

# OUTCOME OF KIDNEY TRANSPLANTATION in PEDIATRIC PATIENTS AFTER TRANSFER TO ADULT CARE UNIT: A SINGLE CENTER STUDY

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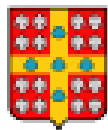


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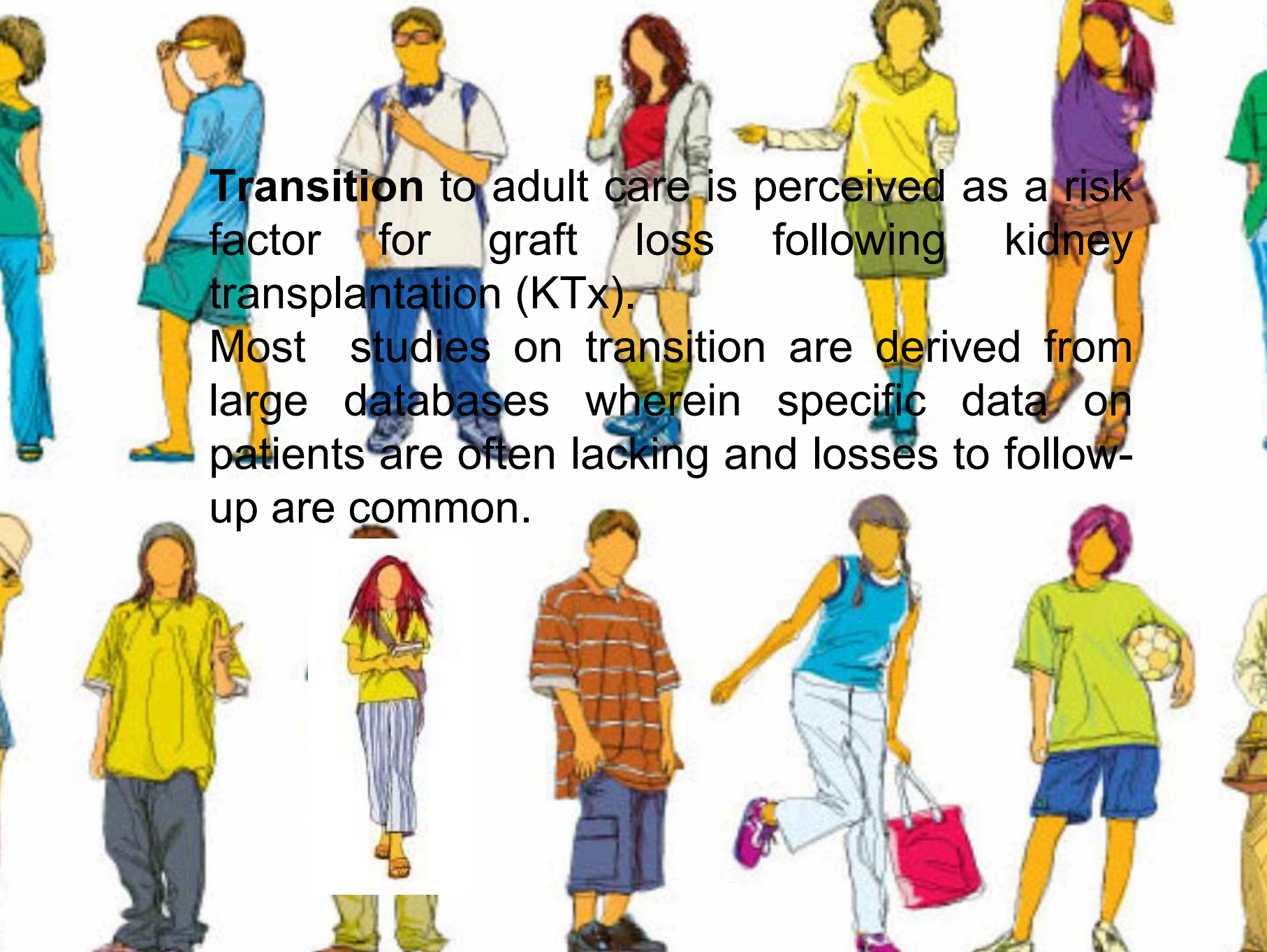
