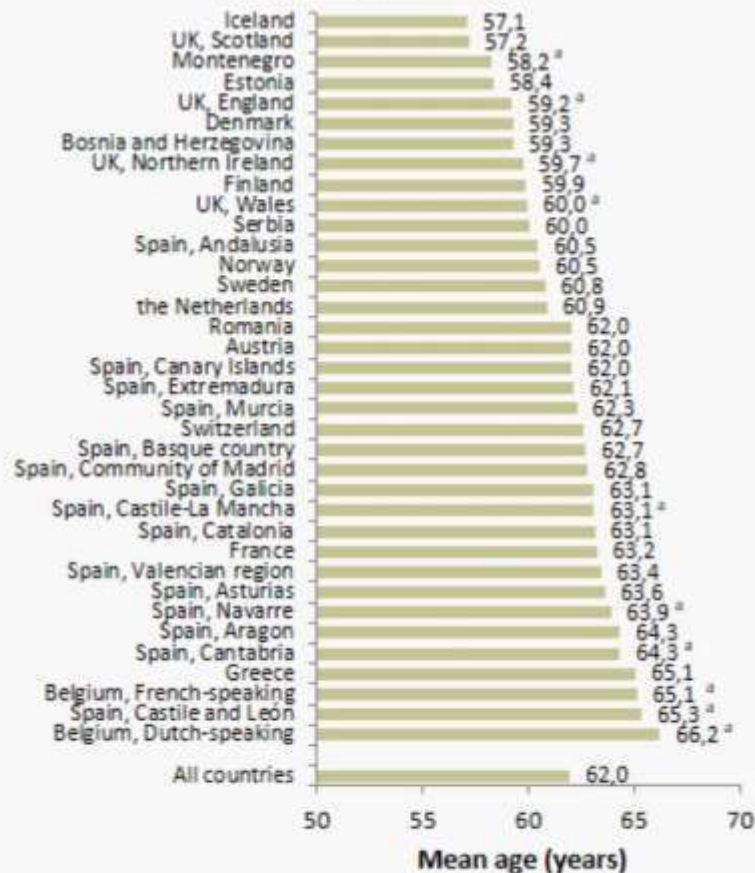[a] patients younger than 20 years of age are not included; [b] data includes patients receiving dialysis only

Prevalent patients on RRT in 2018

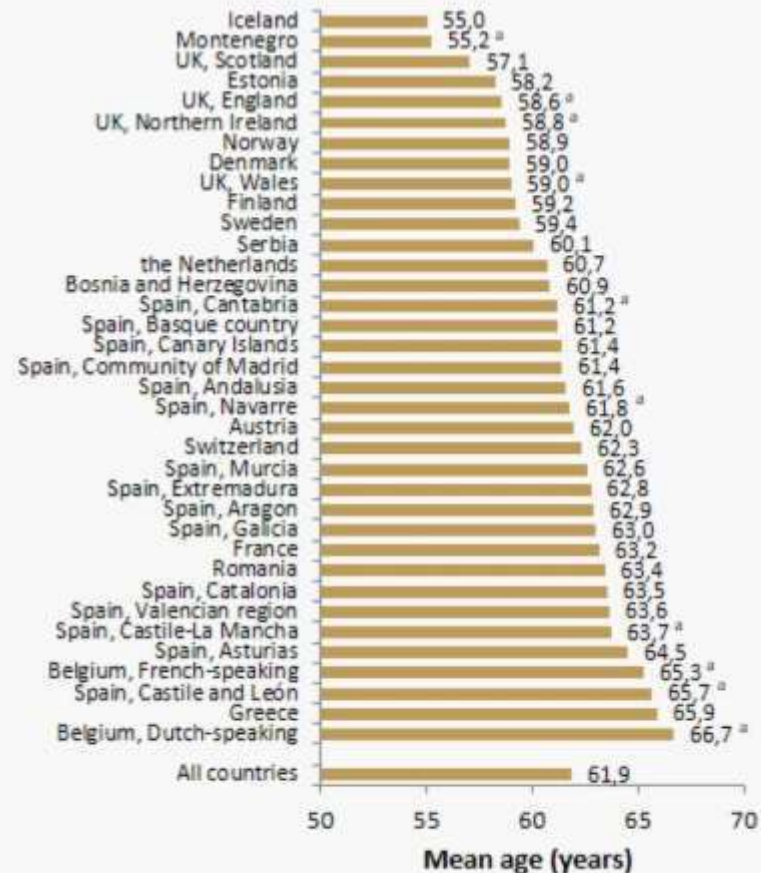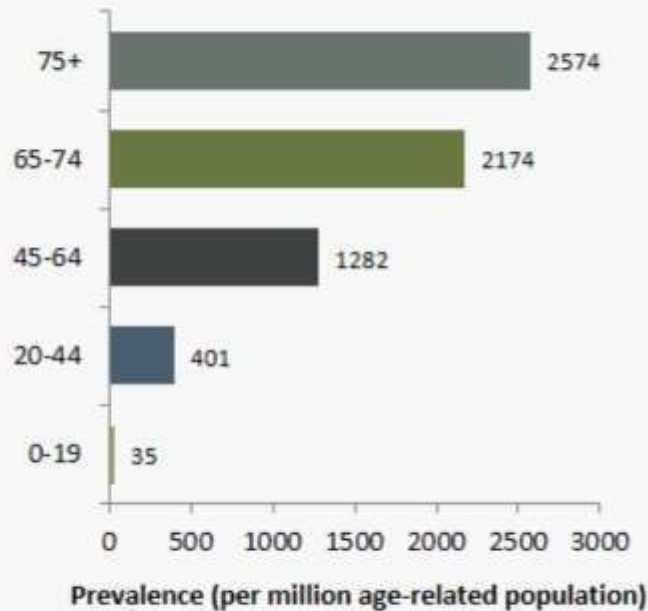*for registries providing individual patient data only*

Mean age on 31 December 2018

male patients

Country	Mean age (years)
Iceland	57,1
UK, Scotland	57,2
Montenegro	58,2 [a]
Estonia	58,4
UK, England	59,2 [a]
Denmark	59,3
Bosnia and Herzegovina	59,3
UK, Northern Ireland	59,7 [a]
Finland	59,9
UK, Wales	60,0 [a]
Serbia	60,0
Spain, Andalusia	60,5
Norway	60,5
Sweden	60,8
the Netherlands	60,9
Romania	62,0
Austria	62,0
Spain, Canary Islands	62,0
Spain, Extremadura	62,1
Spain, Murcia	62,3
Switzerland	62,7
Spain, Basque country	62,7
Spain, Community of Madrid	62,8
Spain, Galicia	63,1
Spain, Castile-La Mancha	63,1 [a]
Spain, Catalonia	63,1
France	63,2
Spain, Valencian region	63,4
Spain, Asturias	63,6
Spain, Navarre	63,9 [a]
Spain, Aragon	64,3
Spain, Cantabria	64,3 [a]
Greece	65,1
Belgium, French-speaking	65,1 [a]
Spain, Castile and León	65,3 [a]
Belgium, Dutch-speaking	66,2 [a]
All countries	62,0

Mean age (years)

Mean age on 31 December 2018

female patients

Country	Mean age (years)
Iceland	55,0
Montenegro	55,2 [a]
UK, Scotland	57,1
Estonia	58,2
UK, England	58,6 [a]
UK, Northern Ireland	58,8 [a]
Norway	58,9
Denmark	59,0
UK, Wales	59,0 [a]
Finland	59,2
Sweden	59,4
Serbia	60,1
the Netherlands	60,7
Bosnia and Herzegovina	60,9
Spain, Cantabria	61,2 [a]
Spain, Basque country	61,2
Spain, Canary Islands	61,4
Spain, Community of Madrid	61,4
Spain, Andalusia	61,6
Spain, Navarre	61,8 [a]
Austria	62,0
Switzerland	62,3
Spain, Murcia	62,6
Spain, Extremadura	62,8
Spain, Aragon	62,9
Spain, Galicia	63,0
France	63,2
Romania	63,4
Spain, Catalonia	63,5
Spain, Valencian region	63,6
Spain, Castile-La Mancha	63,7 [a]
Spain, Asturias	64,5
Belgium, French-speaking	65,3 [a]
Spain, Castile and León	65,7 [a]
Greece	65,9
Belgium, Dutch-speaking	66,7 [a]
All countries	61,9

Mean age (years)

[a] patients younger than 20 years of age are not included; [b] data includes patients receiving dialysis only

Prevalent patients on RRT in 2018
by age category

Prevalence by age category
for all registries

Age category	Prevalence
75+	2574
65-74	2174
45-64	1282
20-44	401
0-19	35

Prevalence (per million age-related population)

Prevalence by age category
by type of data provided by registry

	All countries	Individual data	Aggregated data
75+	19	22	17
65-74	24	25	24
45-64	40	39	41
20-44	16	14	17
0-19	1	1	1
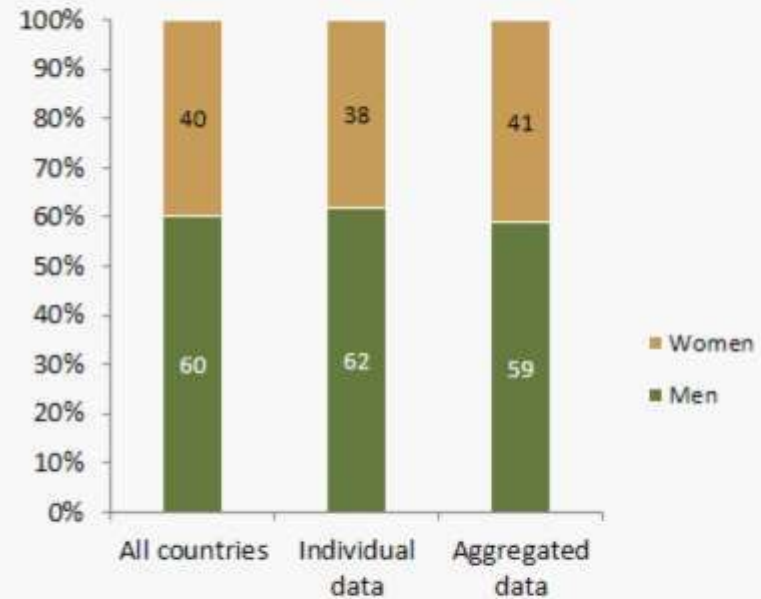
Prevalent patients on RRT in 2018
by primary renal disease

