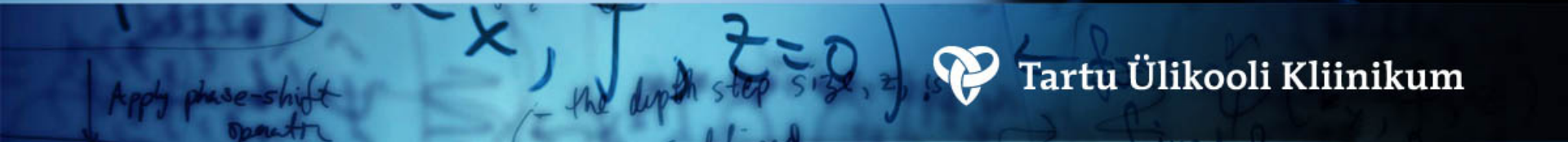
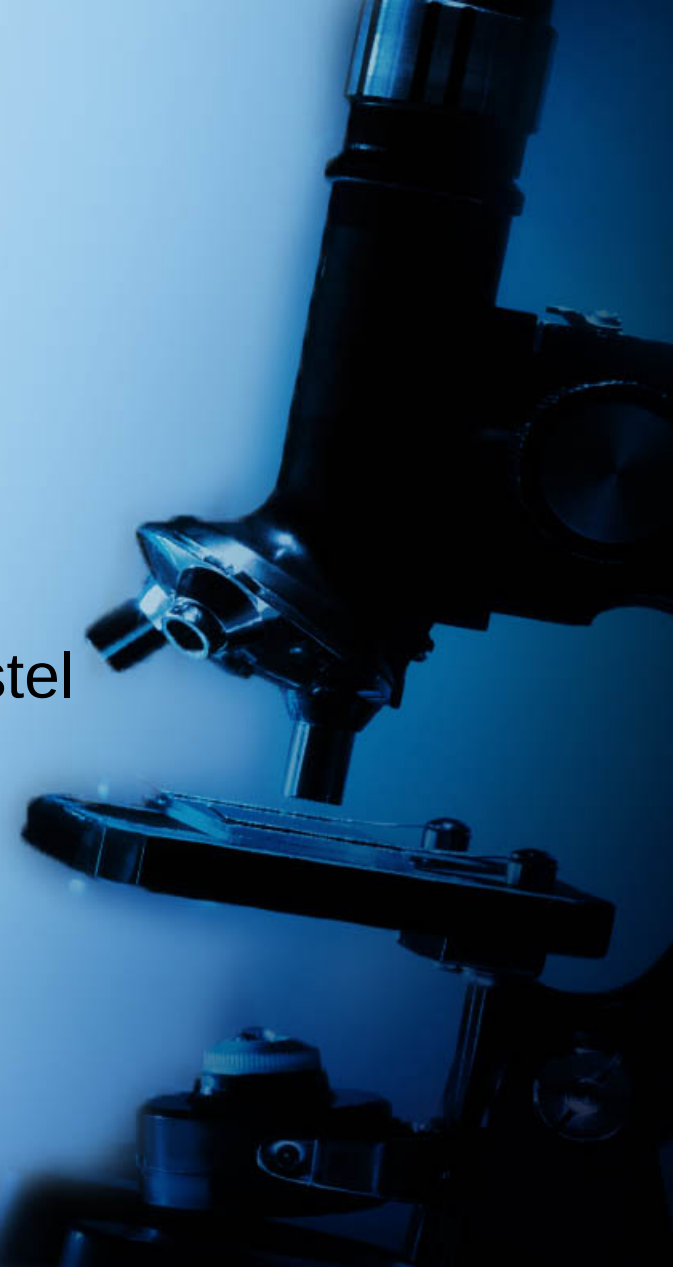


Verelooma tüvirakkude siirdamine lastel

Ain Kaare

Tartu Ülikooli Kliinikum



Tartu Ülikooli Kliinikum

Vereloome tüvirakkude siirdamine

- Autoloogne
- Alloogne
 - Sugulasdoonor
 - HLA identne
 - haploidne
 - Registridoonor

