

Induction therapy in elderly kidney transplant recipients with low immunological risk

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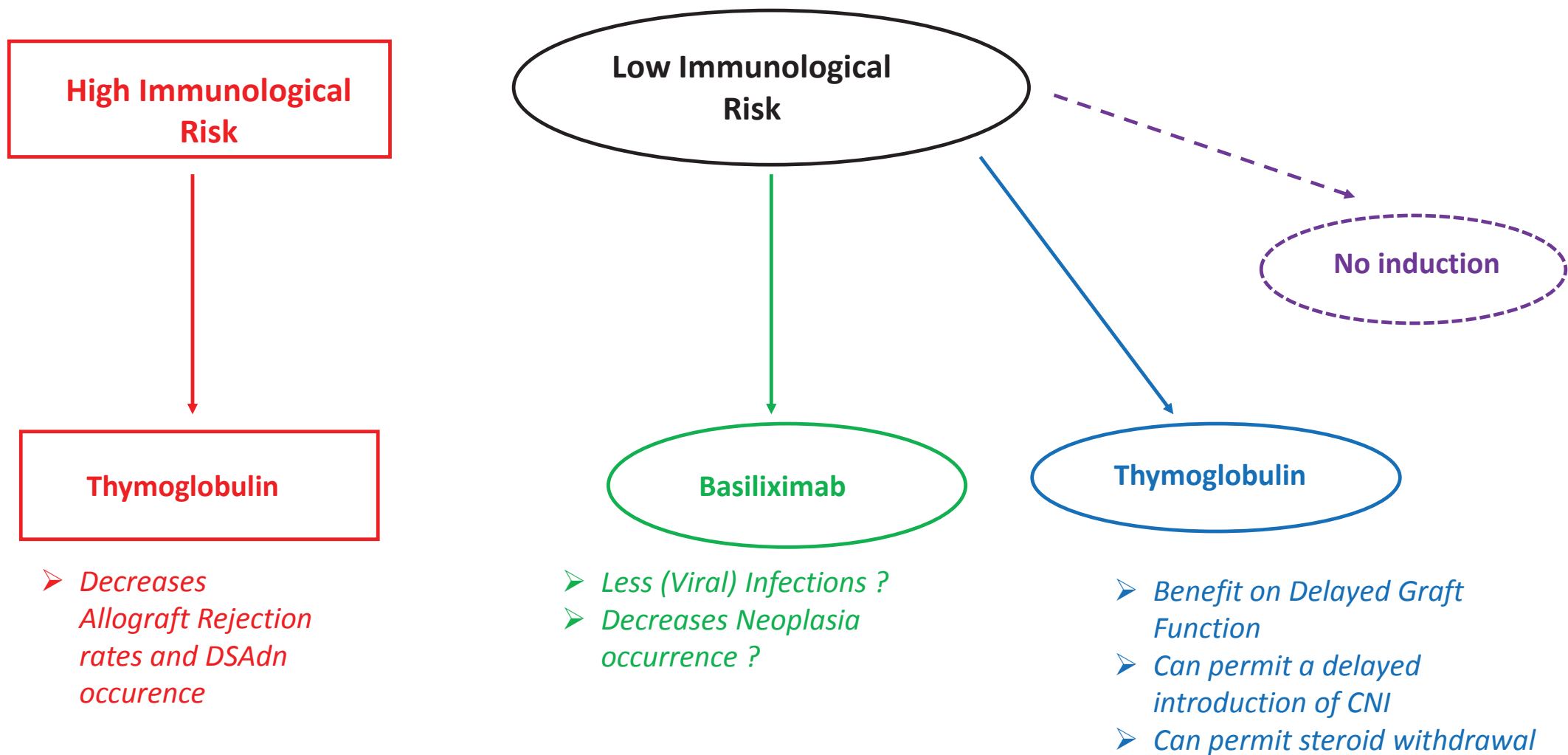
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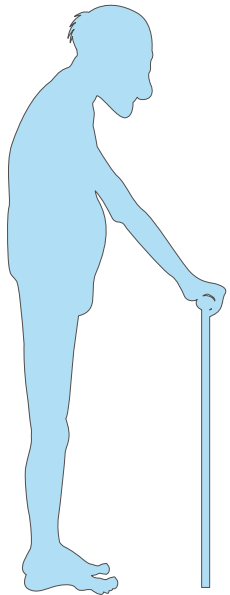
Congrès Ouest Transplant – Angers 2018



Induction Therapy in Kidney Transplantation



Kidney Transplantation in Elderly Recipients (≥ 65 years)



