**Conclusion:** The higher the Boruta importance score, the stronger the impact the particular input variable has on the outcome variable.

**Results:** The cohort comprised 1,329,698 new opioid users (801,533 women [60.3%]; 525,542 White patients [88.2%]), with a mean age of 60 years [SD 17]. The proportion patients with different RMDs in order of frequency were OA: 1,246,574 (93.7%); RA: 50,000 (3.8%), fibromyalgia [47,708, 3.6%], PsA (11,181 (0.8%)); SLE [6,757 (0.5%)] and AS [6,560 (0.5%)]. Of our study population, 4,016 individuals (0.3%) experienced a hospitalization for opioid-related harms within our follow-up period of five years after first prescription date. Logistic regression and random forest model showed consistent results when ranking the most important variables associated to opioid-related hospital admissions. The main risk factor identified consistently across both methods was history of alcohol excess, with an odds ratio (OR) of 10.7; 95% confidence interval (95% CI): 8.1–14.2 and Boruta Importance (Imp) of 93.6. Other main risk factors included history of attempted suicide and self-harm (OR 7.5; 95% CI: 5.6–9.8, Imp: 80.3), major depression (OR 2.0; 95% CI: 1.7–2.3, Imp: 39.7) and lower socioeconomic status (OR: 10.4, 95% CI: 4.6–23.4, Imp: 34.0).

**Conclusion:** Patients with a documented history of alcohol excess, severe psychological problems and those most socioeconomically deprived were found to have a higher risk of opioid-related hospitalisations. Medical providers should be made aware of psychosocial factors associated with opioid hospital admissions when prescribing opioids to patients with RMDs. By determining patient subgroups most vulnerable to opioid-related harms and further analysing patient risk factors, we hope to contribute to the development of targeted interventions for safer future clinical care.

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**POS0938**

**PROLONGED PHYSICAL STRAIN AT WORK CONVERS RISK FOR DEVELOPMENT OF RHEUMATOID ARTHRITIS IN PATIENTS WITH CLINICALLY SUSPECT ARTHRALGIA: CUES FOR MECHANICAL FACTORS AS FINAL PATHOPHYSIOLOGICAL HIT**

**Keywords:** Rheumatoid arthritis, Epidemiology, Work-related issues

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**Background:** Some case-control studies have identified physical workload as a risk-factor for rheumatoid arthritis (RA).

**Objectives:** To better understand its influence on the pathophysiological trajectory of RA-development, we studied the relation of work-related physical strain with MRI-detected joint-inflammation in clinically suspect arthralgia (CSA) and the general population, and with progression from CSA to clinical arthritis.

**Methods:** 501 consecutively presenting CSA-patients and 155 symptom-free persons filled out questionnaires on their occupation. Physical strain was determined using the International Standard Classification of Occupations (ISCO) per subject-reported occupation. Contrast-enhanced hand-MRIs were evaluated for synovitis/tenosynovitis/osteitis (summed as joint-inflammation) using the RAMRIS method. CSA-patients were followed on clinical arthritis development (median follow-up 25 months). Analyses included interaction with age as proxy for prolonged physical strain.

**Results:** In CSA-patients, the degree of physical strain was associated with the severity of subclinical joint-inflammation, independent of BMI/smoking/education-level: there was a positive interaction between age and physical strain; p=0.007. Plotting the age-dependent effects showed a positive relation in CSA-patients aged ≥50 years (Figure 1A), suggesting the effect relates to higher physical strain in symptom-free persons who was not associated with MRI-detected joint-inflammation. Older (≥50 years) CSA-patients with higher physical strain developed clinical arthritis more often (Figure 1B; HR 1.17 (95% CI 1.00–1.35) per 10 percentage-points physical strain increase; p=0.043). This was partially mediated by subclinical joint-inflammation. Moreover, physical strain partially mediated the known association between low educational attainment and clinical arthritis development.

**Conclusion:** Prolonged work-related physical strain increases the risk of developing RA in CSA-patients, which is partially mediated by an effect on increased subclinical joint-inflammation. This points to mechanical factors as a final hit in the pathophysiology of RA-development.

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**POS0939**

**PLEUROPARENCHYMAL FIBROELASTOSIS: A SPECIAL CLINICAL SITUATION IN PATIENTS WITH INTERSTITIAL LUNG DISEASE ASSOCIATED WITH CONNECTIVE TISSUE DISEASES. DESCRIPTIVE STUDY FROM A REFERRAL CENTRE**

**Keywords:** Comorbidities, Lungs

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**Background:** Pleuraparenchymal fibroelastosis (PFPE) is a rare interstitial lung disease (ILD) that can be idiopathic or associated with a variety of different conditions, including connective tissue diseases (CTD) [1-2]. In this regard, the presence of PFPE has been reported as an independent predictor of worse