Results: Over a mean 4.06±1.07 years of follow-up, there were 132 (15.7%) deaths. In men, after adjustment for age, BMI, smoking, physical activity, alcohol, diabetes, dyslipidemia, cardiovascular event, recurrent falls, 25OHD and PTH, the presence of sarcopenia (OR 11.36, 95% CI: 2.21–58.37, p=0.004) and visceral fat mass (OR 1.99 95% CI: 1.38–2.87, p<0.001, for each 100g-increase) significantly increased all-cause mortality risk, while FMI was associated with decreased mortality risk (OR 0.48, 95% CI: 0.33–0.71, p<0.001). Similar results were observed for cardiovascular mortality in men: sarcopenia (OR 14.84, 95% CI: 5.15–47.72, p<0.001), visceral fat mass (OR 1.66, 95% CI: 1.31–2.10, p<0.001) and FMI (OR 0.57,95% CI: 0.43–0.76, p<0.001). In women, only sarcopenia was predictor of all-cause (OR 62.88, 95% CI: 22.59–175.0, p<0.001) and cardiovascular death (OR 74.54, 95% CI: 9.72–571.46, p<0.001).
Conclusions: Sarcopenia and fat distribution are associated with all cause and cardiovascular mortality risk in elderly, and they are different according to sex. Visceral fat and subcutaneous fat have opposite roles on mortality risk in elderly men, and this is distinct from what is observed in young adults.These findings point to the risk of encouraging weight loss in the elderly aiming young adult goals. Furthermore, DXA seems to be a promising tool for evaluation risk of mortality in elderly, since it is easily applicable in clinical practice.
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AB1125 PREDICTION OF CHRONIC DAMAGE IN SYSTEMIC LUPUS ERYTHEMATOSUS BY USING MACHINE-LEARNING MODELS

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Background: The increased survival in Systemic Lupus Erythematosus (SLE) patients implies the development of chronic damage, occurring in up to 50% of cases after a follow-up of 10 years. Its prevention is a major goal in the SLE management. During the last years, it has been suggested that Artificial Neural Networks (ANNs) could be a useful prediction tool in medical *scenarios*, by using patients' data as inputs and the specific outcomes as outputs. The International Conference on Advanced Computing and Communication Systems in 2015 underlined the possible application of sophisticated data analysis tools, such as machine learning methods, in SLE patients, in the light of their potential application to diagnostic and prediction purposes.
Objectives: In the present study, we aimed at predicting chronic damage in a large monocentric SLE cohort by using neural networks.
Methods: For the present analysis, we used data from 413 SLE patients (1997 ACR criteria; M/F 30/383; mean age ± SD 46.3±11.9 years; mean disease duration ± SD 174.6±112.1 months, mean follow-up period ±SD 63.9±30.7 months). At each visit, the patients underwent a complete physical examination and clinical and laboratory data were collected in a standardized, computerized, and electronically filled form. All the patients were evaluated at least twice per year. Autoantibodies and complement serum levels were also registered. Chronic damage was assessed by the SLICC/ACR Damage Index (SDI). We applied Recurrent Neural Networks (RNNs) as a machine-learning model to predict the risk of chronic damage. The clinical data sequences registered for each patient during the follow-up were used for building and testing the RNNs. We used 27 clinical and laboratory items for the mathematical model.
Results: At the first visit, 35.8% of patients had an SDI≥1, with a mean±SD value of 1.7±1.1. For the RNN model, two groups of patients were analyzed: patients with SDI=0 at the baseline, developing damage during the follow-up (N=38), and patients without damage (SDI=0). In particular, in the first group, we used all the visits before the development of damage, and in the second group, we considered patients with at least 5 visits and a follow-up of 2 years. We created a mathematical model with an AUC value of 0.77, able to predict damage development. A threshold value of 0.35 (sensitivity 0.74, specificity 0.76) seems able to identify patients at risk to develop damage.
Conclusions: We applied RNNs to identify a prediction model for SLE chronic damage. By using longitudinal data, including laboratory and clinical items, we created a mathematical model able to identify patients at higher risk to develop chronic damage.
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AB1126 CITRULLINATION OF PROTEINS, SMOKING AND RHEUMATOID ARTHRITIS

