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Anatomical Distribution of OA Influences Outcome of TKA

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Disclosures:

- Research was conducted at the not-for-profit Sydney Orthopaedic Research Institute, which receives Fellowship funding
- Funding is not specific to any findings presented here



Factors influencing patient satisfaction after TKA:

- Patient factors – registry data
 - Sex, Age, BMI
 - Prosthesis? Patella Resurfacing?
 - Alignment strategy?
 - Robots?
 - Does the pattern of compartment involvement correlate with patient satisfaction postoperatively?



Has not been investigated as an isolated variable in a population of TKA patients before.

- Cohort of 496 knees
- 3 Surgeon Practice/3 TKA systems
- Prospective data collection Age, Sex, BMI and Oxford Knee Score Preop and 12 months Postop
- Weightbearing XRs including Rosenberg views



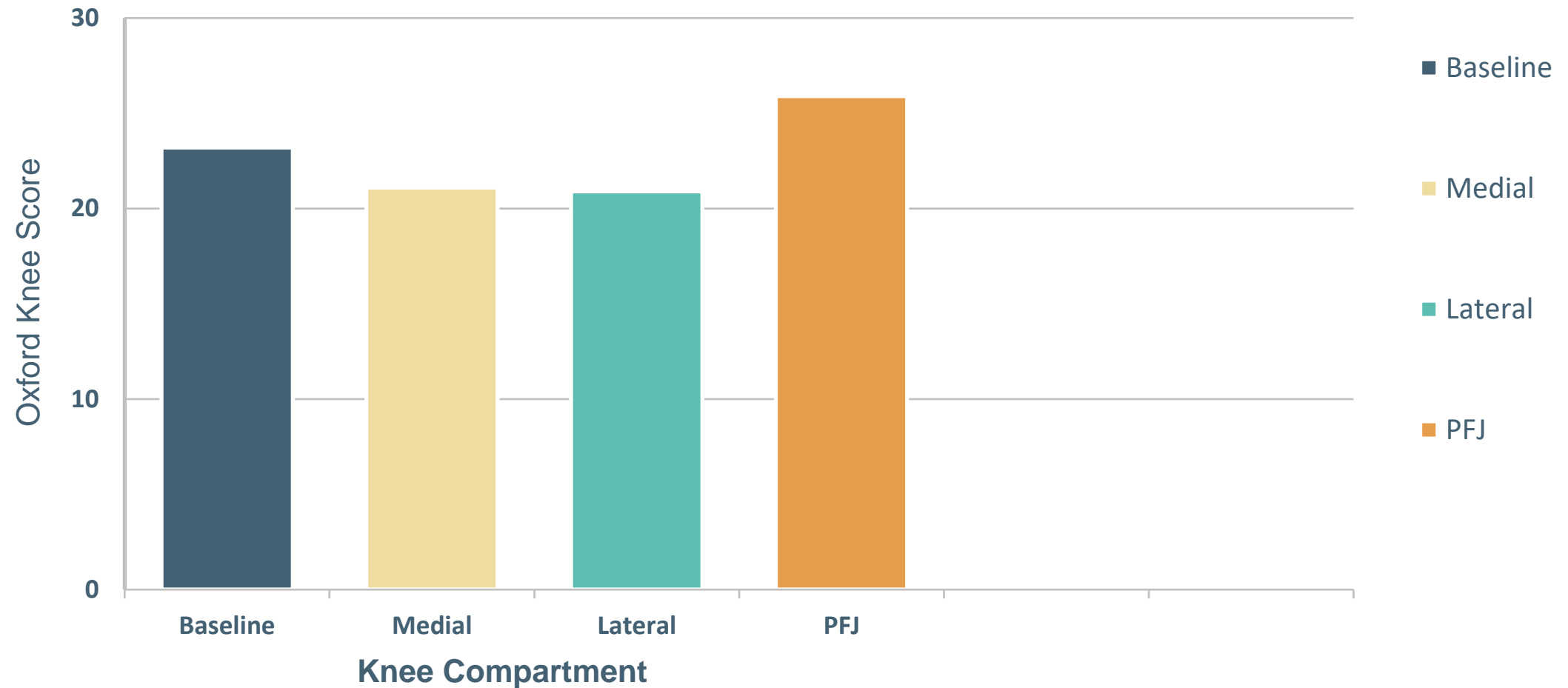
Patient characteristics in exposure groups:

	Baseline	Medial	Lateral	PFJ	P Value
	Preserved joint space > 2mm in all compartments	Radiographic joint space obliteration confined to the involved compartment			
	62	264	104	66	
Age	68.4	69.2	70.9	71.0	0.344
Sex	23 M / 39 F	172 M / 136 F	42 M / 71 F	17 M / 58 F	<0.001
BMI	31.2	31.2	29.8	29.3	0.059



Oxford Knee Score (OKS) at TKR Indication

Oxford Knee Score by Exposure Category (P = 0.062) ** adjusted for age, sex BMI



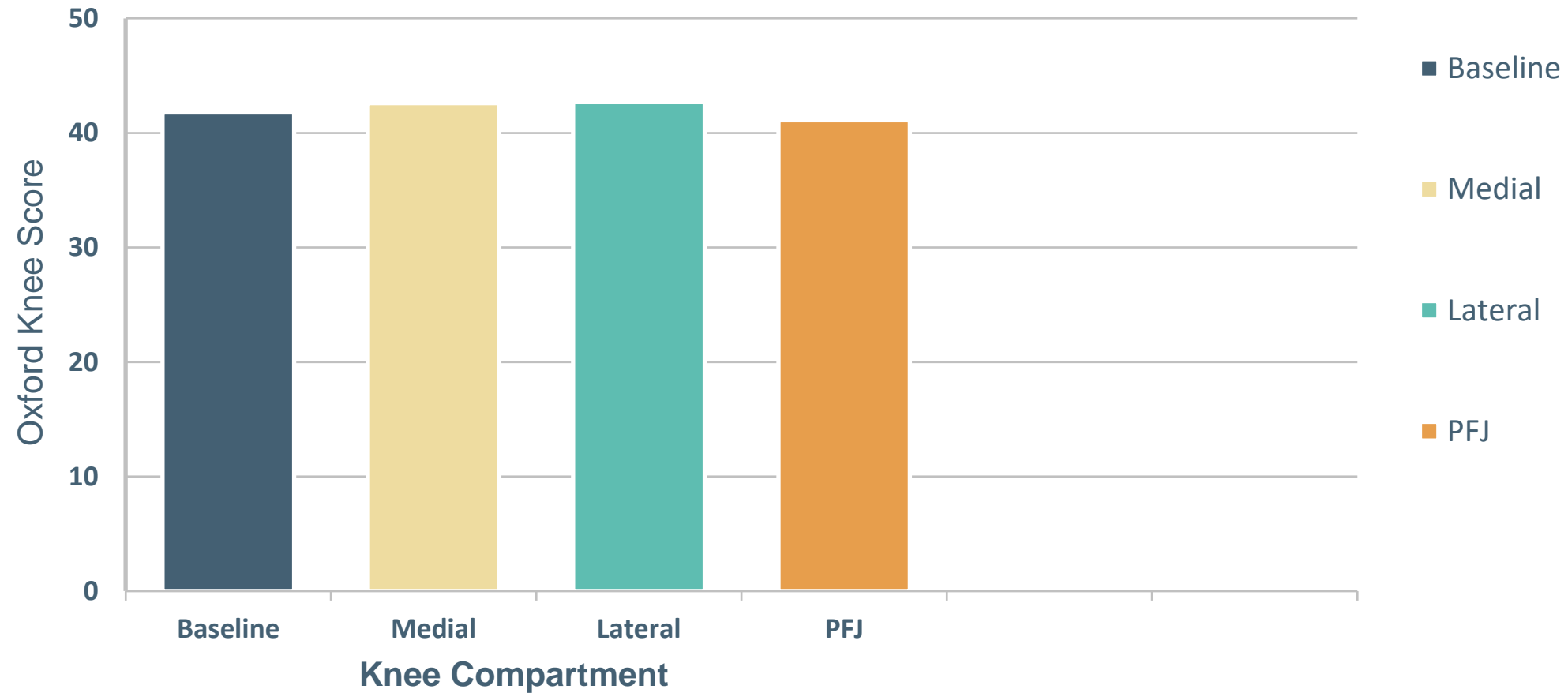
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Absolute OKS12 Months Post-Op