Apply phase-shift
operator

the depth step size, $z=0$



Vereloome tüvirakkude siirdamine

- Luuüdi
- Perifeerse vere
- Platsentaar- ja nabaväädi veri





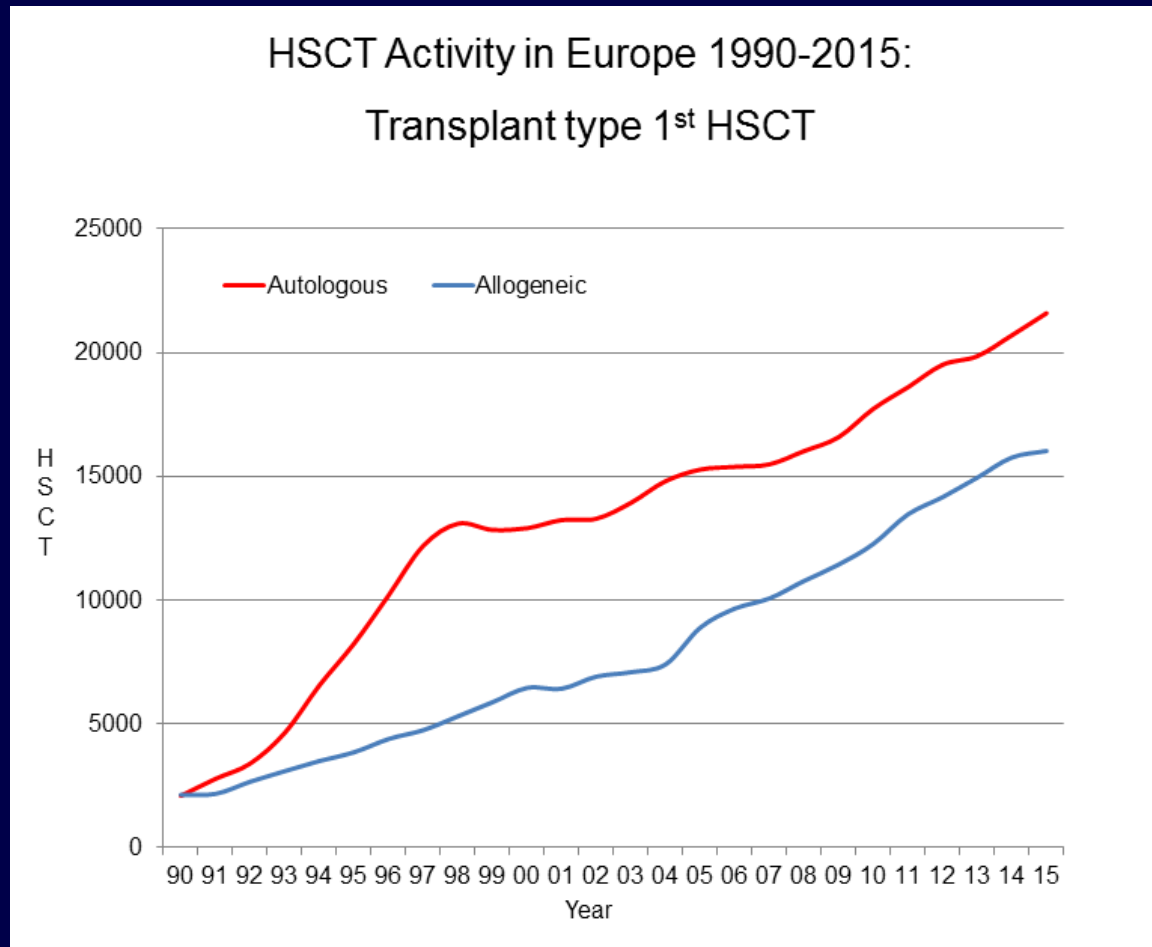
Apply phase-shift operator

$z=0$
the depth step size



Tartu Ülikooli Kliinikum

Vereloome tüvirakkude siirdamiste arv



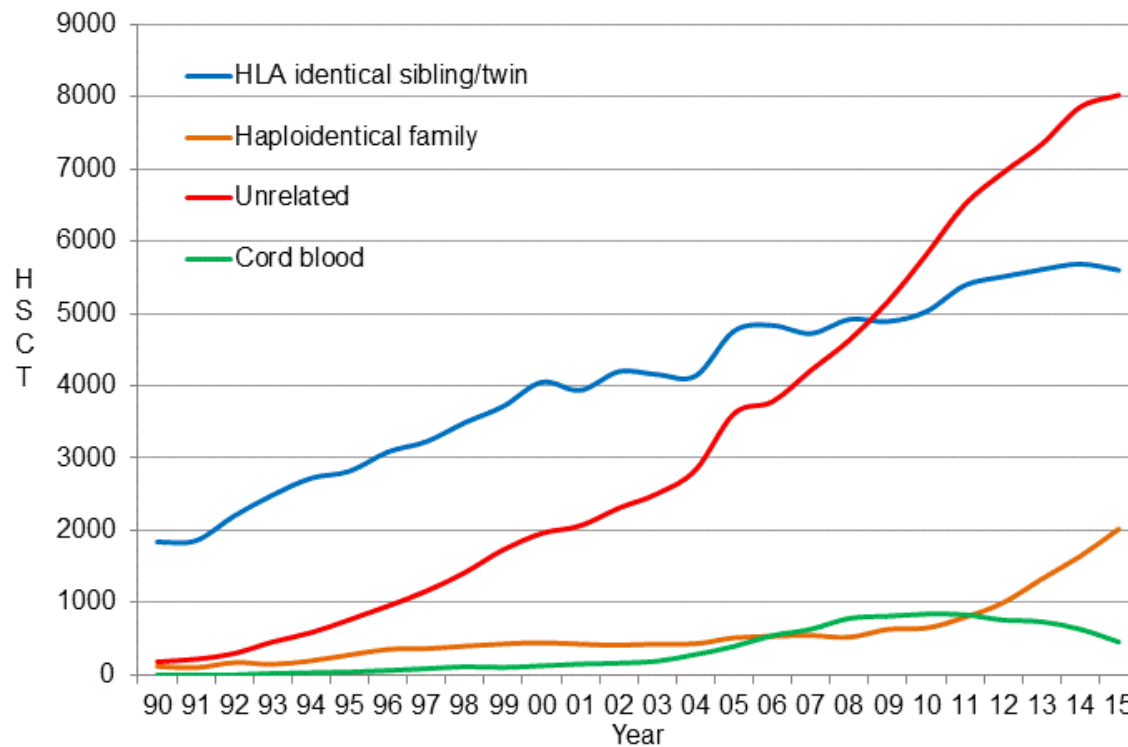
Bone Marrow Transplantation advance online publication 13 March 2017



Tartu Ülikooli Kliinikum

Allogeensete siirdamiste arv

HSCT Activity in Europe 1990-2015:
Donor type 1st HSCT

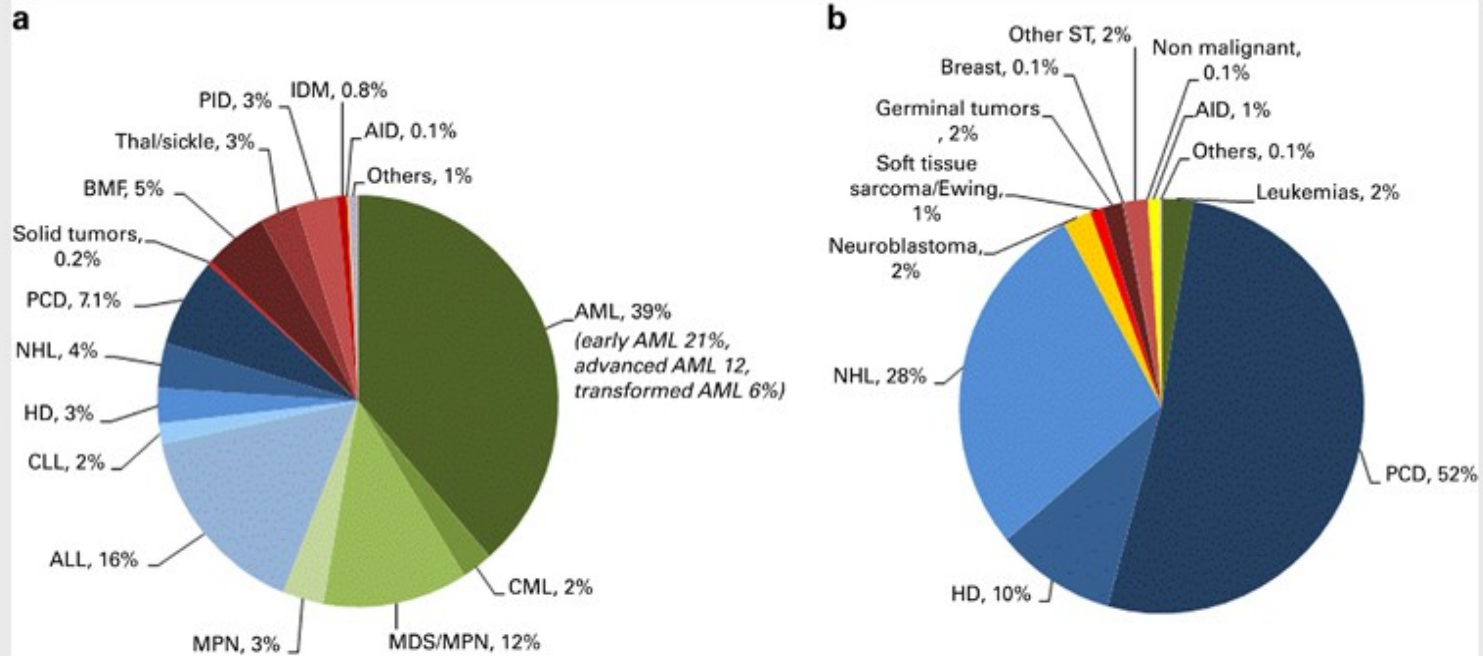


Vereloometüvirakkude siirdamiste arv Euroopas 2015

	Transplant activity 2015																	
	No. of patients																	
	Allogeneic										Autologous			Total				
	Family									Unrelated			BM only	BM + PB	Cord	Allo	Auto	
	HLA-id			Twin	Haplo \geq 2MM		Other family			BM	PB	Cord						
	BM	PB	Cord		All	BM	PB	BM	PB				Cord					
Total patients	1434	4102	40	25	606	1125	121	160	5	1355	6667	390	91	21504	1	16030	21596	37626
Re/additional transplants	55	257	0	2	96	257	4	12	0	71	497	21	7	3266	0	1272	3273	4545
Total transplants	1489	4359	40	27	702	1382	125	172	5	1426	7164	411	98	24770	1	17302	24869	42171



Näidustused



Relative proportion of indications for HSCT in Europe in 2015. **(a)** Proportions of disease indications for allogeneic HSCT in Europe in 2015. **(b)** Proportions of disease indications for autologous HSCT in Europe in 2015.

