



Udruženje ljekara za nefrologiju, dijalizu i  
transplantaciju bubrega u Bosni i Hercegovini

# RENAL REPLACEMENT THERAPY IN BOSNIA AND HERZEGOVINA IN YEAR 2011.

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- UCC Tuzla, Enisa Mesic
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# Centers for dialysis and transplantation in Bosnia and Herzegovina



DIJALYSIS CENTERS in B&H	Total number of patients in 2011. (by centers in FBiH, RS & Brčko district)
Banja Luka	194
Bihac	119
Bijeljina	303
Brcko	74
Doboj	124
Foca	21
Gradiska	38
Gracanica	95
Ilidza	60
East Sarajevo	73
Konjic	22
Laktasi	100
Livno	37
Mostar	185
Odzak	101
Pediatric clinic Sarajevo	3
Prijedor	71
Sarajevo-Clinic for HD	218
Sarajevo-Clinic for nephr.	92
Šamac	93
Tesanj	47
Travnik	123
Trebinje	31
Tuzla	285
Zenica	267
Zvornik	77
Zivinice	72
<b>TOTAL:</b>	<b>2.925</b>





## Distribution of dialysis patients in B&H at the day 31.12.2011. by age group and sex

Age group	Male	Female
0-19	15 (0,9%)	10 (0,8%)
20-44	288 (17,1%)	172 (13,8%)
45-64	772 (45,9%)	514 (41,4%)
65-74	369 (21,94%)	339 (27,3%)
75+	238 (143,1%)	208 (16,7%)
Median	59,4 year	62,3 year





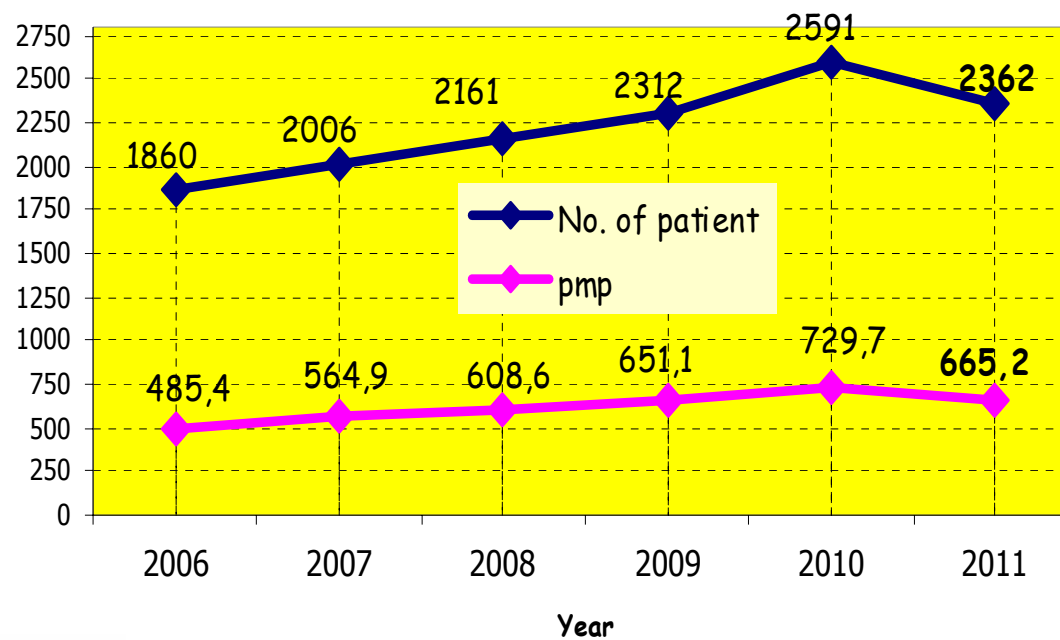
# Epidemiology chronic renal failure - prevalence

- Prevalence
- Incidence
- Primary renal disease
- Modality of treatment
- Blood transmitted diseases
- Vascular access
- Acute renal failure
- Outcome





## Prevalence >90 day





## Age group of prevalence patient (>90 dana)

December 31. 2011.	0-19	20-44	45-64	65-74	75+
Males (n)	10	220	631	296	175
Females (n)	9	137	450	277	157
<b>Total (n/%)</b>	<b>19 (0,8%)</b>	<b>459 (15,1%)</b>	<b>1192 (45,8%)</b>	<b>591 (24,3%)</b>	<b>319 (14,0%)</b>





# Epidemiology chronic renal failure - incidence

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# Incidencee in B&H (at day 1) – comparation 2002.-2011.

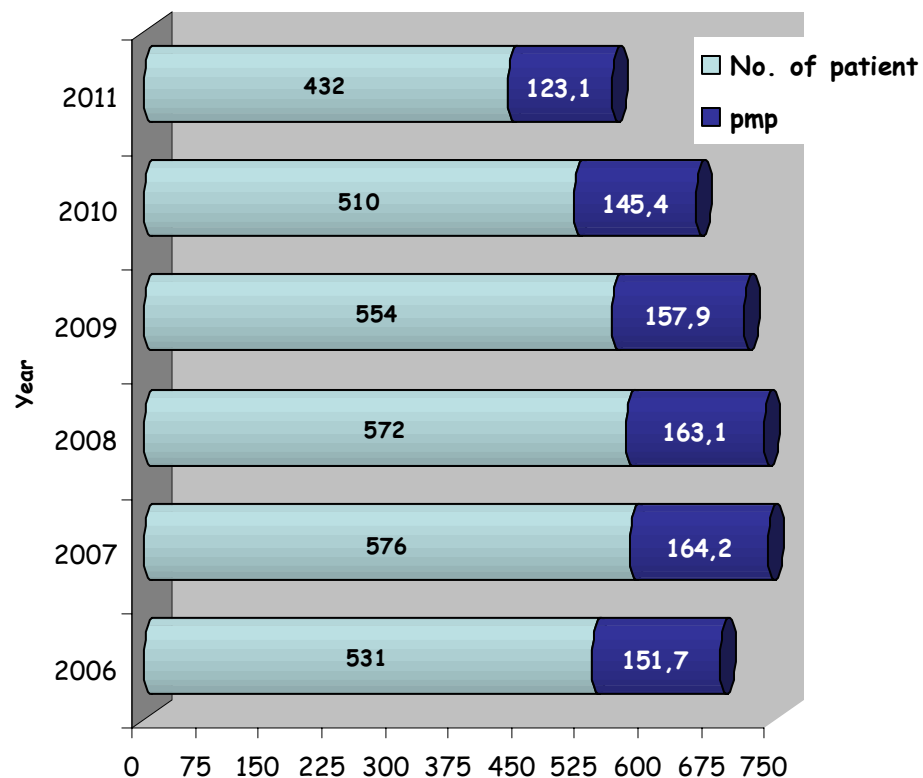
Entity	Incidencee in B&H (at day 1)			
	Year 2002		Year 2011	
	N	pmp	N	pmp
Federation BiH	-*	-*	266	-*
R. Srpska	-*	-*	160	-*
DC Brcko	-*	-*	6	-*
Bosnia and Herzegovina	420	109,7	432	123,1

