

# RENAL BIOPSY OUTCOMES IN HIGH RISK PATIENTS

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## Aim

To understand the degree of interstitial fibrosis and potential treatable aetiologies in kidney biopsies of those patients at high risk for kidney biopsy.

## Introduction

Renal biopsy helps diagnose potentially treatable kidney diseases.

High Risk kidney biopsy cases are often considered to have chronic kidney disease with significant interstitial fibrosis, and accordingly biopsy is avoided.

## Materials and Methods

**TYPE OF STUDY:** A combined retrospective and prospective study.

**DURATION:** JANUARY 2014 TO NOVEMBER 2016

### INCLUSION CRITERIA:

All patients who underwent renal biopsy as per clinical and biochemical demand and had one of the **High risk parameters**.

High risk was defined based on the presence of at least one of the following characters:

Uncontrolled hypertension (SBP>160);  
GFR<30 ml/min/1.73m<sup>2</sup>;  
Small kidney size (<9 cm);  
Anaemia (Hb <9mg/dl);  
Age>65 yrs.

### EXCLUSION CRITERIA:

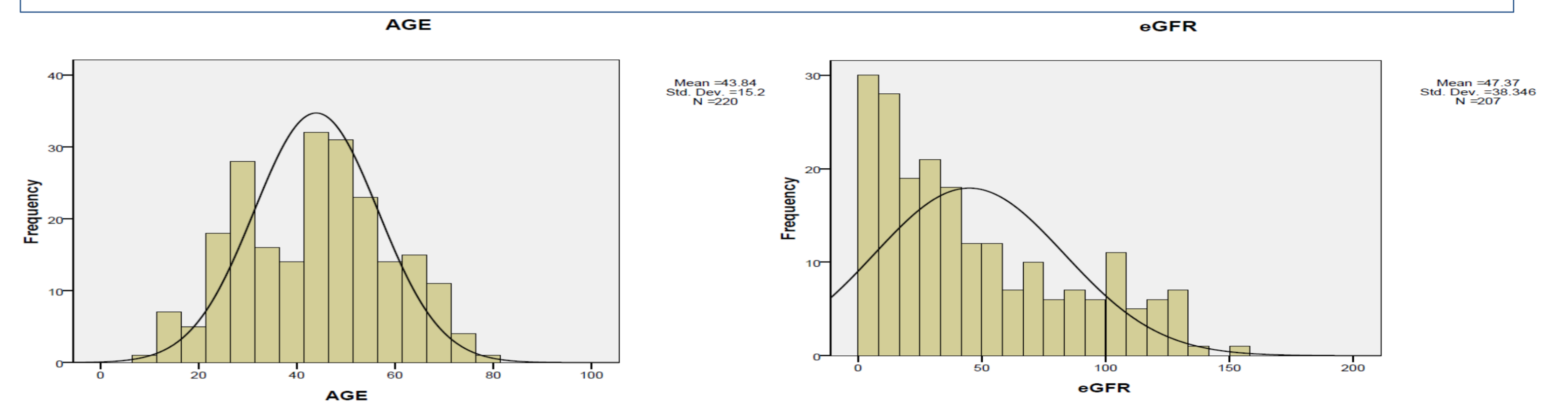
Children age <18  
Renal Allograft Recipient  
Patient with Ischemic Renal disease.

The extent of Interstitial fibrosis and Tubular atrophy (IFTA) in the biopsy was analysed and severity of interstitial fibrosis and tubular atrophy were categorized into two groups –