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Background: Rheumatoid arthritis (RA) is an inflammatory disease characterized by chronic synovitis and erosive destruction of articular cartilage and bone ultimately leading to joint deformities, disability, loss of quality of life and work loss. There are multiple risk factors, both environmental and genetic, that may predispose an individual to developing RA. Cigarette smoking is the most important risk factor. Citrulline contained within proteins is created post-translationally by the action of the enzyme peptidyl arginine deiminase on the aminoacid arginine. Citrullination takes place in several normal cellular processes, including inflammation, apoptosis, and cellular differentiation. Additionally, tissues involved in inflammation have increased levels of citrullinated proteins. Smoking may lead to increased formation of citrullinated proteins, which in the appropriate genetic background leads to autoimmunity to citrullinated proteins and subsequently the development of clinically apparent RA. This model of RA development is compelling at least in terms of anti-citrullinated peptides antiodies (ACPA) positive RA that occurs in smokers, although the specific anatomic sites and mechanisms by which smoking leads to ACPA generation and RA have yet to be elucidated.
Objectives: To evaluate the prevalence of tobacco smokers in different sub-groups of patients with RA. Sub-groups were formed according to the combination of positivity and negativity of ACPA and rheumatoid factor (RF).
Methods: We examined patients with rheumatoid arthritis. We performed examination of ACPA and RF at the baseline. We formed 4 sub-groups of patients with rheumatoid arthritis: ACPA positive and RF positive, ACPA positive and RF negative, ACPA negative and RF positive, ACPA negative and RF negative. We collected data from medical history concerning smoking status in each individual patient.
Results: The total number of 290 patients with rheumatoid arthritis was examined. There were 50 patients in the sub-group with ACPA positivity and RF positivity, 19 of them were smokers (38%, n=50). There were 13 patients in the sub-group with ACPA positivity and RF negativity, 5 of them were smokers (39%, n=13). There were 97 patients in the sub-group with ACPA negativity and RF positivity, 28 of them were smokers (29%, n=97). There were 130 patients in the sub-group with ACPA negativity and RF negativity, 28 of them were smokers (21%, n=130. The highest prevalence of smokers was in the sub-group of patients with ACPA and RF positive rheumatoid arthritis (39%) and ACPA positive and RF negative rheumatoid arthritis (38%). The prevalence of smokers in ACPA negative sub-groups of patients with rheumatoid arthritis is significantly lower.
Conclusions: We confirmed that prevalence of smokers is significantly higher in the sub-group of patients with ACPA positive rheumatoid arthritis than in the sub-group with ACPA negative rheumatoid arthritis. Quitting smoking is highly recommended especially to these patients in order to achieve a favorable effect on the course of the disease.
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AB1127 HEALTH LOCUS OF CONTROL IN SYSTEMIC LUPUS ERYTHEMATOSUS – A CROSS-SECTIONAL ANALYSIS OF THE LULA-COHORT IN GERMANY 2013

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Background: Health Locus of Control (HLC) is the degree to which individuals believe that their health is controlled by internal (self-responsibility) or external factors (healthcare professionals or chance). This generalized expectancy might affect different disease aspects, especially in chronic diseases.
Objectives: Our objective was to assess the influence of HLC on different disease aspects in a representative sample of German systemic lupus erythematosus (SLE) patients.
Methods: The LuLa-Study is a longitudinal survey on a multitude of SLE associated factors that is being conducted annually by means of a self-reported questionnaire among members of the German LE self-help community since 2001 and is ongoing. Inclusion criteria are a diagnosis of SLE and returning the completed paper questionnaire. Amongst others medication, health-related quality of life (Short-Form-12), damage (Brief index of lupus damage) and disease activity (Systemic Lupus Activity Questionnaire) are surveyed. In 2013 we additionally inquired about the health locus of control (HLC) that distinguishes between the "internal" HLCint (self-responsibility) and the two external dimensions HLCdoc and HLCchance considering their doctor respectively chance responsible for personal health. A high HLC was assumed for values above the upper quartile of the specific scales. Accessory questions examined fatigue (Fatigue severity scale), medication adherence (Morisky medication adherence scale), and illness perception (Brief illness perception questionnaire).

