

Prevalence of associated injuries in ACL tear in Indian population – A retrospective study



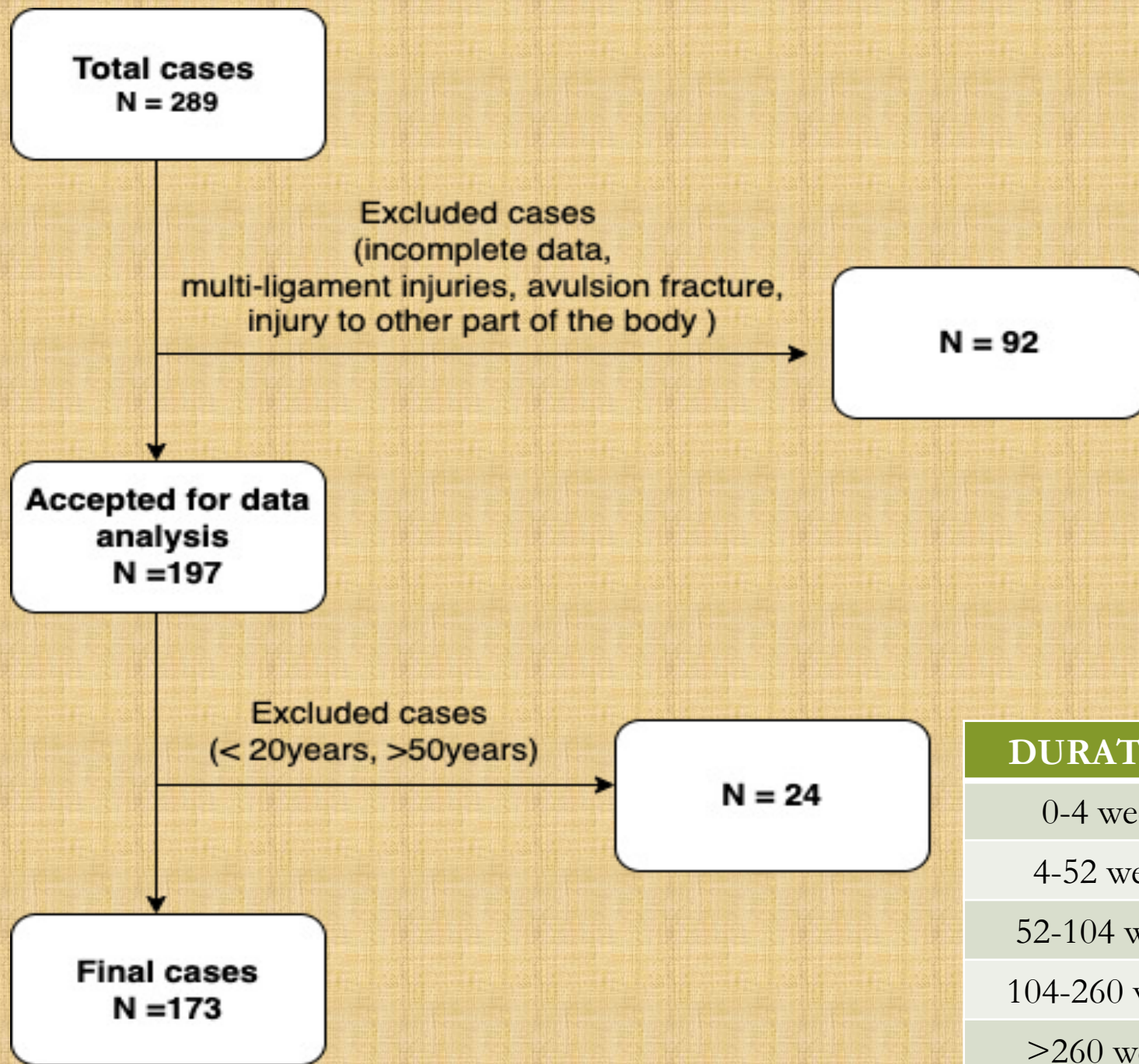
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NO CONFLICT OF INTEREST