Prevalence by primary renal disease
for all registries

Primary renal disease	Prevalence (per million population)
Unknown/missing	243,4
Miscellaneous	124,3
Renal vascular disease	10,8
Hypertension	84,4
Diabetes mellitus	130,7
Polycystic kidneys, adult type	69,7
Pyelonephritis	62,5
Glomerulonephritis/sclerosis	168,2

Prevalence (per million population)

Prevalence by primary renal disease
by type of data provided by registry

	All countries	Individual data	Aggregated data
Unknown/missing	27	17	39
Miscellaneous	14	18	9
Renal vascular disease	1	1	1
Hypertension	9	11	7
Diabetes mellitus	15	16	13
Polycystic kidneys, adult type	8	9	7
Pyelonephritis	7	8	6
Glomerulonephritis/sclerosis	19	19	18

Prevalent patients on RRT in 2018

by primary renal disease and age category

Prevalence by primary renal disease

patients from registries providing individual patient data only

all patients

- Glomerulonephritis/sclerosis, 20%
- Unknown/missing, 17%
- Miscellaneous, 18%
- Renal vascular disease, 1%
- Hypertension, 12%
- Diabetes mellitus, 16%
- Polycystic kidneys, adult type, 9%
- Pyelonephritis, 7%

patients younger than 65 years of age

- GN, 25%
- Unkn/miss, 15%
- Miscellaneous, 20%
- RVD, 1%
- HT, 7%
- DM, 13%
- PKD, 10%
- PN, 9%

patients aged 65 years or older

- GN, 14%
- Unkn/miss, 18%
- Miscellaneous, 15%
- RVD, 2%
- HT, 17%
- DM, 19%
- PKD, 8%
- PN, 6%
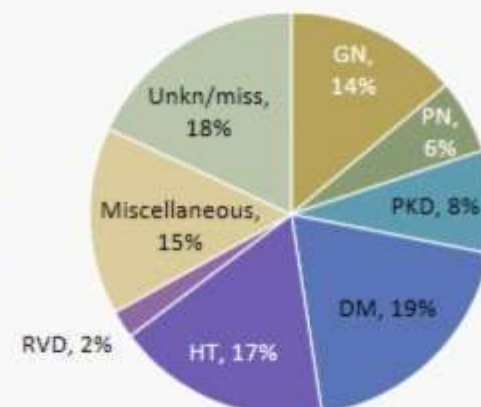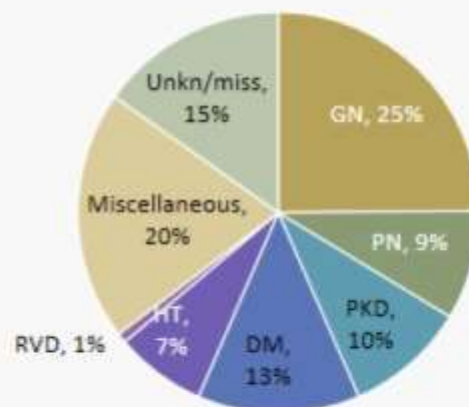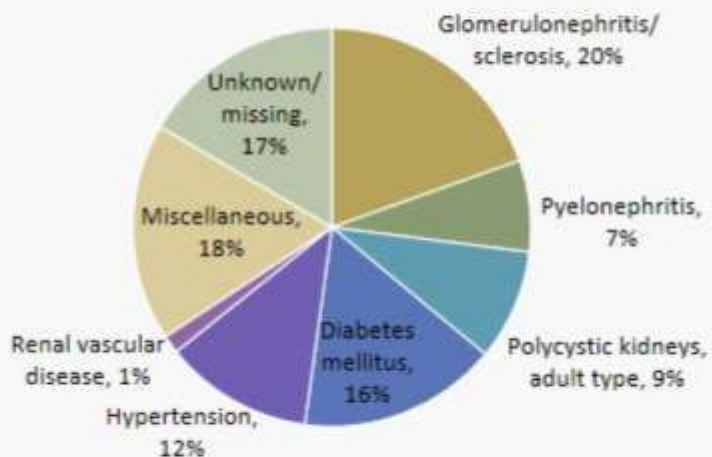
Prevalent patients on RRT in 2018
by modality

Prevalence by modality
for all registries

Modality	Prevalence (per million population)
Haemodialysis	514
Peritoneal dialysis	43
Transplant	338
Unknown / missing	1
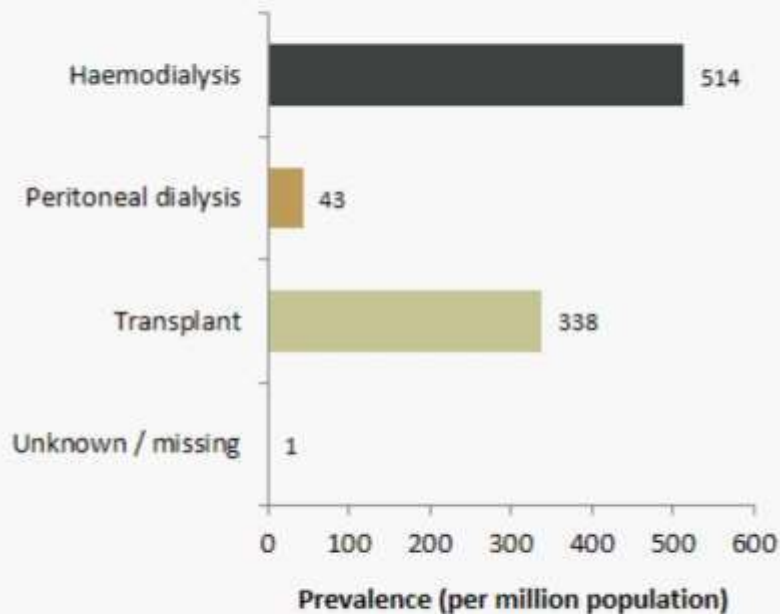
Prevalence by modality
by type of data provided by registry
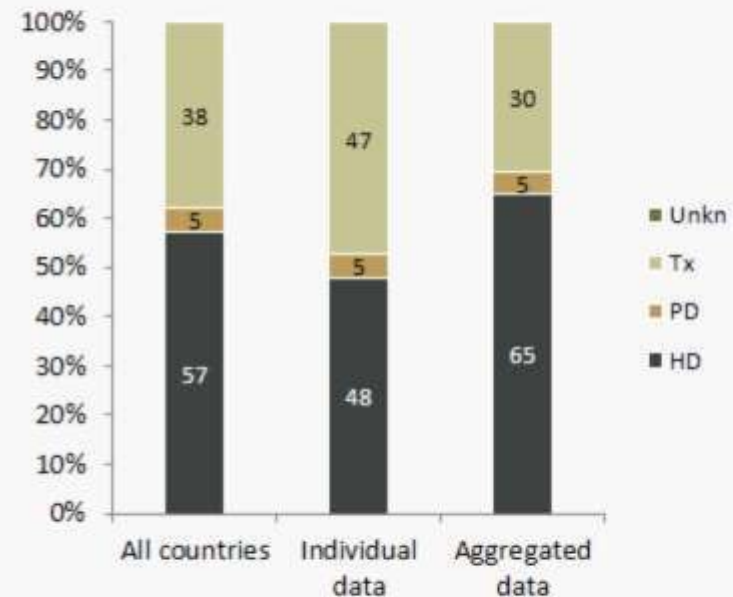
Prevalent patients on RRT in 2018
by modality and age category

Prevalence by modality
patients from registries providing individual patient data only
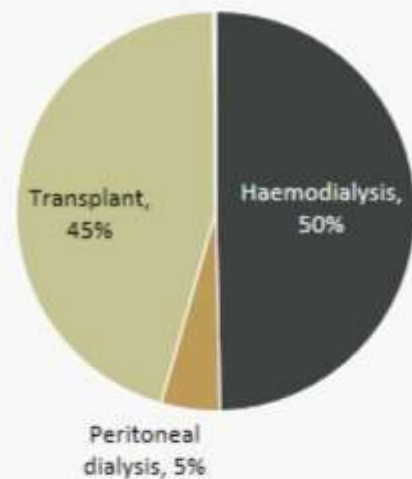
all patients