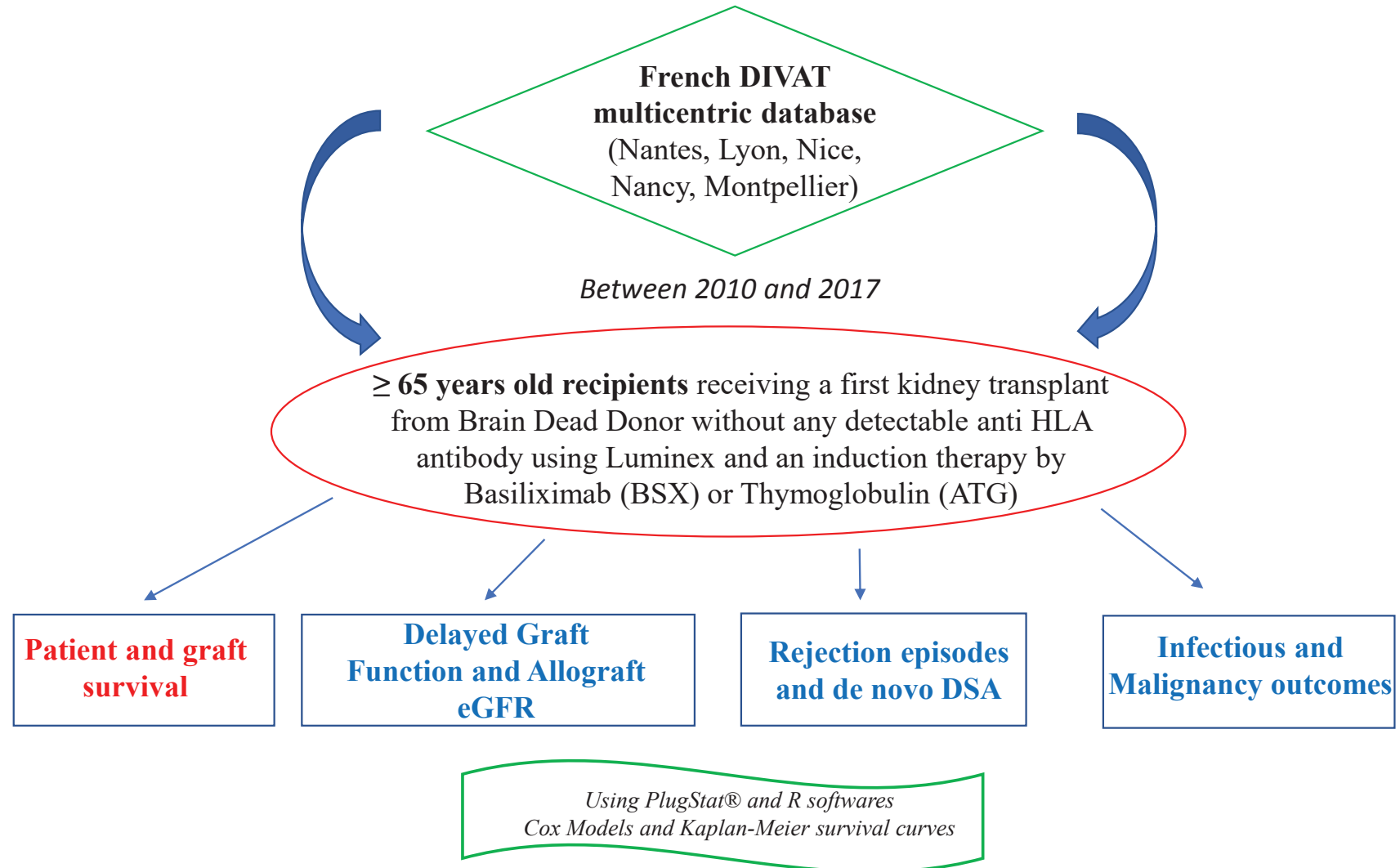
**Best Induction Therapy
in non immunized
Elderly Recipients ?**



- **Cardiovascular risk**
- Immune senescence → **Infectious risk ?**
- Risk of **Neoplasia**
- Morbid Mortality in case of rejection

- Extended Criteria Donor
- **Delayed Graft Function**
- **Susceptibility to CNI Toxicity**

Methods : A real-life cohort based study



Description of the cohort

	Whole Sample (n=383)	ATG (n=179)	Basiliximab (n=204)	p value
Male Recipient	74.2%	76.5%	72.1%	0.3180
Recipient Age (years)	70.8 +/- 4.8	70.5 +/- 4.8	71.0 +/- 4.8	0.3733
Recurrent Causal Nephropathy	16.4%	16.2%	16.7%	0.9024
Recipient BMI (kg.m2)	26.7 +/- 4.0	26.9 +/- 4.2	26.5 +/- 3.9	0.2796
History of Diabetes	32.1%	35.8%	28.9%	0.1530
History of dyslipidemia	57.4%	51.4%	62.7%	0.0250
History of Hypertension	85.4%	83.8%	86.8%	0.4124
History of vascular disease	28.5%	29.6%	27.5%	0.6405
History of cardiovascular disease	39.9%	41.9%	38.2%	0.4651
History of Malignancy	24.5%	23.5%	25.5%	0.6457
Positive Recipient CMV serology	60.8%	68.0%	54.7%	0.0082
Duration on waiting list (months)	16.5 +/- 19	17.9 +/- 18.9	15.4 +/- 19.1	0.2082
Preemptive transplantation	16.0%	10.1%	21.1%	0.0035
Cold Ischemia Time (hours)	15.6 +/- 5	15.9 +/- 5.2	15.3 +/- 4.8	0.2820
HLA A-B-DR Incompatibilities ≥ 4	25.7%	23.3%	27.7%	0.3556
Use of Machine Perfusion	54,3%	48%	59,8%	0,0684
Male donor	48.8%	52%	46.1%	0.2510
ECD donor	97.4%	96.6%	98.0%	0.5244
Vascular cause of donor death	71.8%	70.4%	73.0%	0.5655
Donor hypertension	60.2%	60.6%	59.9%	0.8927
Positive Donor CMV serology	62.7%	64.2%	61.3%	0.5486
Positive Donor EBV serology	96.9%	96.6%	97.1%	0.8102

Induction Immunosuppressive Therapies

Basiliximab

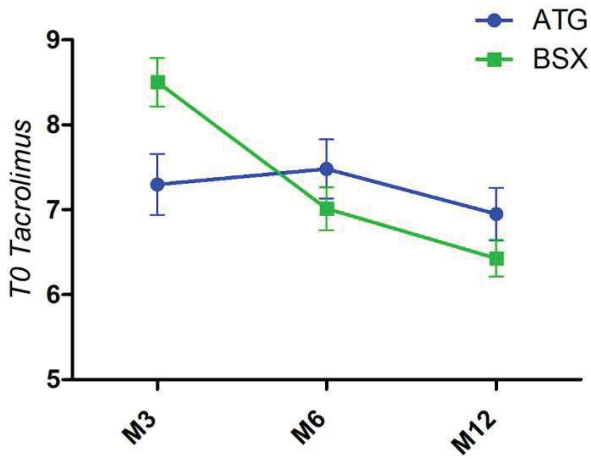
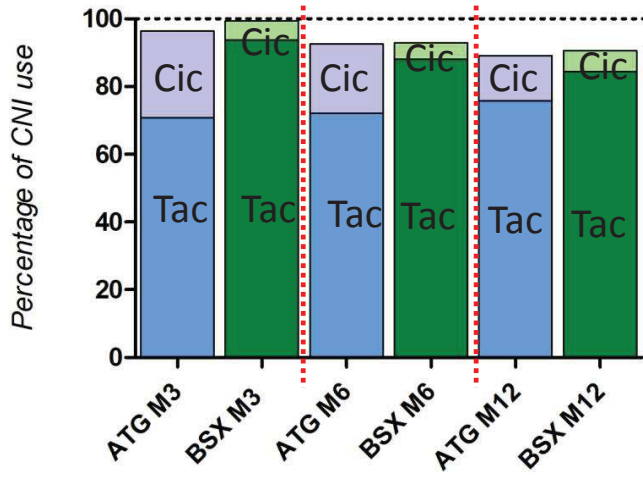
- Intravenous
- **20mg on Day 0 and Day 4**