Results: Patients with a high internal health locus of control (HLCint 13.1 vs. 9.1) had less pain (numeric rating scale 0–10), less flares, a better mental and physical health related quality of life, lower disease activity and less fatigue. Patients with a high external 'doctor'-related health locus of control (HLCdoc 10.7 vs. 7.2) were older, had more co-morbidities, more disease damage and received more frequently an immunosuppressive therapy. No significant differences were found between the patients with a high external 'chance'-related HLC compared to the lower scoring patients (HLCcha 11.1 vs. 6.3). Participants with a high external 'doctor'-related HLC had a more threatening view on their illness and a better adherence to medication (high adherence in 78.6% vs. 59.4%). Participants with a high internal HLC perceived their disease significantly less threatening. Higher education levels (school education, further education) went along with a decrease of external 'doctor'-related HLC (HLCdoc).
Conclusions: Health locus of control has a significant impact in patients with SLE. Depending on the HLC different disease characteristics, treatments, levels of medication adherence and illness perception were noticed. Holistic care needs to consider the impact different HLCs may have. The direction of causality cannot be proved beyond reasonable doubt in this cross-sectional analysis. Hence additional longitudinal studies are necessary.
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AB1128 HELICOBACTER PYLORI IN SYSTEMIC LUPUS ERYTHEMATOSUS ITS ASSOCIATION WITH ENDOSCOPIC AND HISTOPATHOLOGIC FINDINGS

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Background: Helicobacter pylori (Hp) is a Gram-negative bacteria and the cause of most of the chronic gastric infections and its prevalence is above 50% worldwide. This infection is a well-known risk factor to gastric MALT lymphoma but also could be the trigger of several autoimmune diseases such as immune thrombocytopenic purpura and systemic lupus erythematosus
Objectives: To determine the frequency of H pylori in systemic *lupus erythematosus patients* (SLE).
Methods: A cross-sectional study was done in patients who fulfilled the 2012 SLICC criteria for SLE and were willing to sign the informed consent to be subjected to endoscopic procedure. The tissue sample was analyzed by pathologist. We used mean and standard deviation to describe the data, to compare both groups Student t test was done and for continuous variables we used chi-square; the correlation analysis was performed with
Results: Twenty two SLE patients were included and we chose a control group from database of endoscopic clinic with diagnosis of functional dyspepsia. Mean age of study group was 31 vs 48 year-old, 95% were women, 32% with immunosuppressant and 95% were taking *antimarials*. The frequency of Hp in SLE patients was 60%, dsDNA and anti-Ro autoantibodies were associated with the presence of Hp; the study group had more frequency of nodular gastritis, metaplasia and dysplasia. Seventy per cent of patients had less than 5 years of diagnosis.
Conclusions: We found a high frequency of H pylori infection in patients with SLE. Metaplastic and dysplastic changes were also more prevalent in the SLE group. Our data suggest that Hp infection took place in early stages of disease.
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AB1129 A SYSTEMATIC REVIEW ON PREVALENCE OF BACK PAIN AND SPONDYLOARTHRITIS BASED ON COPCORD STUDIES