Transplant, 45%

Haemodialysis, 50%

Peritoneal dialysis, 5%

patients younger than 65 years of age

Transplant, 60%

Haemodialysis, 36%

Peritoneal dialysis, 4%

patients aged 65 years or older

Transplant, 30%

Haemodialysis, 64%

Peritoneal dialysis, 6%
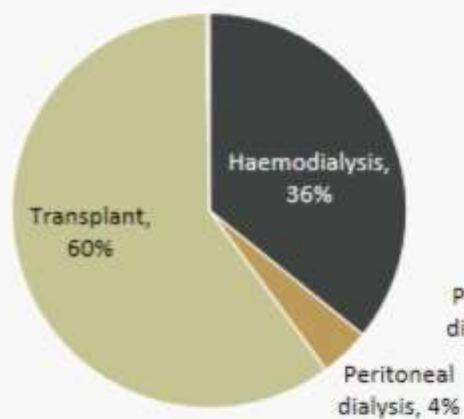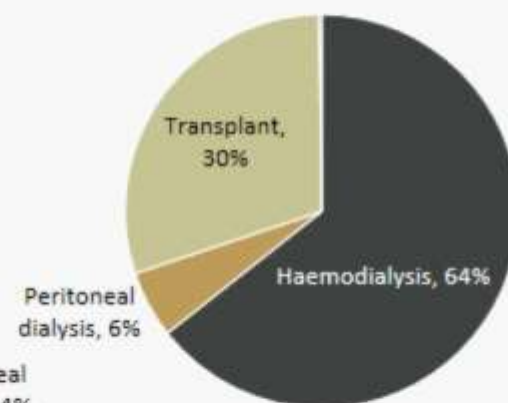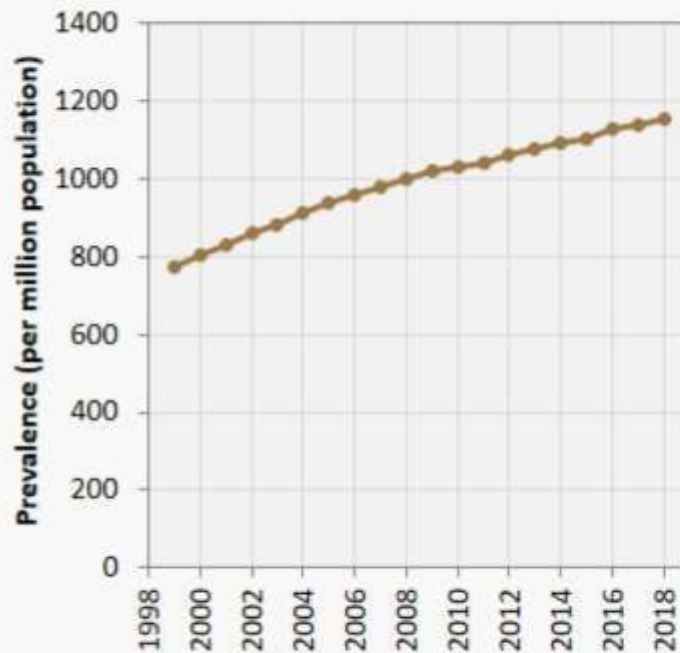
Prevalent patients on RRT
last 15 years (2004-2018)

Unadjusted prevalence over time
all patients on RRT
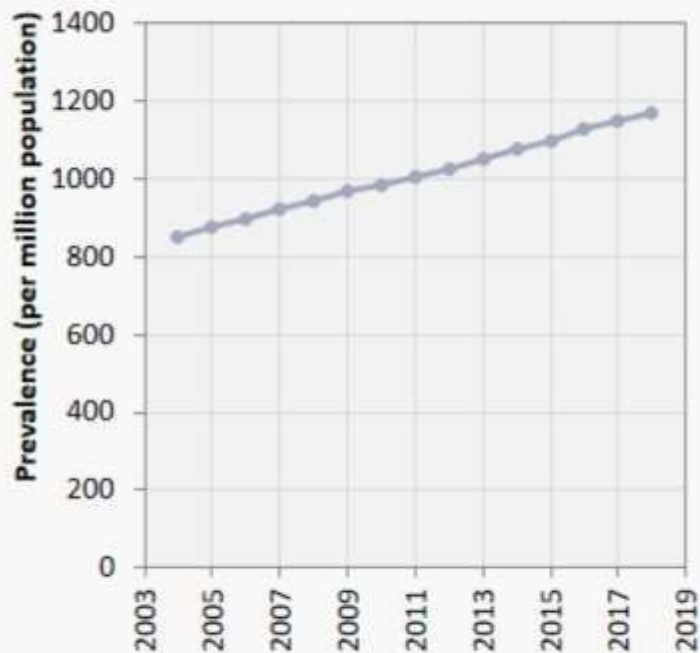
Adjusted prevalence over time
all patients on RRT
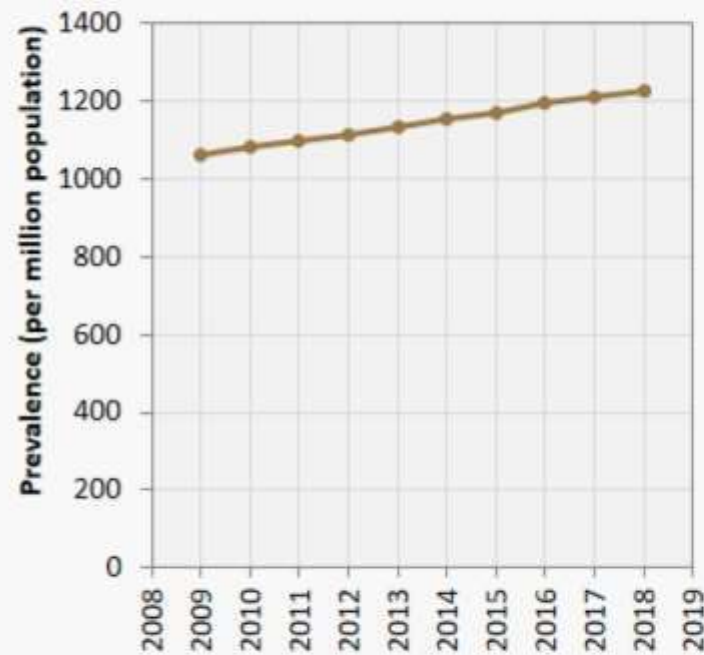
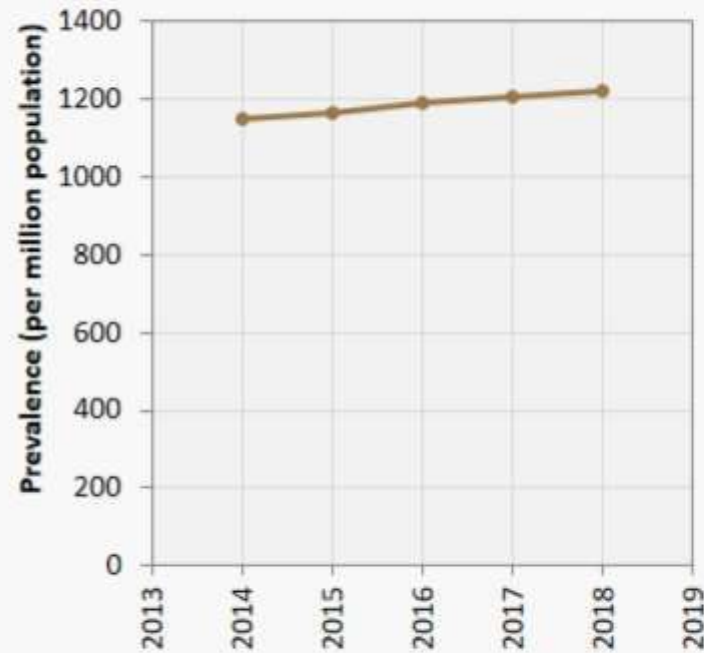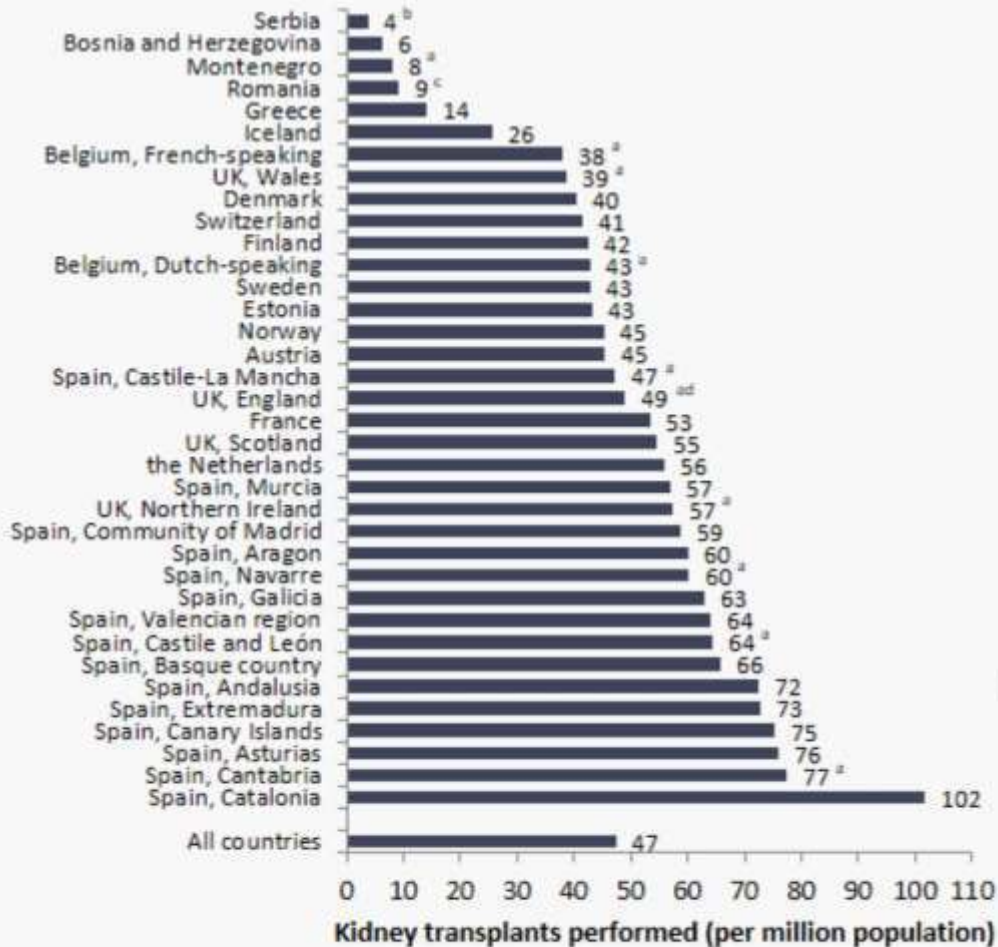# Prevalent patients on RRT
last 5 years (2014-2018)