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Tartu Ülikooli Kliinikum

Näidustused- ASBMT

Indication and Disease Status	Allogeneic HCT	Autologous HCT
Acute myeloid leukemia		
CR1, low risk	N	N
CR1, intermediate risk	C	N
CR1, high risk	S	N
CR2+	S	N
Not in remission	C	N
Acute promyelocytic leukemia, relapse	R	R
Acute lymphoblastic leukemia		
CR1, standard risk	N	N
CR1, high risk	S	N
CR2	S	N
CR3+	C	N
Not in remission	C	N
Chronic myeloid leukemia		
Chronic phase	C	N
Accelerated phase	C	N
Blast phase	C	N
Myelodysplastic syndromes		
Low risk	C	N
High risk	S	N
Juvenile myelomonocytic leukemia	S	N
Therapy related	S	N
T cell non-Hodgkin lymphoma		
CR1, standard risk	N	N
CR1, high risk	S	N
CR2	S	N
CR3+	C	N
Not in remission	C	N
Lymphoblastic B cell non-Hodgkin lymphoma (non-Burkitt)		
CR1, standard risk	N	N
CR1, high risk	S	N
CR2	S	N
CR3+	C	N
Not in remission	C	N

Burkitt's lymphoma		
First remission	C	C
First or greater relapse, sensitive	C	C
First or greater relapse, resistant	C	N
Hodgkin lymphoma		
CR1	N	N
Primary refractory, sensitive	C	C
Primary refractory, resistant	C	N
First relapse, sensitive	C	C
First relapse, resistant	C	N
Second or greater relapse	C	C
Anaplastic large cell lymphoma		
CR1	N	N
Primary refractory, sensitive	C	C
Primary refractory, resistant	C	N
First relapse, sensitive	C	C
First relapse, resistant	C	N
Second or greater relapse	C	C
Solid tumors		
Germ cell tumor, relapse	D	C
Germ cell tumor, refractory	D	C
Ewing's sarcoma, high risk or relapse	D	S
Soft tissue sarcoma, high risk or relapse	D	D
Neuroblastoma, high risk or relapse	D	S
Wilms' tumor, relapse	N	C
Osteosarcoma, high risk	N	C
Medulloblastoma, high risk	N	C
Other malignant brain tumors	N	C
Nonmalignant diseases		
Severe aplastic anemia, new diagnosis	S	N
Severe aplastic anemia, relapse/refractory	S	N
Fanconi's anemia	R	N
Dyskeratosis congenita	R	N
Blackfan-Diamond anemia	R	N
Sickle cell disease	C	N
Thalassemia	S	N

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Tartu Ülikooli Kliinikum

Näidustused- ASBMT

Indication and Disease Status	Allogeneic HCT	Autologous HCT
Congenital amegakaryocytic thrombocytopenia	R	N
Severe combined immunodeficiency	R	N
T cell immunodeficiency, SCID variants	R	N
Wiskott-Aldrich syndrome	R	N
Hemophagocytic disorders	R	N
Lymphoproliferative disorders	R	N
Severe congenital neutropenia	R	N
Chronic granulomatous disease	R	N
Other phagocytic cell disorders	R	N
IPEX syndrome	R	N
Juvenile rheumatoid arthritis	D	R
Systemic sclerosis	D	R
Other autoimmune and immune dysregulation disorders	R	N
Mucopolysaccharidoses (MPS-I and MPS-VI)	R	N
Other metabolic diseases	R	N
Osteopetrosis	R	N
Globoid cell leukodystrophy (Krabbe)	R	N
Metachromatic leukodystrophy	R	N
Cerebral X-linked adrenoleukodystrophy	R	N

N indicates not generally recommended; C, standard of care, clinical evidence available; S, standard of care; R, standard of care, rare indication; D, developmental;



Näidustused lastel-EBMT

B. Paediatric patients					
Disease	Disease stage	Donor type			
		HLA id sib	Matched unrelated	Mismatched donor	Auto
AML	CR1, low risk	GNR	GNR	GNR	GNR
	CR1, high risk	S	CO	GNR	S
	CR1, very high risk	S	S	CO	CO
	CR2	S	S	S	S
	>CR2	CO	D	D	GNR
ALL	CR1, low risk	GNR	GNR	GNR	GNR
	CR1, high risk	S	S	CO	GNR
	CR2	S	S	CO	CO
	>CR2	S	S	CO	CO
CML	Chronic phase	S	S	D	GNR
	Advanced phase	S	S	CO	GNR
NHL	CR1, low risk	GNR	GNR	GNR	GNR
	CR1, high risk	CO	CO	GNR	CO
	CR2	S	S	CO	CO
HD	CR1	GNR	GNR	GNR	GNR
	1 st REL, CR2	CO	D	GNR	S
MDS		S	S	D	GNR
Primary immunodeficiencies		S	S	S	NA
Thalassaemia		S	CO	GNR	NA
Sickle cell anaemia, high risk		S	CO	GNR	NA
Aplastic anaemia		S	S	CO	NA
Fanconi anaemia		S	S	CO	NA
Blackfan-Diamond anaemia		S	CO	GNR	NA
CGD		S	S	CO	NA
Kostman's disease		S	S	GNR	NA
MPS-1H Hurler		S	S	CO	NA
MPS -1H Hurler-Scheie (severe)		GNR	GNR	GNR	NA
MPS -VI Maroteaux-Lamy		CO	CO	CO	NA
Osteopetrosis		S	S	S	NA
Other storage diseases		GNR	GNR	GNR	NA
Autoimmune disorders		GNR	GNR	GNR	CO
Germ cell tumour		GNR	GNR	GNR	CO
Ewing's sarcoma, high risk or >CR1		D	GNR	GNR	S
Soft tissue sarcoma, high risk or >CR1		D	D	GNR	CO
Neuroblastoma, high risk		CO	GNR	GNR	S
Neuroblastoma >CR1		CO	D	D	S
Wilms' tumour, >CR1		GNR	GNR	GNR	CO
Osteogenic sarcoma		GNR	GNR	GNR	D
Brain tumours		GNR	GNR	GNR	CO

