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ABSTRACT SUPPLEMENT

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Results: *IL-17A blockade reduces proinflammatory signature in human tenocytes.* Transcriptomic datasets showed the presence of the IL-17 family members IL-17A-E and receptors IL-17RA & IL-17RC throughout the spectrum of tendinopathy. Furthermore IL-17A significantly elevated production of the proinflammatory cytokines IL-6, IL-8, CXCL-1 and CCL-2 in tenocytes. Importantly, IL-17A blockade by secukinumab significantly reduced the expression of these proinflammatory cytokines.

IL-17A blockade significantly improves tendon structure and function in vivo. The pharmacological effects of IL-17A blockade on MRI/ gait abnormalities were assessed 4 weeks after the surgical induction of tendinopathy and following once weekly dosing of anti-IL-17A antibody. The induction of tendinopathy significantly increased the MRI T2 signal in tendinopathy and triggered gait abnormalities by significant alteration of front-hind ratios of footprint contact areas. IL-17A blockade normalized both, altered MRI T2 signals ($p<0.01$, n=4) and gait abnormalities ($p<0.05$, n=8).

Conclusion: Our study provides evidence that IL-17A operates as a cytokine modulator in human supraspinatus tendinopathy and that blockade significantly improves tendon structure and function in a rodent model of supraspinatus tendinopathy. Based on these results we have commenced a randomised multicenter trial of the effect of IL-17A blockade with secukinumab in patients with rotator cuff tendinopathy (NCT03344640).

Abstract Number: 405

<mark>Feasibility of Enabling Self-Management and Coping with Arthritic Pain Using Exercise (ESCAPE-Pain) Programme for Knee Osteoarthritis in Malaysia</mark>

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Background/Purpose: In Malaysia around one in ten older people are diagnosed with osteoarthritis (OA), with the knee being one of the most commonly affected areas. This can lead to functional limitations, impaired activities of daily living and reduced quality-of-life. Our systematic review of the literature concludes that a programme integrating exercise, education and active coping strategies, known as Enabling Self-management and Coping with Arthritic Pain using Exercise (ESCAPE-pain) provides the best evidence for implementation. Thus, this study aims to evaluate the feasibility of the ESCAPE-pain programme among patients with knee OA in the Malaysian healthcare context.

Methods: A pragmatic, feasibility randomised controlled trial (RCT) was conducted recruiting patients with knee osteoarthritis from two hospitals in Malaysia. Participants were randomised to receive ESCAPE-pain intervention plus usual care (n=36) (intervention group) or usual care only (n=36) (control group). Outcomes were measured for physical function (TUG), knee injury and osteoarthritis outcome scores (KOOS), mental wellbeing (Short-WEMWBS), exercise health beliefs and self-efficacy (ExBeliefs) and fear of falling (Short-FES-I) at baseline, six-week and after 12-week of intervention.

Results: There were no significant differences in baseline characteristics between the groups ($p>0.05$). Recruitment rate showed 90.5% (72/105) and retention rate at 12-week was 87.5% (63/72). Attendance to intervention programme at ≥10 of 12 sessions was high (82.4%). Using modified intention-to-treat analysis, repeated measures ANOVA showed no significant changes ($p>0.05$) for TUG or KOOS between intervention and control groups. However, better outcomes ($p<0.05$) were reported after 12 weeks for health beliefs, mental wellbeing, and fear of falling among patients in intervention group. Satisfaction survey among participants revealed that the ESCAPE-pain programme is easy to follow, straightforward and tolerable for future implementation.

Conclusion: The findings of this study indicate that the ESCAPE-pain programme is feasible for patients with knee OA in Malaysia. As a feasibility study, this is not powered to detect significant differences on primary KOOS outcomes,