Thymoglobulin

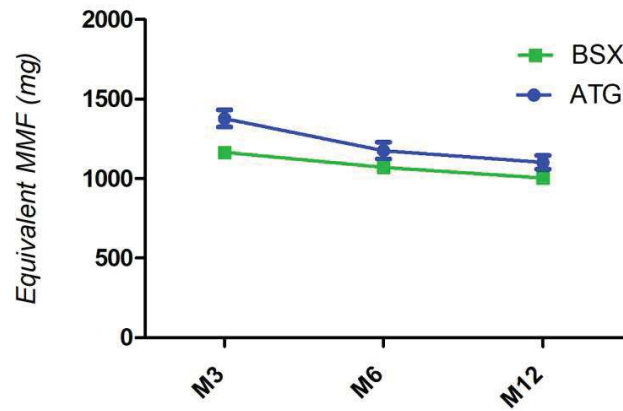
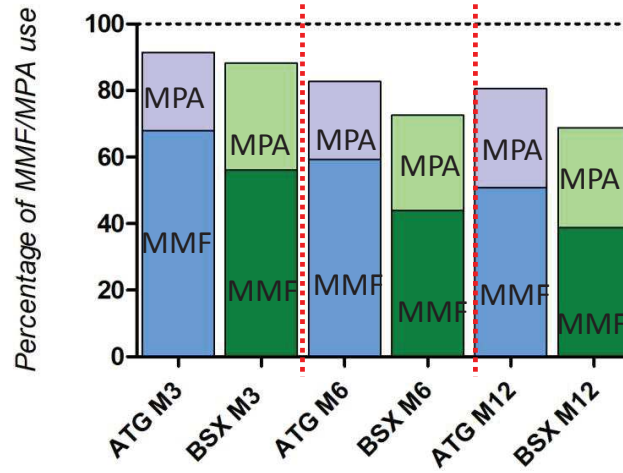
- Intravenous
- **1,5mg/kg per day** (max 75 to 100 mg, depending on centers)
- **Average 6,8 days +/- 3**
- Minimum : 2 days
- Maximum : 18 days
- Heterogenicity in-between centers : 16.2% to 73.2%

Maintenance Immunosuppressive Therapies

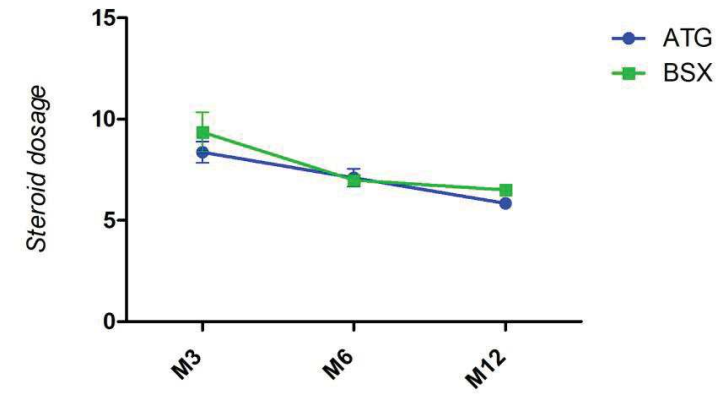
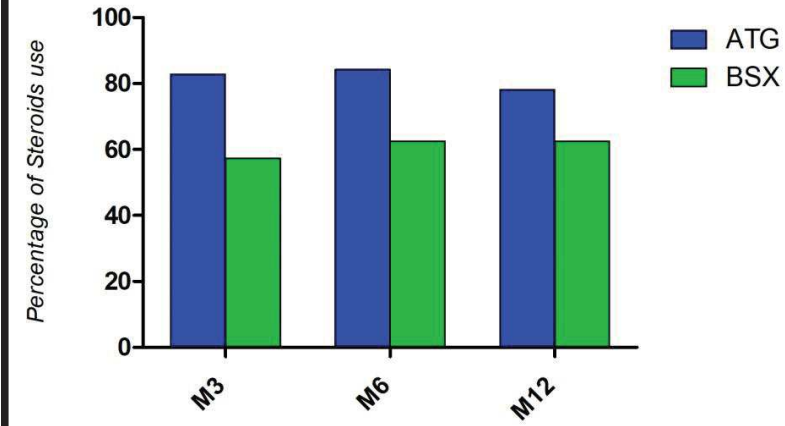
CNI



