Regional and local addressed transplantation center: experience of the Center for cell, tissue and organ transplantation in KC Vojvodina – Novi Sad, 1986-2019

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Tuzla 18.10.2019.

GODT
Global Observatory on Donation and Transplantation

31/07/2017
http://www.transplant-observatory.org/

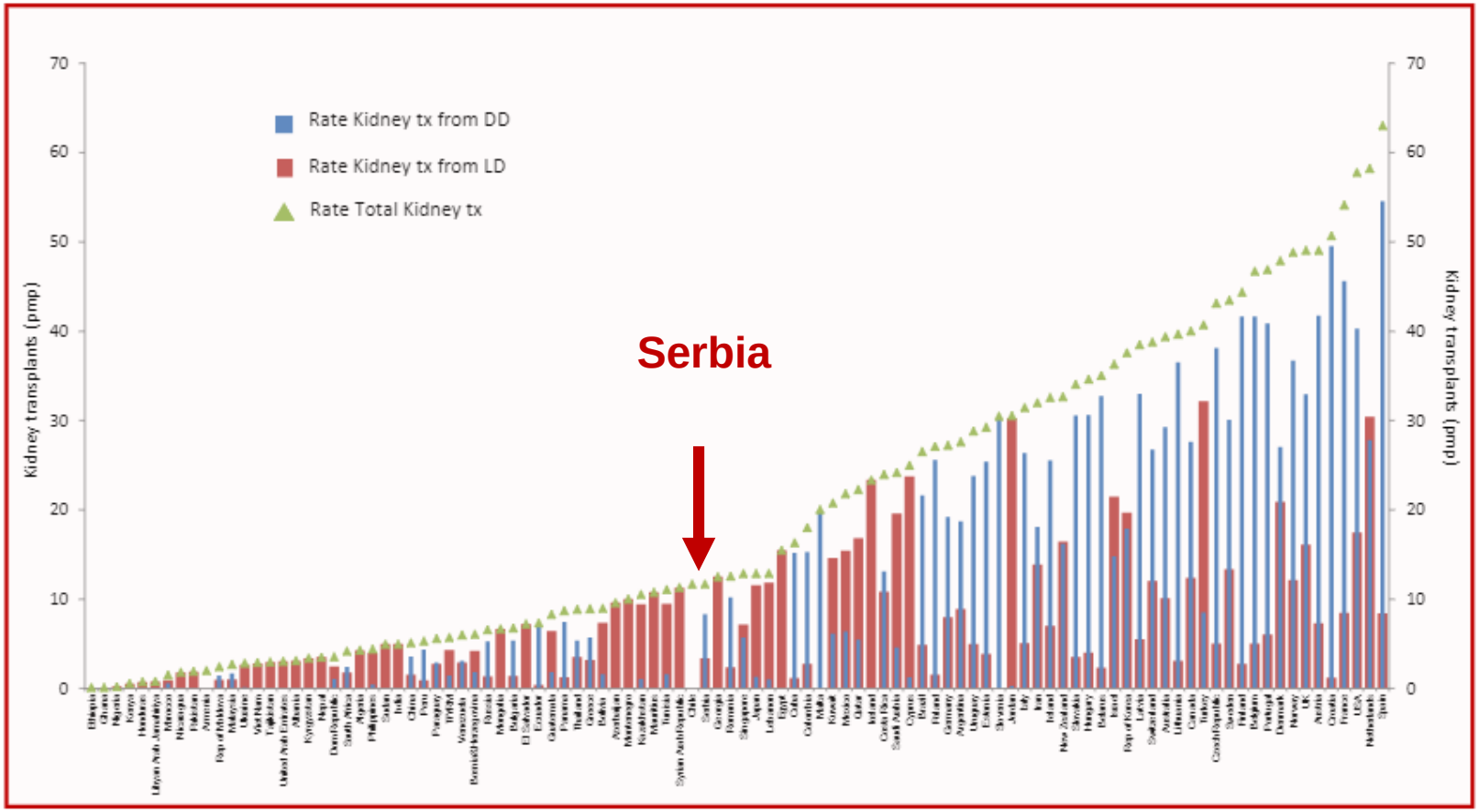
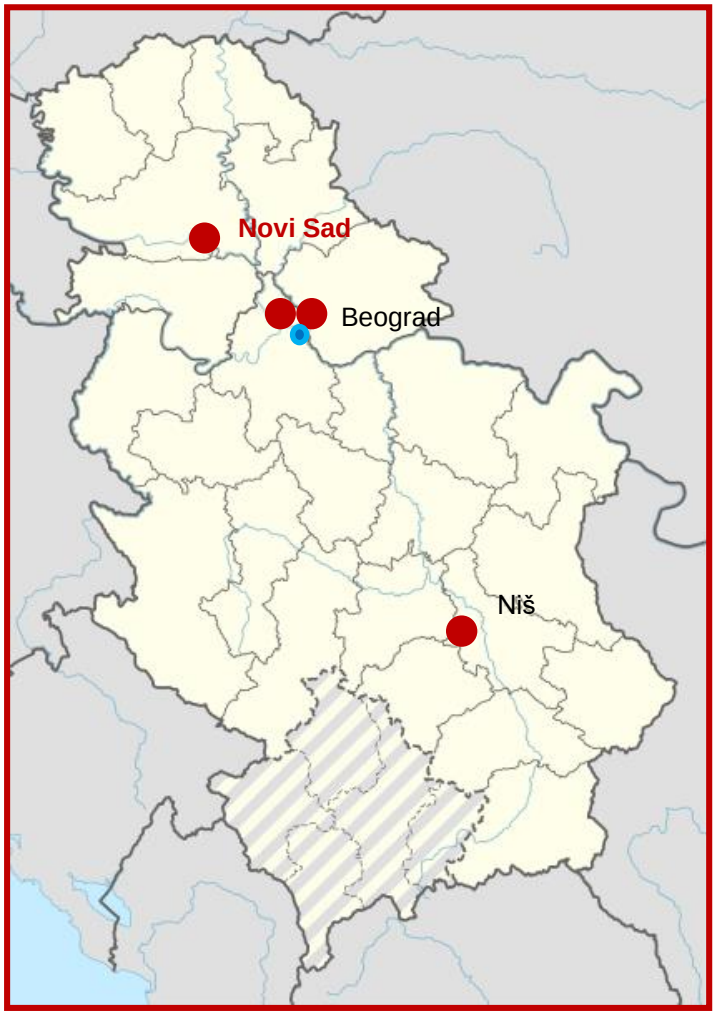
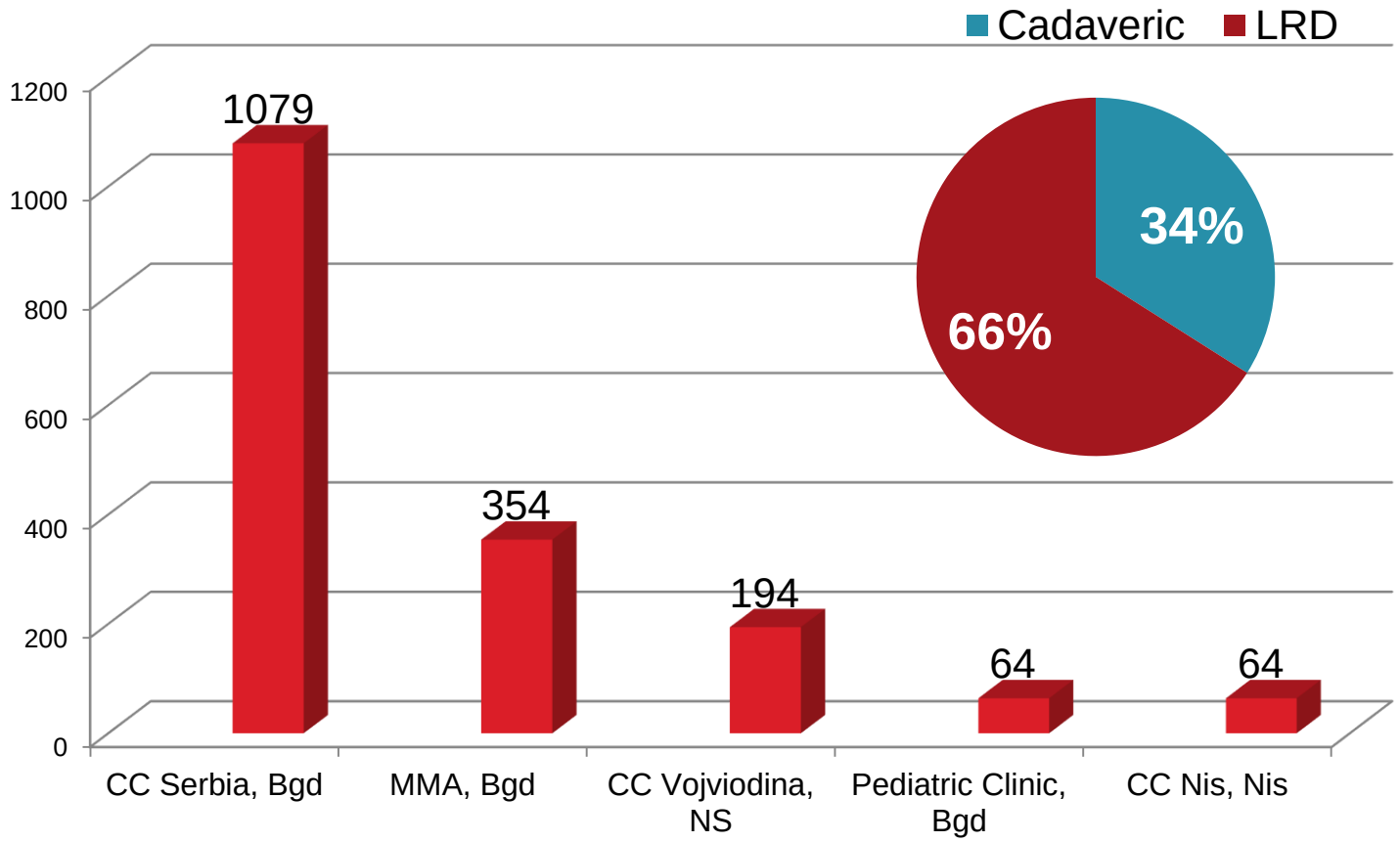


Figure 18. Kidney transplantation Rates (pmp) per countries. 2015.