-\* No data





# Incidence at day 1 (pmp)

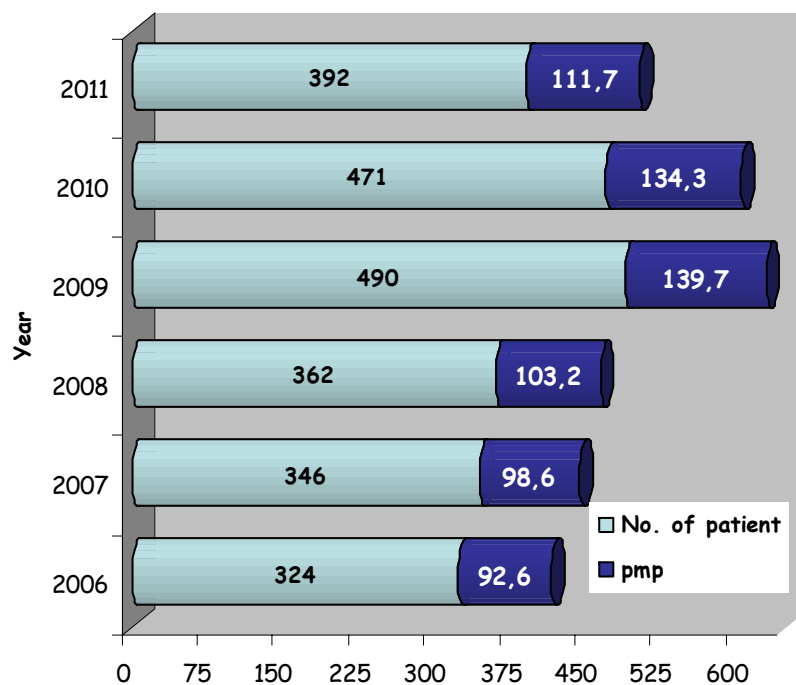


**Note:**

The increase (or decrease) incidencee was relatively because there are no reliable data on population in Bosnia and Herzegovina



# Incidence at day 91 (pmp)



**Note:**

The increase (or decrease) incidence was relatively because there are no reliable data on population in Bosnia and Herzegovina



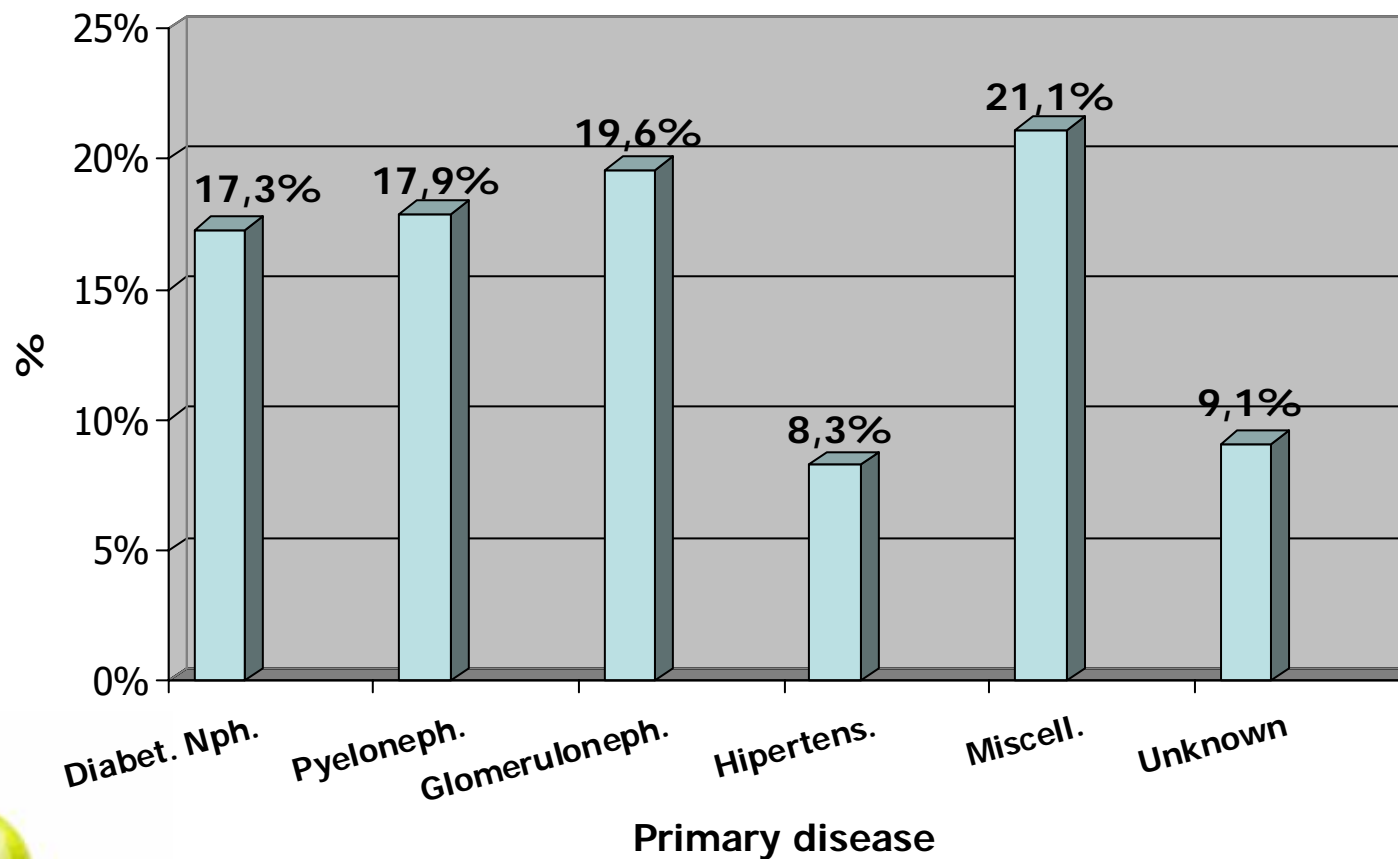
# Epidemiology CKI – Primary renal disease

- Prevalence
- Incidence
- **Primary renal disease**
- Modality of treatment
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- Outcome