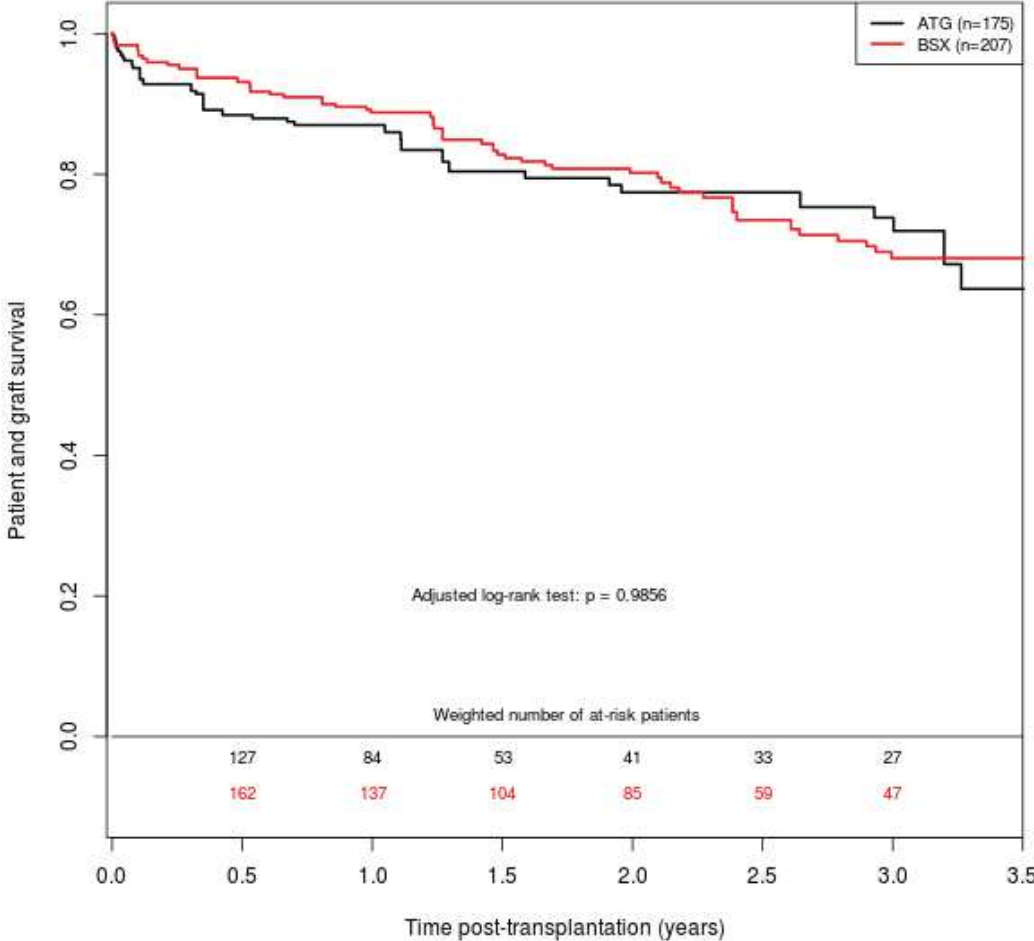
Anti-Metabolites



Steroids

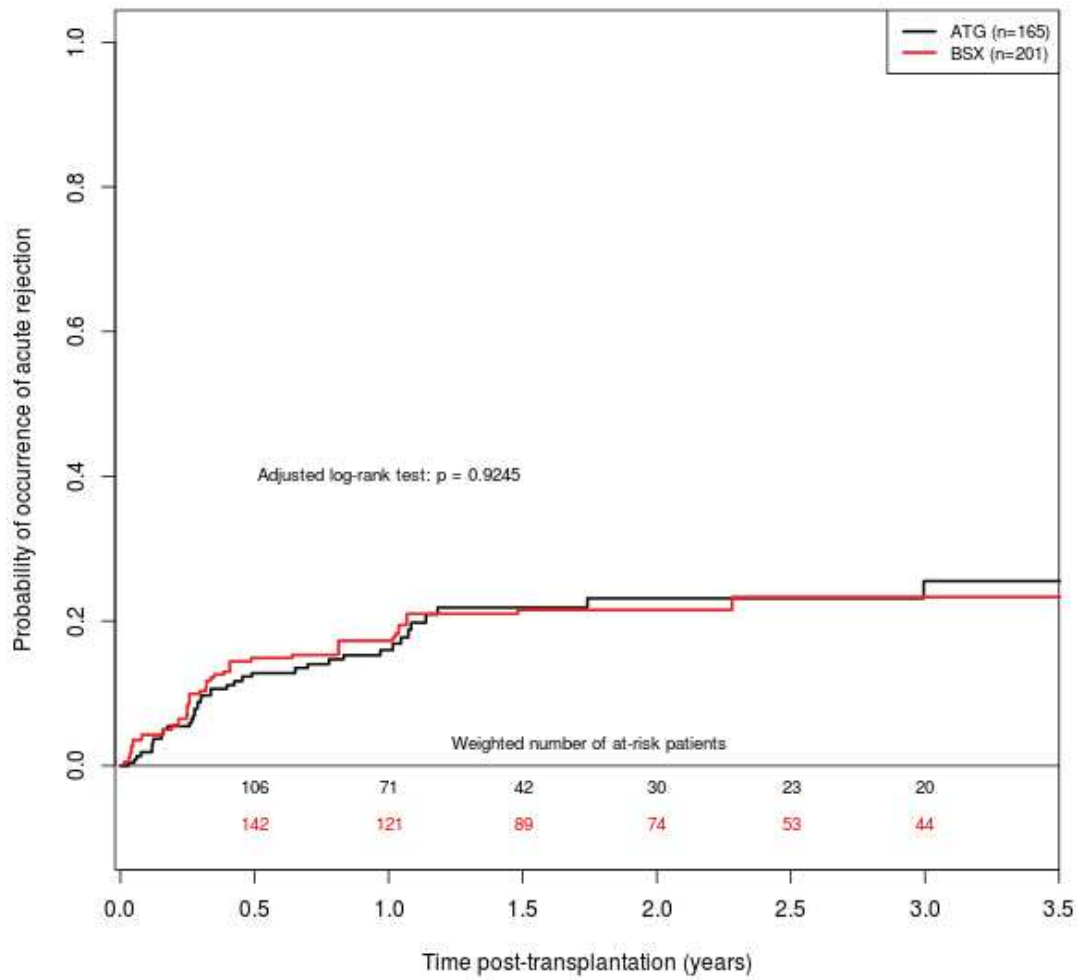


Patient and Graft Survival



No difference on Patient and Graft Survival !

