A PROSPECTIVE RANDOMISED STUDY FROM EASTERN INDIA COMPARING BASILIXIMAB VERSUS NO INDUCTION IMMUNOSUPPRESSION IN LOW IMMUNOLOGICAL RISK KIDNEY TRANSPLANT RECIPIENTS

VARUN GOSAIN, SALIL JAIN , S.B. ROUT

FORTIS MEMORIAL RESEARCH INSTITUTE , GURGAON

INTRODUCTION

S.C.B. MEDICAL COLLEGE

- Induction immunosuppression decreases the risk for acute rejection and improves graft outcomes in kidney transplant recipients. But its role in low immunological risk group of patients is controversial.
- KDIGO clinical practice guidelines recommends induction with IL-2 receptor antagonists as first line agents and lymphocyte depleting agents in high immunologic risk KTRs.
- In the current era of powerful maintenance immunosuppression, it is unclear whether perioperative induction therapy further improves outcomes in low immunological risk KTRs.
- Financial disclosures- None
- AIM AND OBJECTIVE- To evaluate the impact of induction with basiliximab versus no induction therapy on outcomes in low immunological risk kidney transplant recipients (KTRs).

METHODOLOGY

- This study was conducted between May 2013 to May 2019 in a tertiary care centre in eastern India.
- It was a randomised prospective cohort study where two groups of low immunological risk live related KTRs, one who did not receive induction therapy and the other who received induction therapy with basiliximab were analysed.
- Low immunological risk KTRs was defined in this study as patients undergoing first transplant, panel reactive antibody <20% and human leucocyte antigen mismatches ≤3.
- Both the groups were comparable in baseline characteristics and risk factors for acute rejection.
- Both groups received the same protocol and dose of maintenance immunosuppression in the form of oral steroids, tacrolimus and mycophenolate mofetil.
- Statistical analysis was done using multiple logistic regression and chi square tests.

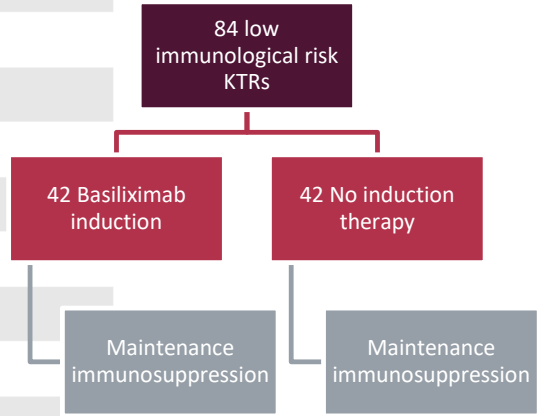
RESULTS

Recepient Characteristics		No Induction (n=42)	Basiliximab Induction (n=42)	p value
Age	18-39	29(69.04%)	31(73.8%)	0.14
	40-60	13(30.95%)	11(26.19%)	
Gender	Male	39(92.85%)	40(95.23%)	0.87
BMI	Underweight	2(4.76%)	3(7.14%)	0.17
	Normal	30(71.42%)	28(66.6%)	
	Obese	8(19.04%)	10(23.8%)	
	Overweight	2(4.76%)	1(2.38%)	
Dialysis duration	Preemptive	0	1(2.38%)	0.79
	<1 year	27(64.28%)	24(57.14%)	
	1-3 years	12(28.57%)	14(33.3%)	
	>3 years	3(7.14%)	3(7.14%)	

Donor Characteristics		No Induction (n=42)	Basiliximab Induction (n=42)	p value
Donor Age	18-39	9(21.42%)	6(14.28%)	0.35
	40-60	32(76.19%)	34(80.95%)	
	>60	1(2.18%)	2(4.76%)	
Donor Gender	Female	31(73.80%)	33(78.57%)	0.71

