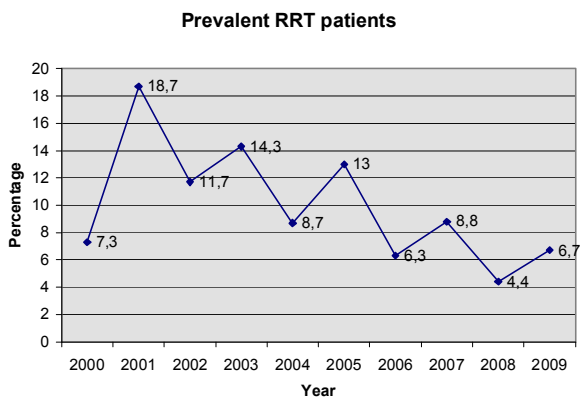


Epidemiological Data of Kidney Diseases in Estonia Annual Report 2009



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Estonia in brief

Official name: Republic of Estonia

Area – 45 227 square km

Population:

- 1.342409 million (1 Jan 2007 est. by Statistics Estonia)
- 1.340935 million (1 Jan 2008 est. by Statistics Estonia)
- 1.340415 million (1 Jan 2009 est. by Statistics Estonia)
- 1.340127 million (1 Jan 2010 est. by Statistics Estonia)
- The last official census was taken in 2000, next will be 2011

Larger cities:

Tallinn (pop. 398 594, 2009 est)

Tartu (102 817)

Narva (66 151)

Kohtla-Järve (44 821)

Pärnu (44 024)

Medical Faculty at Tartu University (1632)

Nephrology centers and units

There are 17 nephrologists (12 pmp), 3 transplantologists in Estonia

There are now 3 nephrology centers in Estonia (big red circles):

- 1) Tartu University Hospital, Department of Internal Medicine, Division of Nephrology with satellites (small white circles), Transplantation: at Department of Surgery, Division of Urology and Transplantation
- 2) North-Estonian Regional Hospital, Department of Internal Medicine, Division of Nephrology with satellites
- 3) West-Tallinn Central Hospital, Department of Internal Medicine, Division of Nephrology

Hemodialysis units at regional hospitals (3 small red circles):

East-Viru Regional Hospital, Kuressaare Hospital, Narva Hospital

Private hemodialysis cabinets (8 big white circles): Pärnu, Narva, Viljandi, Rakvere, Võru, Paide, Haapsalu, Rakvere, Keila

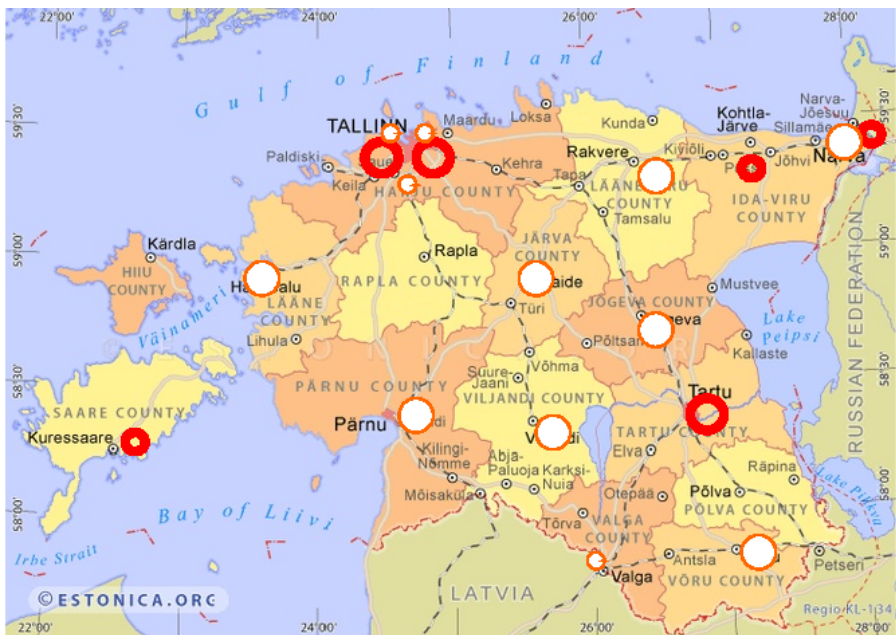


Figure 1. Nephrology centers (big red circles), satellites (small white circles), HD units at regional hospitals (small red circles) and private HD units (big white circles) in Estonia

Introduction

Report 2009 gives an up-to-date information about the incidence and prevalence of renal replacement therapy (RRT) in Estonia. RRT in Estonia was started in late 1960s (hemodialysis in 1968 and first kidney transplantation was performed in 1968). Continuous ambulatory peritoneal dialysis (CAPD) was started in 1994.