Transplantation centers in Serbia



Renal transplants in Serbia 1971 - 2013



KC Vojvodina transplants

- Organization of transplant system KCV
- Results of kidney transplantations KCV

KC Vojvodina transplants

- Organization of transplant system KCV
- Results of kidney transplantations KCV

KC Vojvodina transplants

- Autonomous province Vojvodina
- Area 21,506 km²
- Population 1 980 000 inhabitants
- GDP 8200 $/year
- Novi Sad, capital od AP Vojvodina
- Population 400 000
- University of Novi Sad (15 Faculties, 6000 employees, 55000 students)
- Medical Faculty Novi Sad
- Klinical centre Vojvodina (3250 employees, 1450 beds)

- Okruzi Vojvodine -

Transplantation procedures in KC Vojvodina

• Renal transplantation	1986
• Liver transplantation	2008
• Bone marrow transplantation	1977
• Corneal transplantation	1988
• Bone bank	1992
• Skin bank	2015

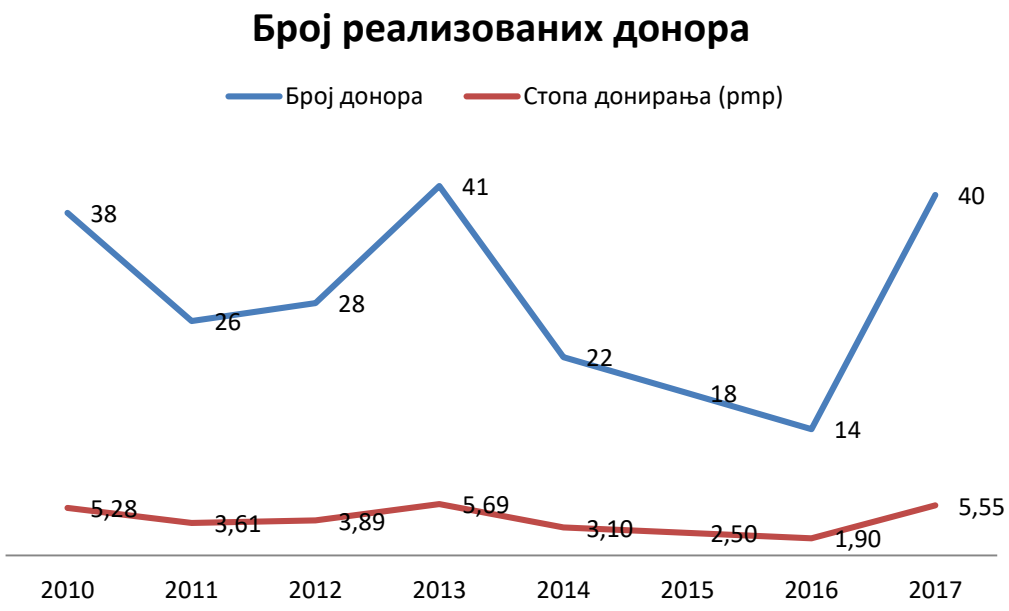
Centre for cell, tissue and organ transplantations KC Vojvodina (2018)

- Donor centre
- Kidney transplantation unit
- Liver transplantation
- Corneal transplantation
- Skin transplant bank
- Bone transplant bank
- Bone marrow transplantation

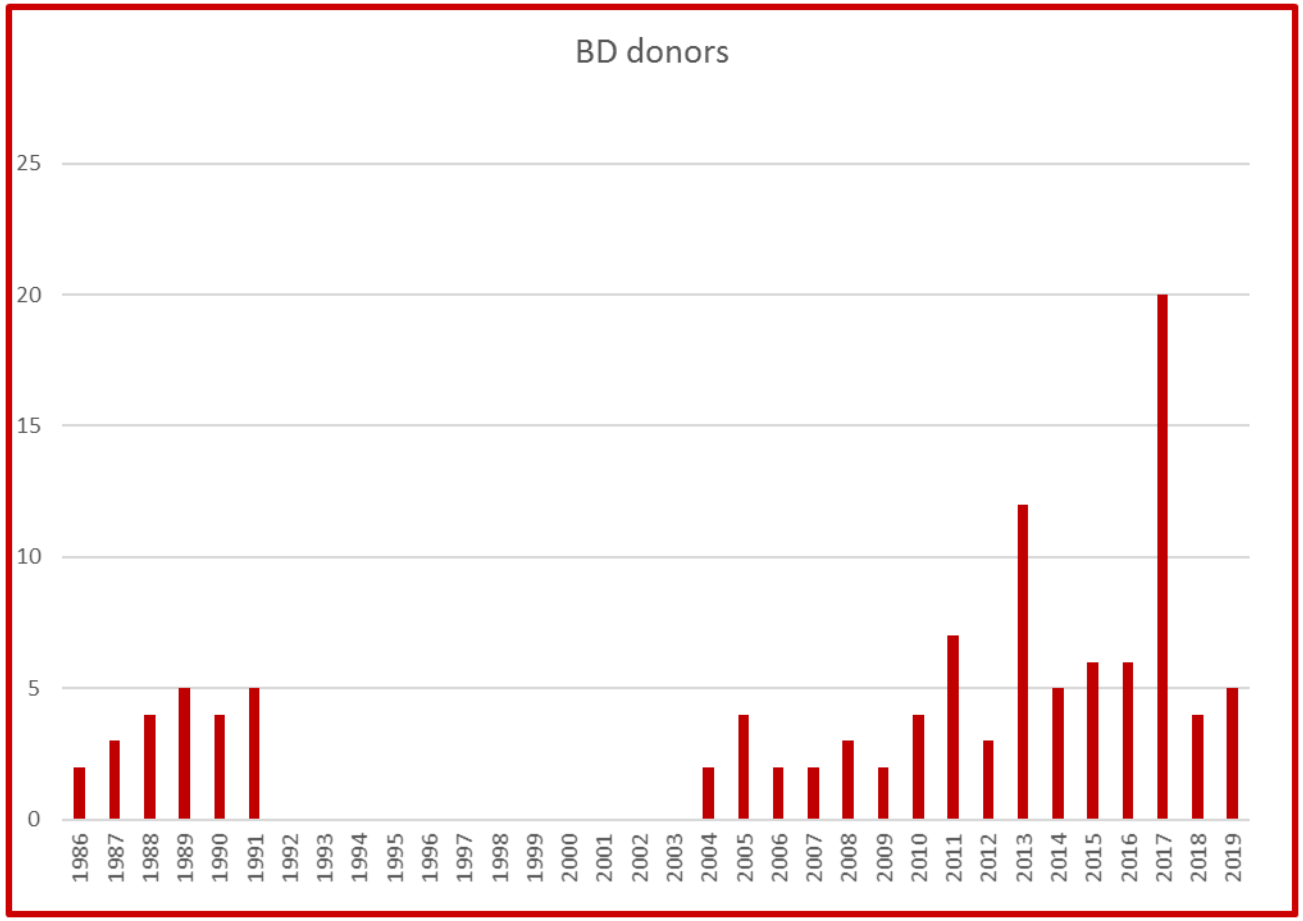
KC Vojvodina transplants

- Organization of transplant system KCV
- Results of kidney transplantations KCV

Donattion rate Republic Serbia



Donor program KC Vojvodina



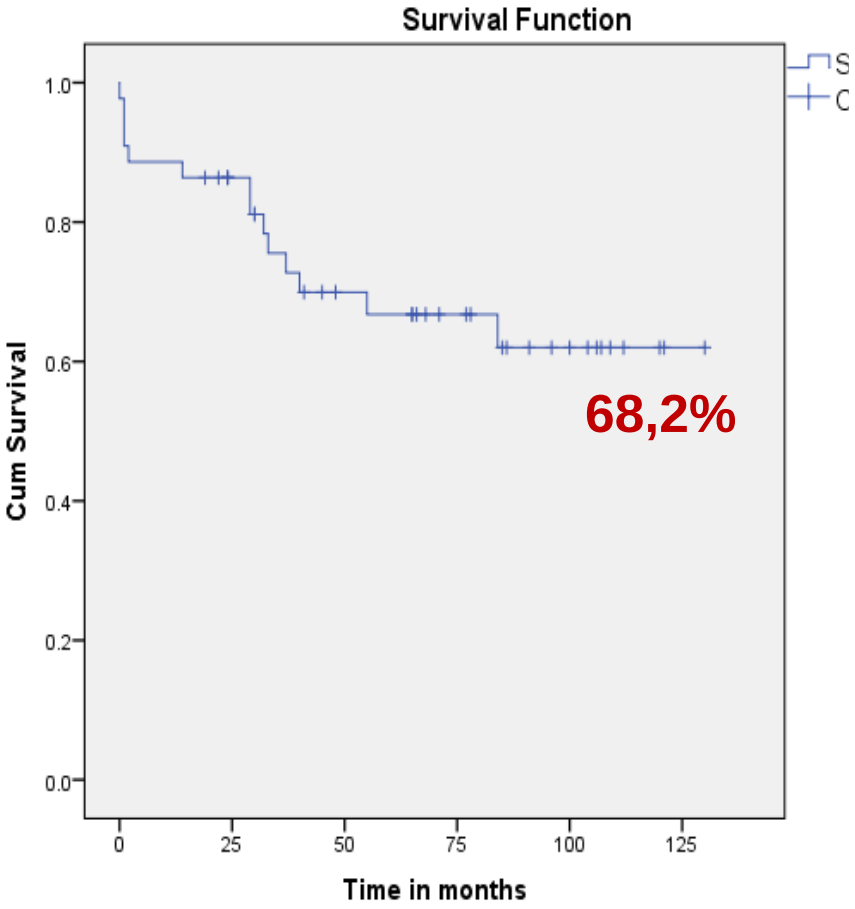
Possibilities?