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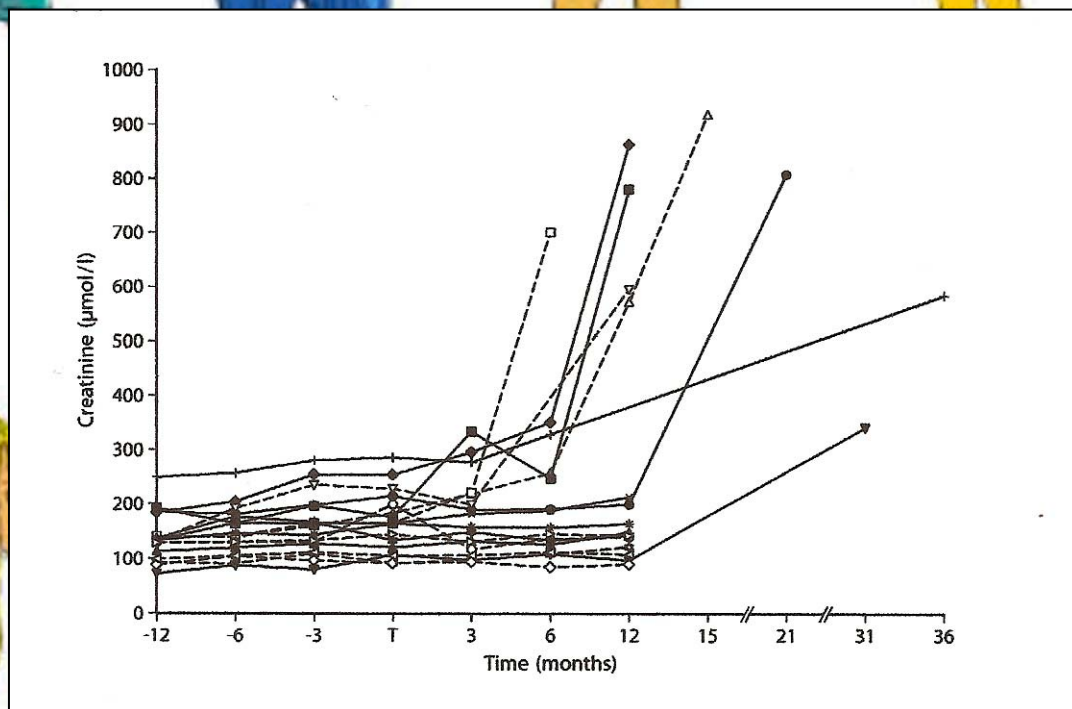
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The background of the slide features a collage of colorful, stylized illustrations of young people in various poses and outfits, representing a diverse group of individuals. The text is overlaid on this background.