The collection of RRT patient's epidemiology data in Estonia is ongoing constantly for already more than 10 years due to the initiative of the members of the Estonian Society of Nephrology. There is no official renal registry in Estonia but collection of epidemiological RRT data have been performed from 1996 in conjunction with governmental scientific grants and NephroQUEST (2007–2010) project. Ethics Committee of the Tartu University approved the NephroQUEST study protocol.

The RRT epidemiological report is based on individual and center questionnaires. All patients receiving RRT were included in the analysis. Data were obtained from all nephrology centers (who treat and monitor of hemodialysis – HD, peritoneal dialysis – PD and transplant patients) and HD units in Estonia in 2009.

The main epidemiological data set include the patient's (pts) date of birth, gender, cause of renal failure, date of start of first RRT, history of RRT with dates and changes of modality, treatment centre, date and cause of death. Incidence and prevalence per million population (pmp) were calculated.

The incidence and prevalence of RRT patients in our country remains lower than that reported from the developed world with chronic glomerulonephritis being the most common cause, accounting for about one third of patients, while diabetic nephropathy accounts for about one fifth of all RRT pts. Although the incidence of RRT has a decreasing tendency the prevalence of RRT continues to increase. During last years we have noticed the decrease of annual percentage of increase among prevalent pts.

Beside the basic RRT epidemiological data collection we recently expanded the data set and individual RRT pts data together with clinical performance indicators (CPI) have been started to collect and analyze. In 2007, we began collecting the following CPIs: laboratory data (Hb, Ca, Pi, PTH, CRP, Uprot/Ucreat, albumin, cholesterol), ESA use, weight, height, antihypertensive drugs, smoking status, dialysis treatment adequacy parameters and treatment complications.

Collection and evaluation of CPIs of RRT patients is an important improvement of our epidemiology research and raises significantly the awareness of all nephrologists. National collection of data in renal disease will help audit of practices within the Estonia and will thus improve patient care and further research within this field.

Prevalence of RRT

Table 2. Prevalent RRT patients 2007–2009 according to centers and units

Center name	HD 2007	HD 2008	HD 2009	PD 2007	PD 2008	PD 2009	Tr 2007	Tr 2008	Tr 2009	Total 2007	Total 2008	Total 2009
TUH	22	34	37	39	26	32	134	144	160	195	204	230
WTH	67	70	71	22	20	17	151	158	174	240	248	262
NERH	43	24	30	23	24	22	36	46	58	93	94	110
CH	1	0	0	1	2	2	0	1	0	2	3	3
HD units	73	84	67							73	84	67
Total	196	212	206	86	70	73	321	348	393	603	630	672

Table 3. Prevalent RRT population in Estonia according to age group and gender 2008–2009.

Age group	Male 2008	Male 2009	Female 2008	Female 2009	Total 2008	Total 2009
0–14	1	2	1	1	2	3
15–24	7	7	6	7	15	14
25–34	35	31	23	22	58	53
35–44	58	60	47	45	105	105
45–54	92	100	56	62	148	163
55–64	77	79	58	62	135	141
65–74	60	74	59	62	119	136
>75	27	30	23	27	50	57

Table 4. Demographic data of prevalent RRT patients

	Male/Female 2007	Median age	Male/Female 2008	Median age	Male/female 2009	Median age
HD	110/86	59.0	113/99	57.8/62.0	112/94	61.4/63.2
PD	48/38	58.0	40/30	58.7/57.2	37/36	58.2/62.5
Transplant	185/136	49.1	204/144	49.6/48.6	235/158	50.5/48.4
RRT Total	343/260	57.1	357/273	55.4/55.9	384/288	56.7/58.0

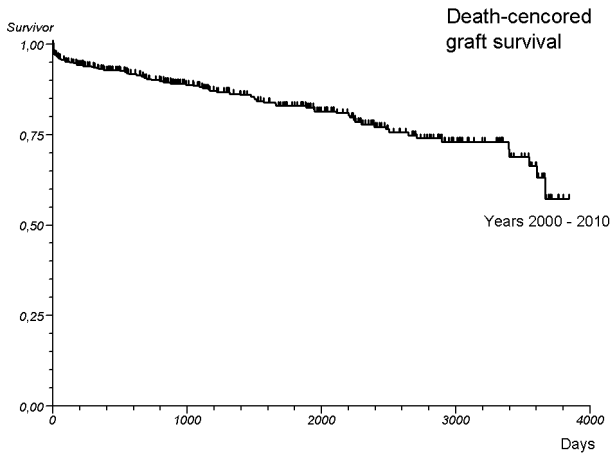


Figure 14. Death-censored graft survival

Table 8. Peritoneal dialysis at single center – Tartu University Hospital.