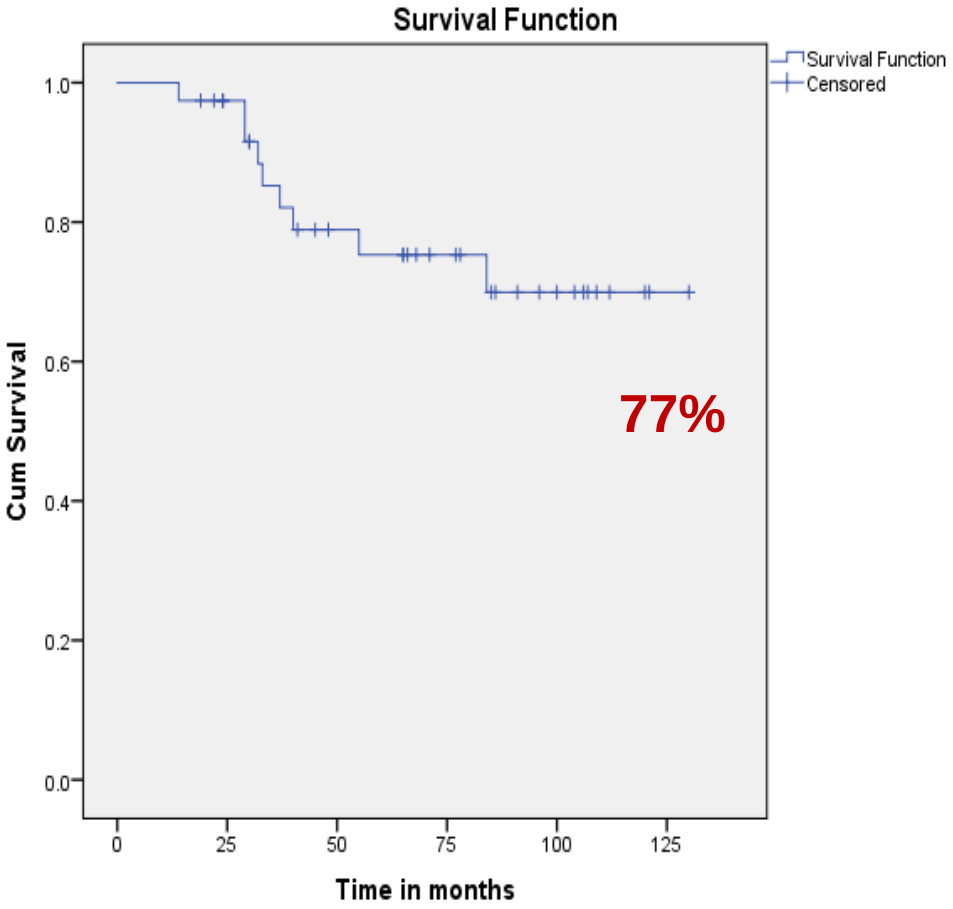
- **50** BD
- **25** suitable BDD
- **12** realized BD donors

Liver transplantation in KC Vojvodine

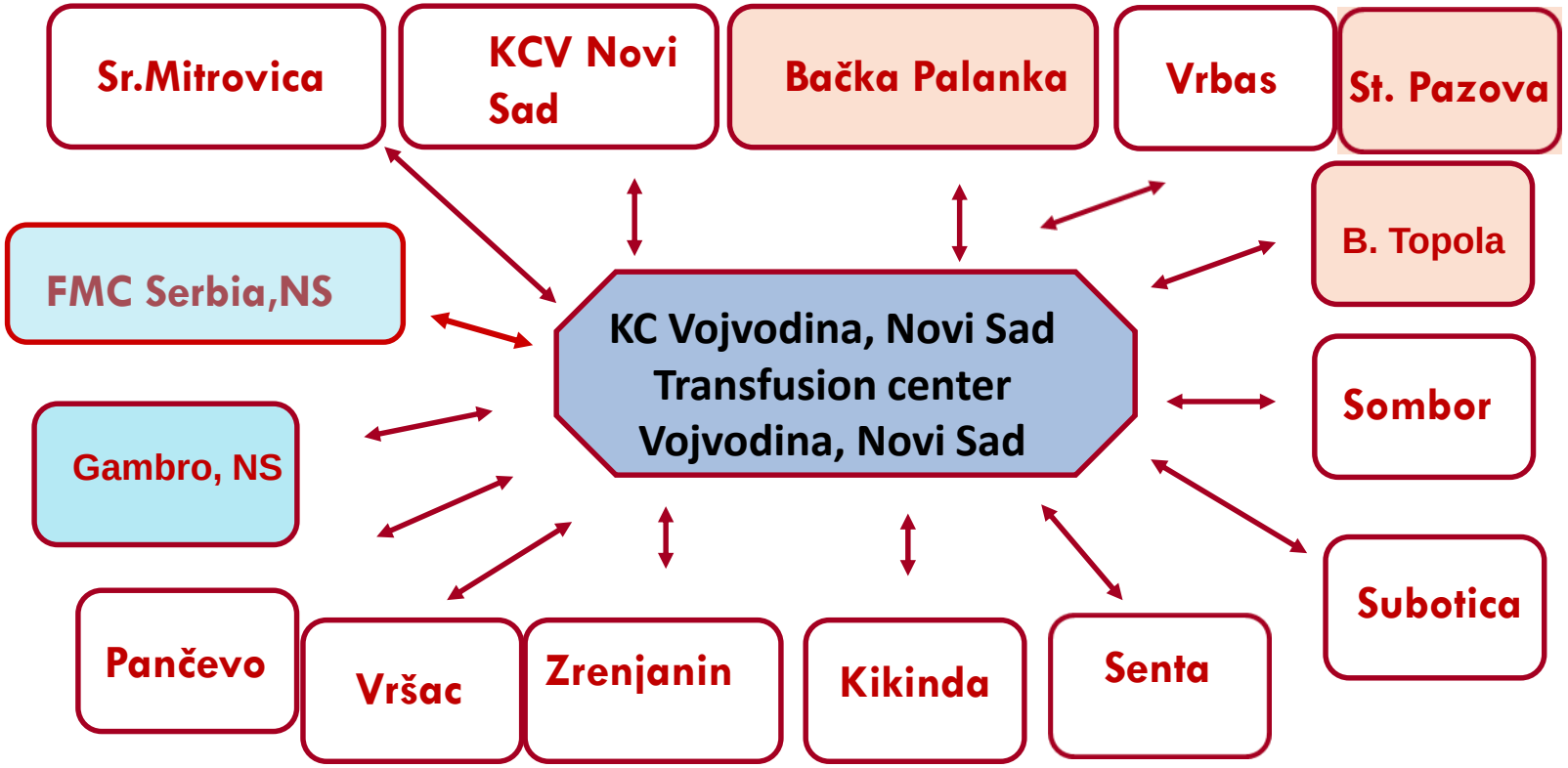
- 2008-2017
- 44 liver transplantations
- Early mortality (surgical, infective complications) 3/44
- 2017-2019 liver explantations

Patient survival after LT in KC Vojvodine



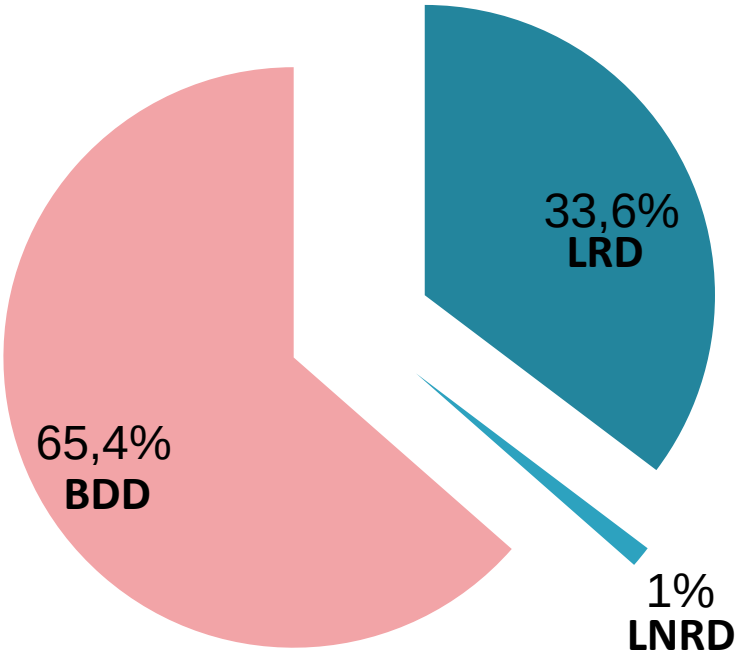


Relation of KCV to regional dialysis centers in AP Vojvodina



1200 Dialysis patients
15 Dialysis centers

KC Vojvodina 1986 - 2019. year renal transpants: 319 Pts.