Unadjusted prevalence over time
all patients on RRT
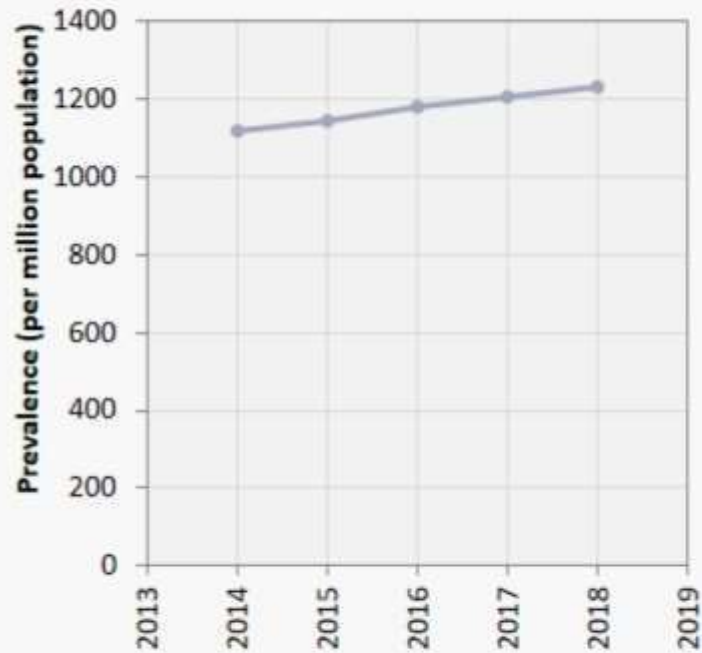
Adjusted prevalence over time
all patients on RRT
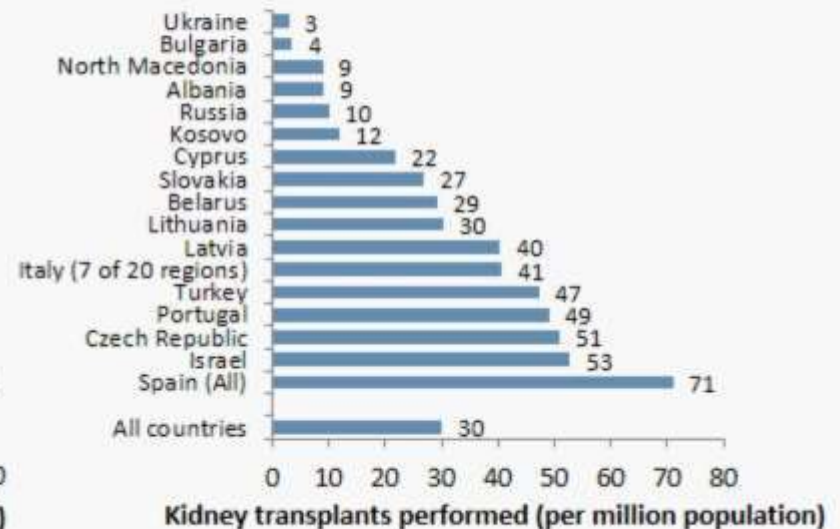
Kidney transplants performed in 2018

by country

Kidney transplants performed

renal registries providing individual patient data

Country	per million population
Serbia	4 [b]
Bosnia and Herzegovina	6
Montenegro	8 [a]
Romania	9 [c]
Greece	14
Iceland	26
Belgium, French-speaking	38 [a]
UK, Wales	39 [a]
Denmark	40
Switzerland	41
Finland	42
Belgium, Dutch-speaking	43 [a]
Sweden	43
Estonia	43
Norway	45
Austria	45
Spain, Castile-La Mancha	47 [a]
UK, England	49 [ad]
France	53
UK, Scotland	55
the Netherlands	56
Spain, Murcia	57
UK, Northern Ireland	57 [a]
Spain, Community of Madrid	59
Spain, Aragon	60
Spain, Navarre	60 [a]
Spain, Galicia	63
Spain, Valencian region	64
Spain, Castile and León	64 [a]
Spain, Basque country	66
Spain, Andalusia	72
Spain, Extremadura	73
Spain, Canary Islands	75
Spain, Asturias	76
Spain, Cantabria	77 [a]
Spain, Catalonia	102
All countries	47

Kidney transplants performed (per million population)

Kidney transplants performed

renal registries providing aggregated data

Country	per million population
Ukraine	3
Bulgaria	4
North Macedonia	9
Albania	9
Russia	10
Kosovo	12
Cyprus	22
Slovakia	27
Belarus	29
Lithuania	30
Latvia	40
Italy (7 of 20 regions)	41
Turkey	47
Portugal	49
Czech Republic	51
Israel	53
Spain (All)	71
All countries	30

Kidney transplants performed (per million population)