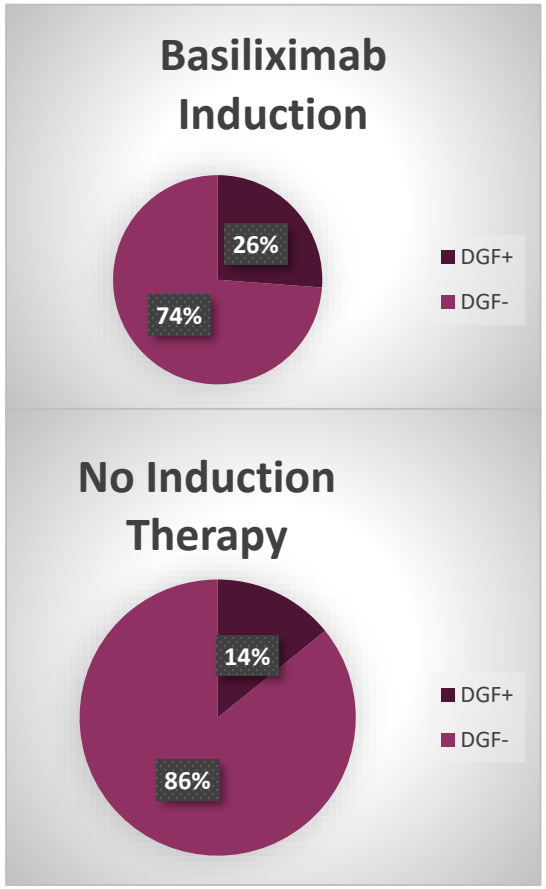
Cause of ESRD	DM	14(33.3%)	11(26.19%)	0.91
	HTN	6(14.28%)	7(16.66%)	
	CGN	2(4.76%)	4(9.52%)	
	CKDu	15(35.71%)	17(40.47%)	
	Others	5(11.9%)	3(7.14%)	
PAD	yes	3(7.14%)	2(4.76%)	0.21
CMV	R+/D+	15(35.71%)	17(40.47%)	0.34
	R+/D-	7(16.6%)	10(23.8%)	
	R-/D+	11(26.19%)	9(21.42%)	
	R-/D-	9(21.42%)	6(14.28%)	
Hep C	Serum +	4(9.52%)	5(11.9%)	0.47
Hep B	Serum +	3(7.14%)	5(11.9%)	0.76

Transplant Characteristics		No Induction (n=42)	Basiliximab Induction (n=42)	p value
HLA Mismatch	2	1(2.38%)	0	0.92
	3	41(97.61%)	42	
PRA	Median	0	0	0.33
Type of crossmatch	CDC	25(59.52%)	28(66.6%)	0.45
	Flow	17(40.47%)	14(33.3%)	