INTRODUCTION AND AIM

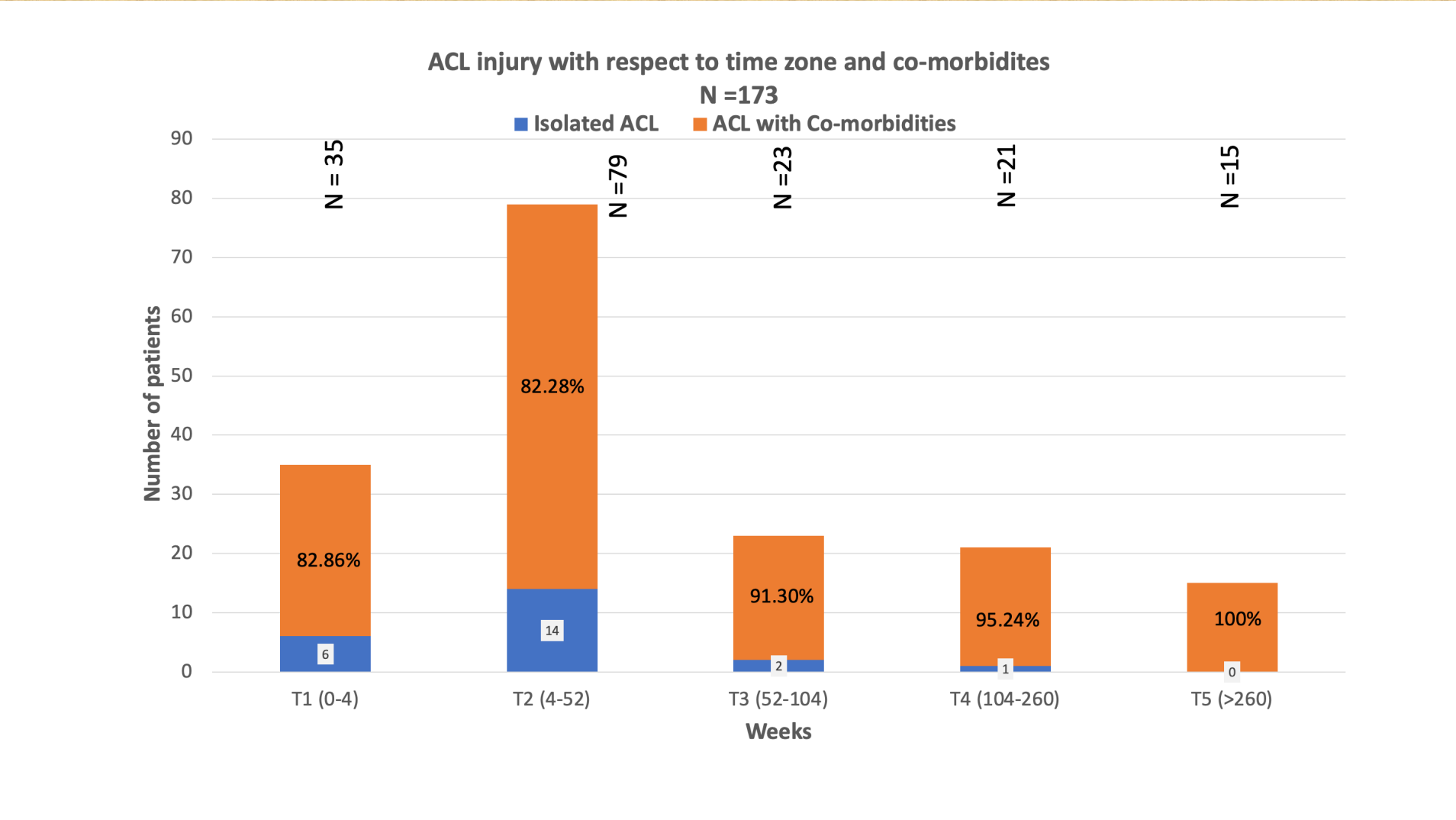
- The intraarticular comorbidities are very common with ACL tears.
- These comorbidities tend to increase with chronicity of untreated ACL tear.
- The aim was...
 - To study the prevalence of associated chondral co-morbidities in different compartments.
 - To study sub regional location, size and depth in relation with
 - age of the patient and with
 - chronicity of the untreated ACL tear.