[a] patients younger than 20 years of age are not included; [bcd] transplant rates are underestimated by 15% (b), 30% (c), 7% (d)
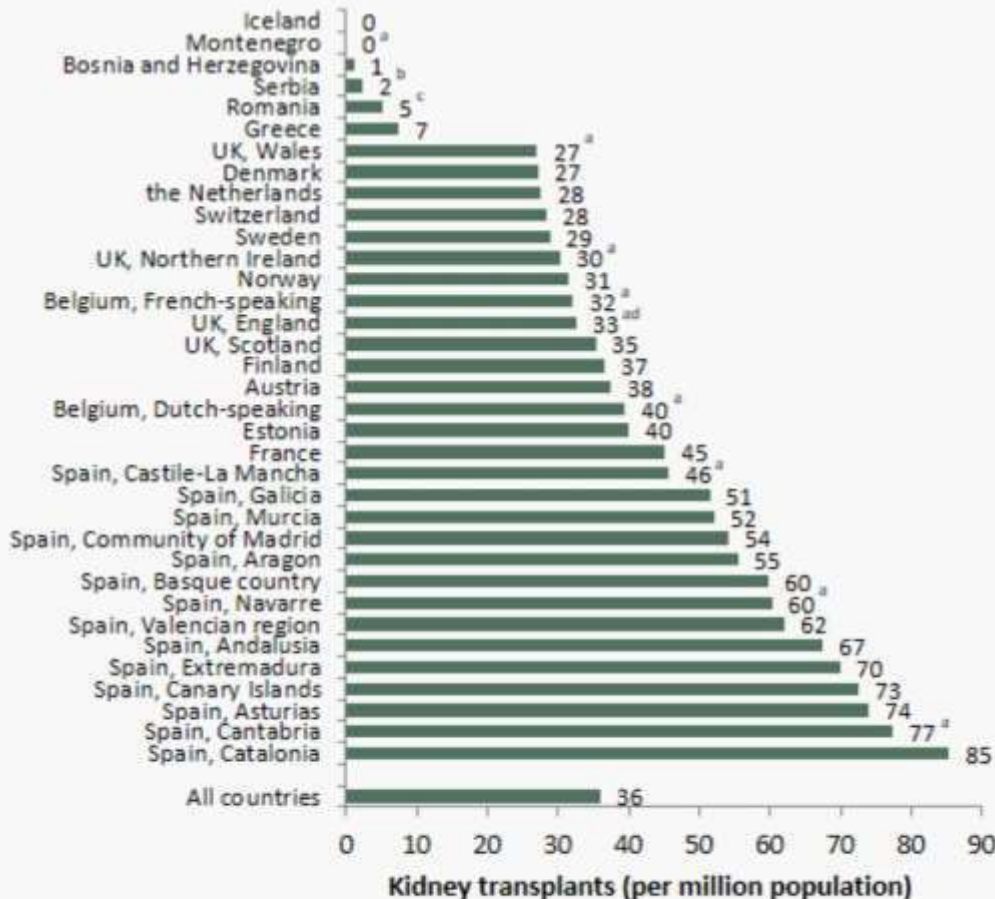
Kidney transplants performed in 2018
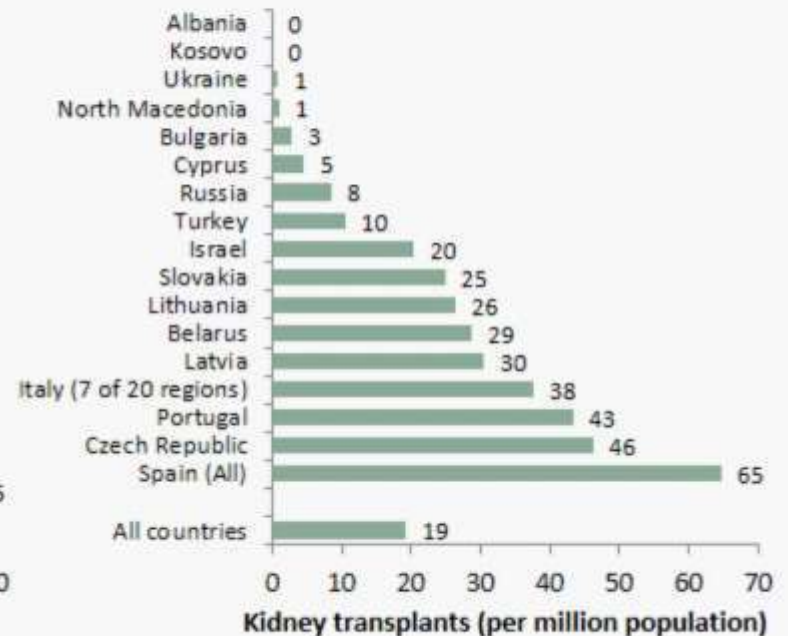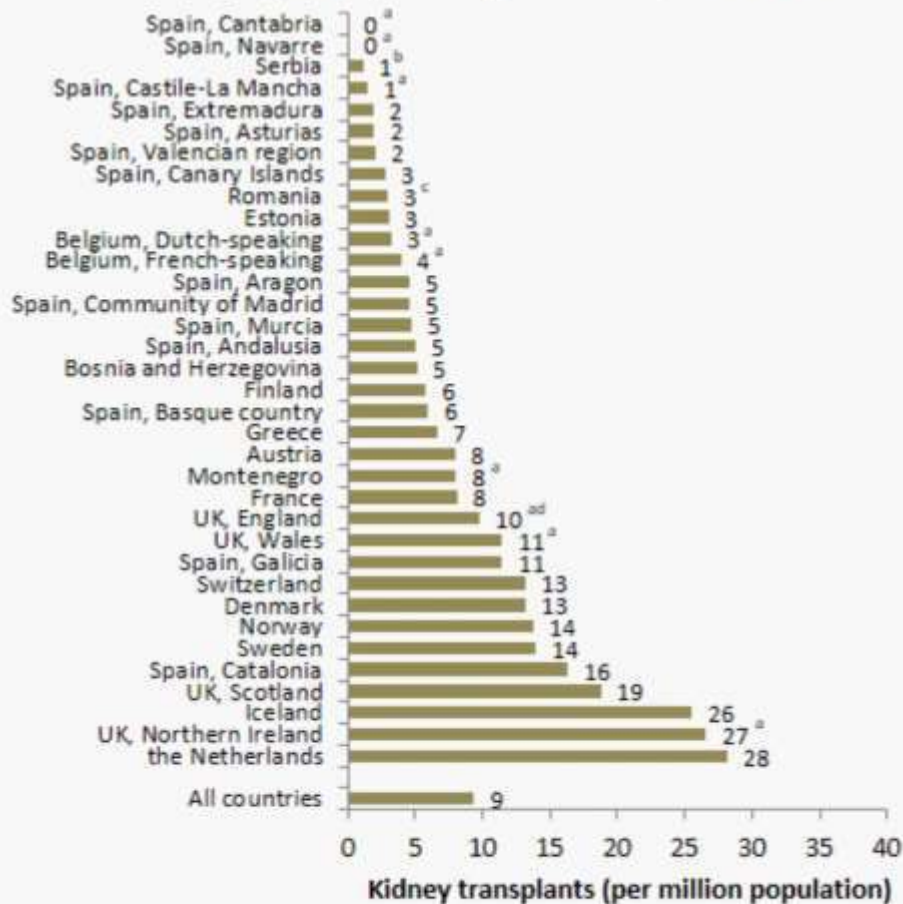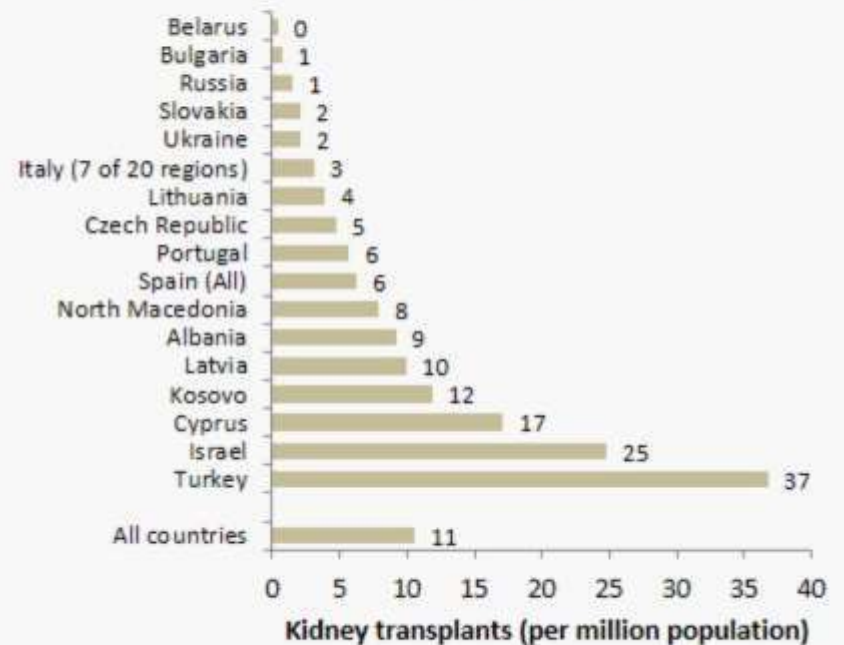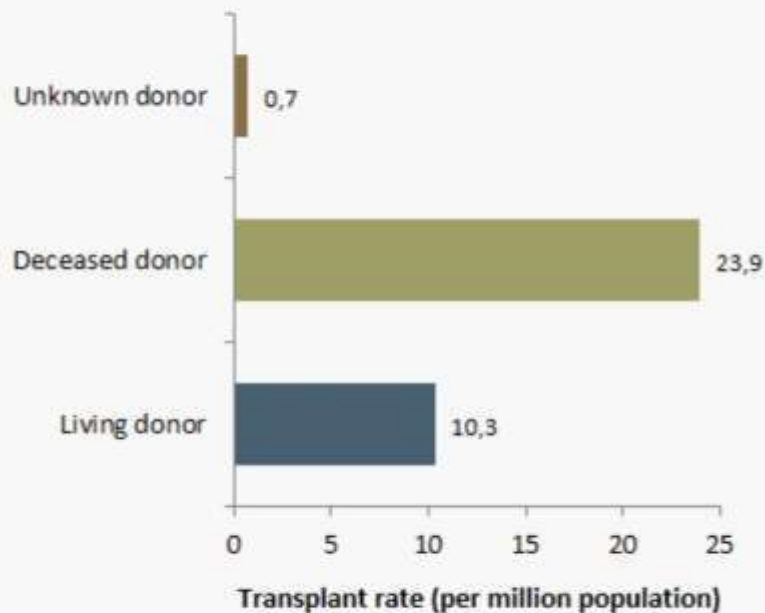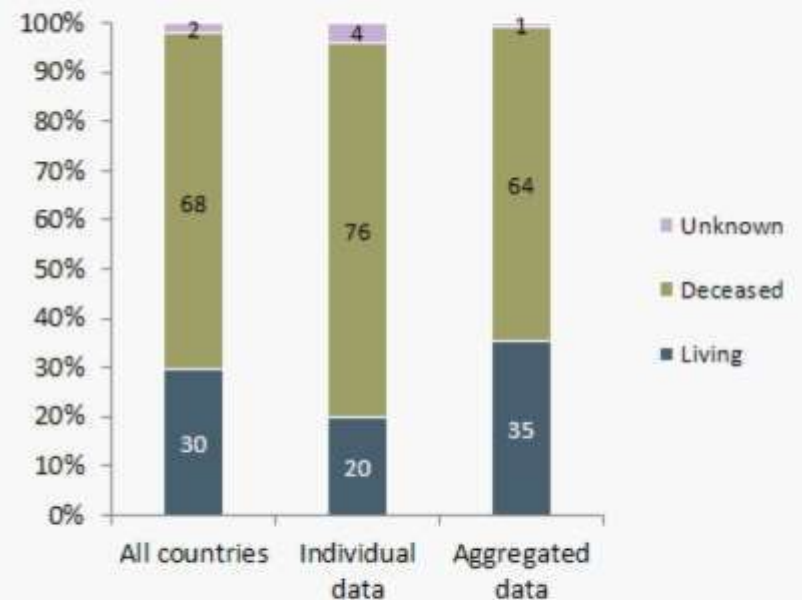
transplants from deceased donors by country

Deceased donor transplant rate

renal registries providing individual patient data

Country	Rate
Iceland	0
Montenegro	0 [a]
Bosnia and Herzegovina	1 [b]
Serbia	2 [c]
Romania	5 [c]
Greece	7
UK, Wales	27 [a]
Denmark	27
the Netherlands	28
Switzerland	28
Sweden	29
UK, Northern Ireland	30 [a]
Norway	31
Belgium, French-speaking	32 [a]
UK, England	33 [ad]
UK, Scotland	35
Finland	37
Austria	38
Belgium, Dutch-speaking	40 [a]
Estonia	40
France	45
Spain, Castile-La Mancha	46 [a]
Spain, Galicia	51
Spain, Murcia	52
Spain, Community of Madrid	54
Spain, Aragon	55
Spain, Basque country	60 [a]
Spain, Navarre	60
Spain, Valencian region	62
Spain, Andalusia	67
Spain, Extremadura	70
Spain, Canary Islands	73
Spain, Asturias	74
Spain, Cantabria	77 [a]
Spain, Catalonia	85
All countries	36

Kidney transplants (per million population)

Deceased donor transplant rate

renal registries providing aggregated data

Country	Rate
Albania	0
Kosovo	0
Ukraine	1
North Macedonia	1
Bulgaria	3
Cyprus	5
Russia	8
Turkey	10
Israel	20
Slovakia	25
Lithuania	26
Belarus	29
Latvia	30
Italy (7 of 20 regions)	38
Portugal	43
Czech Republic	46
Spain (All)	65
All countries	19

Kidney transplants (per million population)

[a] patients younger than 20 years of age are not included;   [bcd] transplant rates are underestimated by 15% (b), 30% (c), 7% (d)

Kidney transplants performed in 2018

transplants from living donors by country

Living donor transplant rate
renal registries providing individual patient data

Country	Rate
Spain, Cantabria	0 [a]
Spain, Navarre	0 [a]
Serbia	1 [b]
Spain, Castile-La Mancha	1 [a]
Spain, Extremadura	2
Spain, Asturias	2
Spain, Valencian region	2
Spain, Canary Islands	3
Romania	3 [c]
Estonia	3
Belgium, Dutch-speaking	3 [a]
Belgium, French-speaking	4 [a]
Spain, Aragon	5
Spain, Community of Madrid	5
Spain, Murcia	5
Spain, Andalusia	5
Bosnia and Herzegovina	5
Finland	6
Spain, Basque country	6
Greece	7
Austria	8
Montenegro	8 [a]
France	8
UK, England	10 [ad]
UK, Wales	11 [a]
Spain, Galicia	11
Switzerland	13
Denmark	13
Norway	14
Sweden	14
Spain, Catalonia	16
UK, Scotland	19
Iceland	26 [a]
UK, Northern Ireland	27
the Netherlands	28
All countries	9