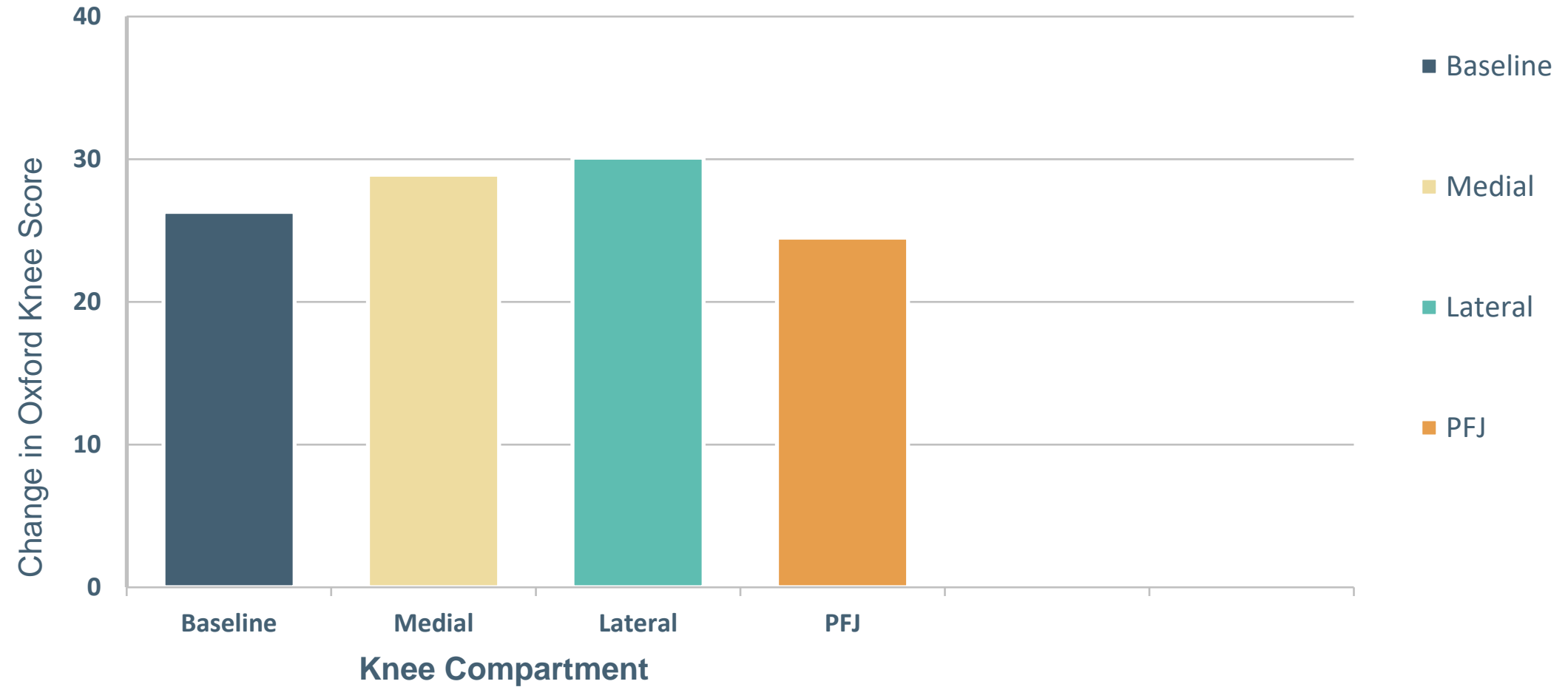
Oxford Knee Score by Exposure Category (P = 0.472) **adjusted for age, sex BMI



“Ceiling Effect”

Delta OKS at 12 Months Post-OP

Change in OKS by Exposure Category (P = 0.088) ** adjusted for age, sex BMI



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Discussion

- Results demonstrate a trend to greatest clinical improvement following TKA : Lateral > Medial > PFJOA (adjusted for age, sex, BMI, P = 0.088)
- First study to isolate the effect of individual knee compartments on
 - A) Clinical presentation
 - B) Outcome of TKA
- ? OKS not the best score to assess clinical function in PFJOA



Conclusion

- This study provides evidence that the anatomical distribution of radiographic change in the arthritic knee can influence the clinical outcome of TKA



References

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3. 1. Rodriguez-Merchan, E.C., *Patient Satisfaction Following Primary Total Knee Arthroplasty: Contributing Factors*. Arch Bone Jt Surg, 2021. **9**(4): p. 379-386.
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