Immune outcomes

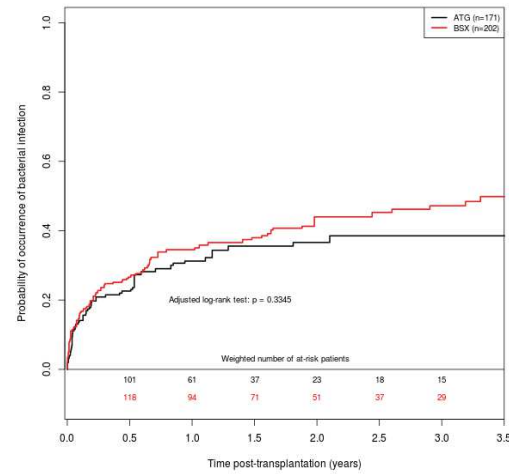
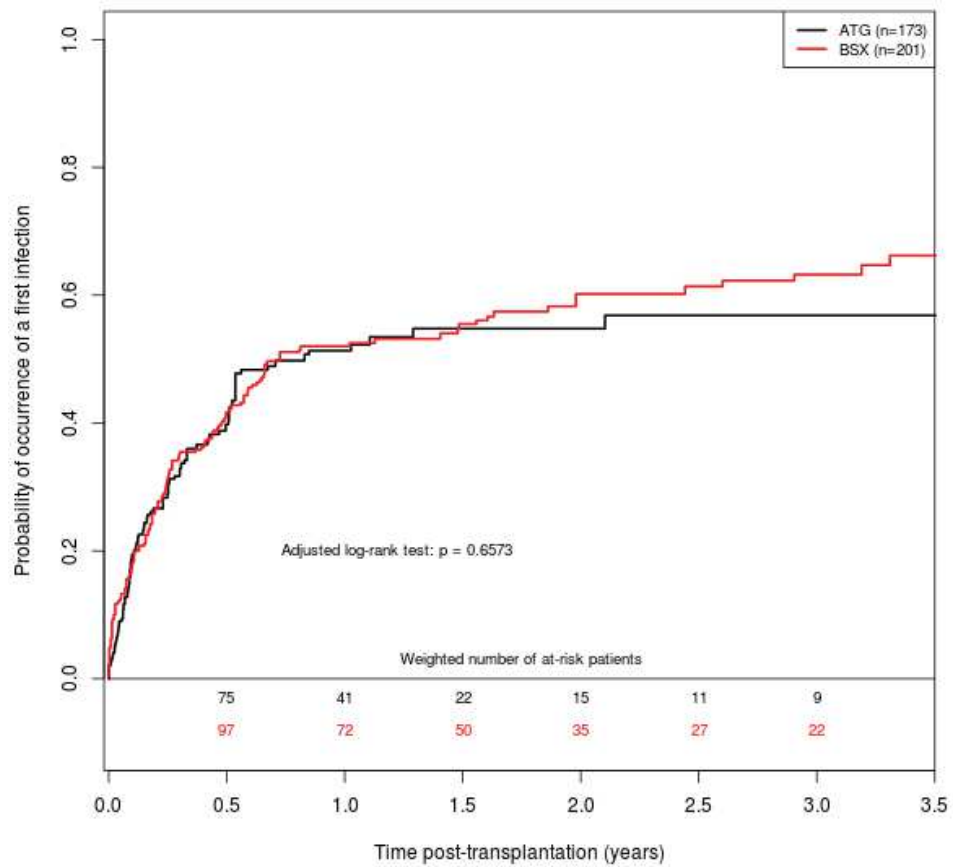


De novo DSA at one Year

BSX : 7 patients (4,8%)

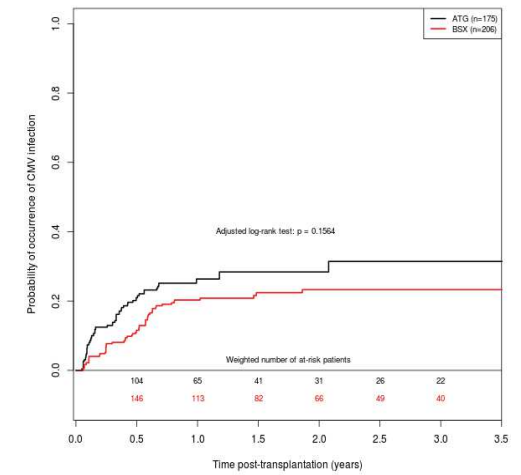
ATG : 4 patients (5,8%)

Infectious Complications

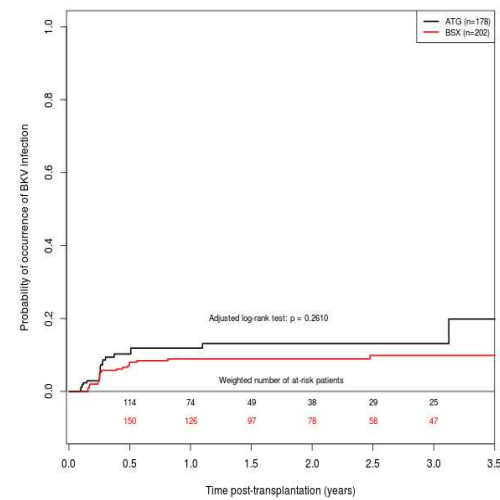


No difference for bacterial infections

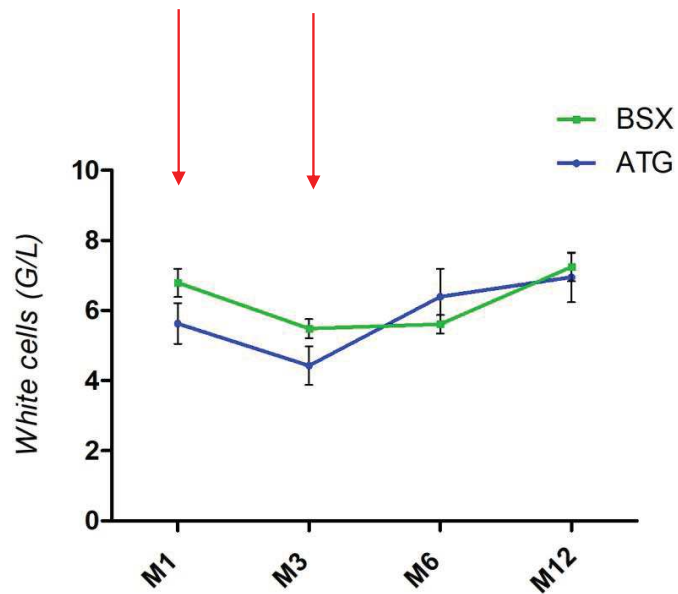
A trend for CMV infections ?