Renal transplant program in KC Vojvodina

Transplantation from living donor

- Living related and living non related donors
- All regional dialysis centers candidates
- Final investigation, acceptance, and transplantation in KC Vojvodina

Transplantation from deceased donor

- Local deceased donors (BDD) in KC Vojvodina
- Suspected donors from regional hospitals (Subotica)
- Brain death confirmation
- Local procurement
- Local waiting list
- Local allocation

Renal transplantation

- **Waiting list KC Vojvodina** (**172** kidney recipients, **15%** of all regional HD/PD patients)
- **Allocation**: locally developed softver (Blood group, HLA, waiting time + pediatric recipients from all Serbia)
- Republic of Serbia of Ministry of health scoring system (2012)
- **HLA, CM, anti HLA antibodies, Cross match**: Transfusion center Vojvodina, Novi Sad
- **Surgery**: Urgent Centre KC Vojvodina organ procurement , Vaskular & Urologic Clinics KC Vojvodina – recipient operation
- **Postoperative care:** Department of transplantation (Kidney, Liver)
- **Follow up**: Clinic of Nephrology and Clinical Immunology

Allocation and recipient selection

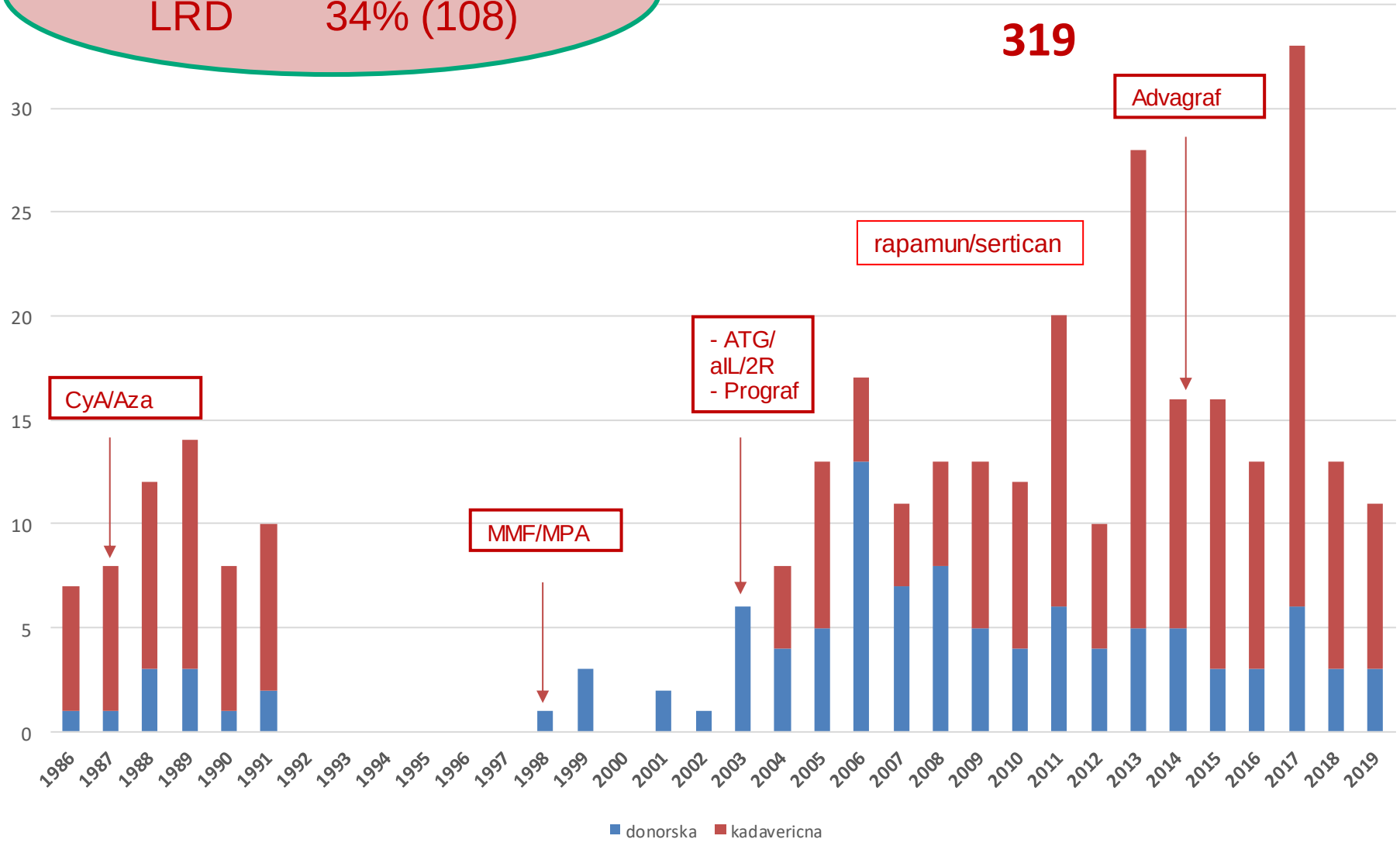
- 2 MD – Clinic of Nephrology and Clinical Immunology
- Softver based selection of acceptable recipients
- Virtual cross match (HLA donor, known anti-HLA antibodies of recipients).
- 6 best matched recipient are called
- Clinical, laboratory and radiological examination
- Complement based CM, fresh & historical sera; Flow cytometry CM
- Scoring, allocation
- Selection of best recipients (nephrologist, vascular surgeon, urologist).
- Renal transplantation

Renal transplantation KC Vojvodine

1986.-16.10.2019.

319

BDD 66% (211)
LRD 34% (108)



Immunosuppressive regime 1986. year

- **cyklosporine A** (Sandimmune®) i.v. / p.o. 12 mg/kg TT
- **cortikosteroides** (metilprednizolon) “pulse“, 1000 mg i.v. 0.5 mg/kg TT after month, and later 8 -16 mg
- **azatioprine** (Imuran®) 2xI amp i.v, later 2x1 tbl p.o.

Immunosuppressive regime 2019. year (4 for all)

- **polyclonal antilymphocyte globulin (Grafalon®)**

  4 days iv
  7 mg/kg i.v. bolus
  + 4 mg/kg 3 days

or

- **monoclonal antibodies (Simulect®)**

  (2 doses, i.v. 0, 4 day)

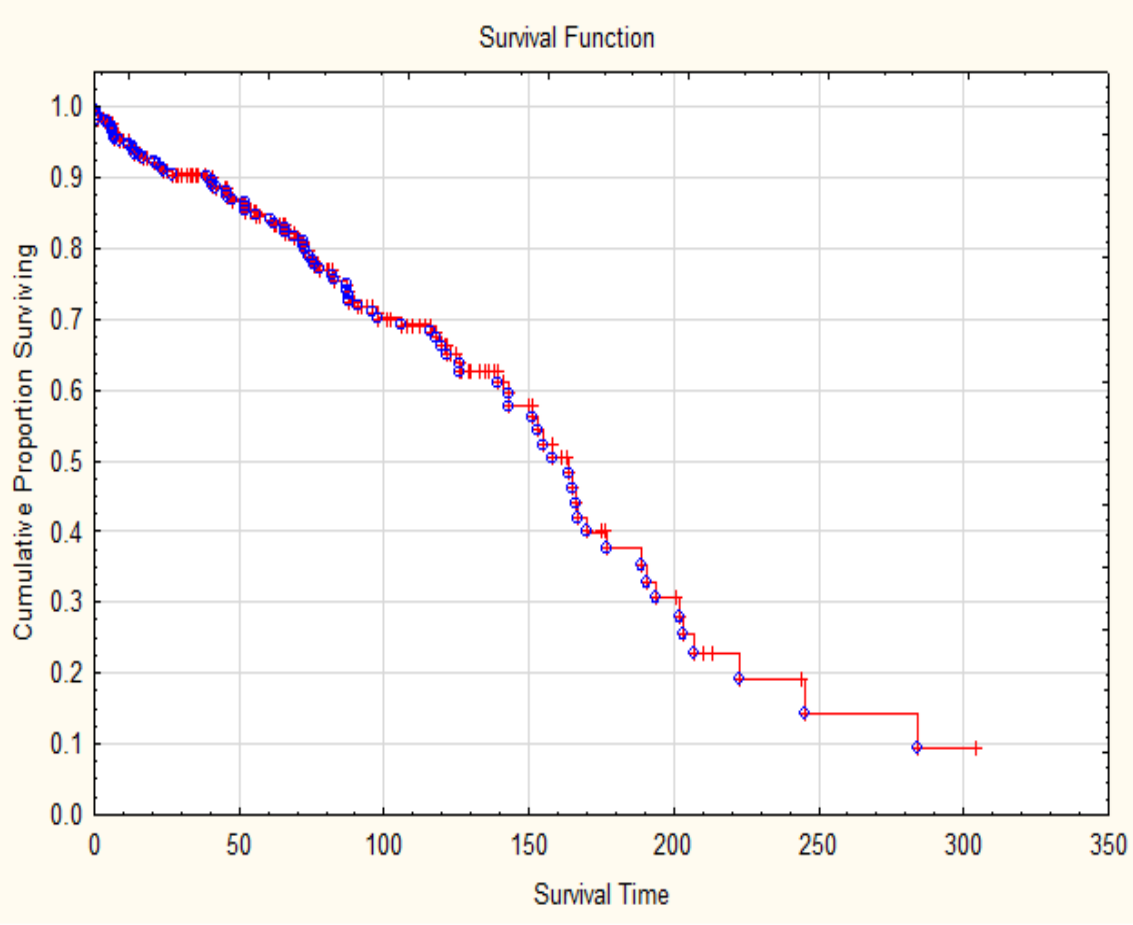
- **cortikosteroides**

  “pulse“ 500 mg
  i.v. 5 days
  rapid dose reduction to 2.5 mg 3 months

Immunosuppressive regime 2019. year (4 for all)