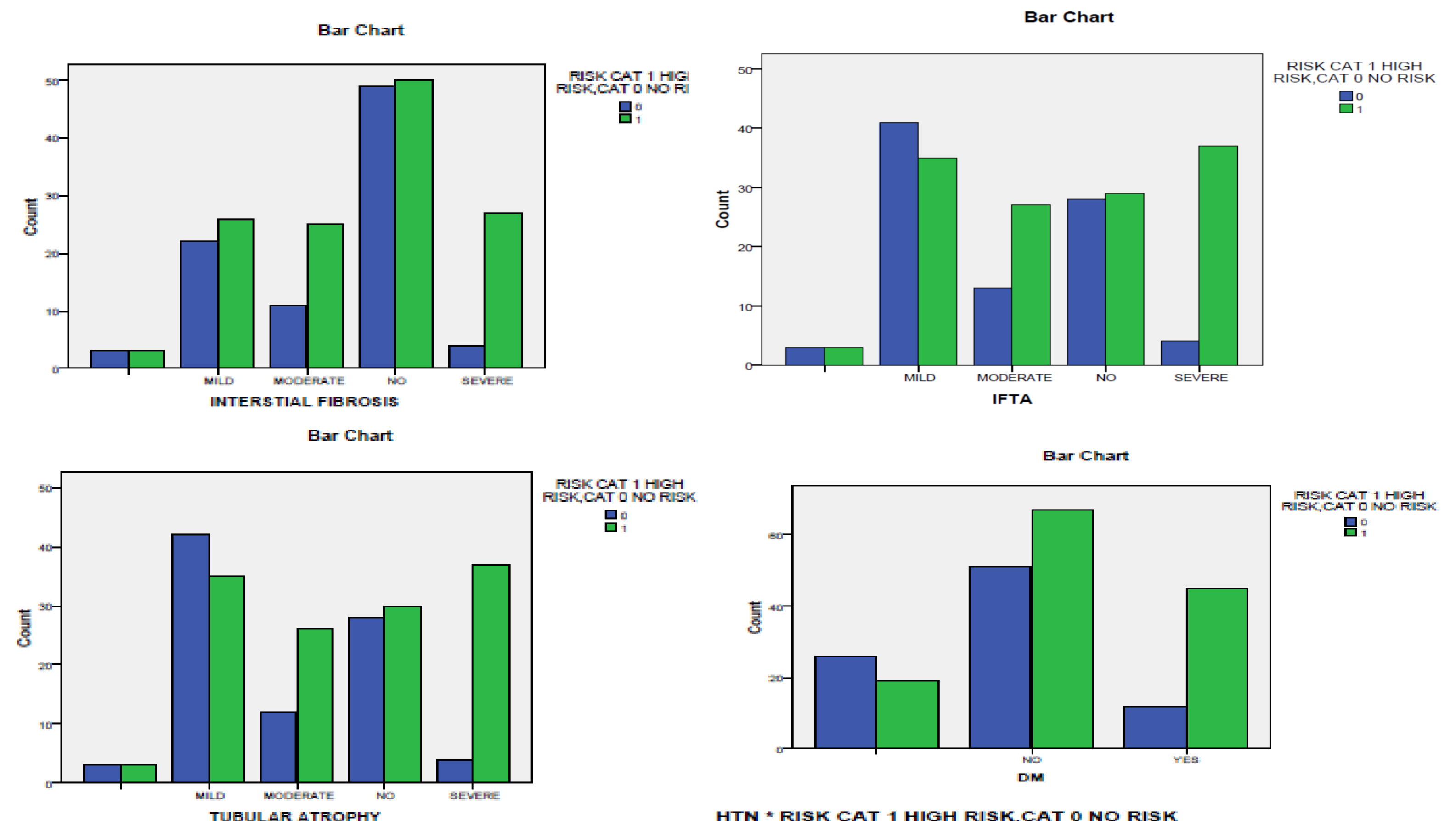
Normal to mild  
Moderate to severe.

## Results

n=220, High risk category =131  
Males=153, Females=66; Mean age=47.39±1.3



Mean eGFR=30.28±2.7; Mean Hb=10.35± 0.2. 81 cases had advanced IFTA ( moderate to severe).



Variables	95% C.I.		Odds ratio	p Value
	Lower	Upper		
AGE	0.921	0.991	0.955	0.014
SEX(1)	0.453	4.431	1.417	0.549
DM(1)	0.015	4.184	0.249	0.334
DM(2)	0.104	2.592	0.519	0.424
HTN(1)	0.061	14.300	0.930	0.959
HTN(2)	0.121	1.417	0.414	0.160
HB	0.724	1.166	0.919	0.485
CREAT	0.890	1.333	1.089	0.408
eGFR	0.920	0.986	0.952	0.006
DIAGBYDS(1)	0.089	21.319	1.374	0.820
DIAGBYDS(2)	1.759	83.754	12.138	0.011
DIAGBYDS(3)	0.459	7.514	1.857	0.386
DIAGBYDS(4)	1.041	48.870	7.132	0.045
RISKCAT1HIGHRISKCAT0NORISK	0.079	1.351	0.326	0.122

## Discussion

Multiple Logistic Regression suggests presence of DM was the strongest predictor of advanced IFTA score [OR=12.1, CI=1.7-83.75 (p=0.011)], and **NOT** High risk category patients for Renal biopsy [OR=0.326 CI=0.07-1.3 p=0.12]

## Conclusions

- High risk cases neither predict the presence of advanced kidney disease (moderate to severe interstitial fibrosis or tubular atrophy) in renal biopsies nor potential irreversible cause, hence renal biopsy should not be avoided in these cases.
- Not doing renal biopsy in such cases could translate to missing potential therapeutic window period.
- However, a prudent approach needs to be exercised in high risk patients with underlying diabetes due to high prevalence of significant interstitial fibrosis or tubular atrophy in them.

## Contact

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