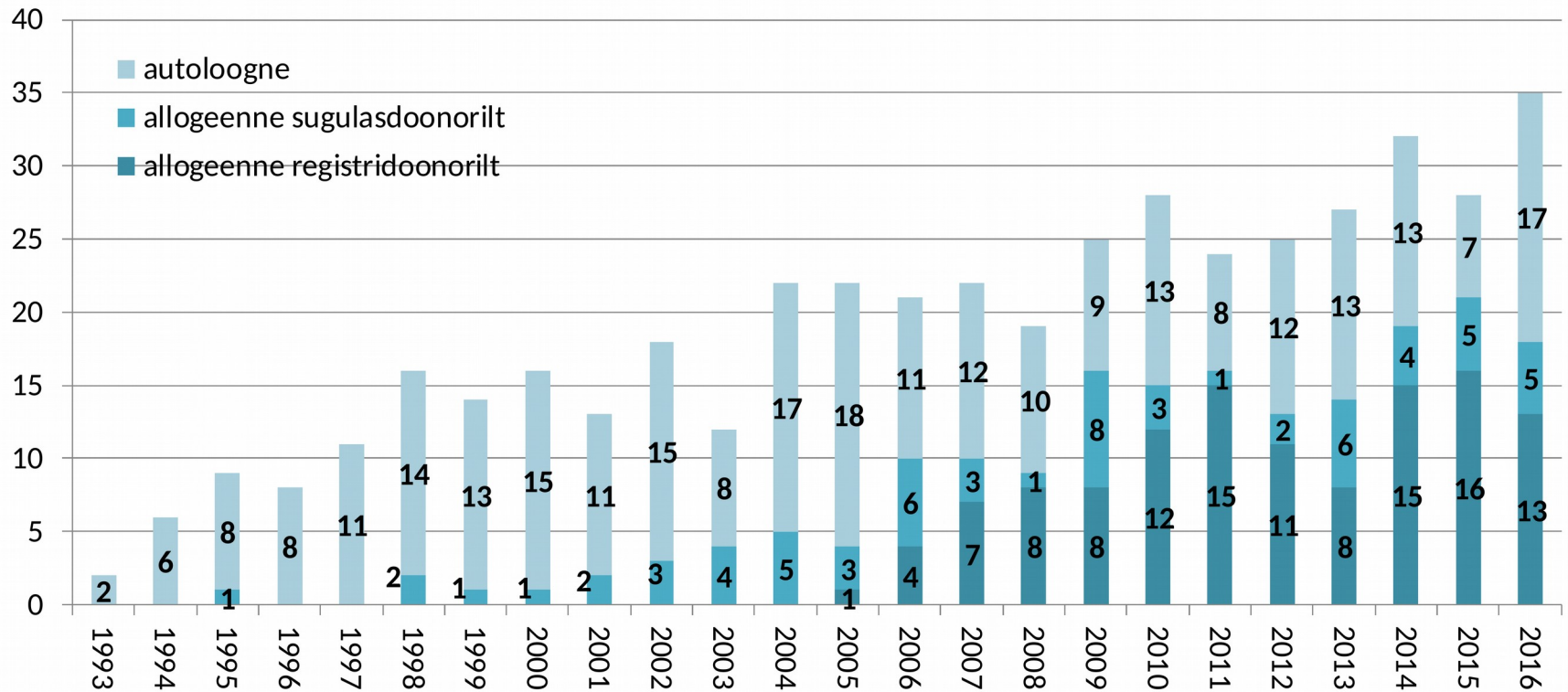


Vereloome tüvirakkude siirdamine Eestis

		lastel
Auto BMT	1993	1995
Auto PBSCT	1996	2000
Allo BMT	1995	1998
Allo PBSCT	2000	2002
Esimene DLI	2004	-
Allogenne vereloome tüvirakkude siirdamine registridoonorilt	2005	2005
Haploidentne siirdamine	2017	-



Vereloometüvirakkude siirdamine 1993-2016

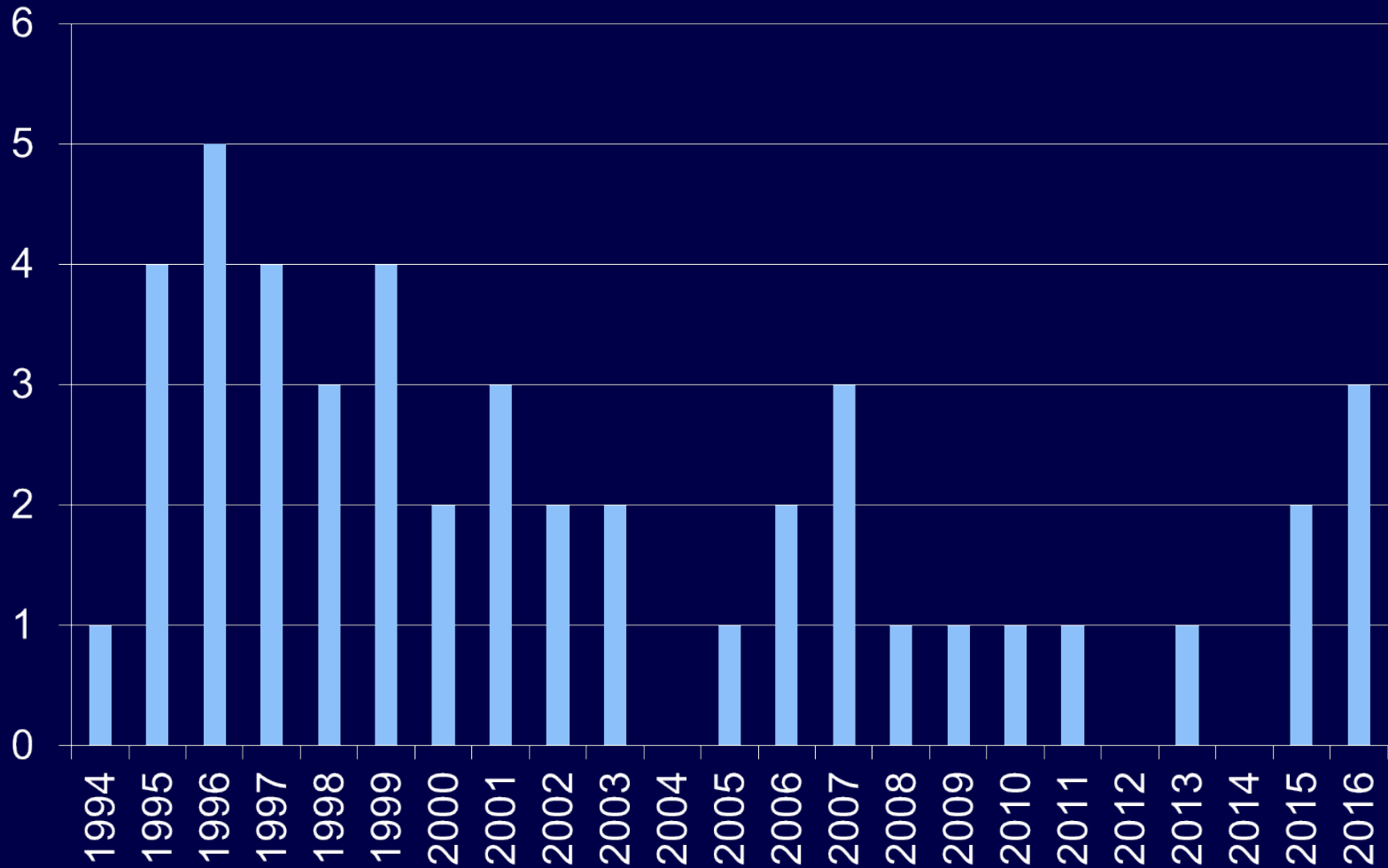


Siirdamise arv lastel Tartu Ülikooli Kliinikumis 2017 mai seisuga

	Kokku	Lapsi
Autoloogseid siirdamisi	272	47
Allogeenseid siirdamisi	194	45
Kokku	466	92