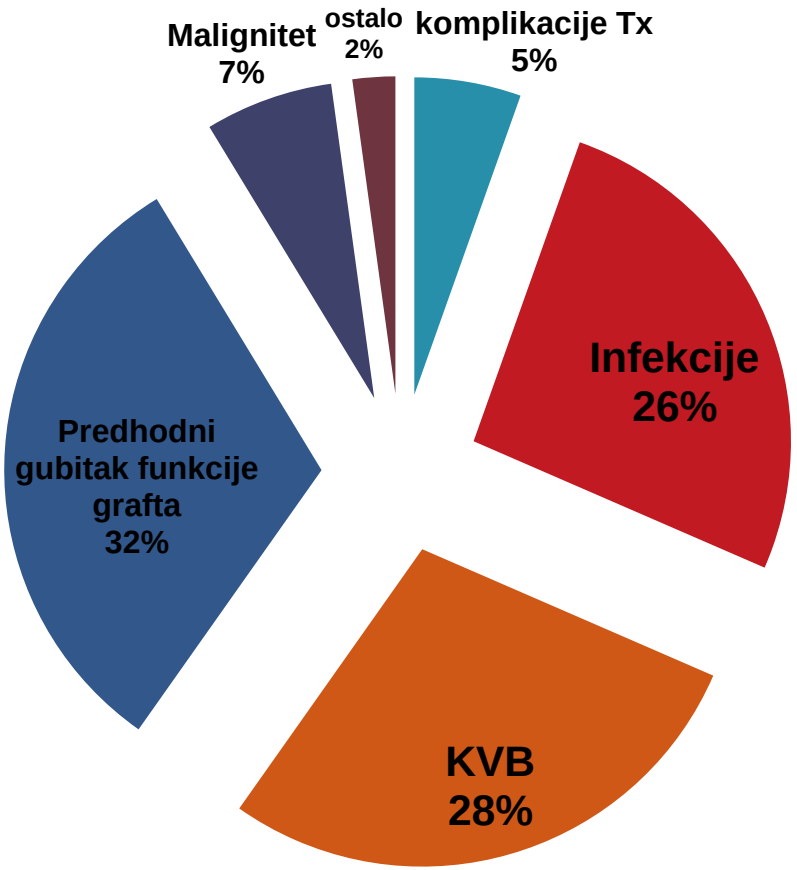
• **Ciklosporin A (Sandimmune Neoral®)**	5 mg/kg u 2 doze p.o.
or	
Takrolimus (Prograf®, Advagraf®)	0.15 mg/kg p.o.
• **Micofenolat-mofetil (CellCept®)**	3 days i.v. 2 gr p.o.
or	
Micofenolic acid (Myfortic®)	1440 mg p.o
• **Everolimus (Certican®)**	5 days post op.

Overall patient survival 1986-2019



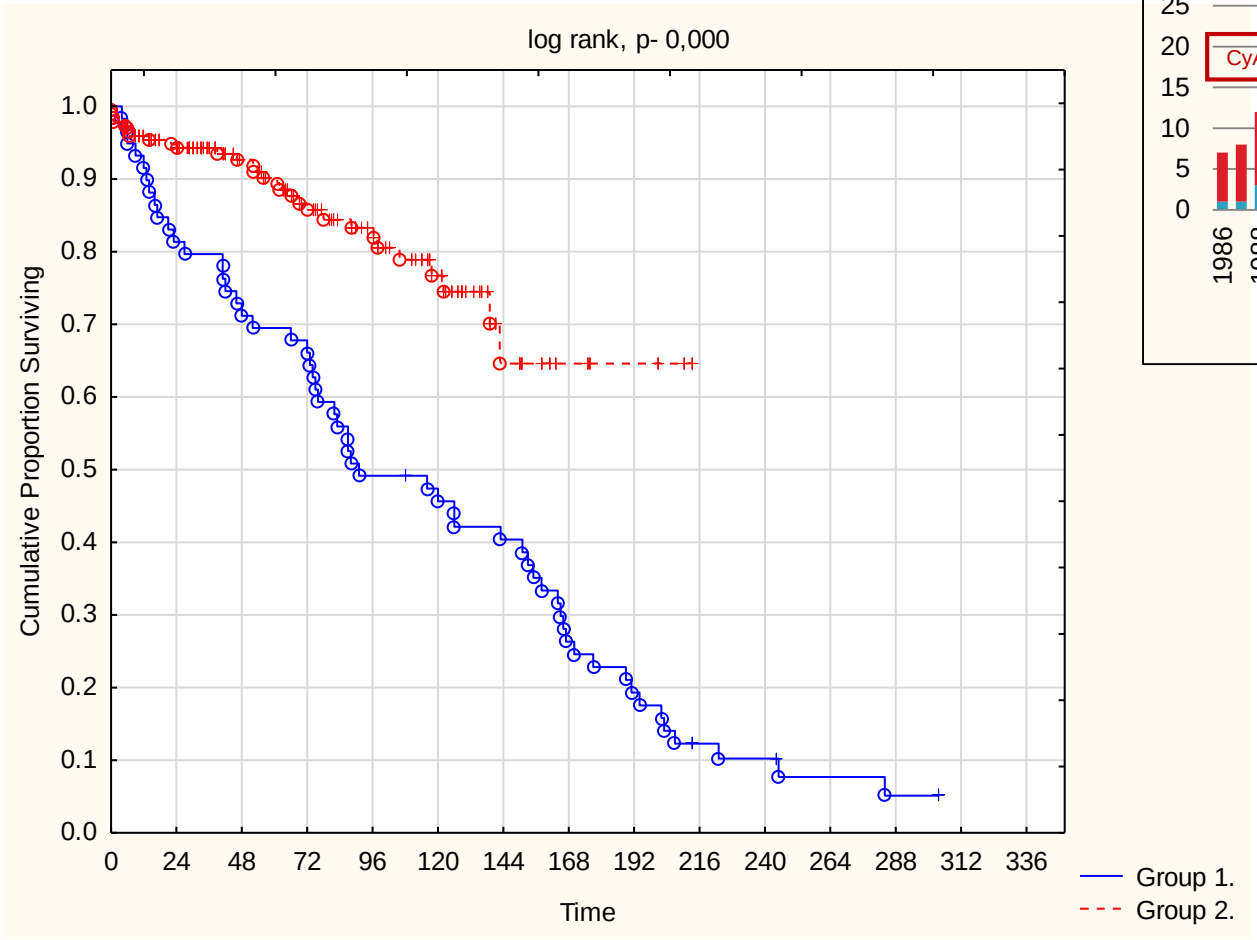
5	years	86%
10	years	65 %
20	years	20%

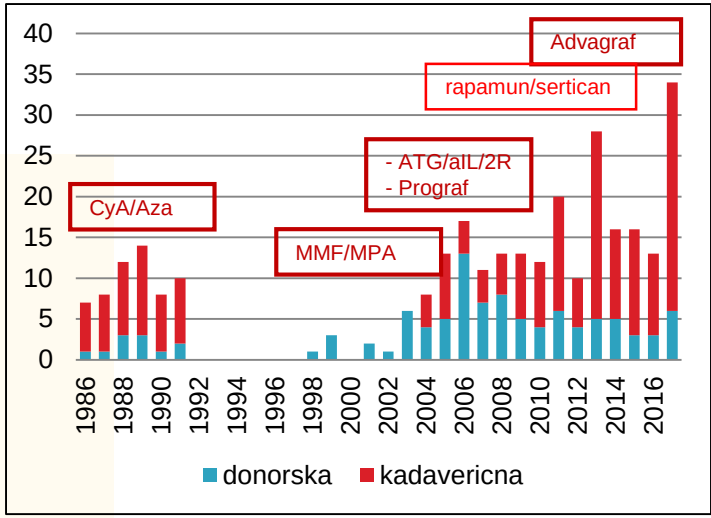
Causes of death (Pts with renal transplant)