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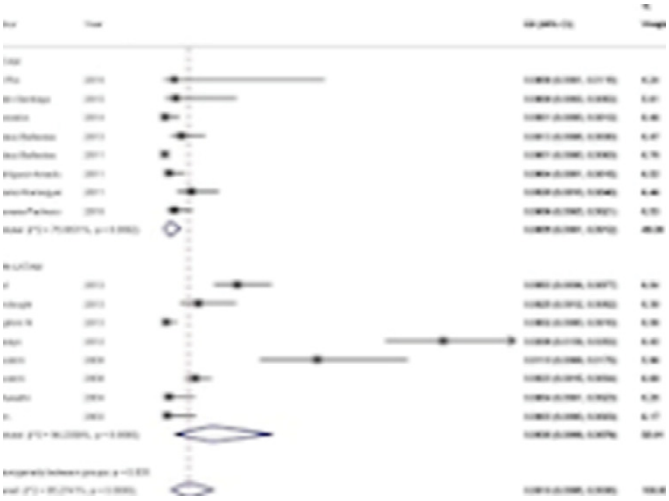
Objectives: To determine, through a systematic review and meta-analysis, the prevalence of back pain (BP) and spondyloarthritis (SpA) in the adult general population and explore the heterogeneity between studies in and out Latin America (LATAM).
Methods: MEDLINE, Embase, BIREME, LILLACS and Web of Science were searched using a strategy combining key words and related database-specific subject terms to identify relevant cross-sectional studies based on COPCORD methodology published since 2006. Included articles were assessed for risk of bias and quality based on the STROBE statement. Prevalence figures for BP and SpA (European Spondyloarthropathy Study Group criteria) were analyzed according to female percentage of sampled individuals, mean age and sample size. A mixed effect model was used to obtain the combined prevalence and a meta-regression to estimate the effects of these variables. Prevalence stratified values were obtained according to its geographical location.
Results: 44 out of 127 papers in English, Spanish or Portuguese were selected. Of them, 16 contained BP or SpA prevalence data. Estimates for any Spa prevalence ranged from 0,1% to 2%, with an average of 0,3% (95% CI: 0,01%>0,05%). The random-effects pooled prevalence was 0,18% (0,06%>0,36%). The prevalence of BP was 6.54% (3.8%>9.2%) with a pooled value of 5.24% (2.6%>8.7%). In both cases the heterogeneity was significant ($p<0.01$). No effect was associated to SpA heterogeneity, but an increase in the prevalence of BP was associated to sample size (random effect coefficient: 0,045, p=0.04). The stratified analysis did not show differences in terms of heterogeneity or prevalence for BP (Pooled prevalence for BP: 5.4%; 2.9%>8.5%, p=0.9); on the contrary, for Spa, for non-LATAM studies, the pooled proportion was significant bigger (prevalence in LATAM 0.05%, 0.01%>0.012%; non-LATAM: 0.35%, 0.09%>0.78%, p=0.03)



Conclusions: We found significant variations in prevalence across this review. In particular, they related to sample size of BP studies. Similarly, there was a significant variation between LATAM versus other latitudes respect to the prevalence of SpA. The limited number of studies included in this meta-analysis however, prevents clear explanations of the mechanisms underlying these results.
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AB1130 RELAPSE RISK ASSESSMENT IN YOUNG APS PATIENTS WITH PREVIOUS STROKE EVENT USING THE ADJUSTED GLOBAL ANTIPHOSPHOLIPID SYNDROME SCORE (AGAPSS)

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Background: The most frequent manifestation of arterial thrombosis in patients affected by Antiphospholipid syndrome (APS) is ischaemic stroke, especially in young adults (less than 50 years old) [1]. Young adults affected by APS are a group of patients at greater risk of developing serious stroke events and recurrences of thrombosis. Therefore, risk stratification in this particular group is crucial, especially in order to prevent a recurrence of ischaemic thrombotic event.
Objectives: With the present study we aimed to assess the clinical usefulness of the adjusted Global AntiphosPholipid Syndrome Score (aGAPSS) [3] for risk stratification of thrombosis relapse and/or progression of known ischaemic lesions dectected with Magnetic Resonance Imaging (MRI) in a cohort of young adult APS patients.