Methods



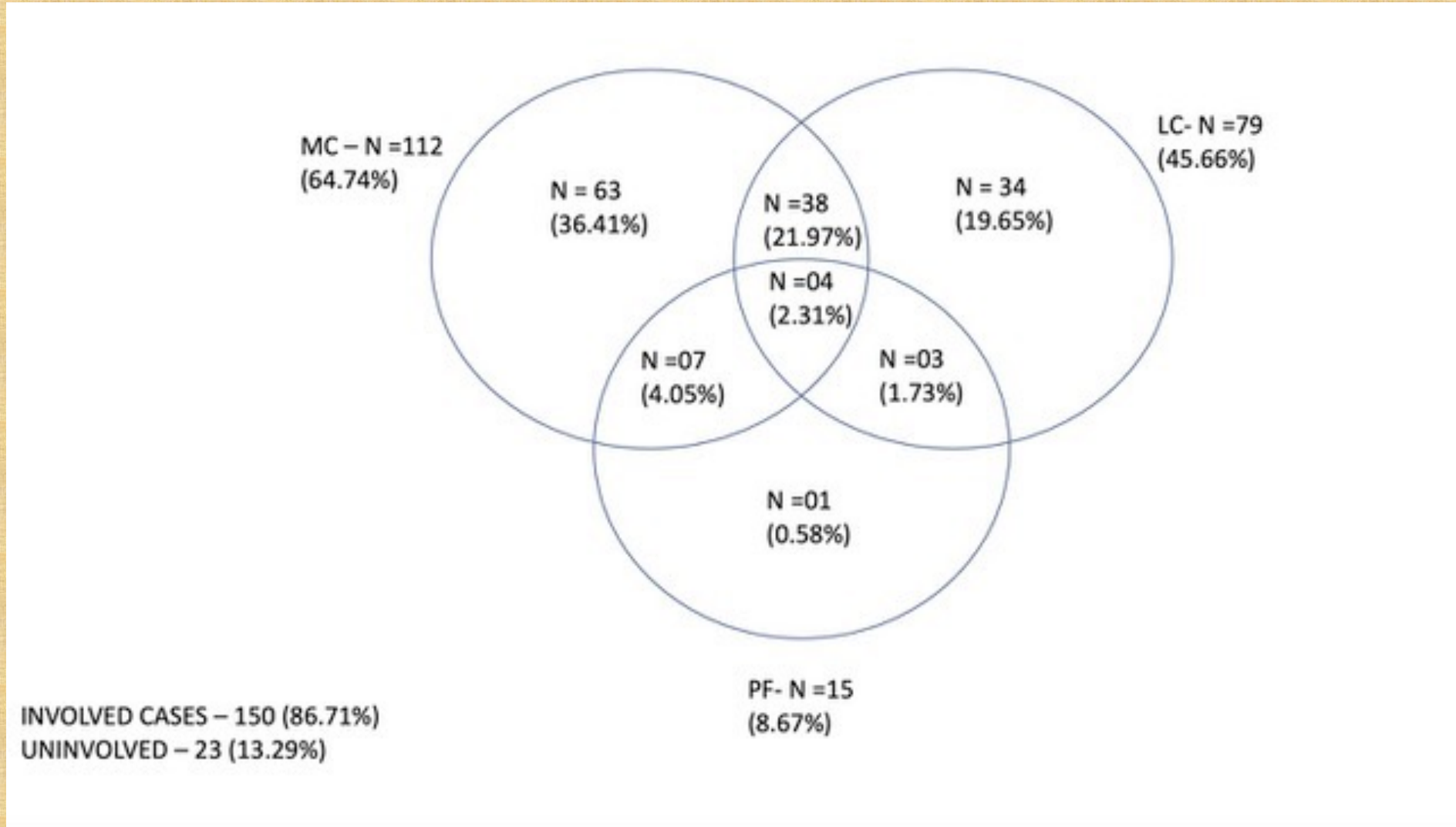
DURATION	TIME- ZONE
0-4 weeks	T1
4-52 weeks	T2
52-104 weeks	T3
104-260 weeks	T4
>260 weeks	T5

Results



With increasing chronicity, a trend towards 100% co-morbidities was seen.