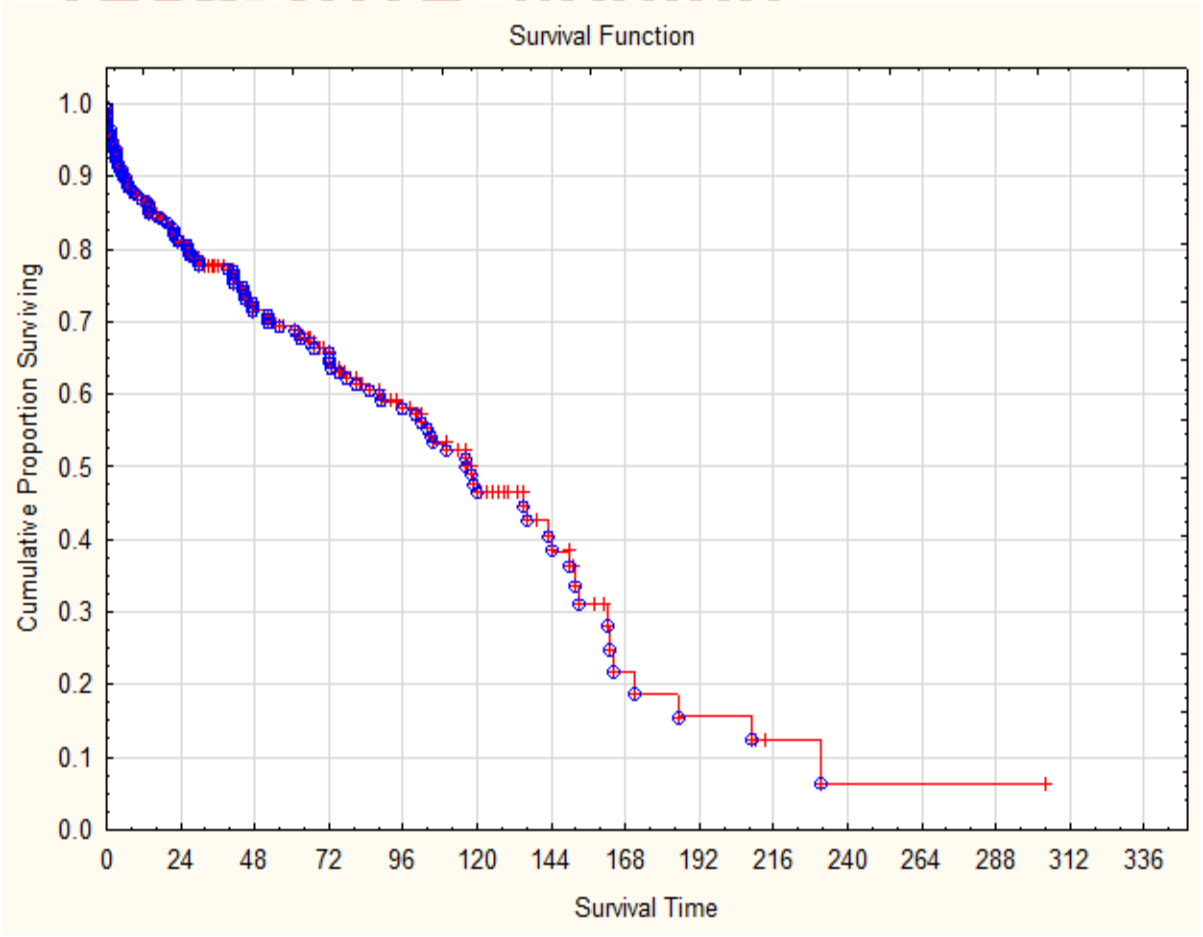
Overall patients survival

blue 1986-1991 red 1998-2019





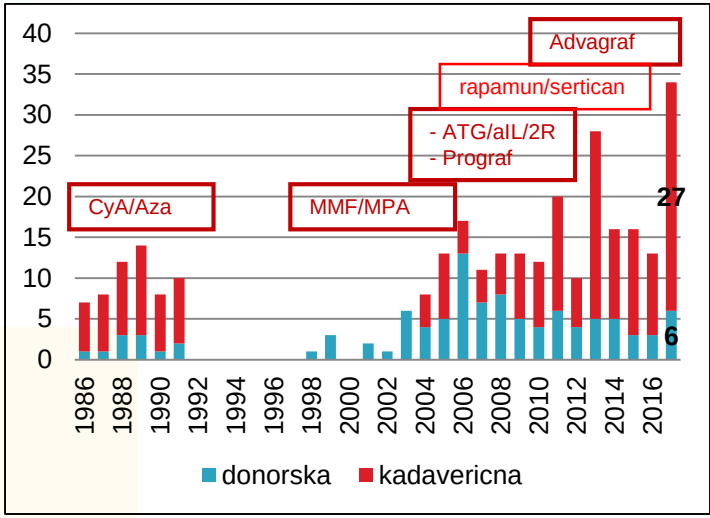
Graft survival
1986-2019. godine



5 years	68 %
10 years	50 %

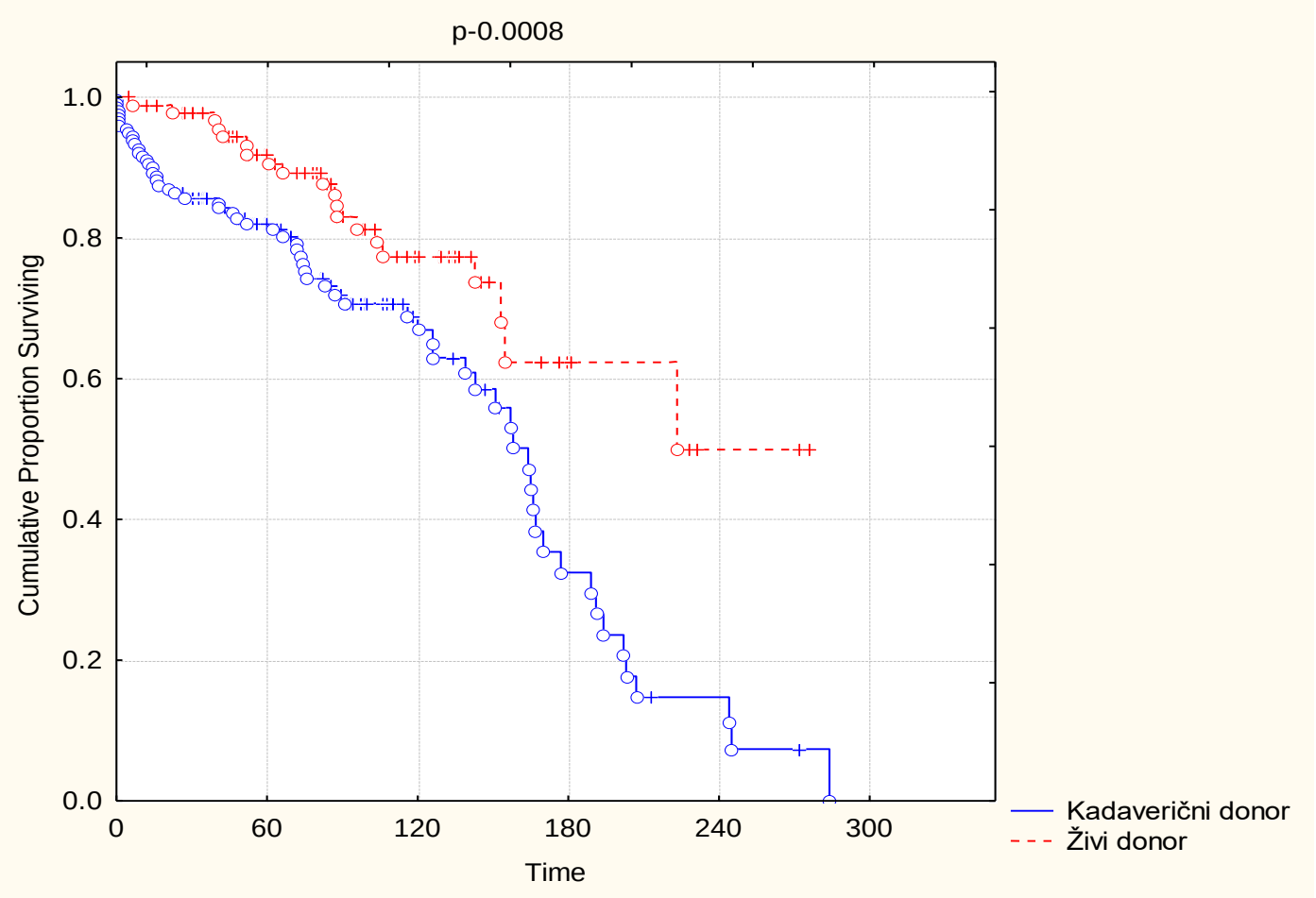
Graft survival 1986-2019. godine

blue 1986-1991 red 1998-2019