Autoloogete siirdamise arv lastel

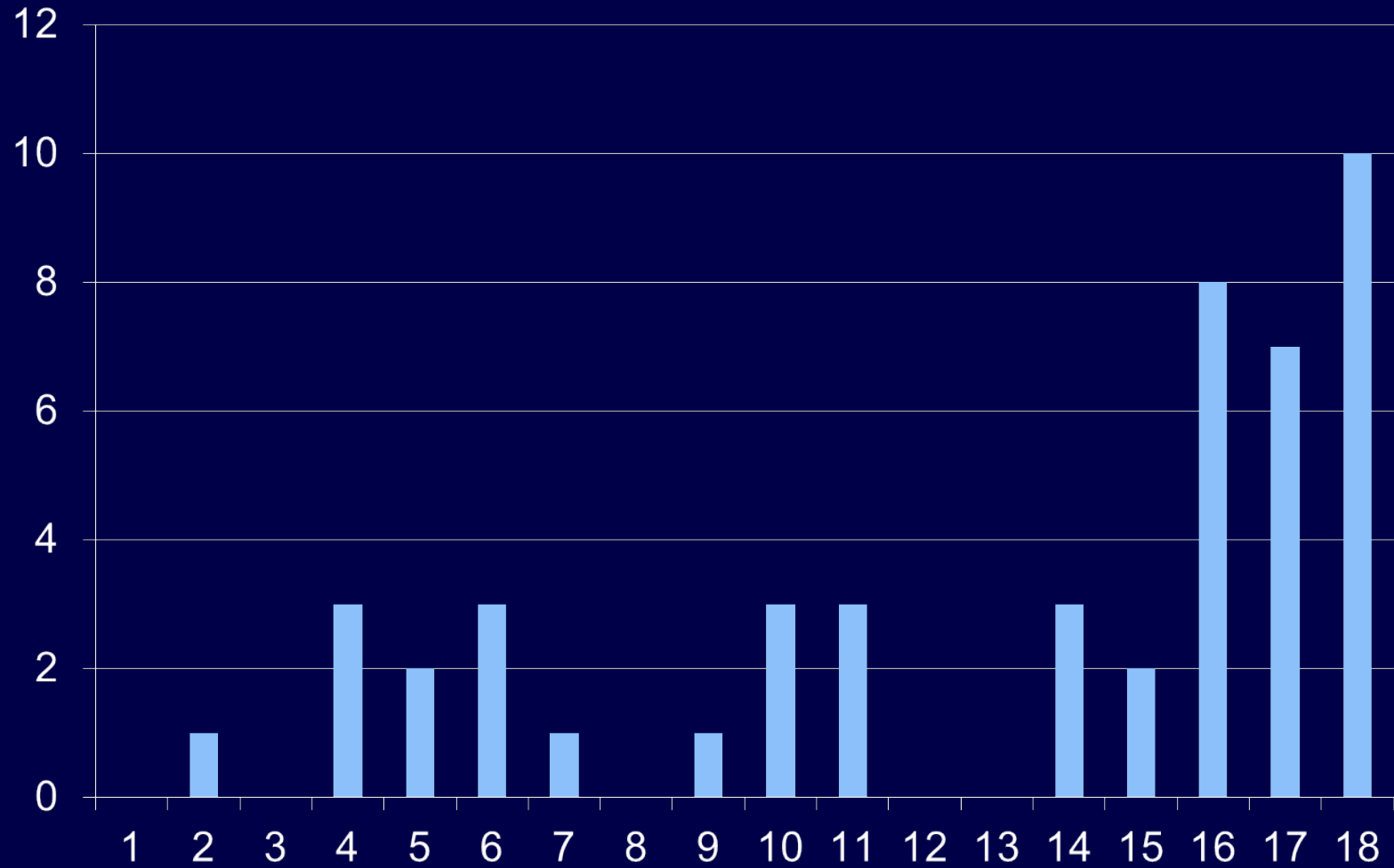


Autoloogne siirdamine: näidustused lastel

	BMT	
	Arv	Aastad
Äge lümfoidne leukeemia	6	1994-2007
Äge müeloidne leukeemia	5	1996-2006
Hodgkini lümfoom	16	1995-2008
Mitte-Hodgkini lümfoom	6	1996-2010
Neuroblastoom	4	2000-2016
Sarkoomid	5	1996-2016
Wilmsi tuumor	2	2013-2015
Aju tuumorid	2	2009-2015



Autoloogne siirdamine: vanuseline jaotus



Äge lümfoidne leukeemia

Vanus	5-18	
Arv	6	
Retsidiivist tulenev surevus		4
Siirdamise komplikatsioonidest tulenev surevus		1
Elus		1



Äge müeloidne leukeemia

Vanus	14-18	
Arv	5	
Retsidiivist tulenev surevus		2
Siirdamise komplikatsioonidest tulenev surevus		0
Retsidiiv, edasi näbaväädi tüvirakkude siirdamine, edasi haploidentne siirdamine		1
Elus		2



Hodgkini lümfoom

Vanus	14-18	
Arv	16	
Retsidiivist tulenev surevus		5
Siirdamise komplikatsioonidest tulenev surevus		0
Elus		11