Results

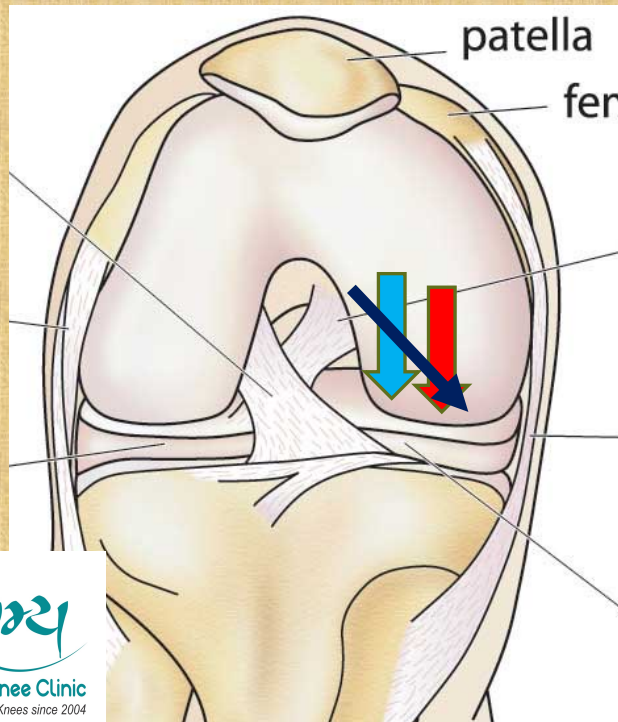


Analysis of Prevalence of co-morbidities in different compartments with medial compartment getting involved in maximum no of cases.

Results

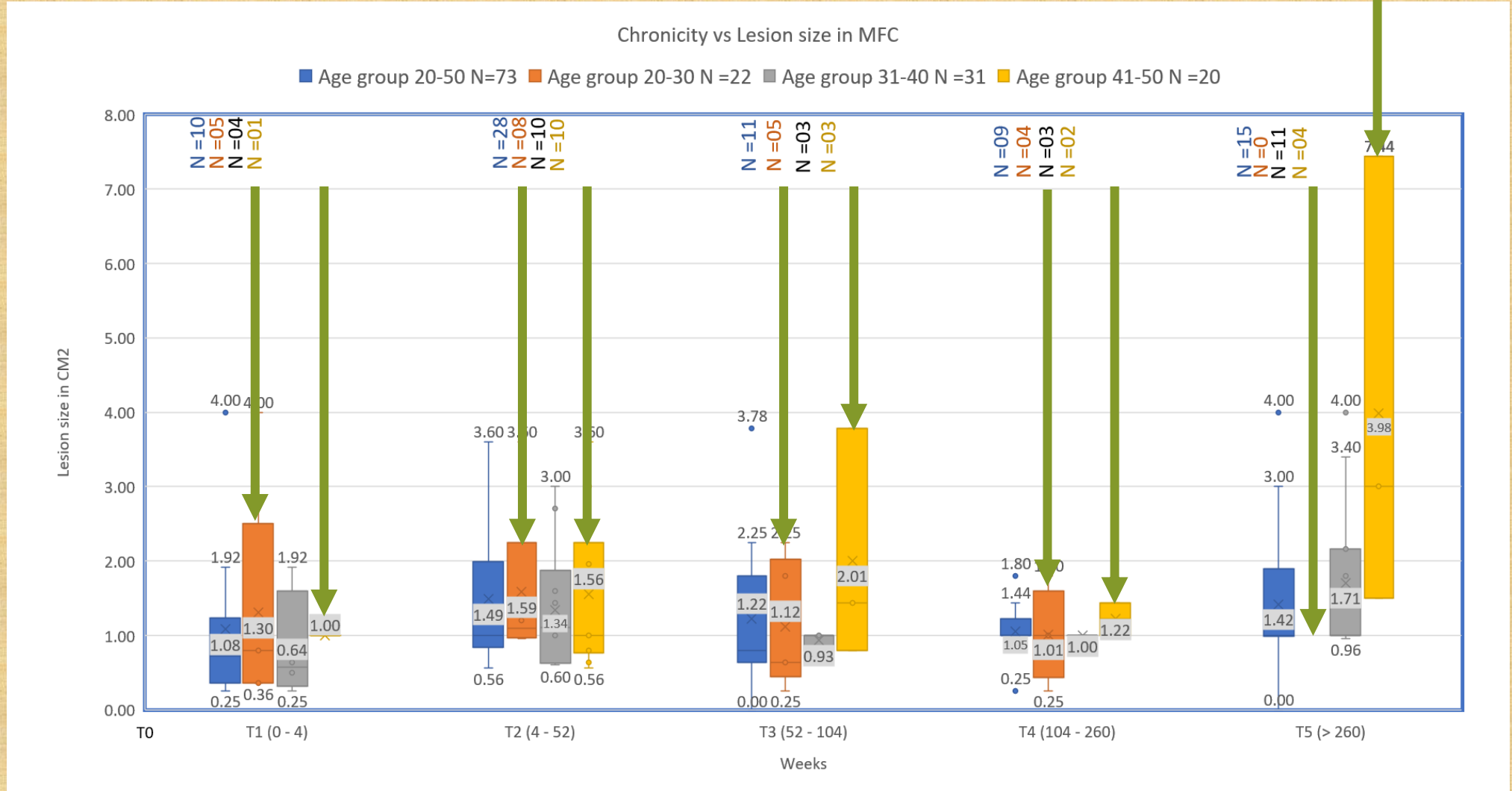
Location of the lesions in Medial Femoral Condyle (MFC) in different age groups in ACL tear cases