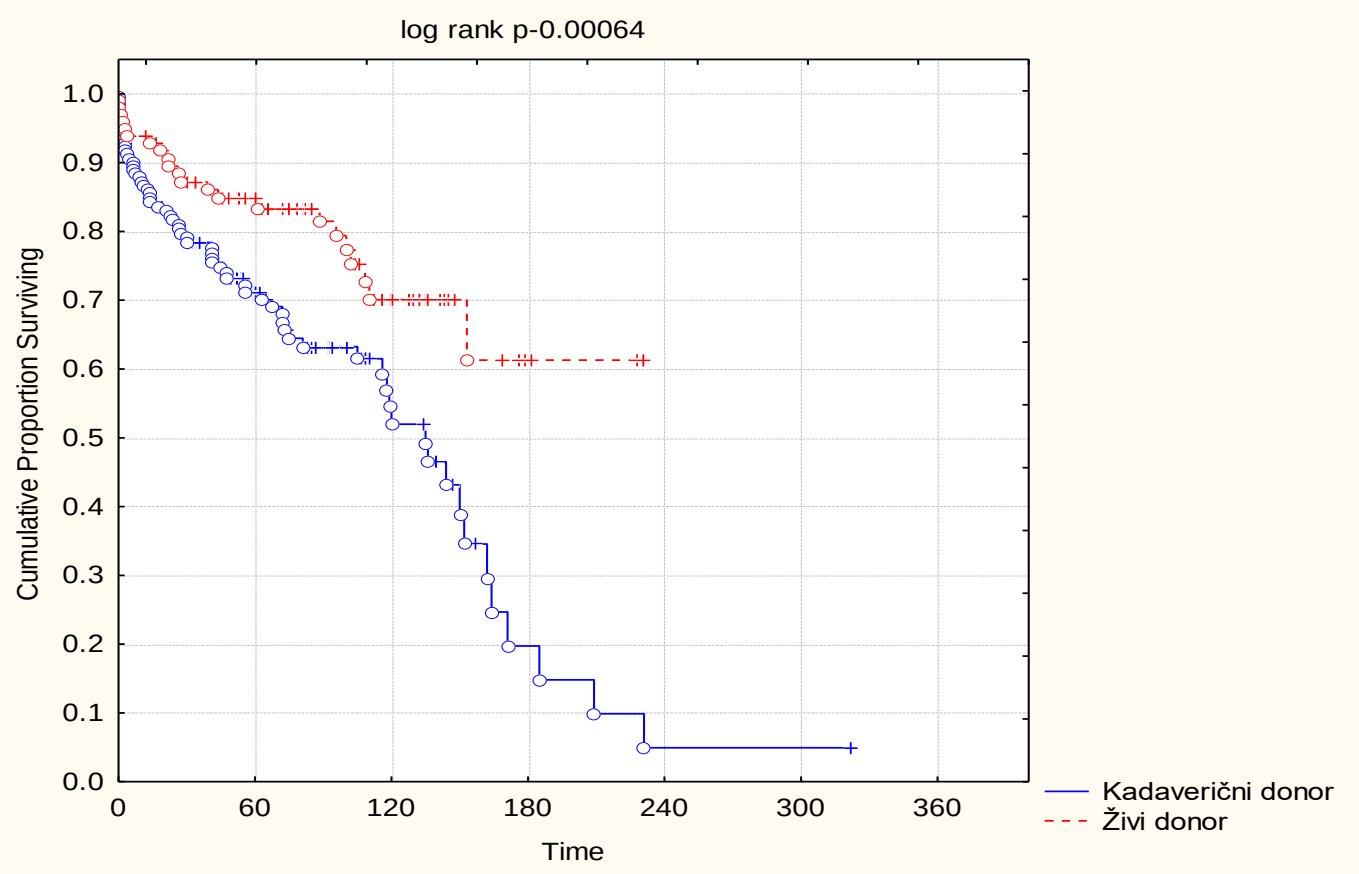
Patient survival: donor type

blue BDD red LRD

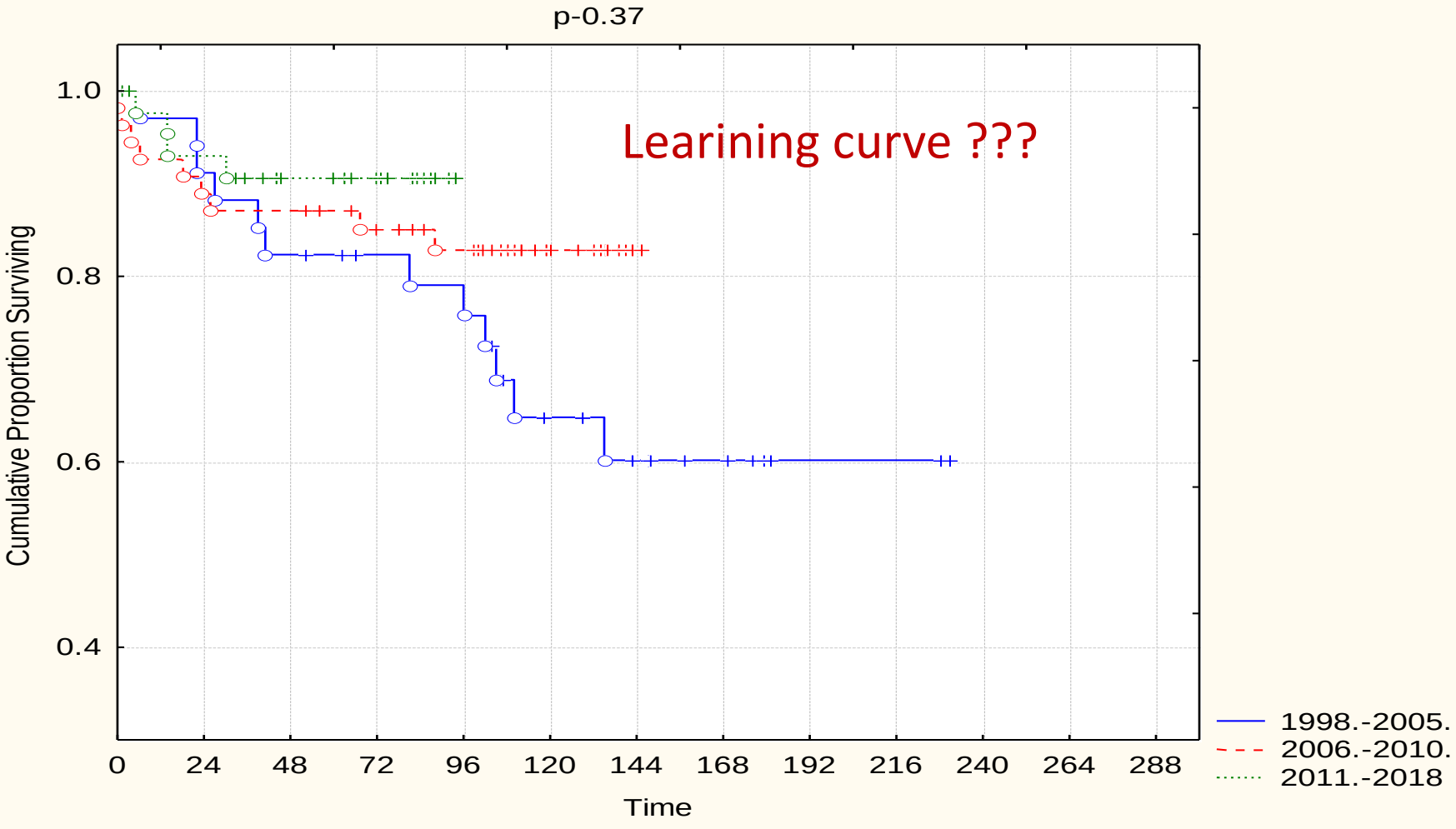


Graft function: donor type

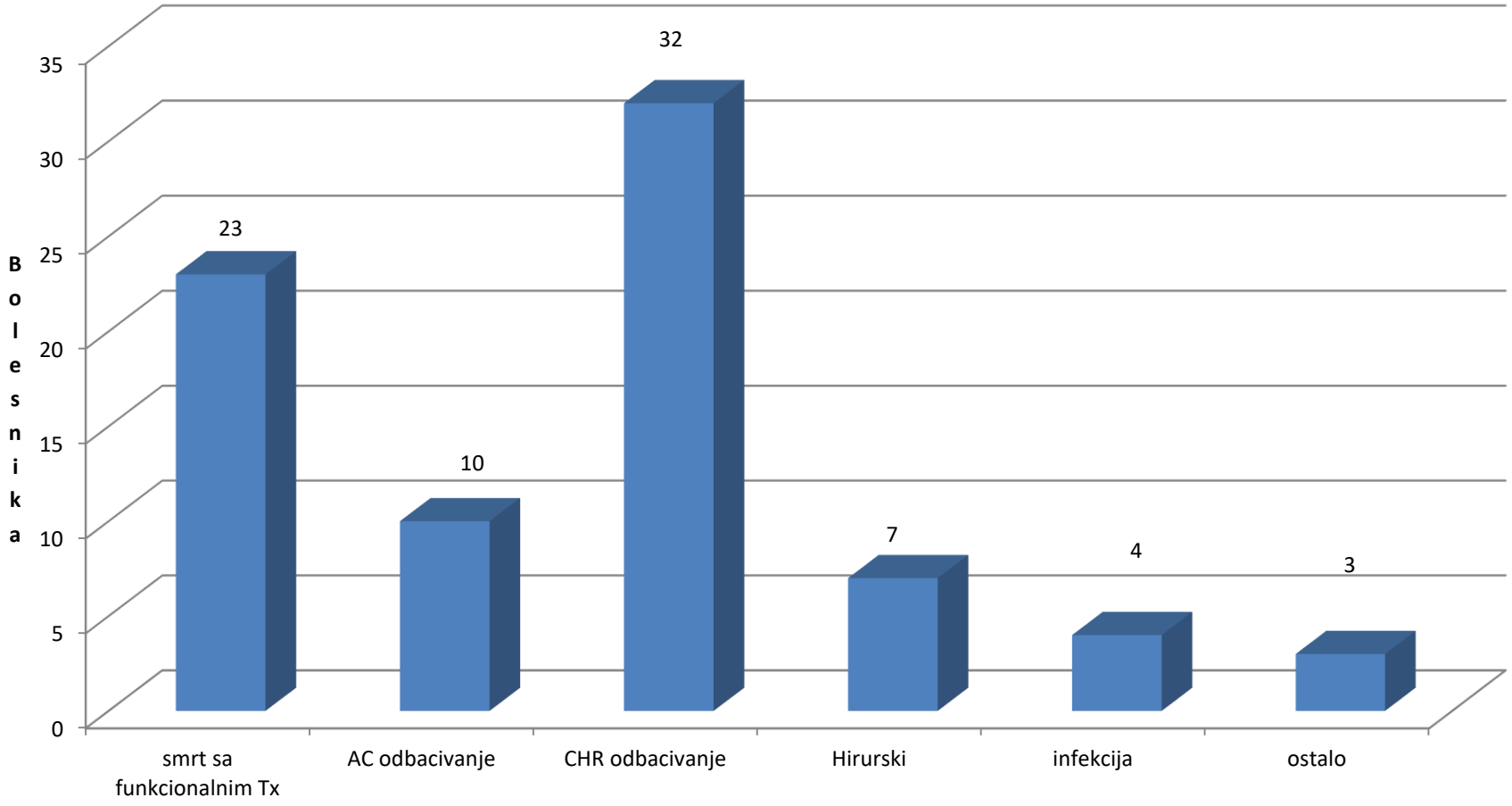
blue BDD red LRD



Graft function: time of transplantation (1998-2005, 2006-2010, 2011-2019)