**Transition** to adult care is perceived as a risk factor for graft loss following kidney transplantation (KTx). Most studies on transition are derived from large databases wherein specific data on patients are often lacking and losses to follow-up are common.



# Non-compliance and transfer from paediatric to adult transplant unit.



Non-compliance and transfer from paediatric to adult transplant unit. A R Watson. Peds nephrol 2000



# Objectives of the study

- To assess in a cohort of patients transferred within the same province percentage of unexpected graft loss post transfer (TF)
- Identify pre-transfer risk factors for eventual graft loss

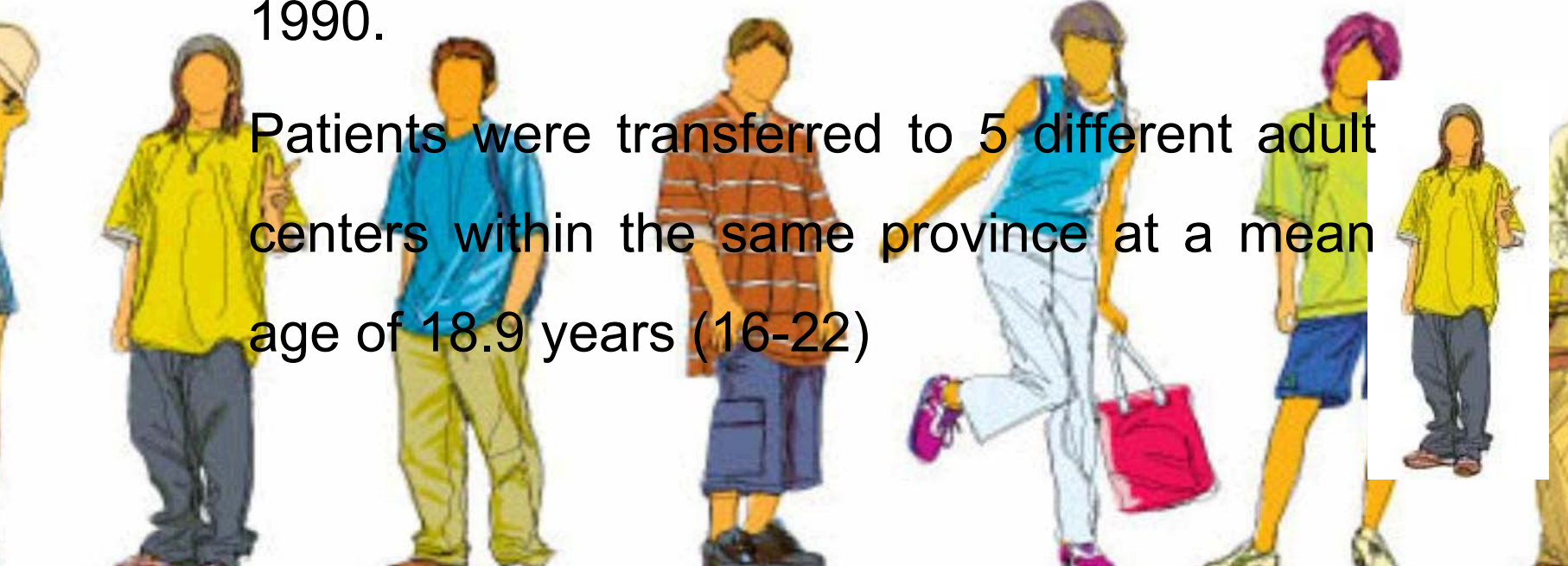


# Methods



Retrospective study of 69 youngsters transplanted at CHU Ste-Justine from 1978 to 2003 and transferred to adult care since 1990.

Patients were transferred to 5 different adult centers within the same province at a mean age of 18.9 years (16-22)



# Methods

## Patients population:

38 boys and 31 girls . Single kidney transplantation  
mean age at KTx:  $12.6 \pm 4.1$  years old.

95.7% received a cadaveric kidney donor.

Pre-emptive Kidney Tx performed in 8 patients (11.6%).

64 first grafts, 4 second grafts and one third graft

## Major diagnosis:

Uropathies (56.5%)

Glomerulonephritis (23.2%)

Cystinosis (10.1%)





Unexpected graft loss was defined as:

- stable graft function at transfer time and graft survival < 10 years
- graft loss due to documented non compliance.

Adolescence was defined as above 13 years of age.