Kidney transplants (per million population)

Living donor transplant rate
renal registries providing aggregated data

Country	Rate
Belarus	0
Bulgaria	1
Russia	1
Slovakia	2
Ukraine	2
Italy (7 of 20 regions)	3
Lithuania	4
Czech Republic	5
Portugal	6
Spain (All)	6
North Macedonia	8
Albania	9
Latvia	10
Kosovo	12
Cyprus	17
Israel	25
Turkey	37
All countries	11

Kidney transplants (per million population)

[a] patients younger than 20 years of age are not included; [bcd] transplant rates are underestimated by 15% (b), 30% (c), 7% (d)

Kidney transplants performed in 2018

by donor type

Kidney transplants by donor type
for all registries

Unknown donor — 0,7
Deceased donor — 23,9
Living donor — 10,3

0 5 10 15 20 25

Transplant rate (per million population)

Kidney transplants by donor type
by type of data provided by registry

	All countries	Individual data	Aggregated data
Unknown	2	4	1
Deceased	68	76	64
Living	30	20	35
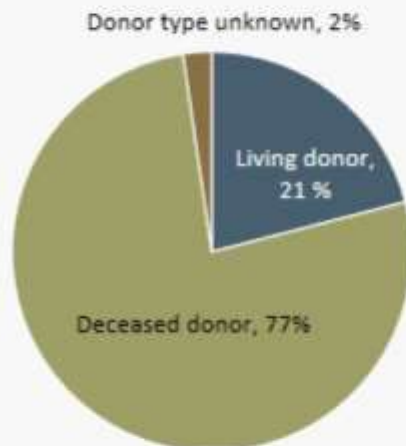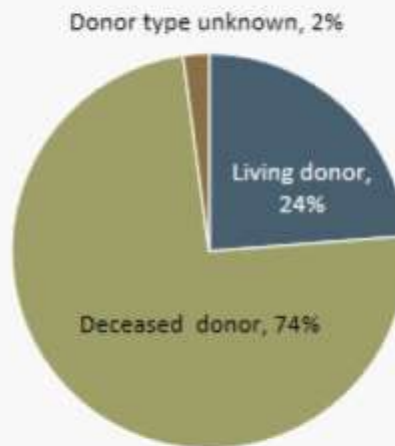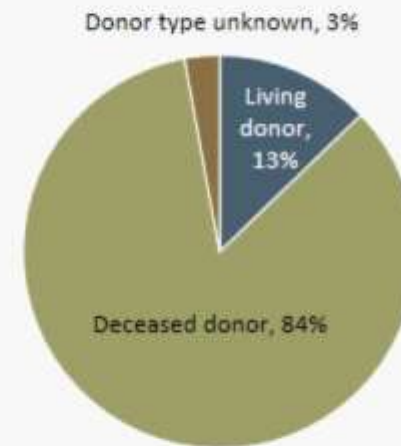
Survival probability cohort 2009-2013

by primary renal disease

Adjusted patient survival by primary renal disease
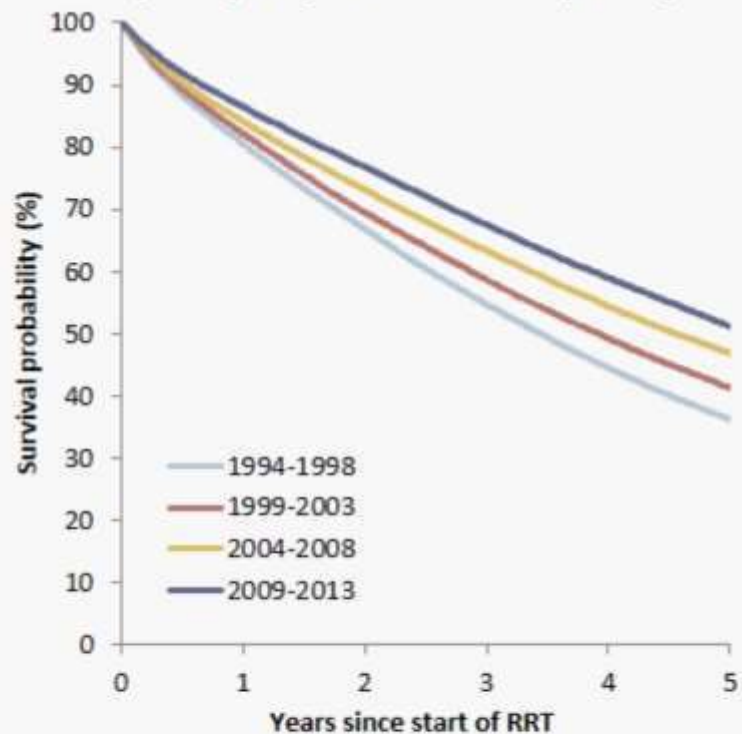## Incident RRT patients

from day 1, adjusted for age and sex
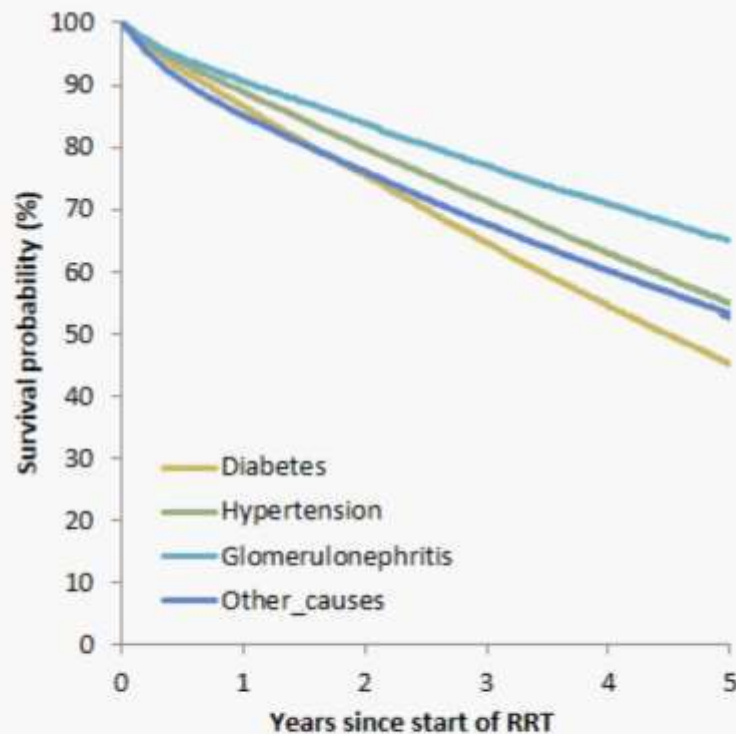
Survival probabilities were adjusted for fixed values for age (67 years), sex (63% men), and the primary renal disease distribution (24% diabetes mellitus, 19% hypertension / renal vascular disease, 11% glomerulonephritis and 46% other primary renal diseases).

Cox regression model was used to calculate survival probabilities.

Survival probability cohort 2009-2013 by dialysis modality

Adjusted patient survival by modality
Incident dialysis patients

from day 91, adjusted for age, sex, and primary renal disease
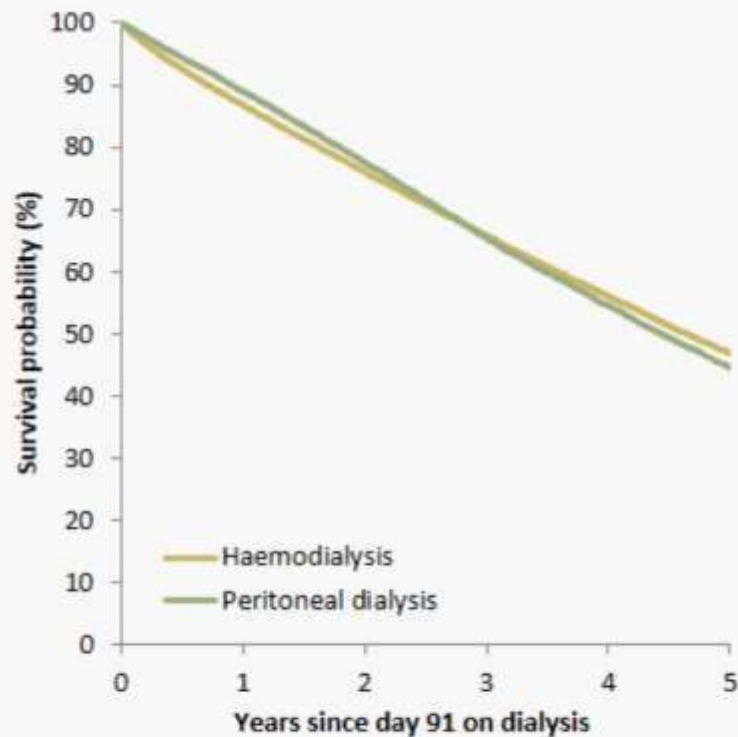
Survival probabilities were adjusted for fixed values for age (67 years), sex (63% men), and the primary renal disease distribution (24% diabetes mellitus, 19% hypertension / renal vascular disease, 11% glomerulonephritis and 46% other primary renal diseases).
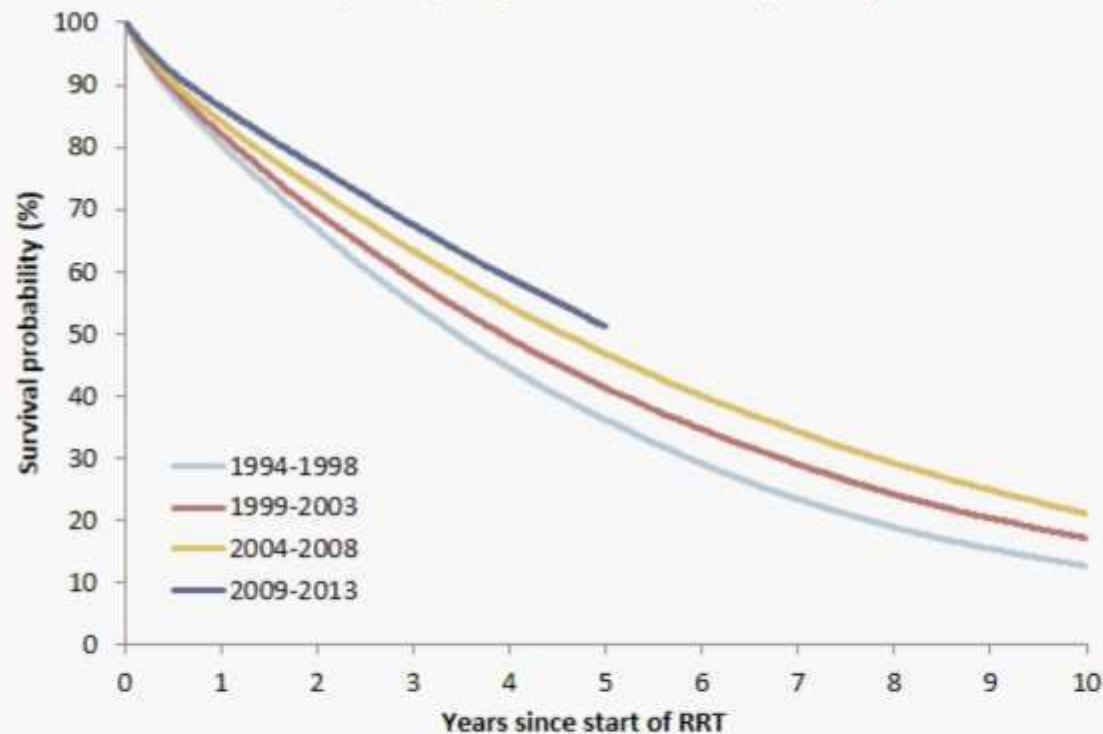
Cox regression model was used to calculate survival probabilities.