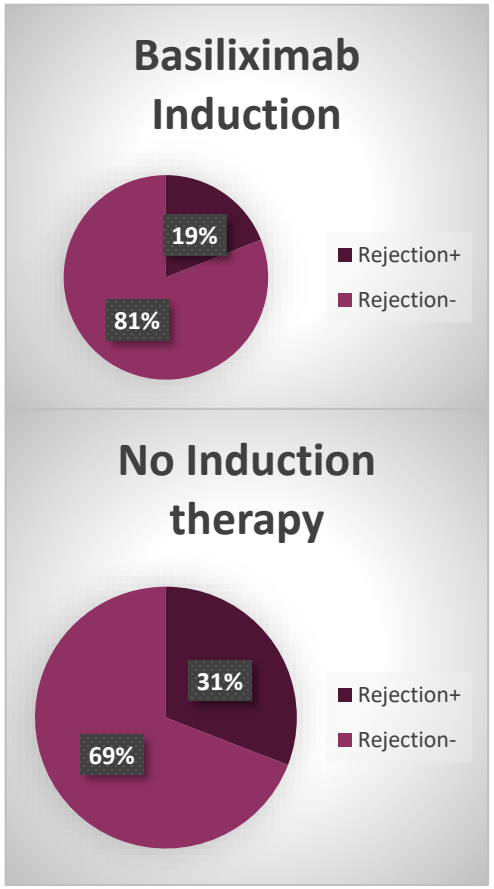


S.C.B. MEDICAL COLLEGE

DELAYED GRAFT FUNCTION

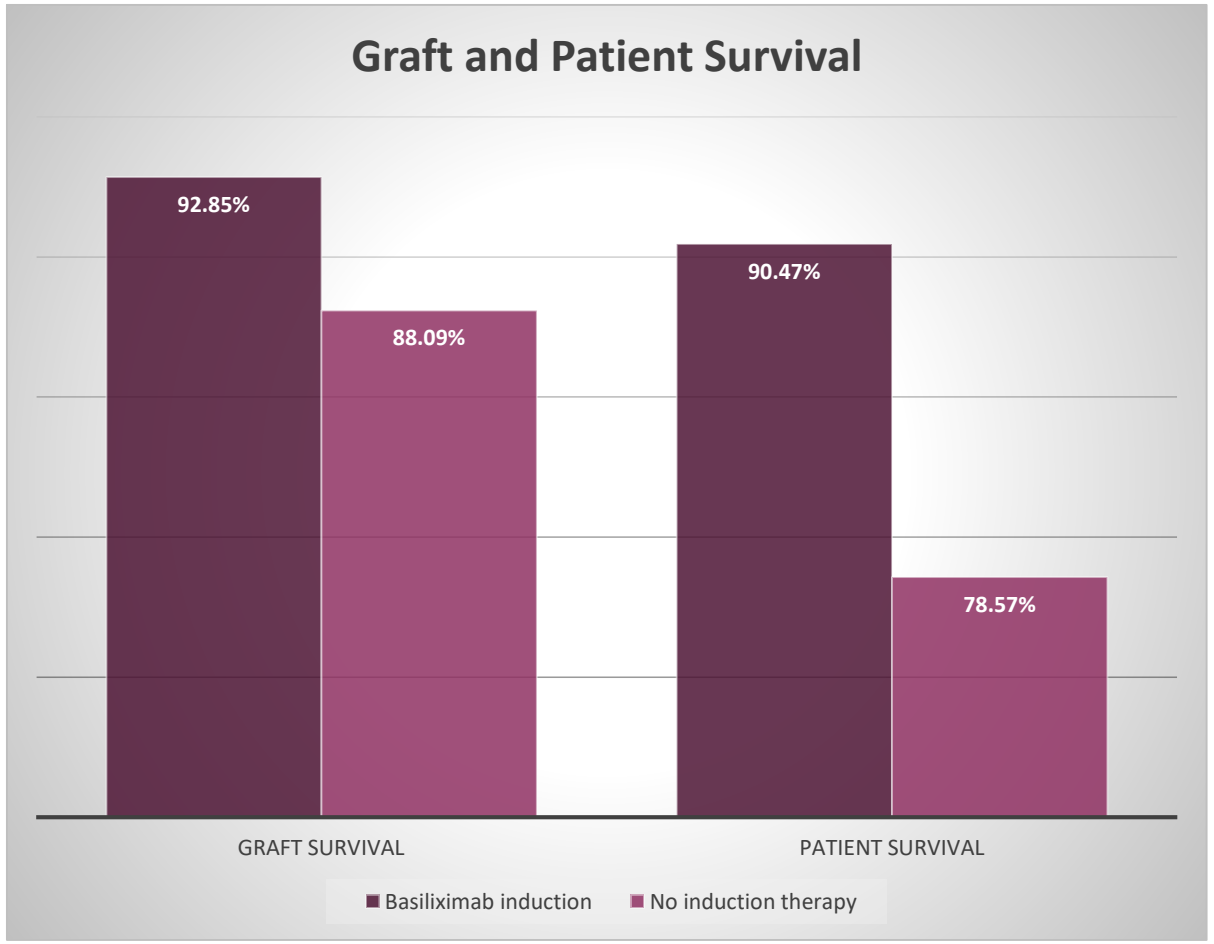


ACUTE REJECTION AT ONE YEAR



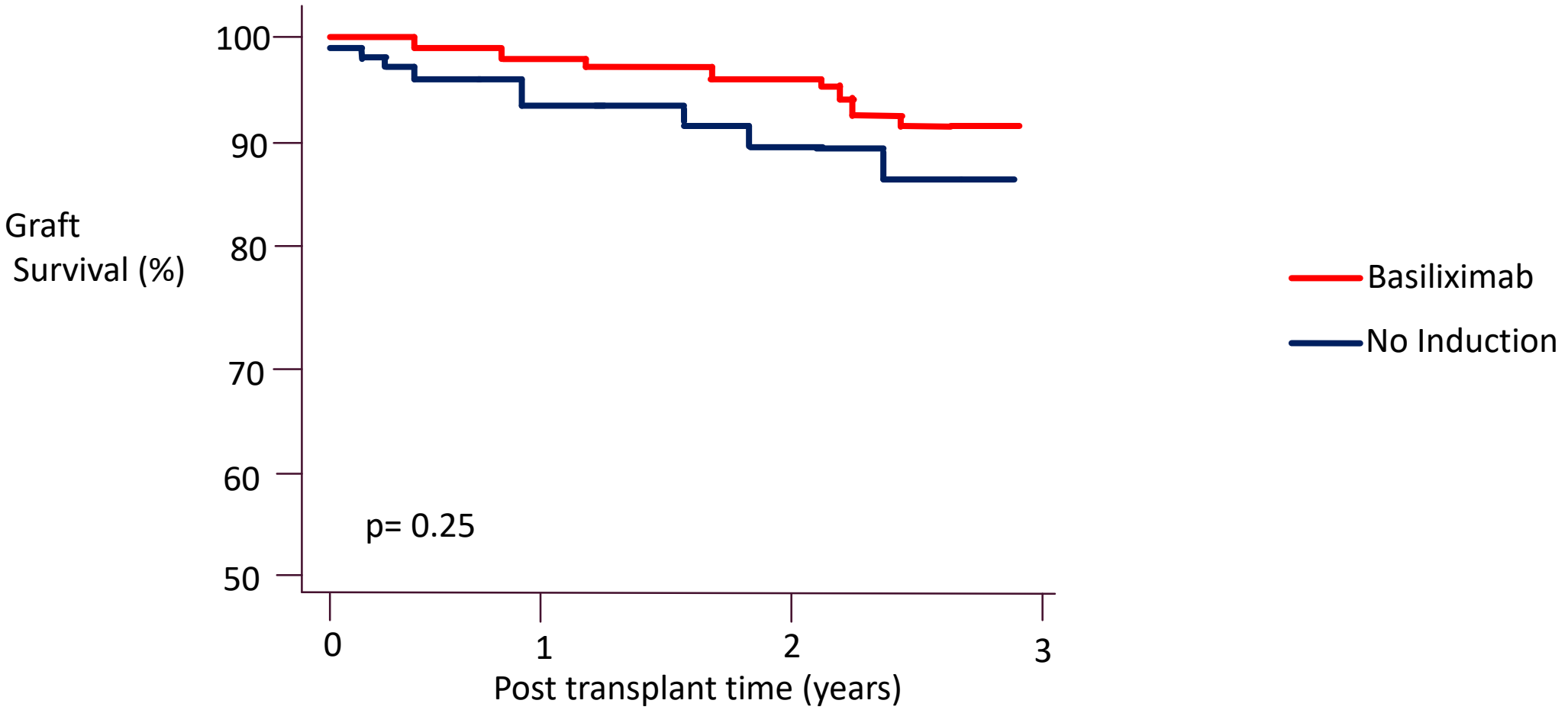
Adjusted risk for delayed graft function was higher (OR 1.69, 95%CI 1.05-3.11, p=0.02) and one year acute rejection was found to be lower (OR 0.53, 95%CI 0.35- 1.08, p= 0.09) in the basiliximab group compared to the group of patients who did not receive induction therapy.

