

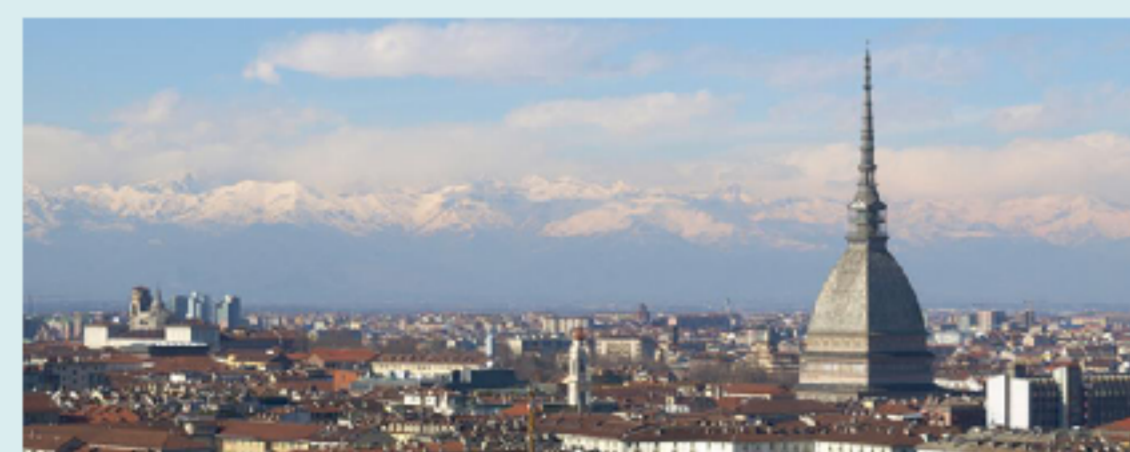
# FAVOURABLE LONG TERM OUTCOMES OF KIDNEY TRANSPLANTATION FROM SELECTED DONORS OLDER THAN 80 YEARS

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## OBJECTIVES

In the last decades, expanded criteria-donors (ECDs) significantly enlarged the pool of available organs. The widening gap between organ and recipients has prompted the use of organs from extremely old ECDs<sup>1</sup>, but the debate about the correct allocation and long term outcomes of these grafts is still open.<sup>2,3</sup>

## METHODS

We retrospectively collected data from Kidney Transplantations (KT) performed at the Kidney Transplantation Center of Turin University (Italy) between 2003 and 2013, from deceased donors older than 60 years. We excluded from our analysis combined KT. Allocation in single or dual transplantation (SKT and DKT) was performed by an algorithm that combines GFR, age and preimplantation biopsy. For histology, Karpinsky score was adopted: score 4 organs were allocated in DKT up to 2006 according to Remuzzi's data<sup>4</sup> and after 2006 in SKT on the basis of our previous experience (unpublished data). KT were classified in 3 groups according to donor age (Group A: 60-69 years, B: 70-79 years and C:  $\geq 80$  years). Main outcome variables were patient and graft survival; secondary outcomes were incidence of delayed graft function, acute rejection, post-transplant complications. Additionally the organ discard rate and its causes were estimated for each donor group.

## RESULTS

- Data of 556 KT were obtained (group A n=264, B n=265, C n=27): 516 SKT and 40 DKT.
- Main donors and recipient characteristics were comparable between the three considered groups as shown in Tab. 1.
- No intragroups differences were observed for patient, graft survival (10 year patient survival: A 78,0 %; B 70,7 %; C 75,6% p= 0,657; 10 year graft survival: A 52,7%; B 50,9%; C 47,6% p= 0,843). Fig 1. Furthermore, no difference was noted in terms of renal function and main post-KT complications between recipients of older and younger ECD. Tab. 2
- SKT from donors older than 80 had significantly lower graft survival than DKT from the same donor class (59 vs 87% at 5 years, p=0,015); conversely no difference was found in the other groups. Fig. 2
- As expected, discard rate was widely superior for octogenarians' kidneys (48,2 % in group C vs. 21,9 % in group B and 18,2 % in Group A).