Survival probability cohort 2009-2013
by kidney donor

Adjusted patient survival by donor type
Patients receiving a first kidney transplant

from day of transplant, adjusted for age, sex, and primary renal disease

Legend:
— Living donor
— Deceased donor

X-axis: Years since kidney transplantation (0 to 5)
Y-axis: Survival probability (%) (0 to 100)

Survival probabilities were adjusted for fixed values for age (50 years), sex (63% men), and the primary renal disease distribution (14% diabetes mellitus, 10% hypertension / renal vascular disease, 23% glomerulonephritis and 53% other primary renal diseases).
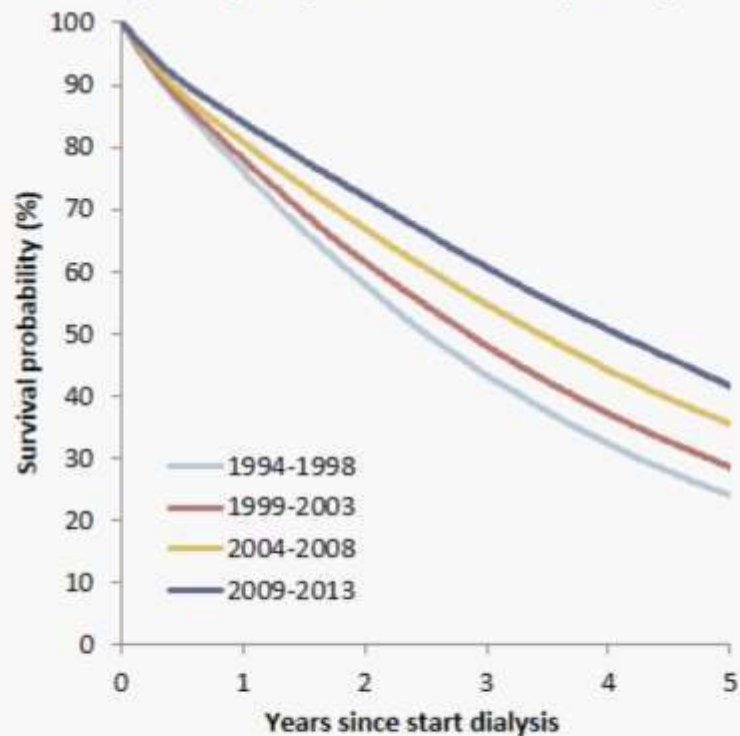
Cox regression model was used to calculate survival probabilities.

Patient survival on RRT by cohort

Patient survival incident RRT patients

adjusted for age, sex and cause of renal failure

Survival probabilities were adjusted for fixed values for age (67 years), sex (63% men), and the primary renal disease distribution (24% diabetes mellitus, 19% hypertension / renal vascular disease, 11% glomerulonephritis and 46% other primary renal diseases).
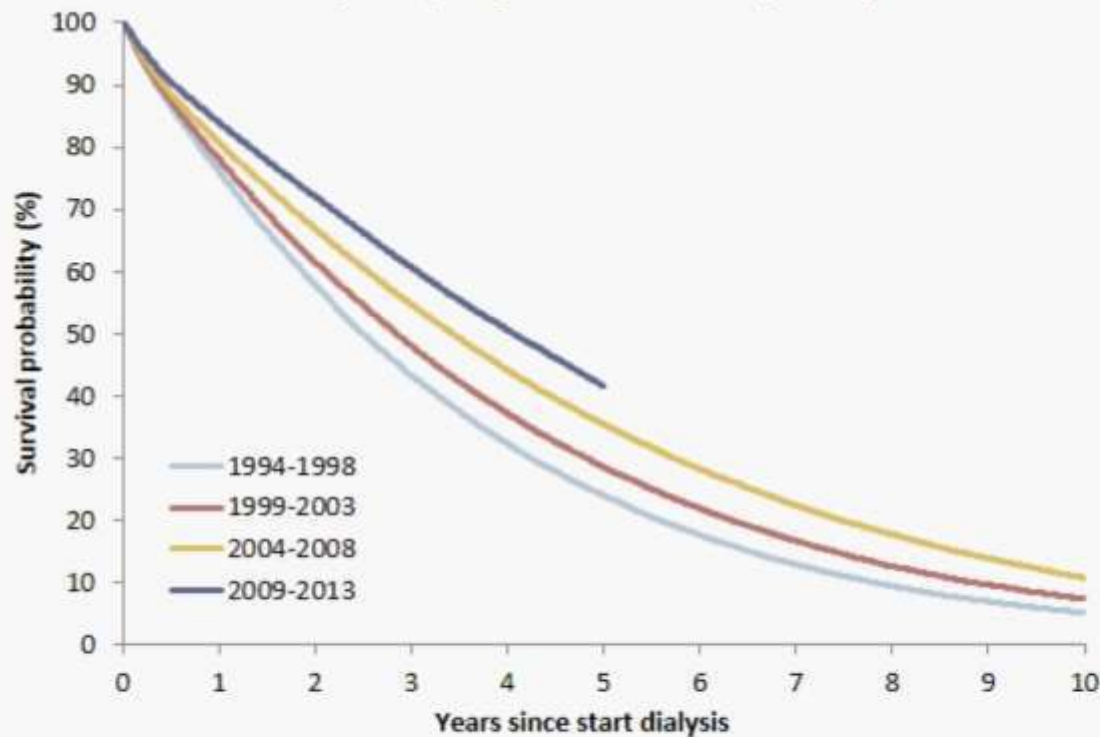
Cox regression model was used to calculate survival probabilities.

Patient survival on RRT
by cohort

Patient survival
incident RRT patients
adjusted for age, sex and cause of renal failure

Survival probability (%) vs Years since start of RRT

1994-1998
1999-2003
2004-2008
2009-2013

Survival probabilities were adjusted for fixed values for age (67 years), sex (63% men), and the primary renal disease distribution (24% diabetes mellitus, 19% hypertension / renal vascular disease, 11% glomerulonephritis and 46% other primary renal diseases).
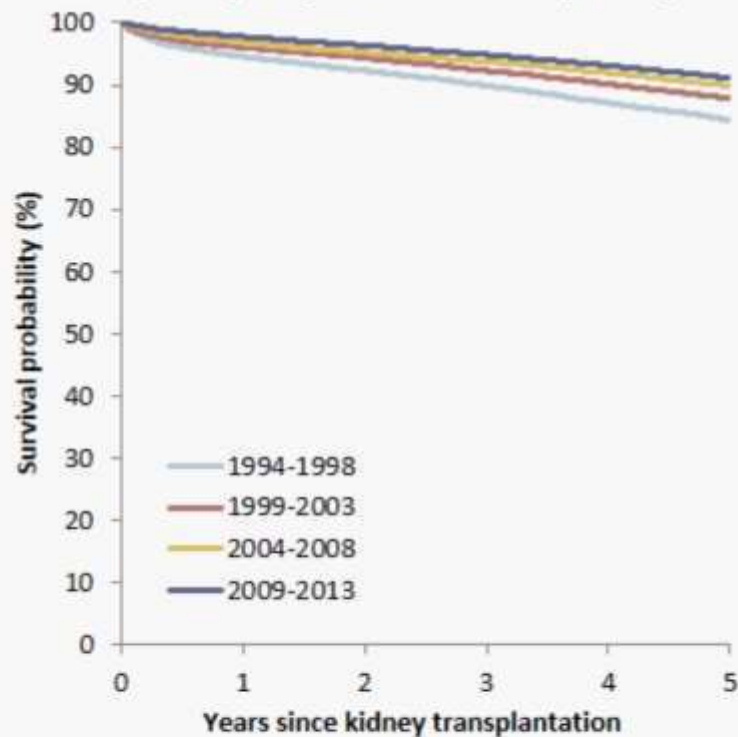
Cox regression model was used to calculate survival probabilities.