THREE YEAR SURVIVAL

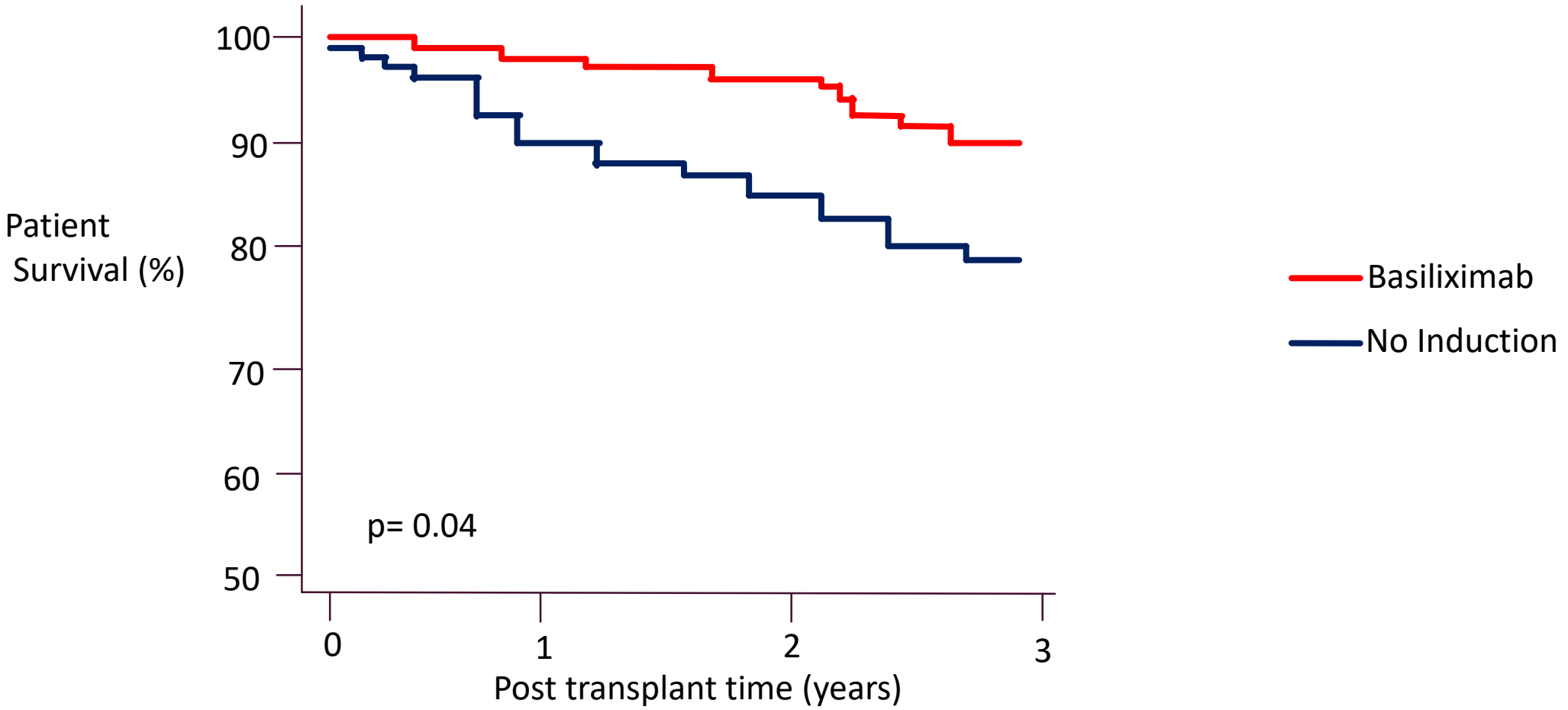


- Adjusted three year graft survival were similar in both groups.
- Adjusted three year patient death risk was found to be lower (HR 0.42, 95%CI 0.30- 0.74, p= 0.04) in the basiliximab group.

KAPLAN MEIR CURVE (GRAFT SURVIVAL)



KAPLAN MEIR CURVE (PATIENT SURVIVAL)



CONCLUSION

- Perioperative induction with basiliximab in low immunological risk kidney transplant recipients had lower rejection and lower patient death risk.