Conclusions: Leg ulcer develops mainly due to venous disease in the lower extremities. Peripheral arterial occlusive disease seems to be rarely involved. It may cause unemployment in 46% and be resistant to treatment in 54% of the cases. Ulcers that appear early during the disease course heal faster and is more responsive to treatment.

Disclosure of Interest: None declared

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Osteoarthritis

SAT0552

BASILINE PREDICTORS OF UPPER LEG MUSCLE STRENGTH OVER 2 AND 4 YEARS IN SUBJECTS WITH KNEE OSTEOARTHRITIS: DATA FROM THE OSTEOARTHRITIS INITIATIVE

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Background: Muscle weakness is common in patients with knee osteoarthritis (OA). Muscle weakness negatively impacts future functional status, and has been linked to symptomatic and radiographic progression of knee OA. Limited information is available on the course of muscle strength over time in these patients.

Objectives: The aim of the present study is to (i) analyse the course and (ii) to identify baseline predictors for upper leg muscle strength over time in subjects with knee OA.

Methods: Data were obtained from the progression cohort of the Osteoarthritis Initiative (OAI) database. Upper leg muscle strength (in N/kg) was measured at baseline, 24 months and 48 months. Potential baseline predictors were demographic factors (age, gender, race, body height, body weight), metabolic factors (body mass index (BMI)), nutrition and vitamin related factors (dietary protein intake, dietary energy intake, vitamin D use, glucosamine use), lifestyle related factors (alcohol consumption, smoking, physical activity), OA-specific factors (KL grade, knee alignment, effusion, pain, pain medication use) and health related factors (comorbidities and depression). Univariable and multivariable mixed model analyses were performed to analyse the course and to identify baseline predictors for muscle strength over time.

Results: A total of 1390 subjects with knee osteoarthritis were included. The majority of the subjects were female (57.1%), mean $\pm$ SD for age was 61.4 $\pm$ 9.1 and mean $\pm$ SD for body mass index was 30.2 $\pm$ 4.9. All subjects had frequent knee symptoms and radiographic tibiofemoral knee OA (Kellgren en Lawrence score $\geq$ 2) at baseline. Muscle strength was significantly lower at 24 months and 48 months compared to baseline; there was no difference between 24 and 48

months. Older age, being female, higher BMI, being non-Caucasian, lower protein intake (g/kg bodyweight), higher dietary energy intake, alcohol consumption, less physical activity valgus malalignment, higher score on the WOMAC pain subscale and the use of pain medication at baseline were predictors of lower muscle strength over time.

Conclusions: Muscle strength decreased over time between baseline and 24 months, but not between 24 and 48 months, which may be attributed to reaching a plateau or to other reasons. In the present study a number of demographic factors, metabolic factors and factors related to nutrition and vitamins, lifestyle and knee OA were found to be predictive for decreased muscle strength over time. This set of baseline factors can be used to identify patients with knee OA at risk for decline of muscle strength over time. External validation of our model is needed.

Disclosure of Interest: None declared

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SAT0553

CHONDROCALCINOSIS OF THE KNEE AND THE RISK FOR KNEE OR HIP OSTEOARTHRITIS PROGRESSION: DATA FROM THE KHOALA COHORT

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Background: Cross-sectional studies repeatedly found that chondrocalcinosis (CC) is associated with osteoarthritis (OA). However, whether CC worsens pre-existing knee or hip OA is unclear.

Objectives: We conducted this study to assess the impact of knee CC on the risk of 1) incident joint replacement surgery, 2) worsening of pain or function and 3) radiographic progression in patients with symptomatic knee OA.

Methods: The KHOALA cohort is a French multicenter population-based cohort of 878 patients with symptomatic knee and/or hip OA (ACR criteria), aged 40–75 years. Patients were followed annually by self-reported questionnaires and by clinical examination and radiography at baseline (year 0), years 3 and 5. Only patients with knee OA were kept for this analysis. CC, defined by the presence of calcium deposits within hyaline or fibro-cartilage on knee radiograph (anteroposterior view), was recorded as present or absent. We used Cox proportional-hazard regression modelling to estimate the local or systemic impact of CC at one knee (index knee) on the 5 year risk of incident total knee replacement (TKR) at the index knee or incident total hip or knee joint replacement (TJR), respectively. In the subgroup of patients without incident TJR during follow-up, logistic regression was performed to assess whether CC was associated with the worsening of Western Ontario and McMaster Universities Arthritis Index (WOMAC) for OA pain or function, or with radiographic progression as defined by a change in Kellgren and Lawrence (KL) grade, between years 0 and 5.

Results: Among the 656 patients included (mean $\pm$ SD age 62.2 $\pm$ 8.5 years; 70.3% females), 93 (14.2%) had CC in at least one knee at baseline. As compared with patients without CC, those with CC were older (64.3 $\pm$ 9.6 vs 61.9 $\pm$ 8.2 years; $p=0.009$), had longer disease duration (16.4 $\pm$ 10.5 vs 13.0 $\pm$ 7.6 years; $p<0.001$) and lower body mass index (29.1 $\pm$ 5.3 vs 30.5 $\pm$ 6.3 kg/m²; $p=0.047$). Patients with/without CC did not differ in baseline pain (7.1 $\pm$ 4.3 vs 6.6 $\pm$ 3.8; $p=0.26$) and function (22.2 $\pm$ 14.7 vs 20.7 $\pm$ 13.5; $p=0.32$) scores, or KL grade ($p=0.69$). Overall, 105 (16.0%) and 91 (13.9%) patients underwent TJR and TKR of the index knee, respectively, during follow-up. The presence of CC at one knee did not affect the risk of TKR in the same index knee (HR=1.0; 95% CI 0.6 to 1.8), or risk of TJR (HR=0.9; 95% CI 0.5 to 1.6). In patients without incident TJR surgery ($n=551$), the presence of CC did not affect the risk of worsened WOMAC pain/function scores or KL grade at year 5.

Conclusions: In a population-based cohort of symptomatic knee OA, the presence of CC in the knee did not affect the risk of subsequent TKR or TJR, nor clinical or radiographic outcomes at 5 years. These results suggest that CC is not a risk factor for worsening clinical or structural outcomes in knee OA.

Disclosure of Interest: None declared

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SAT0554

PREOPERATIVE PHYSICAL FUNCTION INFLUENCES ON STAIR CLIMBING ABILITY 1 MONTH AFTER TOTAL KNEE ARTHROPLASTY

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Objectives: This study was undertaken to identify preoperative physical performance factors predictive of stair climbing ability 1 month following total knee arthroplasty.