Period:	2000–2002 / per one year	2003	2004	2005	2006 / 2007 / 2008
Pts total nr	121 / 40	41	42	38	46 / 60 / 45
Pts nr at the end of the year	81 / 27	27	29	21	34 / 40 / 27
Treatment months	921 / 307	338	354	323	303 / 498 / 409
Peritonitis number	94 / 31.3	35	36	15	19 / 24 / 19
Peritonitis-free pts	36 / 12	6	8	10	32 / 44 / 28
Pts with peritonitis	45 / 15	21	21	11	14 / 22 / 17
Peritonitis rate (episodes/nr pts-months)	9.8	9.6	9.8	21.7	16 / 20.8 / 21.5
Peritonitis rate (episodes/pts-year)	1.2	1.3	1.2	1.79	1.32 / 1.73 / 1.79

Table 9. Distribution groups of diseases in informative kidney biopsies – Tartu University kidney biopsy material 2001–2009.

Group of disease	Number of biopsies	Percentage
Primary glomerulopathies	225	50,8
Secondary glomerulopathies	85	19,2
Tubulointerstitial kidney diseases	37	8,3
Other conditions	96	21,7
All cases	443	100,0

Appendix 1. Individual patient questionnaire

NEERUASENDUSRABI ANDMEBAAS 2009

<u>Põhiandmed:</u>	Nimi, eesnimi: M/N	Sünniaeg (päev,kuu,aasta):	Raviarst:	Raviasutus:	
Elukoht (linn, maakond):			Kaal: kg	Pikkus: cm	
Labor	Hb (g/L):	S-kreatiniin µmol/l):	UProt/Ukreat:	(US-)CRV (mg/L):	
Ferritiin (µg/L):	ESA: ja / ei Milline: Doos (võimalusel)	S-kol (mmol/L):	HDL (mmol/L):	Tg (mmol/L):	
Ca (mmol/L):	i.-Ca (mmol/L):	Fosfaat (mmol/L):	PTH (pmol/L):	S-albumiin (g/L):	
<u>Ravi 31.12.2008 a:</u>	Predial / HD / PD / Tx	Ravi muutus/algus 2009 a. ooksul:	Predial / HD / PD / Tx	Kpv.:	
<u>Neeruhaiguse dgn.:</u>	DM I tüüp, DM II tüüp,	GN, PN, HYP, PCKD,	Amiloidoos, Süst. hg	Muu neeru hg.:	
<u>Tüsistused ja kaasnevad haigused 2009 (millised):</u>	K/v hg: ja / ei	Vähkkasvaja: ja / ei	Amputatsioon: ja / ei	Rasked infektsioonid: ja / ei	Muud:
<u>Kõrge vererõhk:</u> ja / ei	SVR mmHg	DVR mmHg	Endine suitsetaja: ja / ei	Suitsetaja: ja / ei	
<u>Antihüp. ravi:</u> ja / ei	AKE-inhibiitor AT Rets-blokker,	Ca-antagonist, Beta-blokker,	diureetikum, &-blokker,	muud	
<u>HD pt.</u> AVF / graft / perm.kat	HD sagedus x/näd HD pikkus min	PreHD kehakaal: kg PostHD kehakaal: kg UF: kg	PreHD urea (mmol/L): PostHD urea:	Kr.kliirens ml/min	
<u>PD pt.</u> CAPD / APD	<u>Tüsistused:</u> ja / ei	Peritoniit, mitu: Muud tüsistused:	Kt/V	Kr.kliirens ml/min	
<u>TX pt.</u>	<u>Imm.supr. ravi:</u> Medrol, CyA, MMF,	Imuran, Rapamune,	Muu:	Kr.kliirens ml/min	
Tx tüsistused (milline) :	Äratõuge: ja / ei	Infektsioon(id) (milline): ja / ei / ei tea	Lümfoprolif.hg, ja / ei	Muu: ja / ei	
Exitus letalis kpv.:	Põhjus:	MÄRKUSED			