for age and body mass index), assessed the differences in functional performance at 1- and 5-years between the ACLR group and the healthy control group.

Results: The contralateral limb had a significantly ($p<0.05$) greater decrease in functional performance between 1- and 5-years for the three hop-tests, compared to the ACLR limb. Worsening was more common in the contralateral limb than the ACLR limb; resulting in significant improvements in the LSI for the single-hop (mean 87% at 1-year to 95% at 5-years), side hop (77% to 86%) and one-leg rise (76% to 85%). The LSI on all four tests at 1-year post-ACLR was significantly lower than healthy controls, but did not generally differ between groups at 5-years.

Discussion: Although the LSI significantly improved between 1- and 5-years post-ACLR, this was mostly due to worsening function in the contralateral limb. The LSI should not be used in isolation to evaluate functional performance changes after ACLR, as it may overestimate functional improvement. Exercise-based interventions may need to continue beyond the typical rehabilitation period of 6-12 months to improve or maintain function in both limbs, considering the deficits at 1-year post-ACLR compared to healthy controls, and minimal improvement over the proceeding 4-years.

Conflict of Interest: My co-authors and I acknowledge that we have no conflict of interest of relevance to the submission of this abstract

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S0 (6)

Does cam morphology size and location affect self-reported burden in football players with femoroacetabular impingement syndrome?

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Introduction: Diagnosis of femoroacetabular impingement (FAI) syndrome requires hip and/or groin (hip/groin) pain, positive clinical signs, and cam and/or pincer morphology. Cam morphology most often occurs in the anterosuperior region and is better visualised using a Dunn 45° radiograph than an anteroposterior pelvis (AP) radiograph. The relationship between anterosuperior (Dunn 45°) or superior (AP) cam morphology size and reported burden is unknown in people with FAI syndrome who do not seek surgery. Therefore, we aimed to investigate the relationships between cam morphology size and scores for the Copenhagen Hip and Groin Outcome Score (HAGOS) and International Hip Outcome Tool-33 (IHOT-33) in football players with FAI syndrome.

Methods: One hundred and eighteen sub-elite football players (12 women) with FAI syndrome (>6months of hip/groin pain, positive flexion-adduction-internal rotation test, and cam morphology) completed HAGOS and IHOT-33 questionnaires. All participants were aged 18 to 50-years-old and free from hip osteoarthritis and acetabular dysplasia. Participants underwent an anteroposterior (AP) pelvis and Dunn 45° radiograph. An alpha angle ³60° determined anterosuperior (Dunn 45°) and superior (AP pelvis) cam morphology to be present. Linear regression models were used to investigate the relationships between alpha angle (independent variable – assessed separately using AP and Dunn 45° radiographs) and IHOT-33 and HAGOS scores (dependent variables – score of 0 to 100).

Results: In total, 110 (93%, 9 women) and 77 (65%, 8 women) participants had cam morphology when assessed using the Dunn 45° and AP radiographs, respectively. Larger anterosuperior alpha angles were associated with worse scores for the IHOT-Total, IHOT-Symptoms, IHOT-Job, and IHOT-Social subscales (unadjusted estimate range -0.555 to -0.321 (95% confidence interval -0.899 to -0.044), $P=0.002$ to 0.024, $R^2=0.049$ to 0.089). Superior alpha angles were not related to any scores.

Discussion: Football players with larger anterosuperior, but not superior, cam morphology reported worse burden on all IHOT-33 scores, except the IHOT-Sport. Larger cam morphology identified using the Dunn 45° radiograph might have greater clinical relevance in football players with FAI syndrome, than the AP radiograph; however, further prospective studies are needed to discern importance of these findings over time. R^2 values suggest that other physical and non-physical factors also contribute to reported burden in football players with FAI syndrome.

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S8

Glenoid Labral Tears are associated with Increased Neurofilament Innervation

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Background: Pain is a common presentation following glenohumeral labral injuries. However, the source of that pain is undetermined. We aimed to determine if there is a differential expression of nerve fibres around the glenoid labrum and if torn labra have increased neuronal expression compared to untorn labra.

Methods: Labral tissue was collected at 3, 5, 9 and 12 o clock during total shoulder arthroplasty. Samples were also collected at 3, 5 and 12 o clock during rotator cuff repair, anterior labral repair, type II superior labral anterior to posterior (SLAP) repair and capsular release for idiopathic capsulitis. Sections were immunostained with antibodies to neurofilament, a specific neuronal marker which is used to identify central and peripheral nerve fibres, and the concentration and intensity of immunostained-positive cells assessed.

Results: The concentration of neurofilament staining was similar in the superior, anterior, posterior and inferior glenoid labrum in untorn labra (8 neurofilament expressing cells/mm2, $p > 0.05$). Torn labra exhibited a 3-4-fold increase in neuronal expression which was isolated to the location of the tear in SLAP ($p = 0.09$) and anterior labral tears ($p = 0.02$). The concentration of neurofilament expressing cells in torn glenoid labrum samples were comparable to the glenoid labrum of adhesive capsulitis samples ($p > 0.05$).

Conclusions: This study supports the hypothesis that following a traumatic tear of the anterior or superior labrum, the labrum in that region becomes populated with new nerves fibres and that these fibres are likely to be responsible for many of the symptoms noted by patients with superior (SLAP) and/or anterior labral (Bankart) tears.

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S11

Long-Term Durability of Restorative Neurostimulation for Chronic Mechanical Low Back Pain – Two-Year Pivotal Trial Results

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