# Primary renal disease in Year 2011





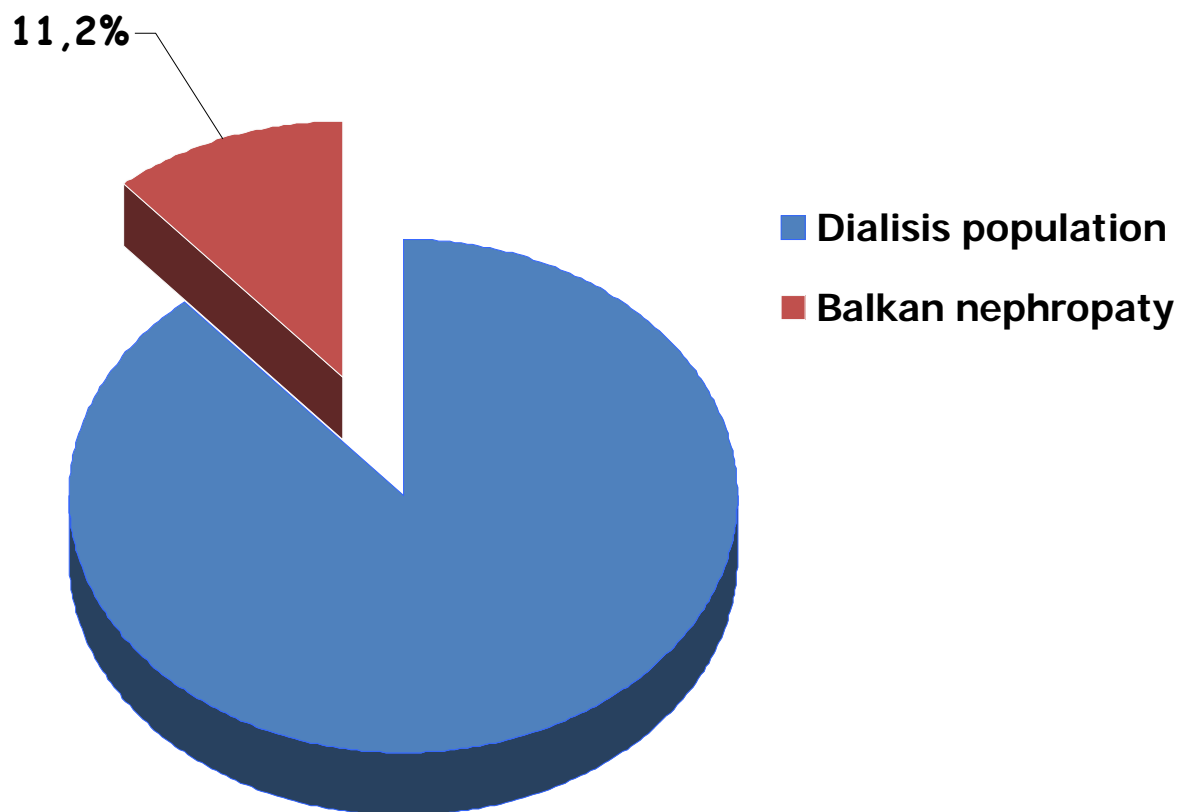
# Balkan endemic nephropathy in Year 2011

- Balkan endemic nephropathy is the most endemic renal disease in the north-east of Bosnia.
- Of 328 patients with Balkan nephropathy 75.1% were older than 65 years.
- Patients with Balkan nephropathy constitute 11.2% of the total number of dialysis patients.





# Balkan endemic nephropathy in Year 2011





## Balkan endemic nephropathy per Years

31. december	2004	2005	2006	2007	2008	2009	2010	2011
Number of patient/pmp	248/70	246/70	270/77	285/81	306/87	306/87	291/83	<b>328/94</b>
Males (%)	48,6%	48,4%	44,6%	44,2%	47,4%	50%	51,2%	<b>51,5%</b>
Females (%)	51,4%	51,6%	55,4%	55,8%	52,6%	50%	48,8%	<b>48,5%</b>







# Age group of patients with Balkan endemic nephropathy

December 31. 2010	0-19	20-44	45-64	65-74	75+
Males (n/%)	0/ 0,0%	1/ 0,6%	34/ 20,1%	82/ 48,5%	52/ 30,8%
Females (n/%)	0/ 0,0%	1/ 0,6%	26/ 16,4%	66/ 41,5%	66/ 41,5%



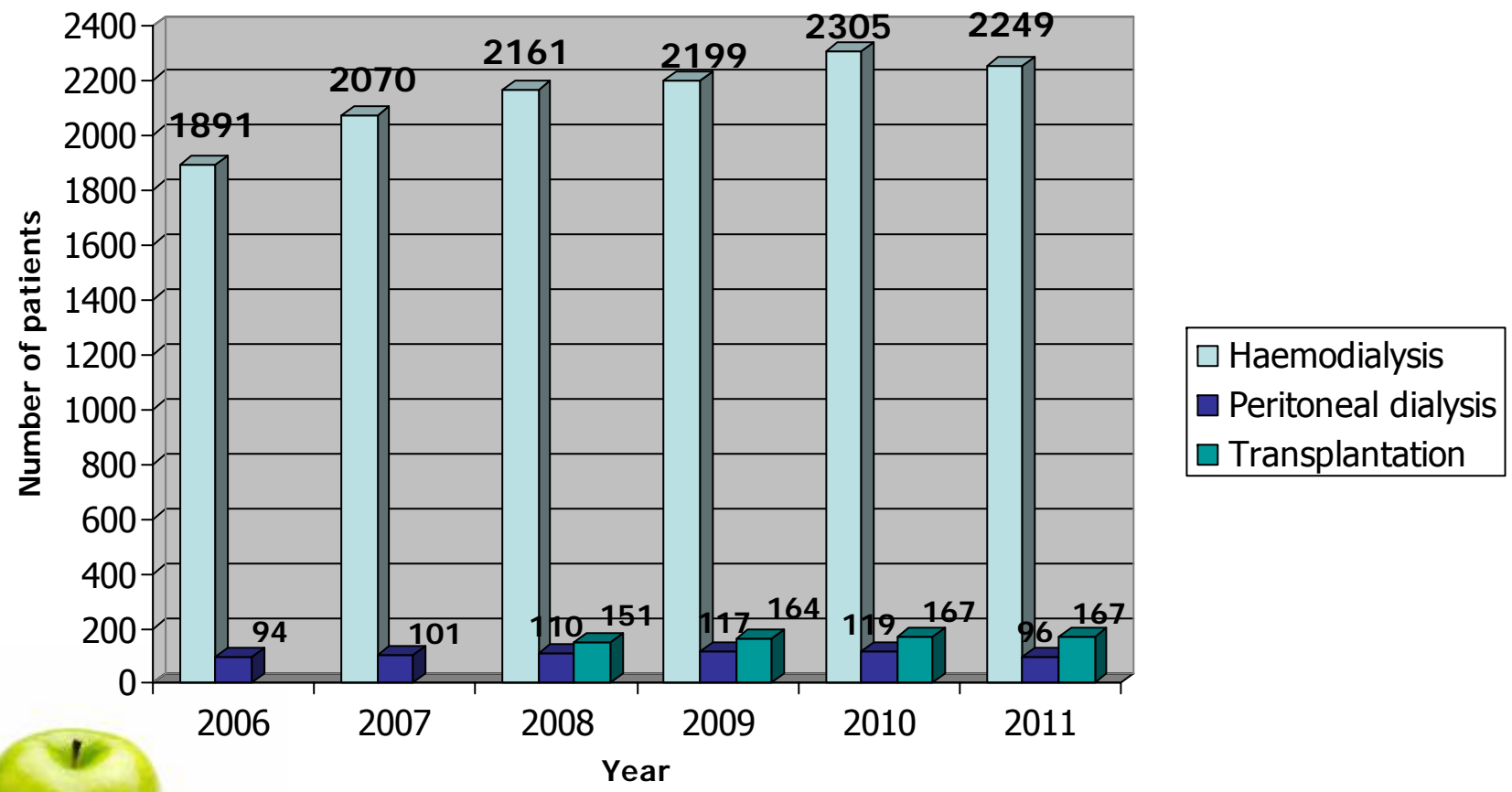


# Epidemiology chronic renal failure – Treatment modality

- Prevalence
- Incidence
- Primary renal disease
- **Modality of treatment**
- Blood transmitted diseases
- Vascular access
- Acute renal failure
- Outcome