Age group	Lateral half WB	Central WB	Medial half WB	Global
20-30	59.09%	31.82%	9.09%	0
31-40	38.70%	38.70%	22.58%	0
41-50	35.00%	45.00%	10.00%	10.00%



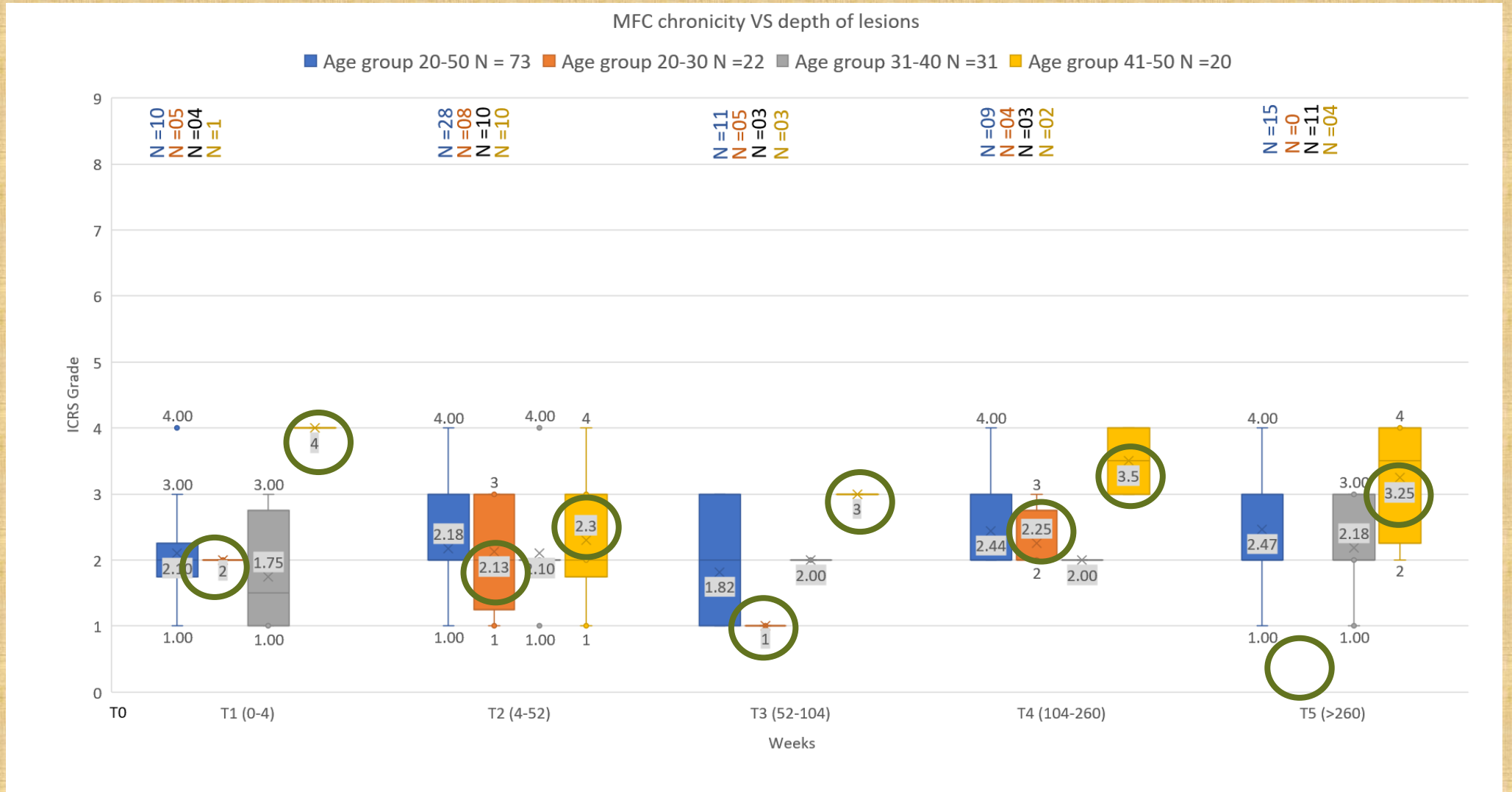
With increasing age, the medial femoral condyle chondral lesions tend to shift their location from lateral region of medial femoral condyle towards central region.

Results



The chondral lesions reduced in **size** with chronicity of the lesion in age group 20-30 years, while chondral lesion increased in **size** in age group 40-50 years except in T4.

Results



The depth of the chondral lesions increasing with increasing time zone in all age groups, but was more pronounced in age group 40-50 years.

DISCUSSION

➤ Trend of timing of ACL RECONSTRUCTION :-

- Several studies have analyzed the prevalence of ACL tear and associated co-morbidities.
- However, no study has given a particular time-zone for timing of ACL reconstruction.
- Our study showed that 65.90 % of the patients got operated in T1 and T2 time zone (0-52) weeks.

➤ COMPARTMENT INVOLVED :-

- No study showed the involvement of different compartment in association with untreated ACL tear.
- Our study, showed Medial compartment (64.74%) was most commonly involved.
- Lateral compartment (45.66%) was followed by Medial compartment.
- Patello-femoral compartment had negligible involvement.

DISCUSSION

➤ SUB- REGIONAL LOCATIONS

- Slauterbeck et al observed preponderance of chondral lesions in central 1/3 of MFC in both sexes.
- Instead, we studied preponderance of chondral lesions in different age groups and had following observations.
 - In younger age group (20-30 yr), the chondral lesions were more prevalent in lateral 1/3 of MFC. (59.09%)
 - In 31-40 age group, the chondral lesions were equally present in lateral and central 1/3 region. (38.40% each)
 - In 41-50 age group, the chondral lesions were more prevalent in central 1/3 region. (45%)
- This trend showed that with advancing age, the preferred location of chondral lesions moves from lateral 1/3 to central 1/3 of weight bearing zone of MFC.