# Results

**After transfer 26 patients lost their graft (37.7%);  
14 boys and 12 girls**

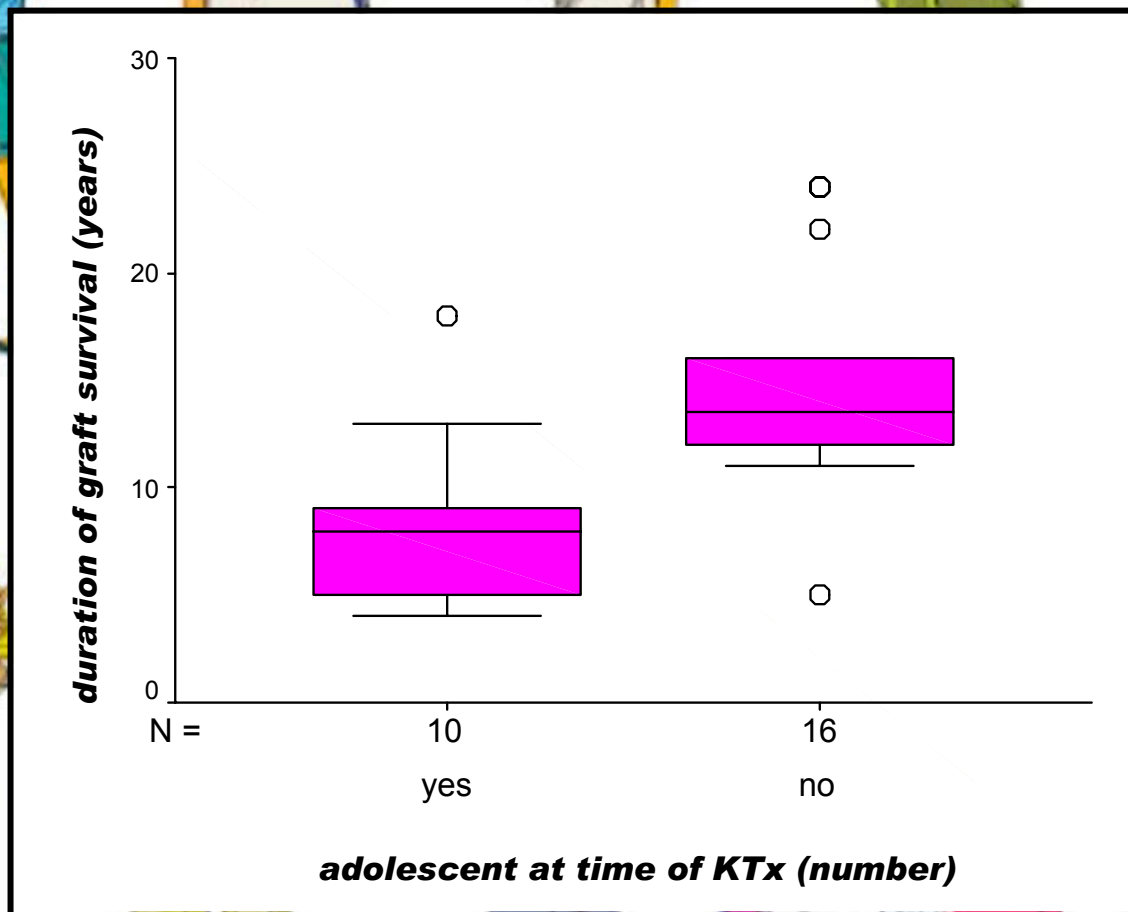
**Mean *time post transfer* of 4.3 years  $\pm$  3.9 years  
(ranges: 2 months to 14 years).**

**Mean *graft survival* 12.4 years  $\pm$  5.6 years compared to  
16.8 years  $\pm$  4.9 years for the remainder of the cohort.**