# Modality patients treatment





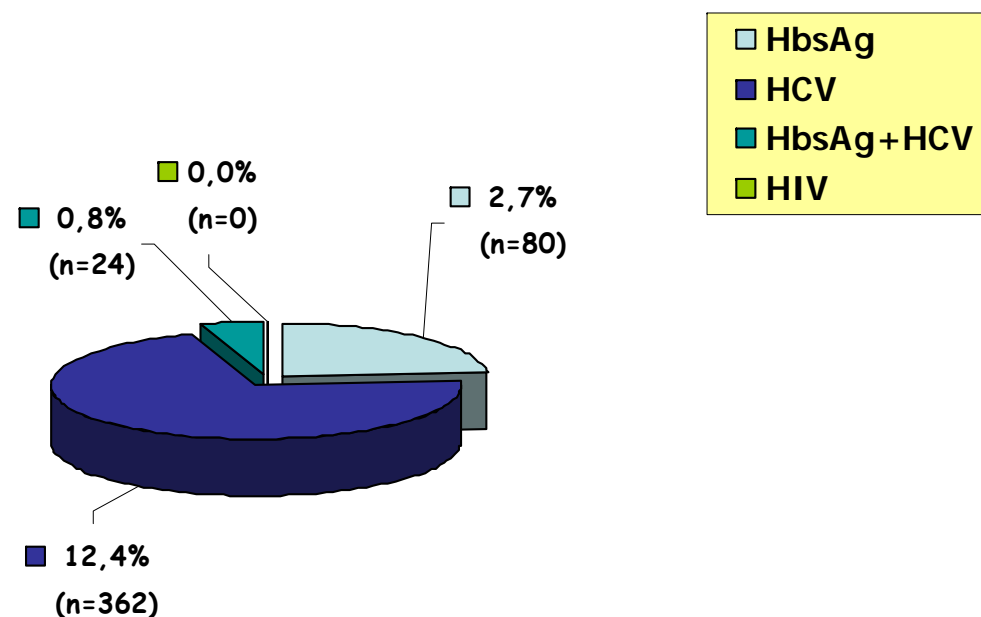
# Blood transmitted diseases

- Prevalence
- Incidence
- Primary renal disease
- Modality of treatment
- Blood transmitted diseases
- Vascular access
- Acute renal failure
- Outcome





# Blood transmitted diseases in Year 2011 (all patients in 2011. year)





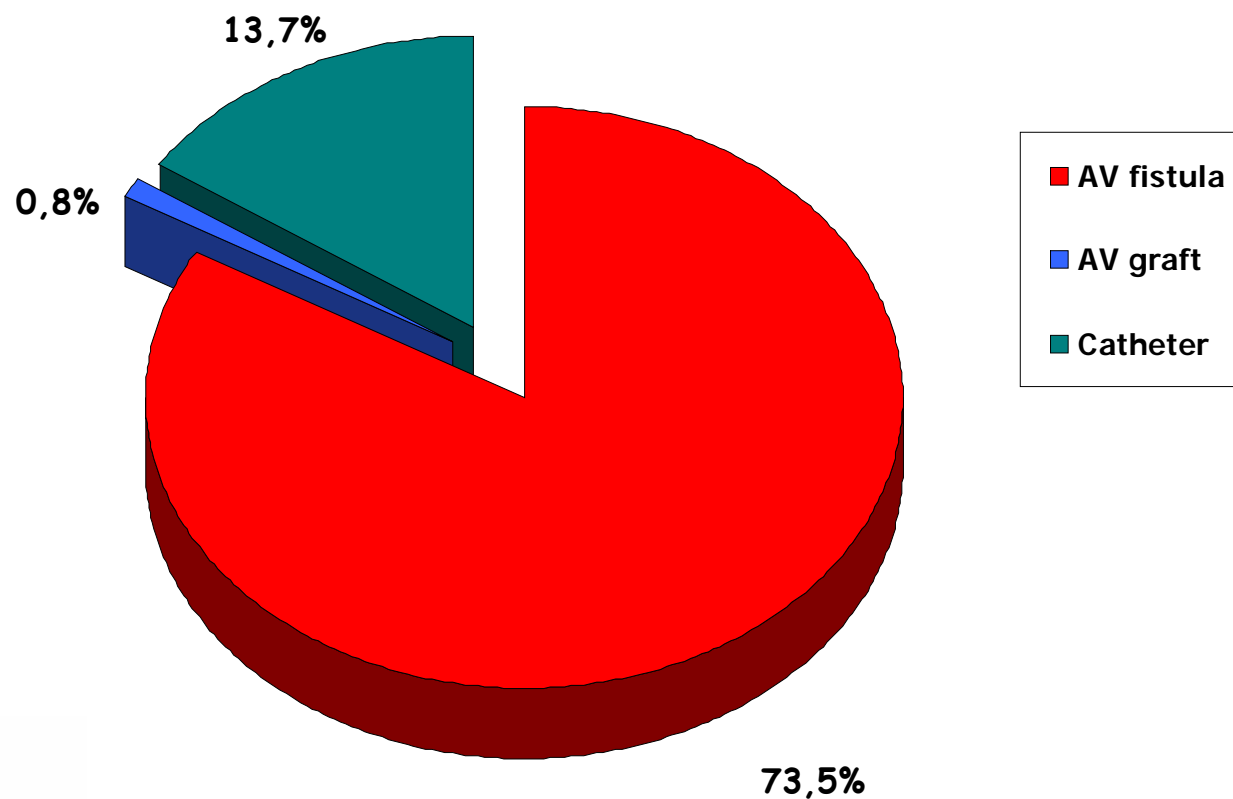
## Vascular access (all patients in 2011. year)

- Prevalence
- Incidence
- Primary renal disease
- Modality of treatment
- Blood transmitted diseases
- **Vascular access**
- Acute renal failure
- Outcome