Patient survival on dialysis

by cohort

Patient survival
incident dialysis patients

adjusted for age, sex and cause of renal failure

Survival probability (%) vs Years since start dialysis

- 1994-1998
- 1999-2003
- 2004-2008
- 2009-2013

Survival probabilities were adjusted for fixed values for age (67 years), sex (63% men), and the primary renal disease distribution (24% diabetes mellitus, 19% hypertension / renal vascular disease, 11% glomerulonephritis and 46% other primary renal diseases).

Cox regression model was used to calculate survival probabilities.

Patient survival on dialysis *by cohort*

Patient survival incident dialysis patients — adjusted for age, sex and cause of renal failure

Survival probabilities were adjusted for fixed values for age (67 years), sex (63% men), and the primary renal disease distribution (24% diabetes mellitus, 19% hypertension / renal vascular disease, 11% glomerulonephritis and 46% other primary renal diseases).
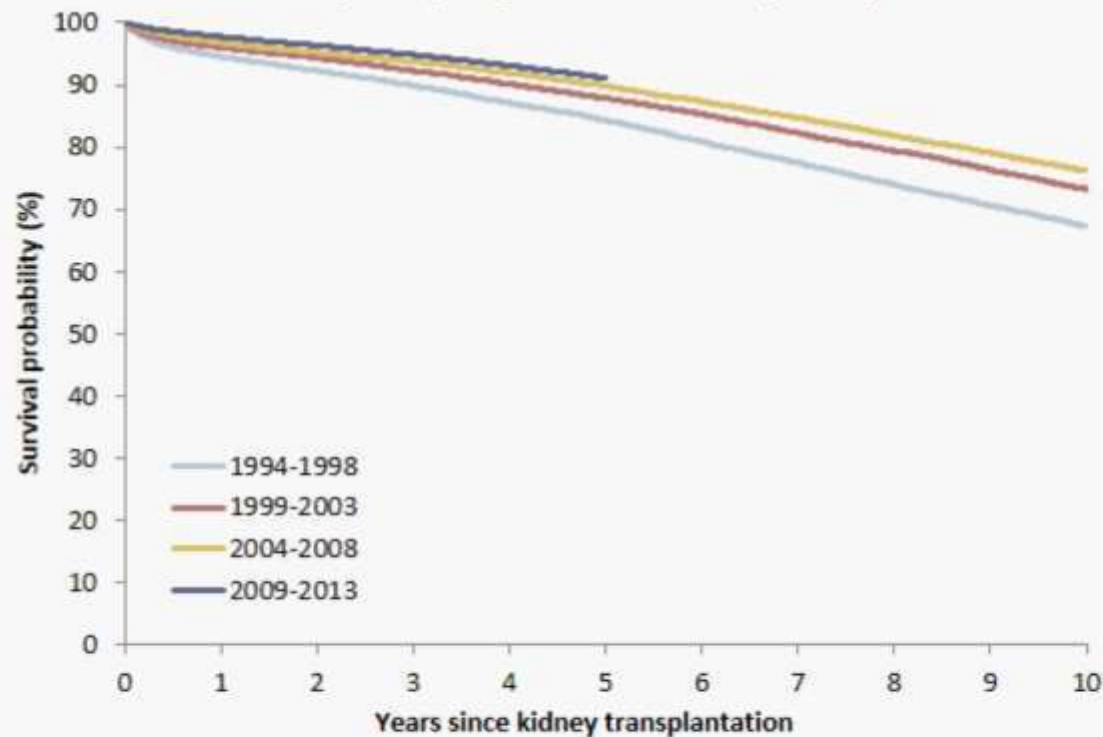
Cox regression model was used to calculate survival probabilities.

Patient survival
after kidney transplantation

by cohort

**Patient survival
after first kidney transplantation**
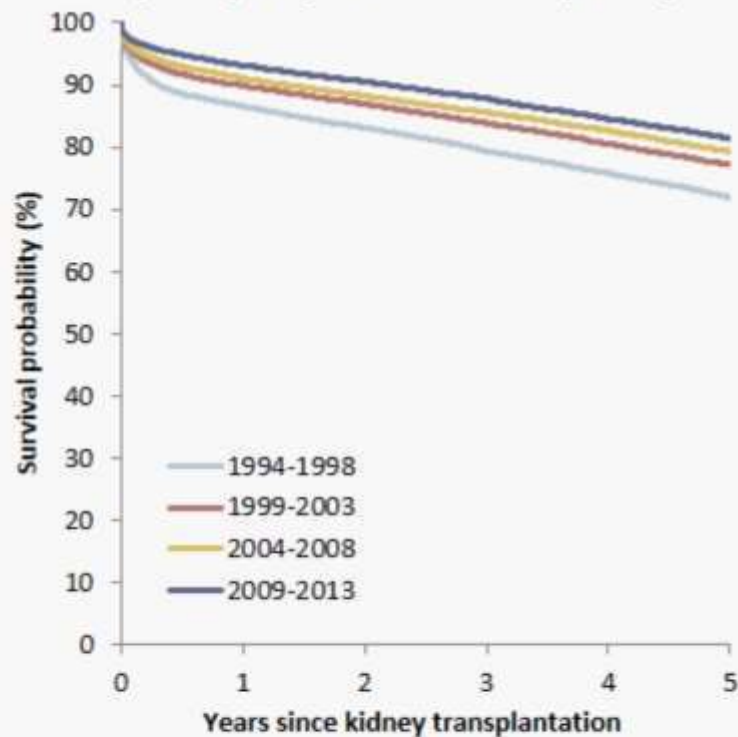
adjusted for age, sex and cause of renal failure

Survival probabilities were adjusted for fixed values for age (50 years), sex (63% men), and the primary renal disease distribution (14% diabetes mellitus, 10% hypertension / renal vascular disease, 23% glomerulonephritis and 53% other primary renal diseases).

Cox regression model was used to calculate survival probabilities.

Patient survival
after first kidney transplantation

adjusted for age, sex and cause of renal failure

Survival probabilities were adjusted for fixed values for age (50 years), sex (63% men), and the primary renal disease distribution (14% diabetes mellitus, 10% hypertension / renal vascular disease, 23% glomerulonephritis and 53% other primary renal diseases).

Cox regression model was used to calculate survival probabilities.

Graft survival
after kidney transplantation

by cohort

**Graft survival
after first kidney transplantation**
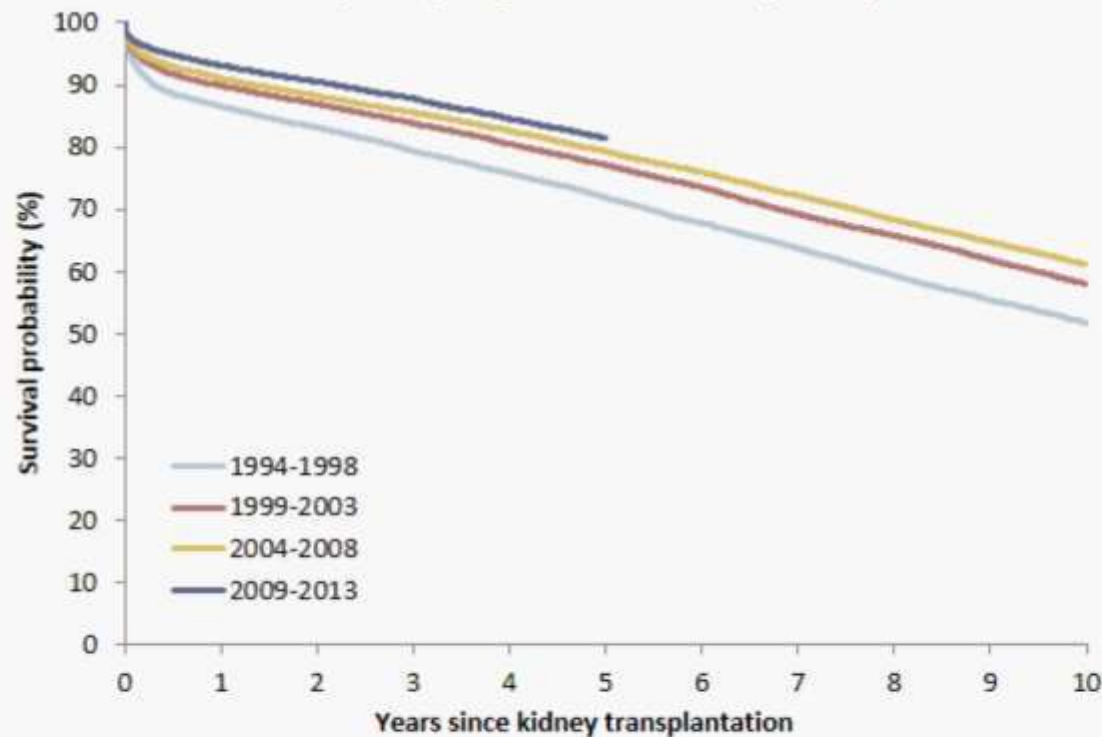
adjusted for age, sex and cause of renal failure

Survival probabilities were adjusted for fixed values for age (50 years), sex (63% men), and the primary renal disease distribution (14% diabetes mellitus, 10% hypertension / renal vascular disease, 23% glomerulonephritis and 53% other primary renal diseases).

Cox regression model was used to calculate survival probabilities.

Graft survival
after kidney transplantation
by cohort

**Graft survival
after first kidney transplantation**

adjusted for age, sex and cause of renal failure

Survival probabilities were adjusted for fixed values for age (50 years), sex (63% men), and the primary renal disease distribution (14% diabetes mellitus, 10% hypertension / renal vascular disease, 23% glomerulonephritis and 53% other primary renal diseases).

Cox regression model was used to calculate survival probabilities.