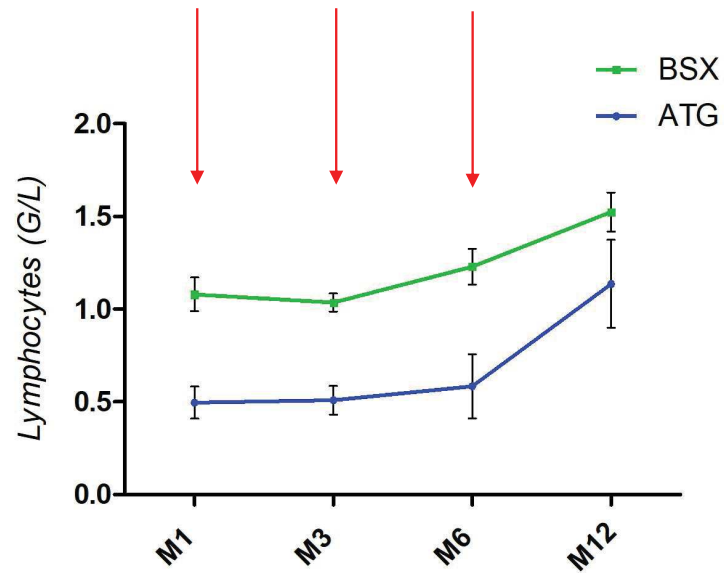
No difference for BkV infections



Evolution of immune cells (Nantes)



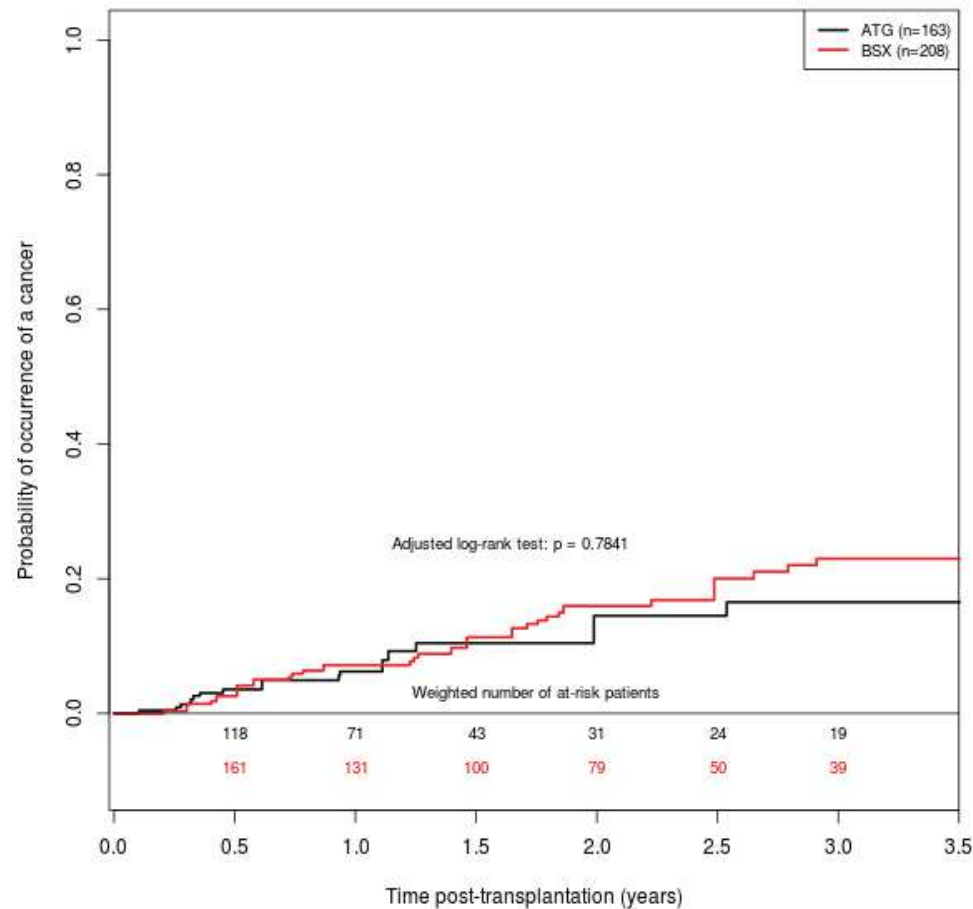
A trend for a higher white cells count for patients receiving BSX