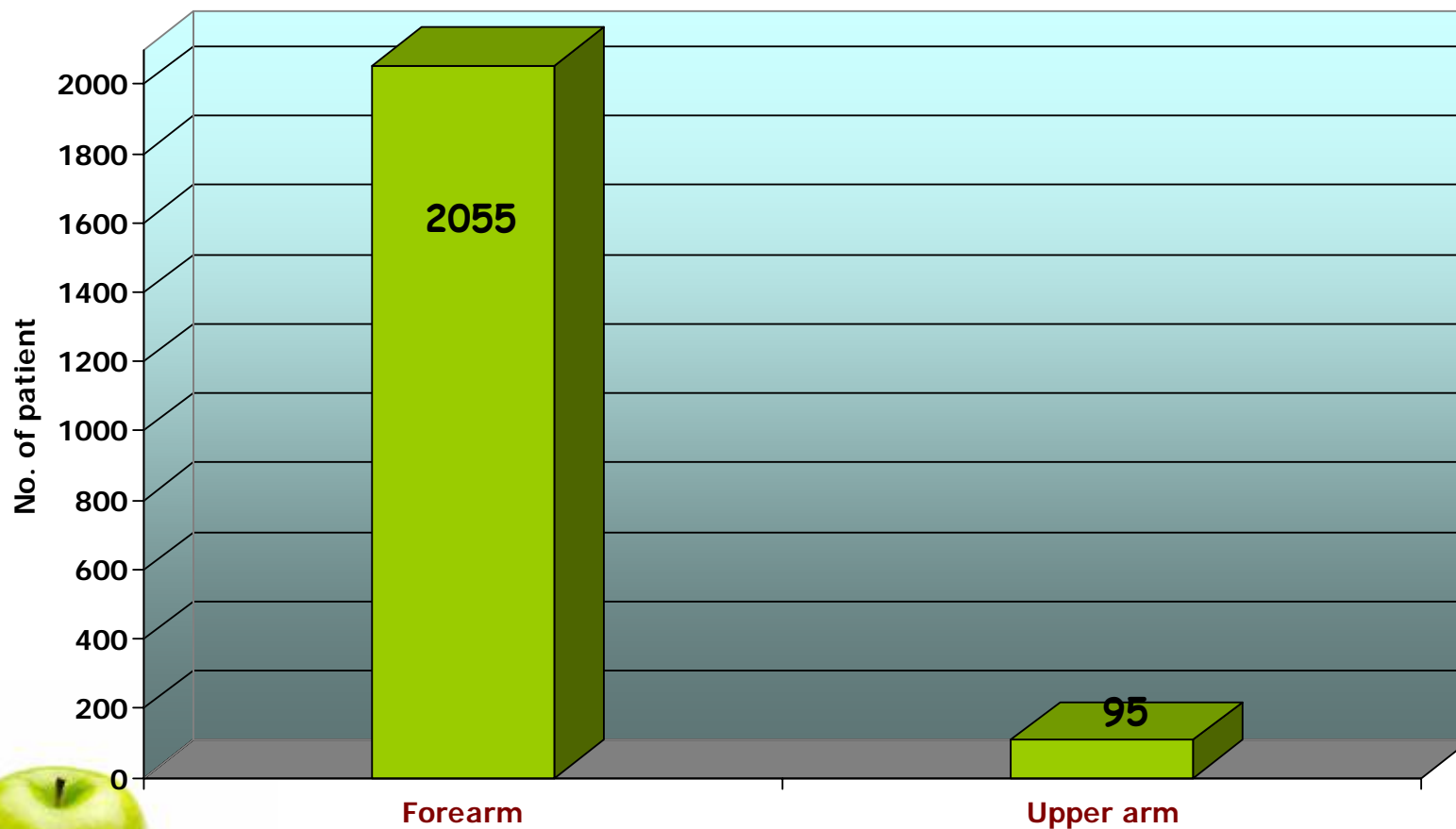


# Vascular access in Year 2011





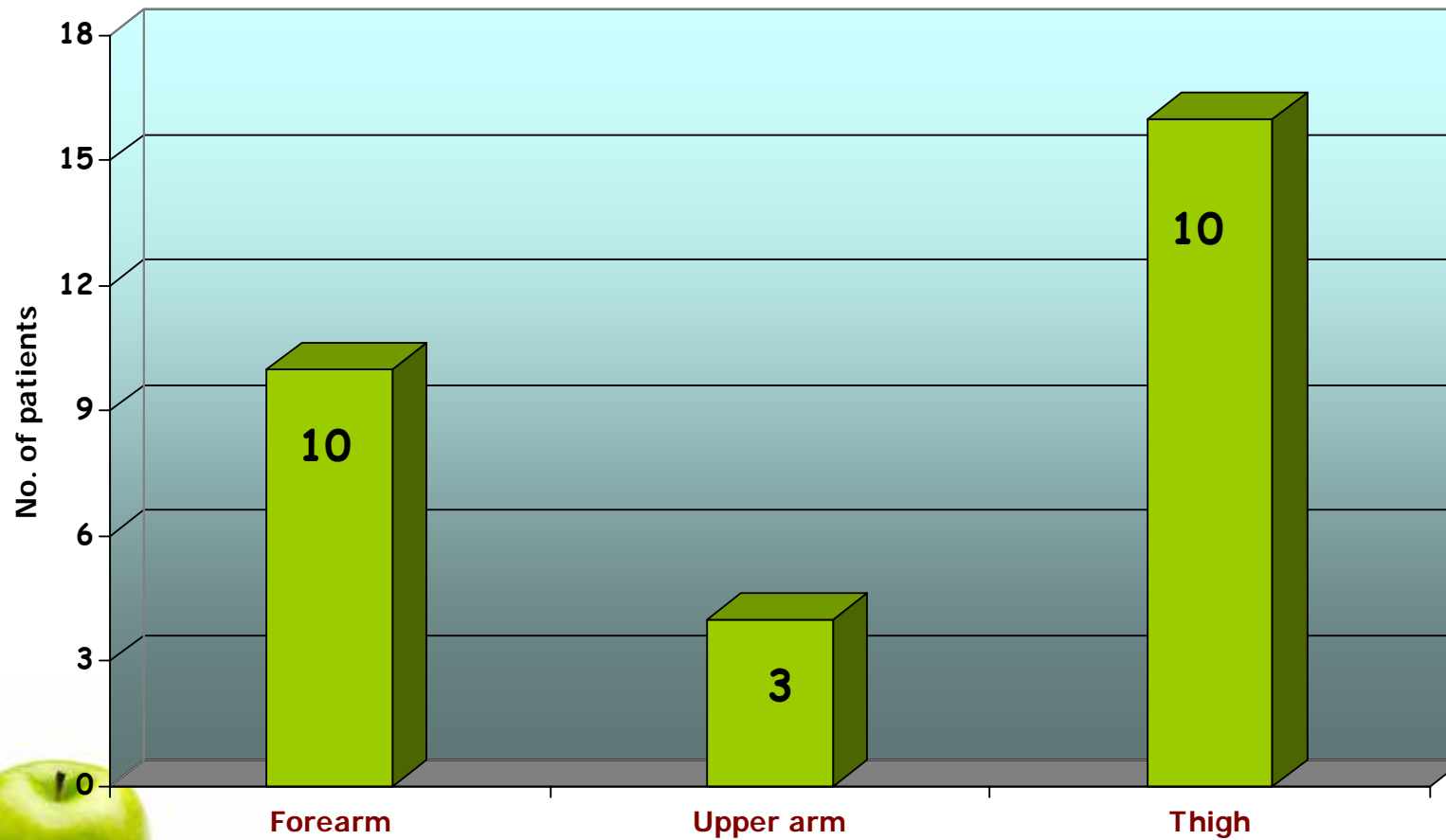
# Vascular access - AV fistula





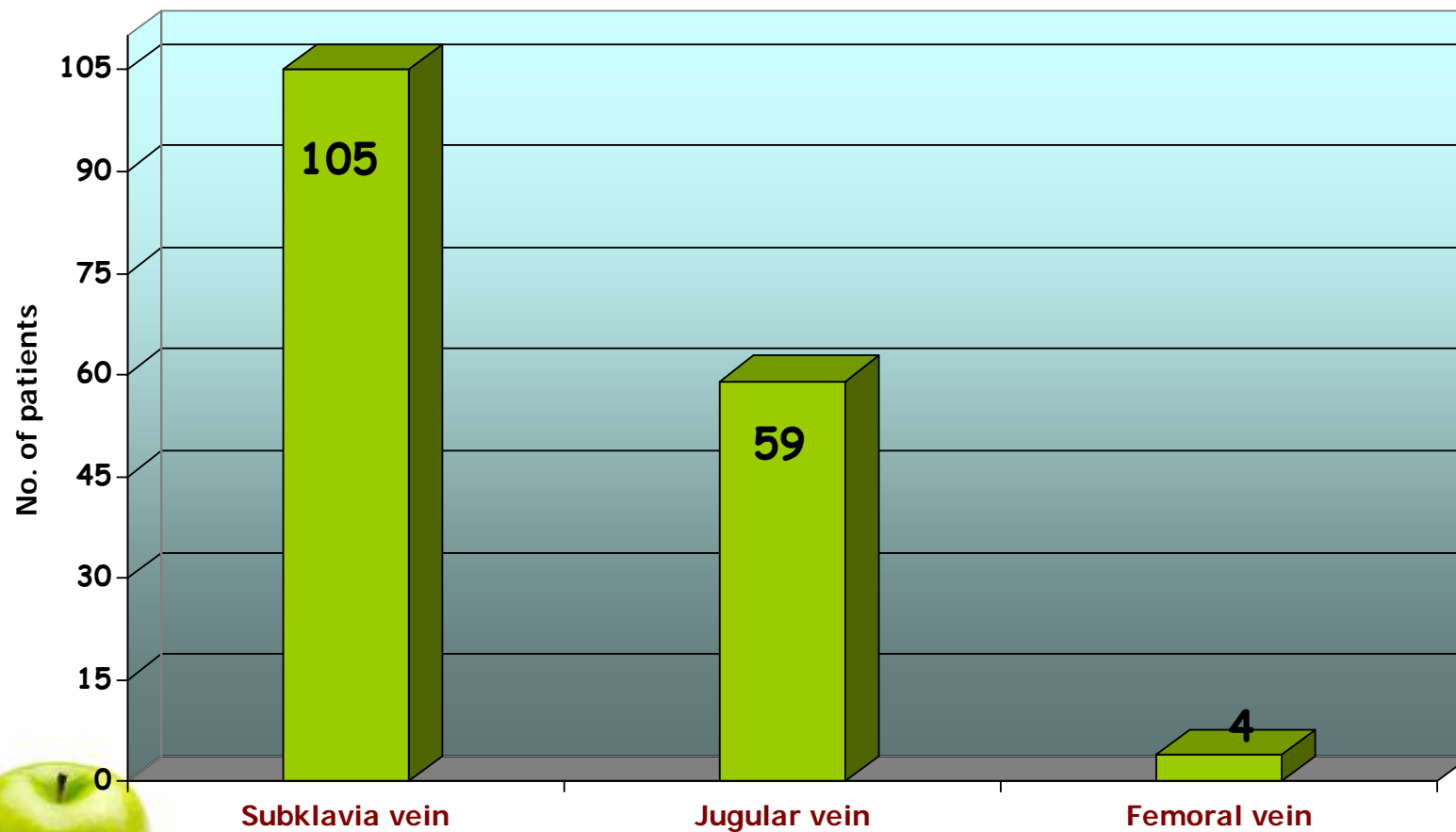


## Vascular access - AV graft





## Vascular access – temporary catheter





## Vascular access – permanent catheter

Permanent catheter at the end  