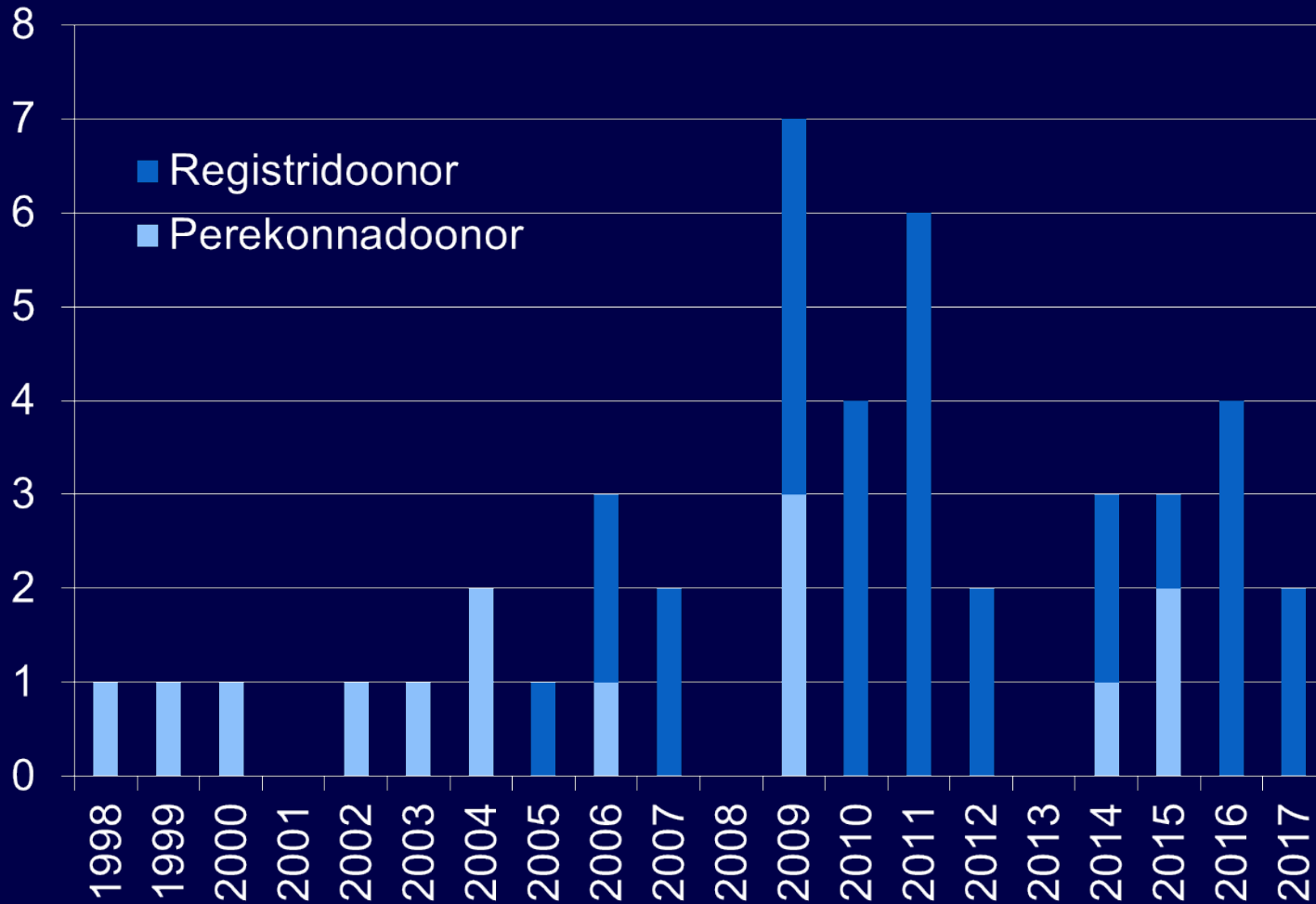


Non-Hodgkini lümfoom

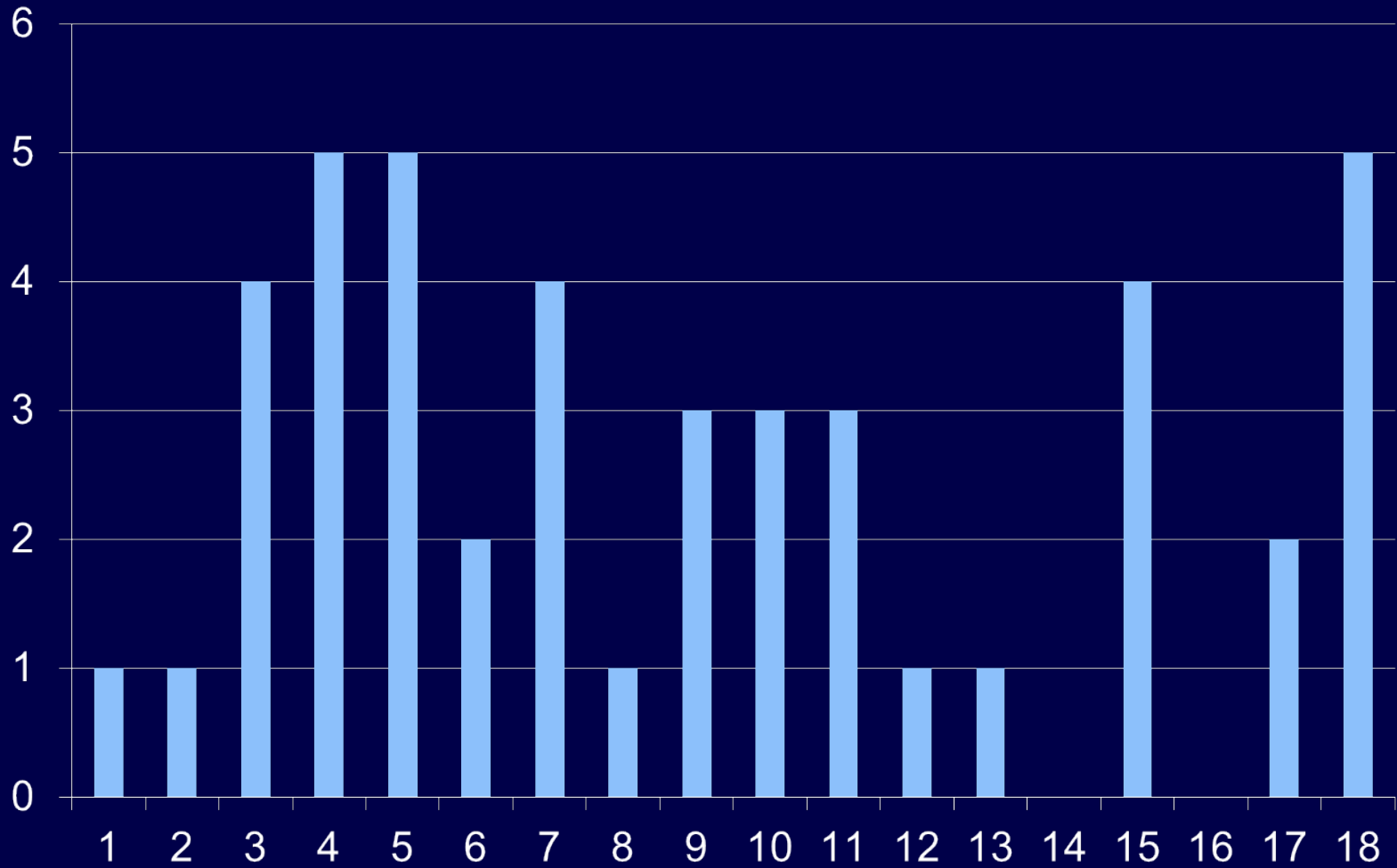
Vanus	10-17	
Arv	6	
Retsidiivist tulenev surevus		0
Siirdamise komplikatsioonidest tulenev surevus		0
Lost of follow-up		2
Elus		4