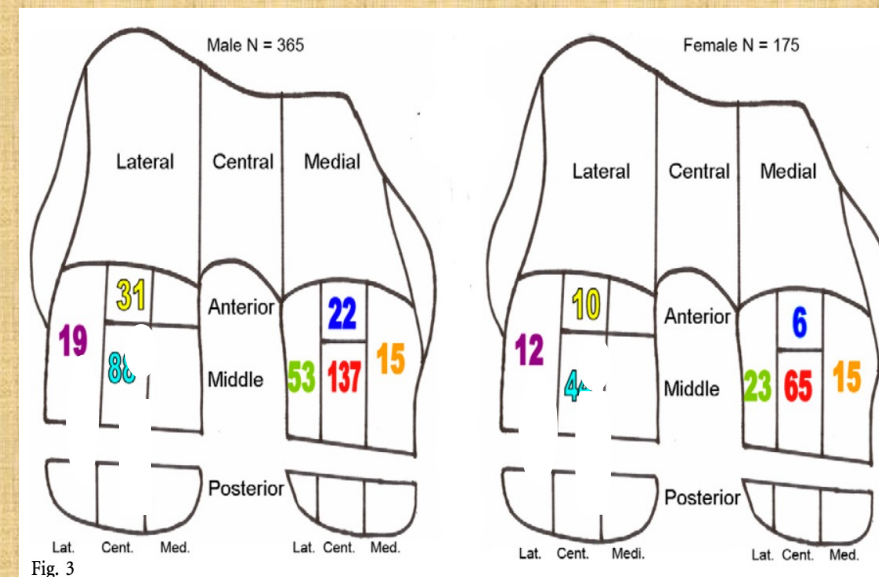
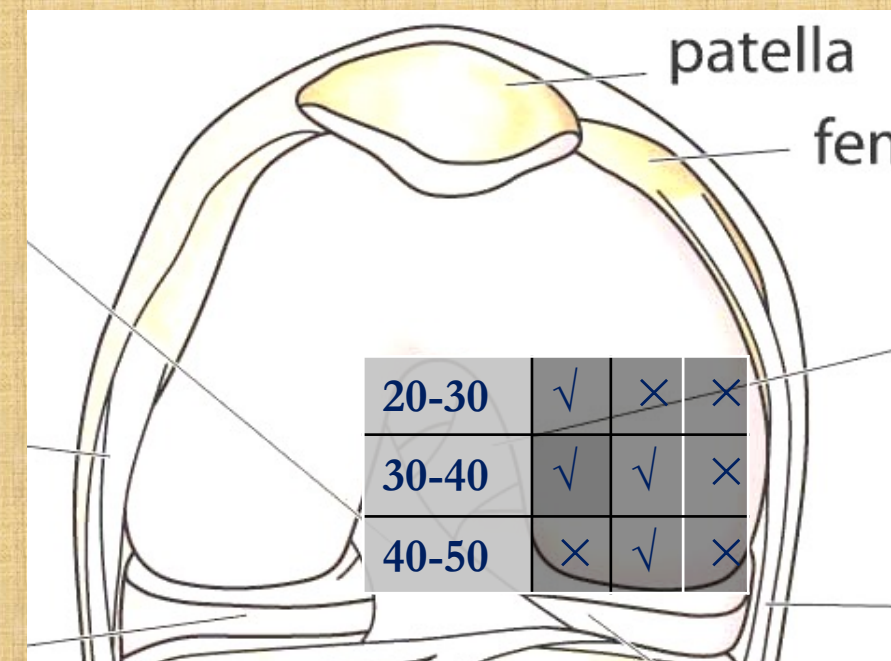


Fig. 3

Slauterbeck JR. JBJS, 2009.



CONCLUSION

- Encouraging trend of getting early ACL reconstruction done in India (65.90% within 1 year of tear).
- Medial compartment is most common compartment involved.
- Medial Femoral Condyle (42.20%) is maximally affected.
- Lateral half weight bearing region of MFC is involved in young which shifts to central half with increasing age.
- Size of the lesion doesn't increase much with increasing chronicity and age, except in 40-50 age group beyond 5 years.
- However, the depth of the lesions increases with increasing chronicity and age.

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