of 2011. year had 235 (8.1%) patient





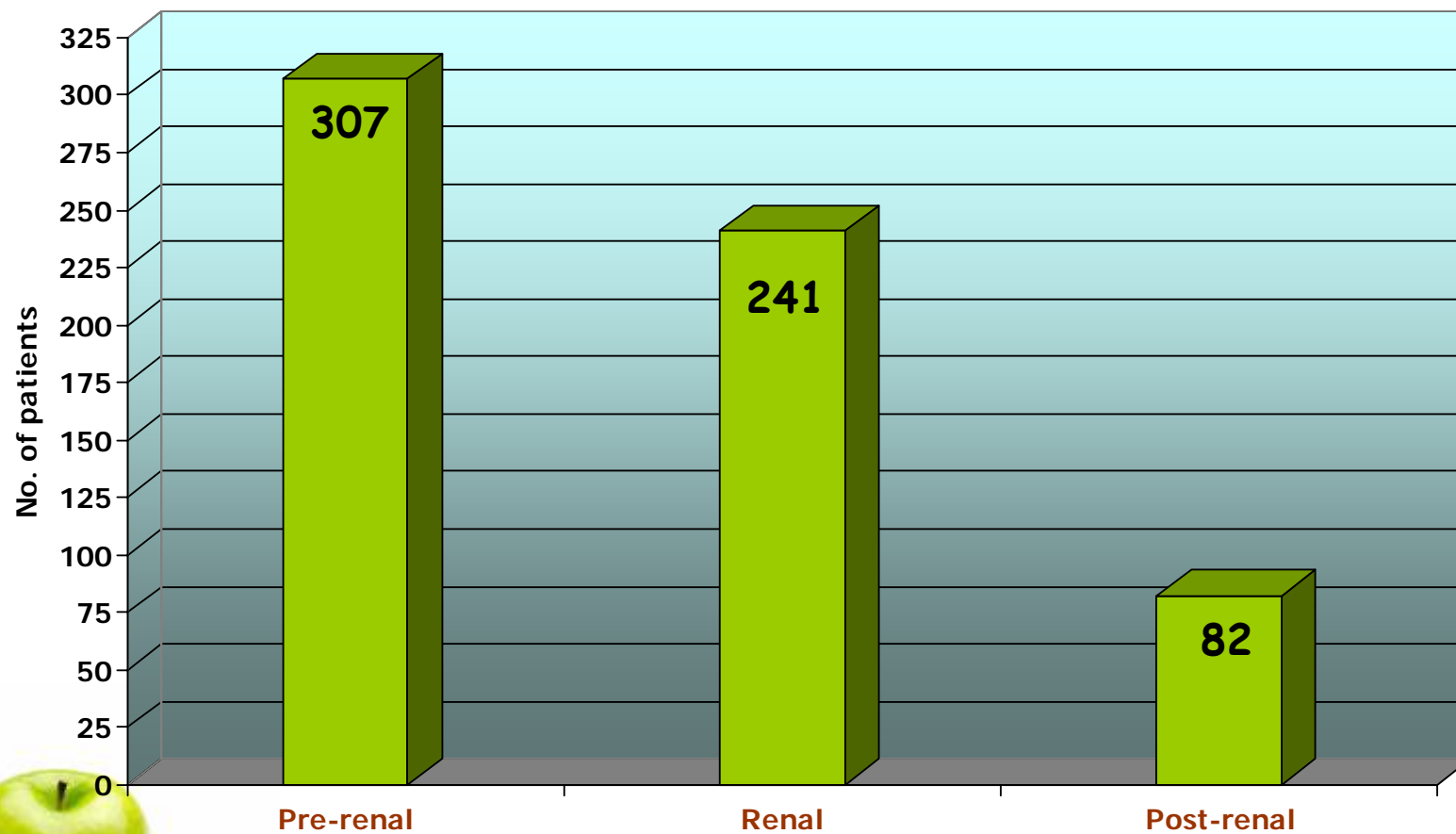
# Acute renal failure

- Prevalence
- Incidence
- Primary renal disease
- Modality of treatment
- Blood transmitted diseases
- Vascular access
- Acute renal failure
- Outcome