Allogeensete siirdamiste arv lastel



Allogeenne siirdamine: vanuseline jaotus



Apply phase-shift operator

$z=0$
the depth step size



Allogeenne siirdamine: näidustused lastel

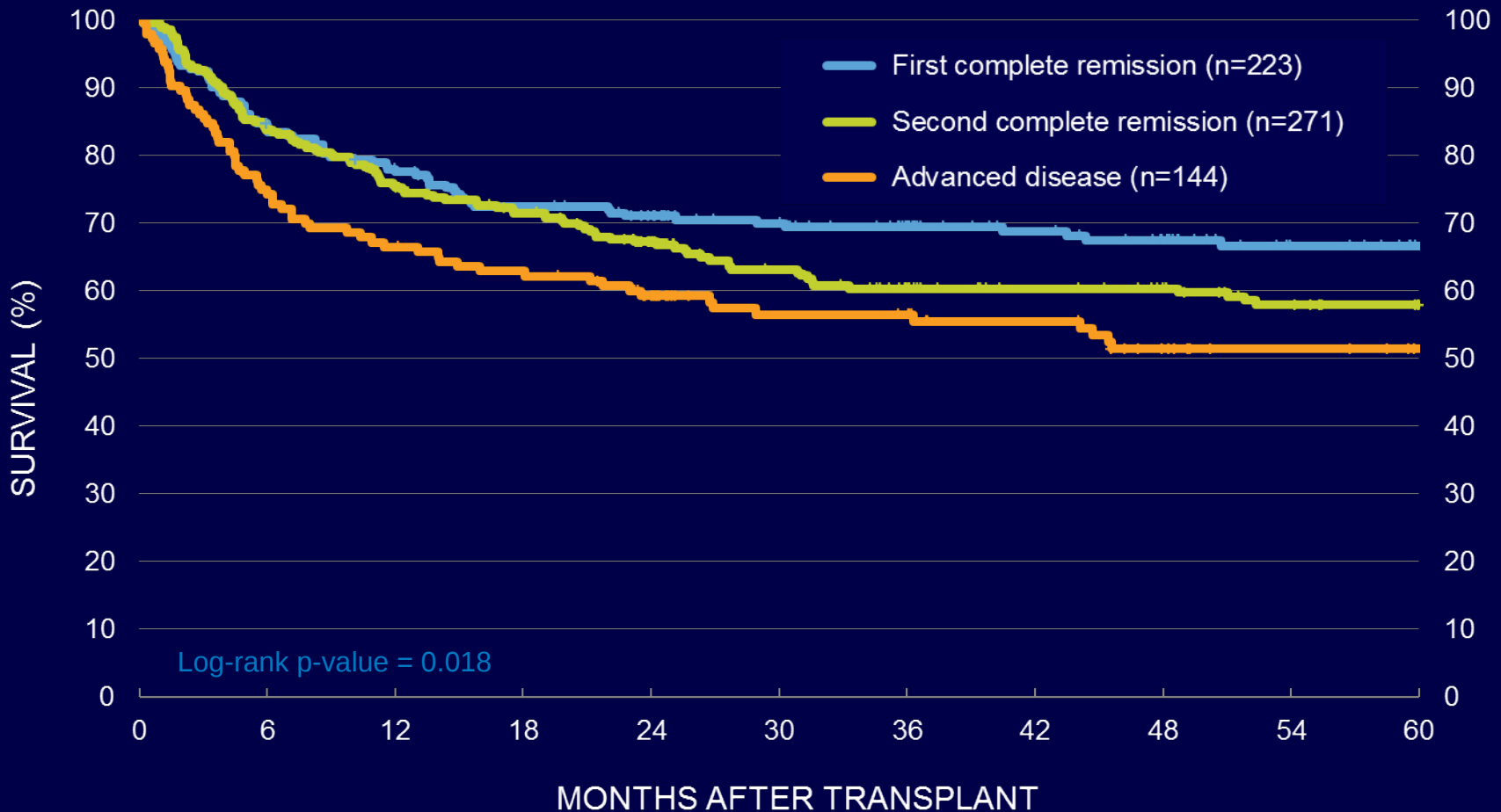
Diagnoos	arv	aastad
Äge lümfoblastleukeemia	16	2002-2016
Äge müeloidleukeemia	10	2004-2011
MDS, JMML, KML	5	2000-2014
Aplastiline aneemia	7	1998-2015



Acute Lymphoblastic Leukemia Overall Survival Bone Marrow Transplantation for Pediatric Patients by Disease Status at Transplant

Unrelated Transplants Facilitated by NMDP/Be The Match

(2004–2013)



Tartu Ülikooli Kliinikum

SOURCE: CIBMTR®, the research program of NMDP/Be The Match

Äge lümfoidne leukeemia

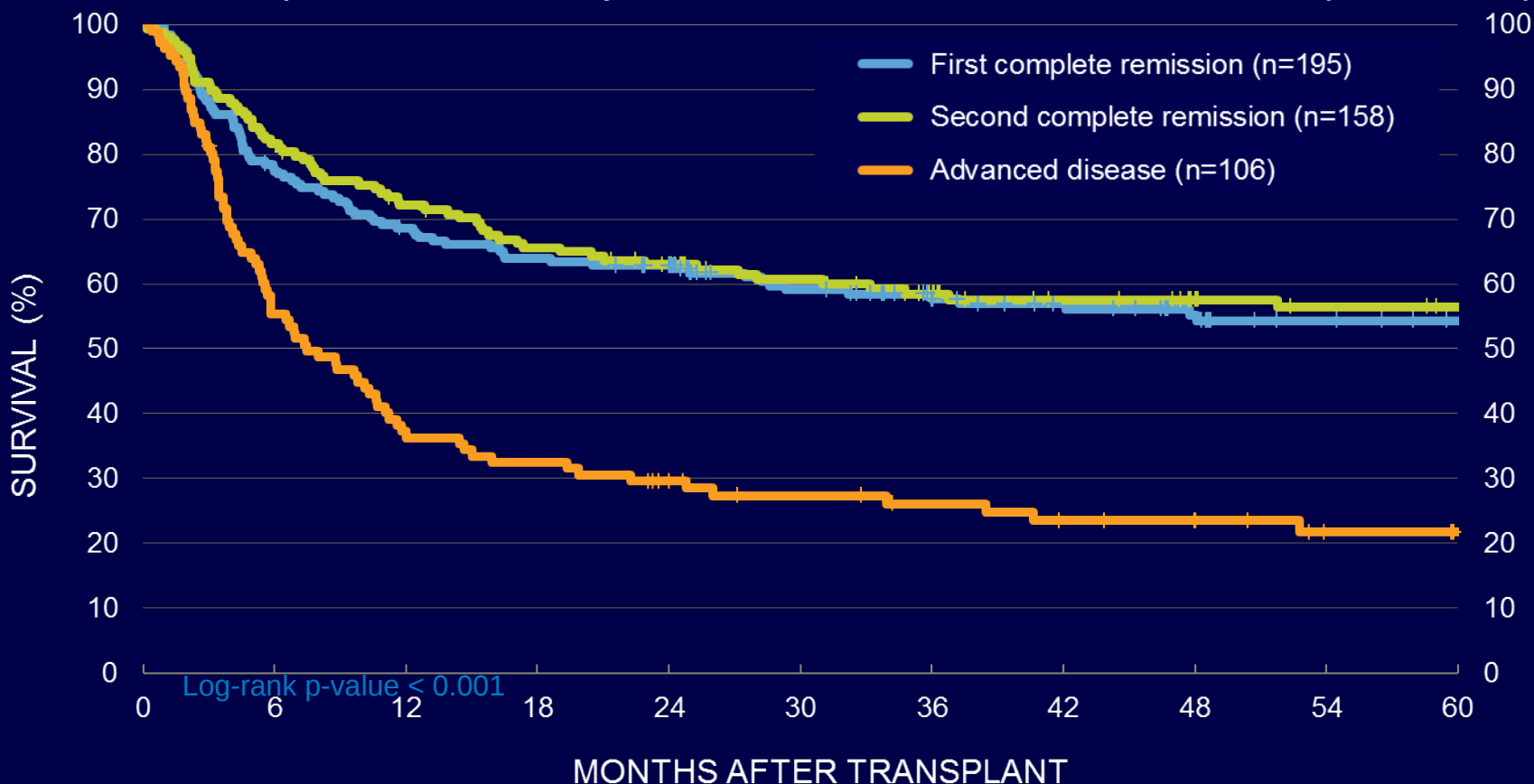
Vanus	4-18	
Arv	16	
Retsidiivist tulenev surevus		5
Siirdamise komplikatsioonidest tulenev surevus		1
Elus		9 (2-108 kuud)



Acute Myelogenous Leukemia Overall Survival Bone Marrow Transplantation for Pediatric Patients by Disease Status at Transplant

Unrelated Transplants Facilitated by NMDP/Be The Match

(2004–2013)