## CONCLUSIONS

- Kidney transplants from highly selected very old ( $\geq 80$  yrs) donors display similar long-term function and survival compared to other ECD age groups and in this subset DKT ensure better graft survival when compared to SKT from the same donor decades
- Kidney transplant from 60-69 yrs and 70-79 yrs have similar long-term outcome either as SKT or DKT in the absence of an increase of the discard rate with the adopted local allocation system.
- As expected, discard rate of octogenarian kidneys is widely superior (either for histology and macroscopical defects). Nevertheless, more than a half of such organs are eventually transplanted, when harvested. Therefore they represent an additional resource for transplantation programs and should not be excluded *a priori*.

## REFERENCES:

- Gallinat et al. Single-center experience with kidney transplantation using deceased donors older than 75 years. *Transplantation*. 2011;92(1):76-81.
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Tab. 1

	All patients	Donor 60-69 yrs	Donor 70-79 yrs	Donors $\geq 80$ yrs	P value
2A - Donor characteristics					
M/F (%)	43,5/56,5	40,9/59,1	45,3/54,7	51,9/48,1	0,401
eGFR CKD-EPI (ml/min)	81,79 $\pm$ 22,84	83,92 $\pm$ 23,59	80,40 $\pm$ 22,12	73,81 $\pm$ 19,88	<b>0,011</b>
Hypertension (%)	68,3	68,6	67,7	70,8	0,941
Diabetes mellitus (%)	10,1	13	7,5	9,1	0,141
Cerebrovascular death (%)	82,2	83,5	80,3	88,5	0,455
2B - Recipient characteristics					
M/F (%)	63,8/36,2	59,1/40,9	68,3/31,7	66,7/33,3	0,084
Mean age (Yrs) $\pm$ SD	60,28 $\pm$ 9,04	57,56 $\pm$ 9,42	62,77 $\pm$ 8,00	62,48 $\pm$ 7,41	<b>0,0001</b>
1st Tx/ More than 1 Tx (%)	500/56 (89,9/10,1)	232/32 (87,9/12,1)	242/23 (91,3/8,7)	26/1 (96,3/3,7)	0,611
Dialysis before Tx (Yrs) $\pm$ SD	5,66 $\pm$ 6,26	5,73 $\pm$ 6,37	5,63 $\pm$ 6,31	5,34 $\pm$ 4,62	0,513
Pre - Tx DM 1 or 2 (%)	14,6	12,6	16,6	12,8	0,432
Pre - Tx HCV POS	9,1	9,8	7,5	12	0,689
2C - Transplant baseline characteristics					
HLA A/B/DR mismatch	3,05 $\pm$ 0,97	2,94 $\pm$ 1,04	3,16 $\pm$ 0,88	3,30 $\pm$ 0,82	0,061
Mean PRA (CDC) at Tx (%)	2,68 $\pm$ 11,38	2,71 $\pm$ 10,38	1,11 $\pm$ 11,69	3,86 $\pm$ 16,84	0,188
CIT (hours) $\pm$ SD	18,36 $\pm$ 4,79	18,32 $\pm$ 4,94	18,17 $\pm$ 4,73	18,97 $\pm$ 3,84	0,349

Tab. 2

	All patients	Donor 60-69 yrs	Donor 70-79 yrs	Donors $\geq 80$ yrs	P value
Primary non function (%)	2,7	2,6	2,3	7,4	P=0,287
Delayed graft function (%)	32,1	31,9	30,9	46,2	P=0,284
Ischemic Cardiopathy (%)	7,2	7,7	7,0	4,0	P=0,786
Urinary fistula (%)	6,5	7,3	5,5	8,0	P=0,684
Urethral stenosis (%)	9,4	9,2	10,6	0	P=0,222
Vascular fistula (%)	6,9	7,3	7,1	0	P=0,379
Renal Artery stenosis (%)	13,1	10,0	15,2	24,0	P=0,056
NODAT (%)	28	28,3	28,5	22,2	P=0,794
CMV reactivation (%)	29,1%	31,8	28,3	11,1	<b>P=0,015</b>
Acute rejection (%)	17	17,6	15,8	23,1	P=0,532
Malignancies (%)	21,2	21,6	21,1	18,5	P=0,93