Graft losss


Bolesnika
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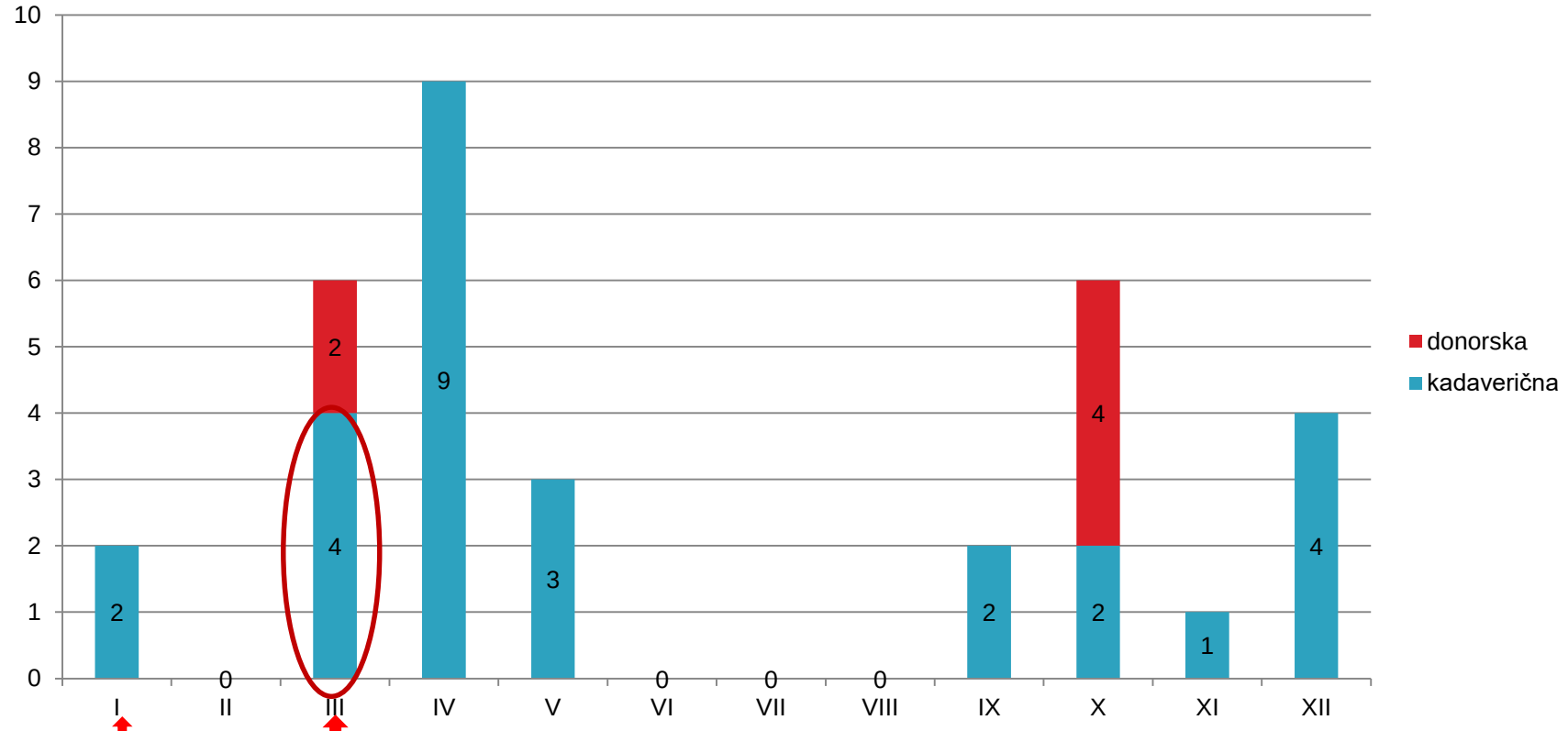
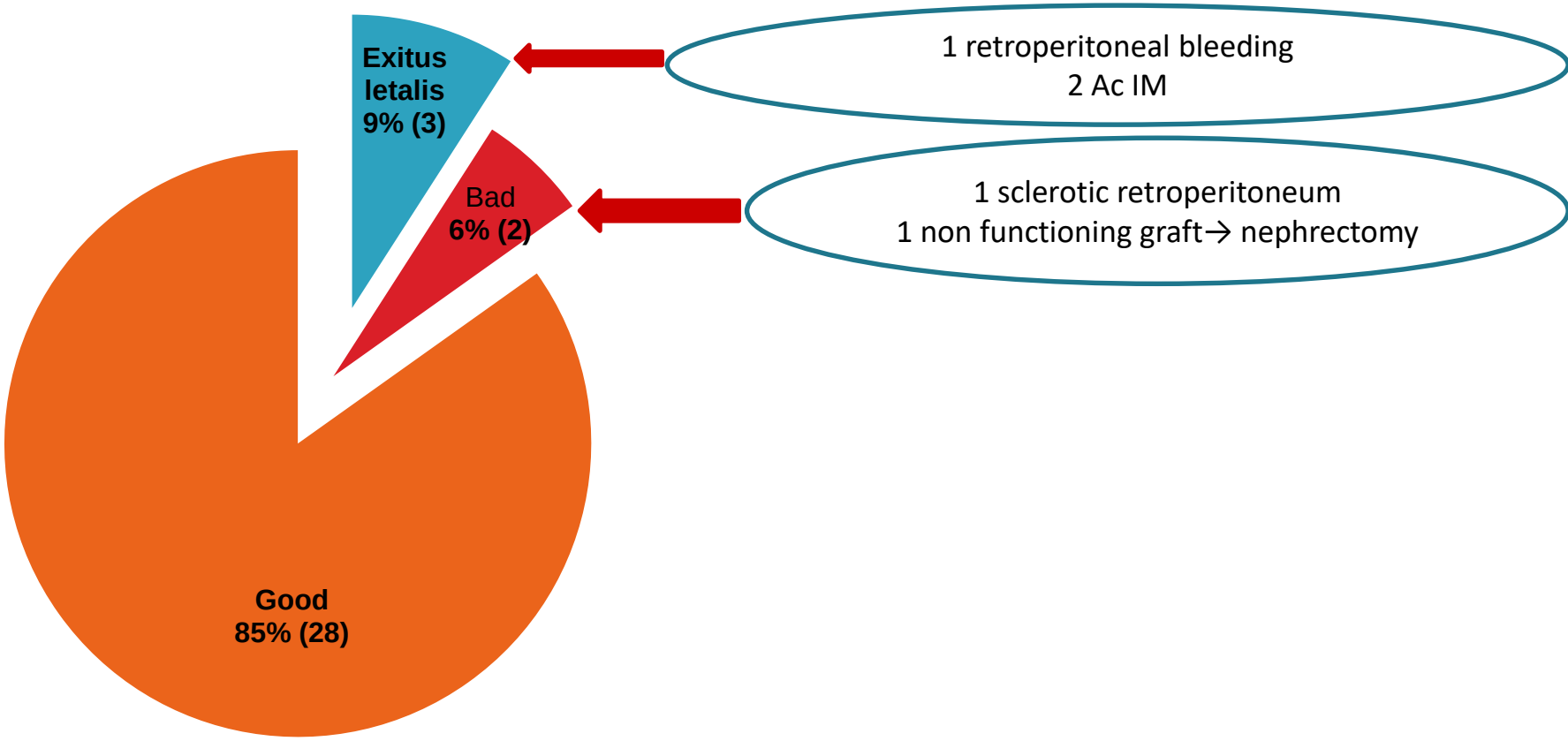
Renal transplantation
KC Vojvodina 2017. year (34)



Listed 1999.y

31.03.2017. 4 BDD transplants in one day

Results of renal transplantation 2017. year (34)



Transplantation medicine in KC Vojvodina

- „Artificial“ medicine, „artificial“ complications.
- Lack of specific training, for some doctors…
- Passion.
- Team work. Team coordination ???
- “Stick and carrot system” is not working.

- Infinitely complicated interpersonal reactions in transplantation field (only in Serbia ???).

Sence of success, unfortunately not based in reality…

Self – sufficiency is possible, but not desirable, for real success …

Lack of Government based coordination !!!

Thank You all.

Come to Novi Sad, anytime !!!