SOURCE: CIBMTR, the research program of NMDP/Be The Match



Tartu Ülikooli Kliinikum

Äge müeloidne leukeemia

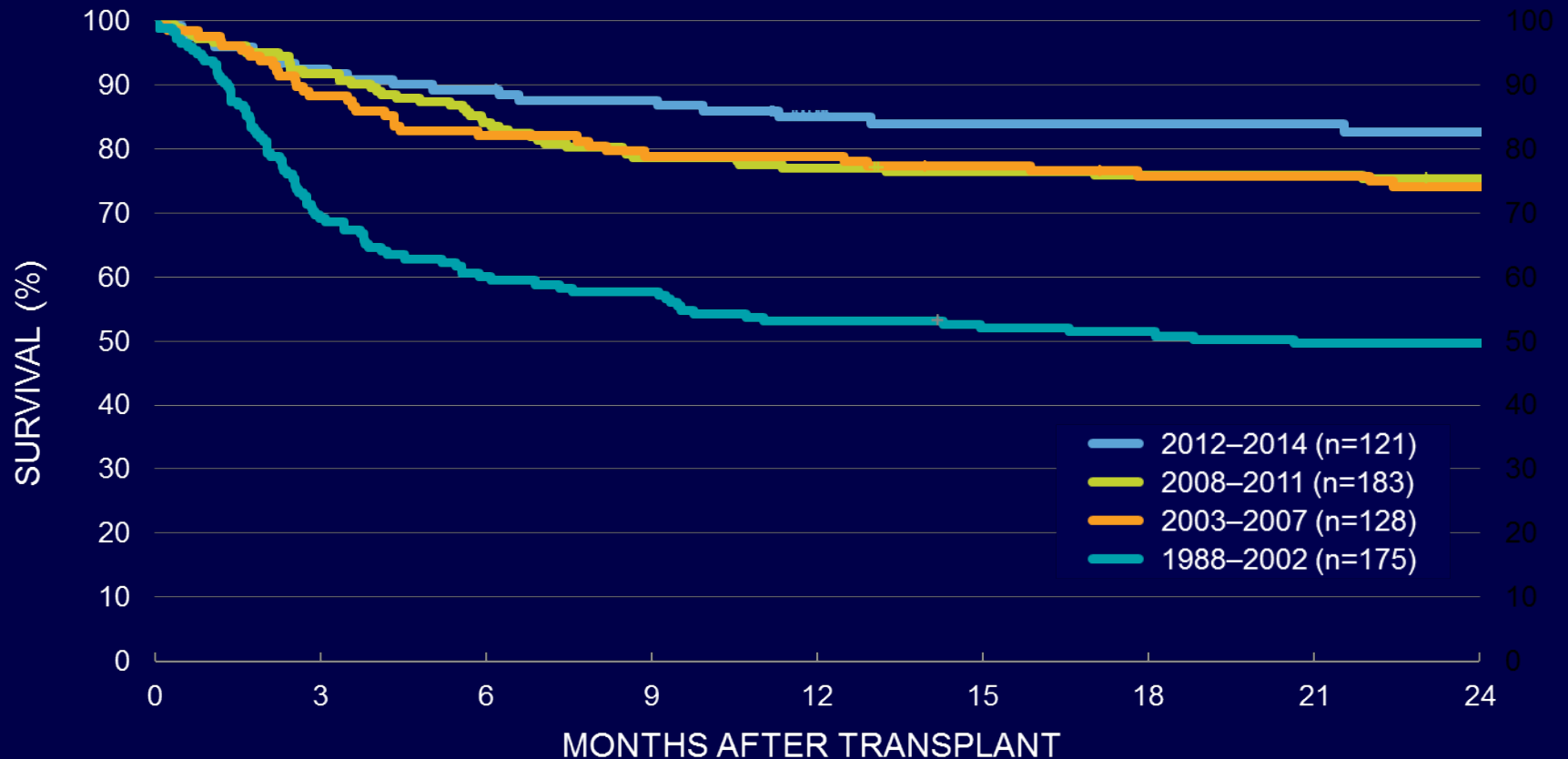
Vanus	3-15	
Arv	9	
Retsidiivist tulenev surevus		0
Siirdamise komplikatsioonidest tulenev surevus		1
Elus		8 (6-77 kuud)



Severe Aplastic Anemia Overall Survival

Pediatric Patient Transplantation by Year of Transplant
Unrelated Transplants Facilitated by NMDP/Be The Match

(1988–2014)



Tartu Ülikooli Kliinikum

SOURCE: CIBMTR®, the research program of NMDP/Be The Match

Aplastiline aneemia

Vanus	11-17	
Arv	7	
Retsidiivist tulenev surevus		0
Siirdamise komplikatsioonidest tulenev surevus		0
Elus		6
Lost of follow up		1



Krooniline müeloidne leukeemia, MDS, juveniilne müelomonotsütaarne leukeemia

Vanus	4-9	
Arv	4	
Retsidiivist tulenev surevus		0
Siirdamise komplikatsioonidest tulenev surevus		2
Elus		2



www.kliinikum.ee/luuydi

The screenshot shows a web browser window with the URL kliinikum.ee/luuydi/. The page features the Tartu Ülikooli Kliinikum logo and the Punainen Risti Veripalvelu logo. The main heading is "Luuüdi doonorite register". A navigation menu includes "Avaleht", "Registrist", "Tüvirakkudest", "Liitumine", "Donatsioon", "Siirdamine", and "Sõbrad". The "Avaleht" section is active, displaying a search bar and a list of links. The central content area features a large graphic with the text "PÄÄSTA TUNDMATU PATSIENT" and silhouettes of people. The right sidebar contains information about joining the register and contact details for various departments.

Kliinikum Sisukaart Viited

Tartu Ülikooli Kliinikum

Punainen Risti Veripalvelu

Luuüdi doonorite register

[Avaleht](#) [Registrist](#) [Tüvirakkudest](#) [Liitumine](#) [Donatsioon](#) [Siirdamine](#) [Sõbrad](#)

Avaleht otsi... otsi

Kontaktandmed

Luuüdi doonorite register

Liitumine

SA EI PEA OLEMA ARST, ET PÄÄSTA ELUSID

Lisainfo ja vastused Teie küsimustele

Telefonil
7 319 661 või 7 319 562

E-kirjaga
luuydi@kliinikum.ee

Infomaterjalid

[Info doonorile](#)

[Infopakett edasistele uuringutele kutsutavale](#)

Luuüdi doonorite register

Tartu Ülikooli Kliinikum Punainen Risti Veripalvelu

Kui Te soovite liituda luuüdi doonorite registriga, siis saate seda teha

[Tartu Ülikooli Kliinikumi hematoloogia ja luuüdi transplantatsiooni osakond L. Puusepa 8, Tartu, kabinet A115](#)

[Tartu Ülikooli Kliinikumi Verekeskus L. Puusepa 1A, Tartu, 3. korrus](#)

[Põhja-Eesti Regionaalhaigla Verekeskus Adala 2, Tallinn](#)


[Põhja-Eesti Regionaalhaigla Verekeskuse DoonoriFoorum Narva mnt 5, Tallinn, 4. korrus](#)

[Pärnu Haigla Vereteenistus](#)

PÄÄSTA TUNDMATU PATSIENT



Tartu Ülikooli Kliinikum



AITA MEIL
AIDATA

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Apply phase-shift
operator

the depth step size $z=0$



Tartu Ülikooli Kliinikum