Less Lymphocytes for patients receiving ATG during the first 6 months

**With « Only »
150mg of
Thymoglobulin
per patient**

Occurrence of Neoplasia

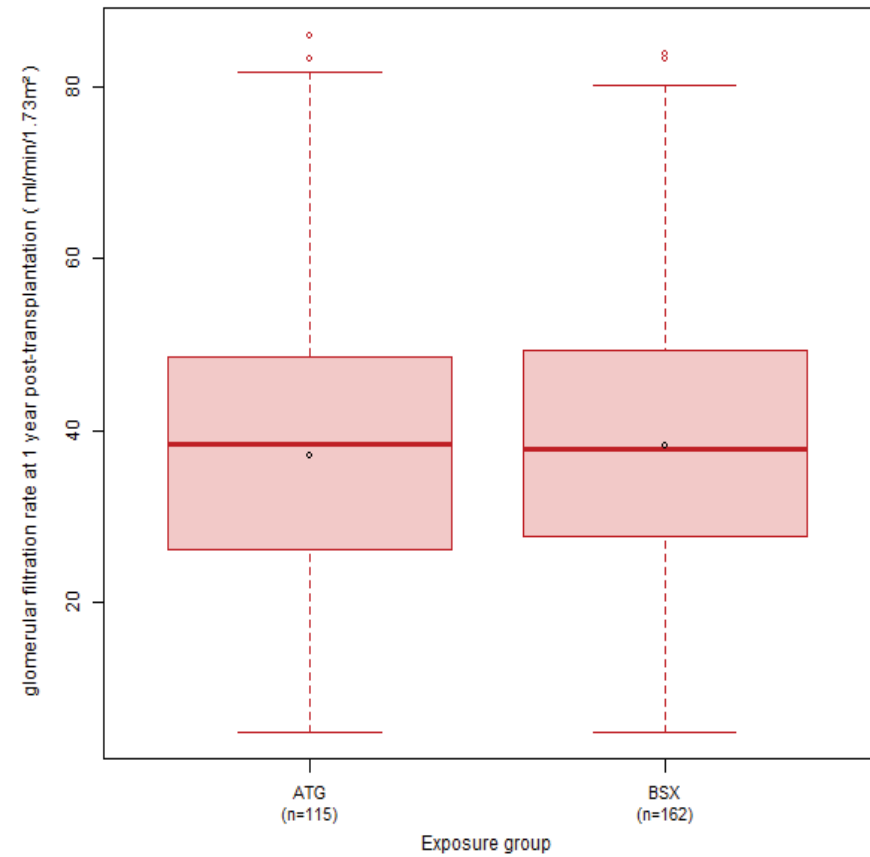
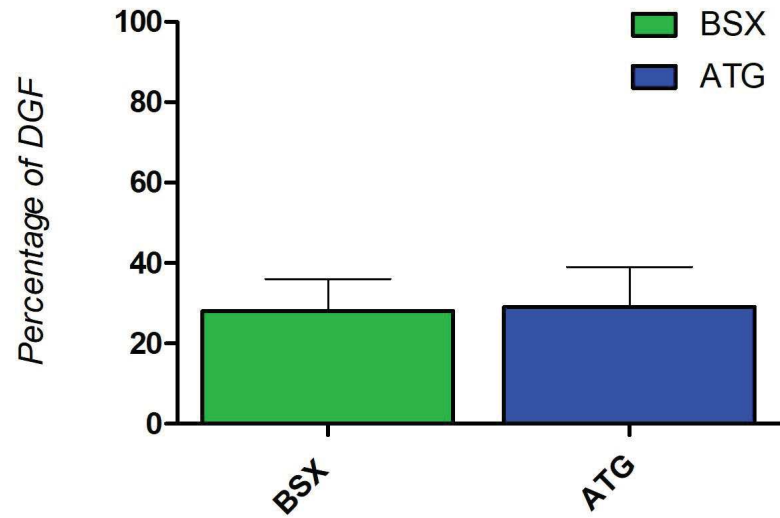


Patients with History of Malignancy

BSX : 52 patients → 3 Cancers during the 1st year

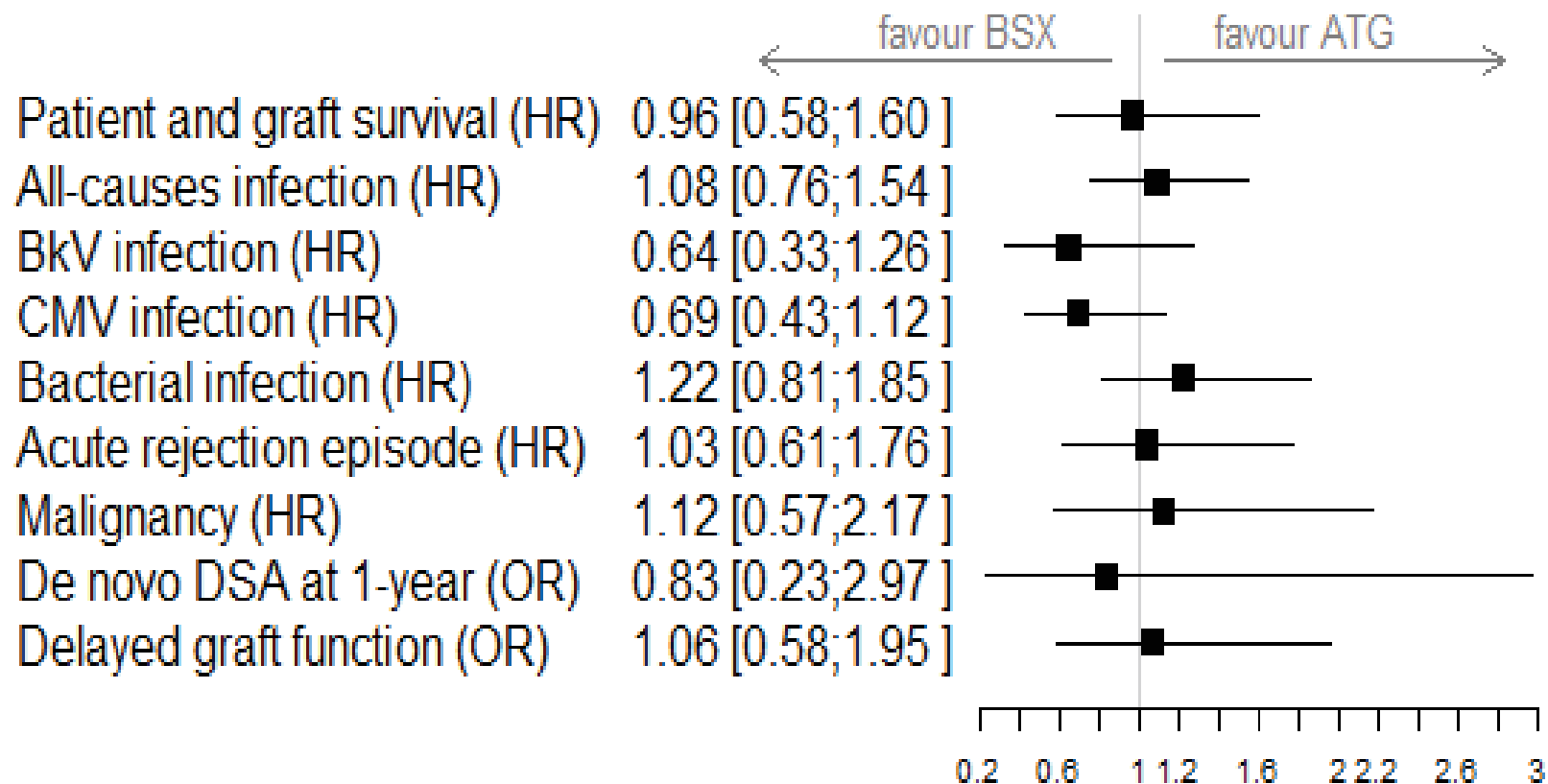
ATG : 42 patients → 5 Cancers during the 1st year