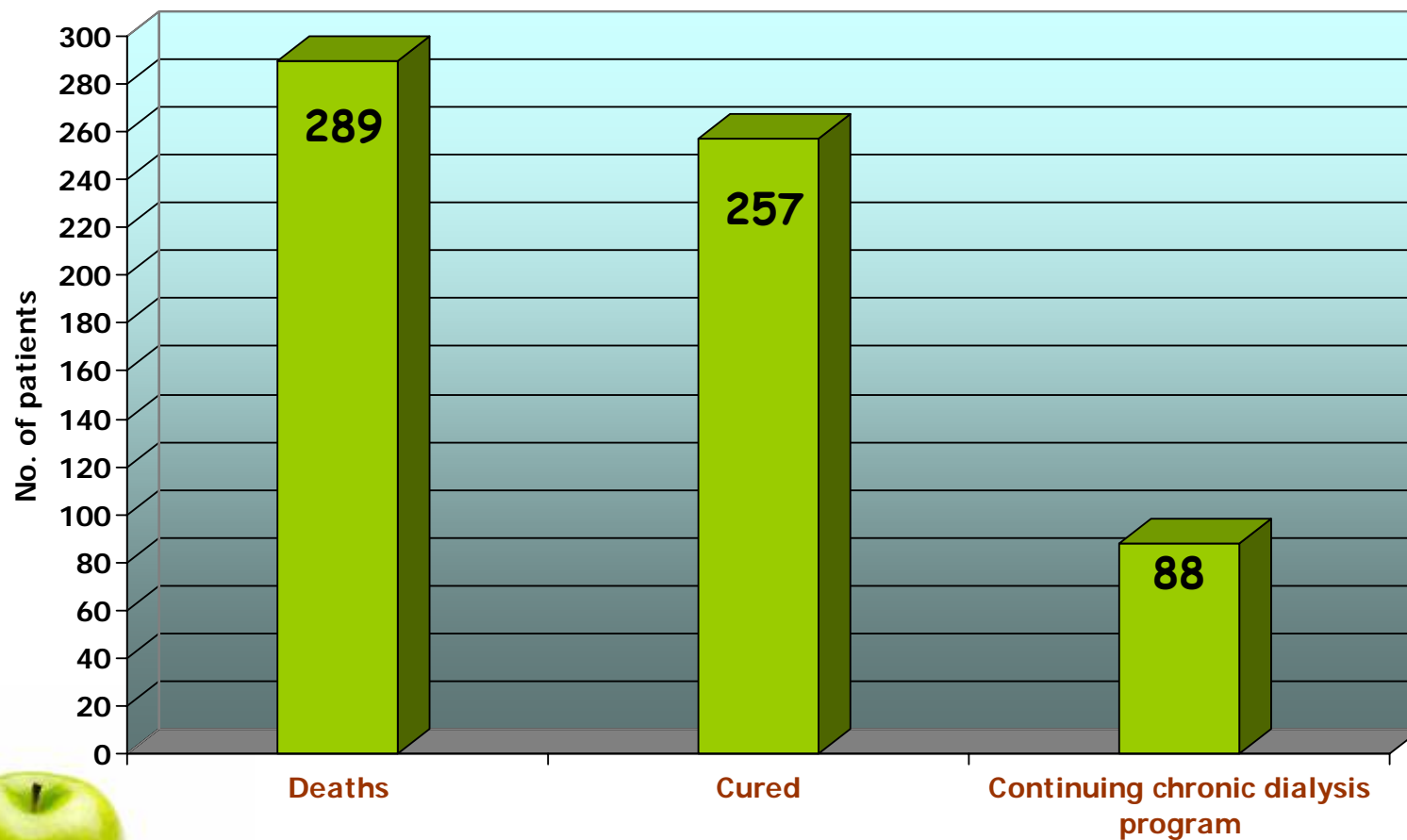


# Causes acute renal failure





# Outcome acute renal failure





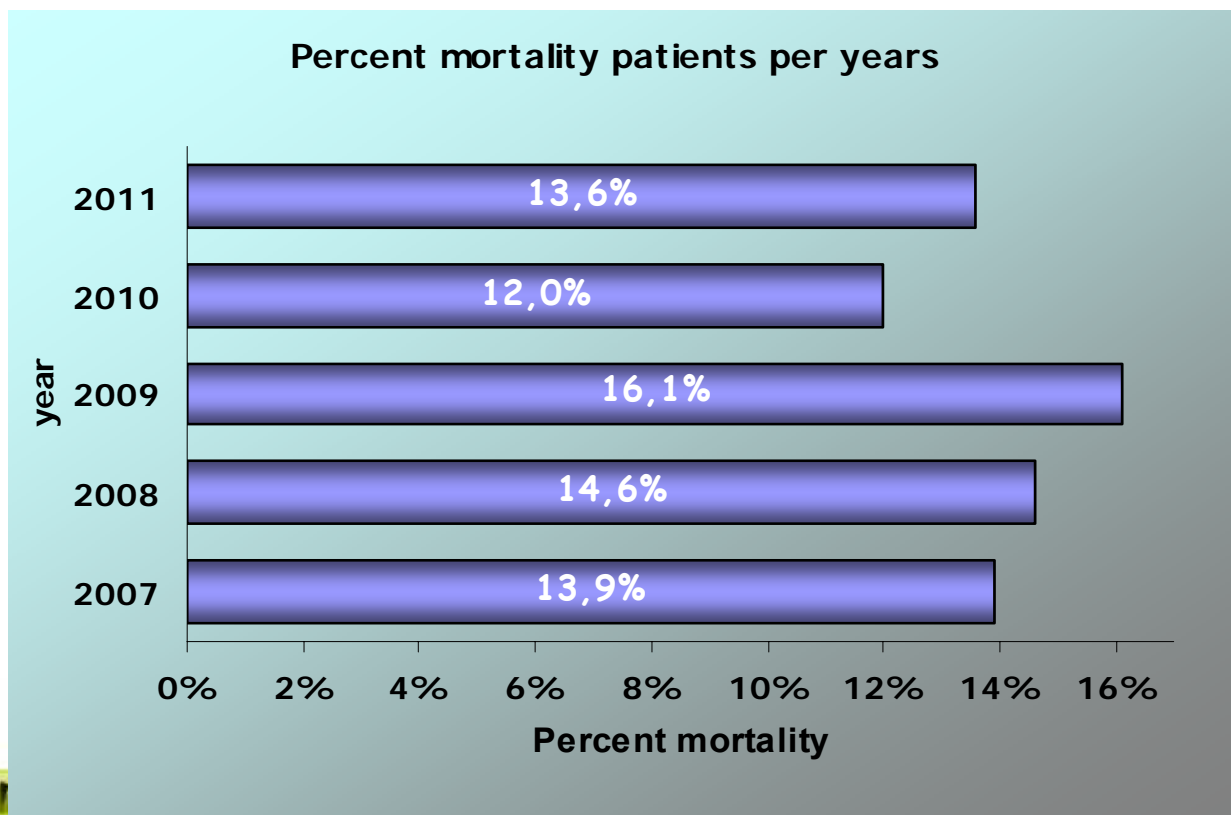
# Outcome

- Prevalence
- Incidence
- Primary renal disease
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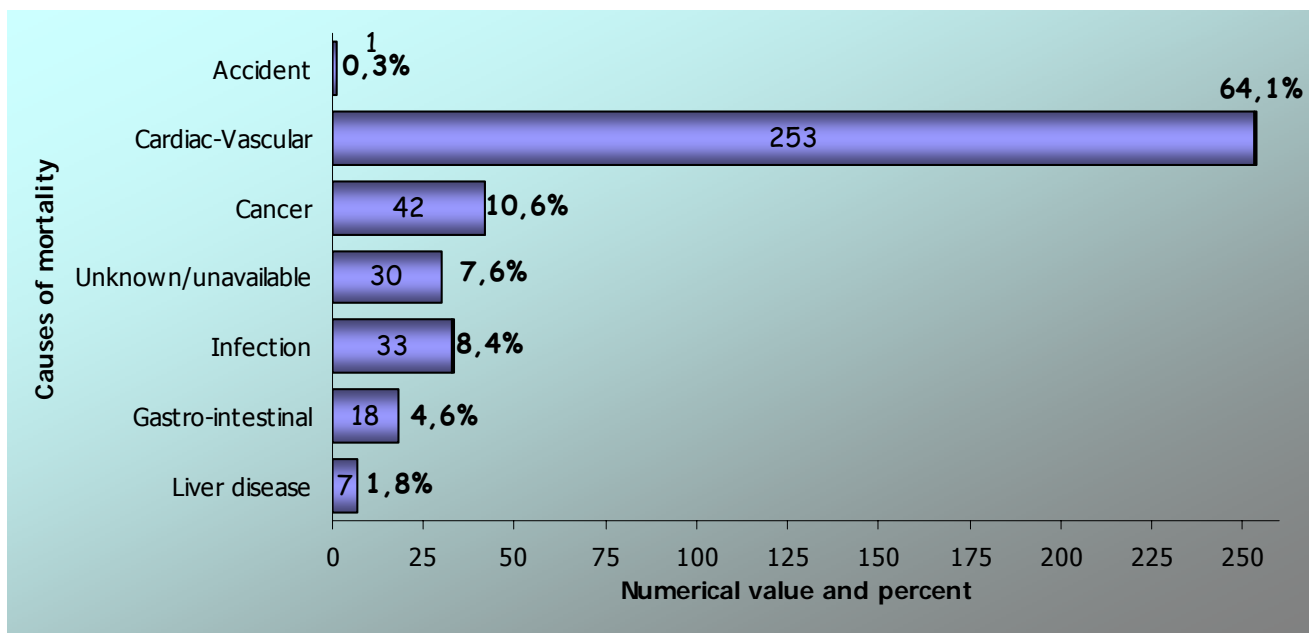
# Mortality rate of patients on dialysis





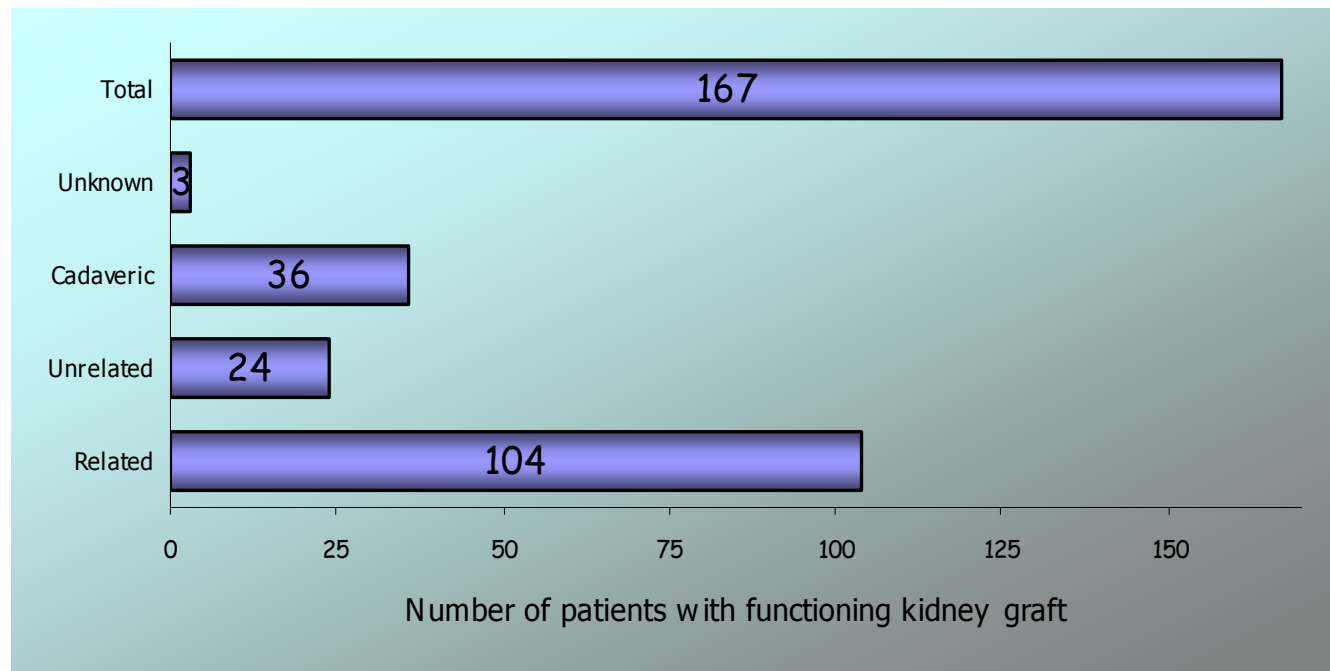


# Causes of mortality of dialysis patients in Year 2011





# The total number of patients with functioning kidney graft in B&H (situation on December 31.2011)





## Conclusions

- Number of dialysis patients in Bosnia and Herzegovina continues to increase; **2002<sup>nd</sup>** (when the register is established) the number was **1.531** and December **31.2011** year **2.925**, an increase of **91%**.
- incidence of patients on dialysis **>90** days also increased, in **2011.** amounted to **123,1.**
- The most common causes of renal failure in Bosnia and Herzegovina are:
  - **Glomerulonephritis**
  - **Pyelonefritis**
  - **Diabetes mellitus (typ I i II)**





## Conclusions (continued)

- Balkan nephropathy and
- Hypertension
- Diabetes mellitus Typ I i II is present in 506 patients in Year 2011, or 17,3% compared to the total number of patients.
- Balkan endemic nephropaty is present in 328 patients, or 11,2% compared to the total number of patients.
- Mortality in Year 2011 of 13,6% can be explained by the age of patients on dialysis, as in Year 2011 there were a total of 39,4% of patients aged over 65 years.