**Duration of graft function was shorter if transplanted as  
an adolescent compared to other age groups.**

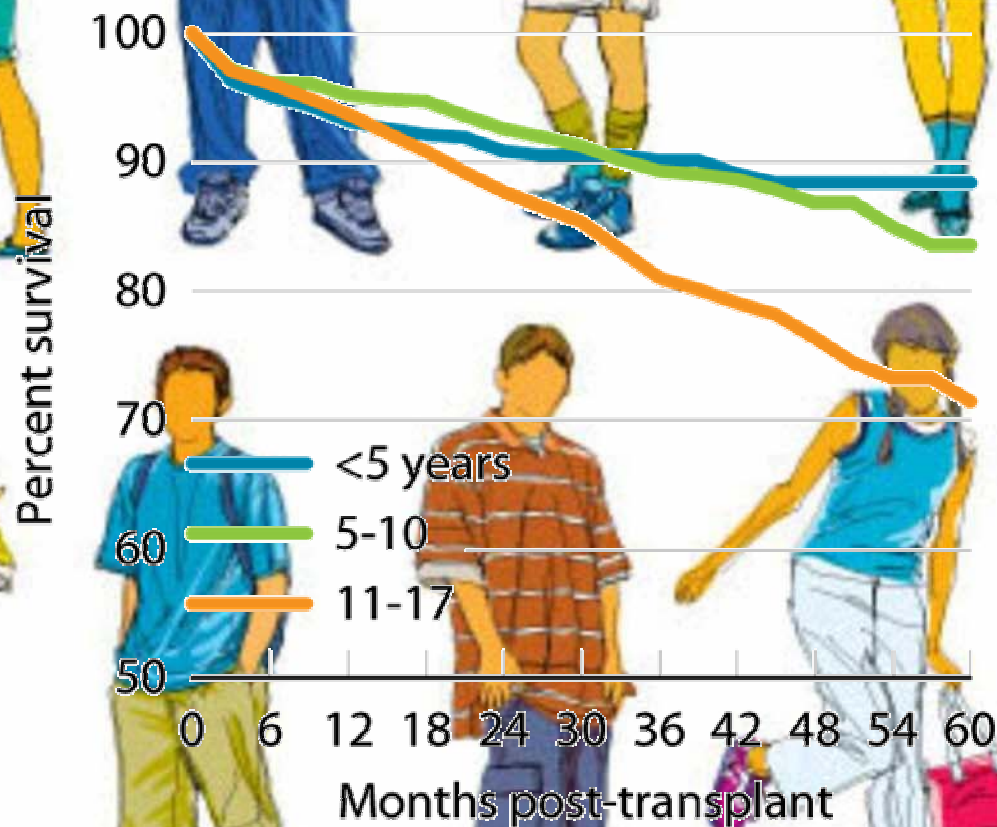


Duration of graft function was shorter if transplanted as an adolescent compared to other age groups. (Graft 1)



P=0.002

# Graft survival in pediatric patients, by age



first-time, kidney-only transplant recipients, age 0-17, transplanted 2002-2006 (N=3,719).





# Ten-year graft survival probabilities: all living donor transplants

Age	1980	1985	1990	1995	1996
<1			75	70	76
1 - 5		71	48	60	68
5 - 9	46	51	57	63	63
10 - 14	38	37	52	47	51
15 - 19	45	40	37	54	56
20 - 29	60	56	59	56	59

# Results

## Causes of graft loss

- So-named chronic allograft nephropathy was the cause of loss in the majority of cases (73.1%)
- Non adherence was thought to be the cause in 15.4%.
- Death with a functioning graft was observed in 2 patients (7.7%)





# Unexpected graft loss following transfer

- Graft lost was *unexpected* in 8/69 pts = **11.6%**
  - 2 patients had DFG.
- **In the remaining 6 patients 8.6%**
  - graft loss occurred at a mean of  $1.8 \pm 2$  years post transfer
  - median 1.1 years ranging from 1 month to 3 years.
- Cause of graft loss was non adherence in 4/6 patients.

# Risk factors for unexpected graft loss

- Gender, age at KTx, age at transfer, time interval between KTx and transfer, history of non adherence pre transfer, being unstable at transfer were not predictive of unexpected graft loss.
- However, *acute rejection episode* ( $p=0.002$ ) and *observed non adherence* ( $=0.012$ ) **within 2 years** of transfer were associated with unexpected graft loss.



# Risk factors for graft loss

	Unexpected graft loss (n=6)	Expected graft loss (n=20)	P value
Age at KTX	11.6 ± 4.1	10.3 ± 3.7	P= 0.465
% boys	50%	55%	P= 1.0
Graft survival	8.3 ± 3.6	13.6 ± 5.6	P= 0.04
Time interval KTX-transfer	6.5 ± 4.1	8.5 ± 3.8	P= 0.227
Obvious non-adherence within 2 years after transfer	3	1	P= 0.016
Acute rejection within 2 years after transfer	4	1	P= 0.002



Trend for unexpected graft loss more frequent in

- young men ( age at transplant =  $16 \pm 2.6$  yo),
- transferred rapidly after transplant ( $1.7 \pm 2$  y)
- younger at age of transfer ( $17.7 \pm 1$  yo)
- graft survival shorter =  $7.2 \pm 2.8$  years





# Conclusions


- Unexpected graft loss occurred in 8.6% of the cohort.
- Risk factors for unexpected graft loss were non adherence and acute rejection *early after transfer*.
- Overall graft survival is shorter in adolescent.
- Patient transplanted during adolescence are not at a greater risk for graft loss (expected or unexpected) after transfer.

The background of the slide features a grid of colorful, stylized illustrations of young adults. The top row shows six figures: a woman in a green top and blue pants, a man in a blue t-shirt and shorts, a man in a white shirt and blue pants with a backpack, a woman in a red top and white jacket, a woman in a yellow top and green skirt, and a woman in a purple top and brown skirt. The bottom row shows five figures: a woman in a yellow t-shirt and grey pants, a man in a blue t-shirt and khaki pants, a man in a brown plaid shirt and blue shorts, a woman in a blue tank top and white pants carrying a pink bag, and a man in a green t-shirt and blue shorts holding a soccer ball. The text is centered over the top row of illustrations.

# Transition clinic

- At the adult center,
- Young adults from peds center
- And other young adults.



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**Transition clinic should be attentive to patients presenting with rejection and non adherence early after transfer in order to prevent unforeseen graft loss.**



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