DGF and eGFR Allograft



Return to dialysis : eGFR = 5ml/min

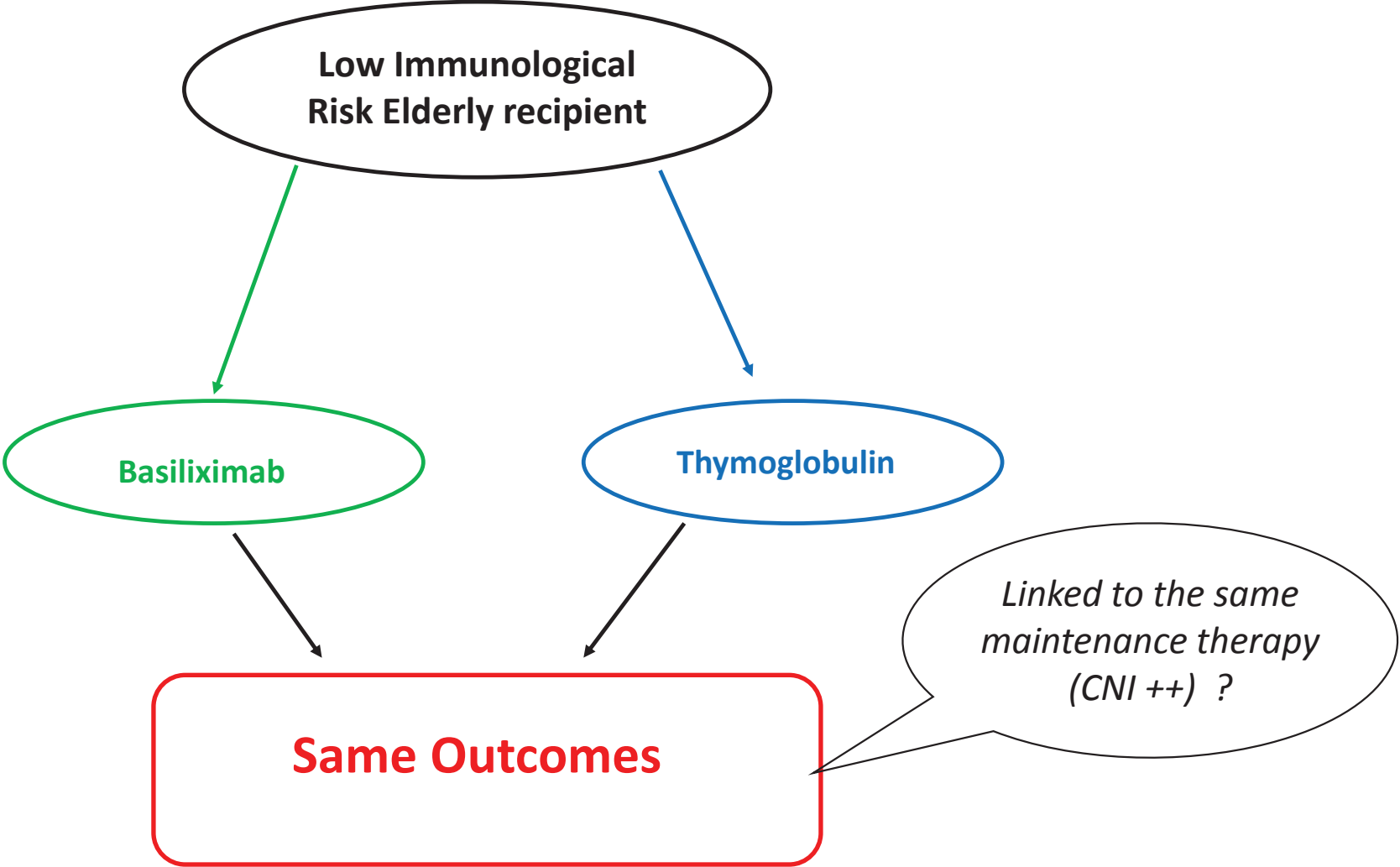
Risk of using Thymoglobulin compared to Basiliximab for the various outcomes



Outcomes

- **No difference of patient/graft survival** : similar to litterature but elderly recipients !
- **Whereas a prolonged Lymphopenia in patient receiving ATG :**
 - Same occurrence of Infectious complications (CMV ?)
 - Same occurrence of Neoplasia complications
- **No difference in immune complications**
 - But a high level of rejection for a low risk population → we included Borderline rejections.
 - Low rate of occurrence of DSA illustrate the low immunological risk.
- **No difference in occurrence of DGF**
 - Time of administration of ATG ?
 - Impact of the trend to a larger use of Machine Perfusion in the BSX group ?

Conclusion





Thank you for
listening
