**Results:** We included FOI scans of patients with PsA/Pso (n=80), patients with RA (n=78) and healthy controls (n=25). Significantly more PsA/Pso patients showed subclinical skin enhancement on the back of their hands than RA and healthy individuals (PsA/Pso: 72.5%; RA: 20.5%; healthy controls: 29.0%; p<0.001). By using the pattern of skin enhancement, it was possible to categorize 58 of 80 patients correctly as PsA/Pso (72.5%), 60 out of 78 as RA (76.9%) and seventeen out of 25 as healthy controls (68.0%; p-value <0.001). We could show an influence of the body weight (kg) (p<0.001, OR 1.04, CI 1.02; 1.06) on the FOI results; no further correlation with cardiovascular risk factors was detected.

**Conclusion:** We were able to prove our primary hypothesis that it is possible to visualize subclinical subdermal skin inflammation in PsA/Pso patients using FOI. Furthermore, we were also able to categorize PsA/Pso and RA patients correctly by using our newly developed method. Although we could not establish a correlation between subdermal skin enhancement and cardiovascular risk factors, we demonstrated an important influence of the body weight on our FOI results. FOI may be a helpful novel tool to study microcirculation in rheumatic diseases with skin involvement.

**References:**

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**Figure.** Left picture: The enhancement is mostly yellow on green ground classified as grade 1. Middle picture: The enhancement is red with minimal white signals classified as grade 2. Right picture: The enhancement in the marked area shows more white than red signals which presents grade 3.

**Disclosure of Interests:** Angelique Schmidt Speakers bureau: Speakers fee from Novartis, Roche, Abbvie, BMS, Anne-Marie Glimm: None declared, Paula Hoff: None declared, Gabriela Schmitt: None declared, Gerd Rüdiger Burmester Consultant of: AbbVie Inc, Eli Lilly, Gilead, Janssen, Merck, Roche, Pfizer, and UCB Pharma, Speakers bureau: AbbVie Inc, Eli Lilly, Gilead, Janssen, Merck, Roche, Pfizer, and UCB Pharma, Jens Klotzsche: None declared, Sarah Ohmdorf: None declared.

**DOI:** 10.1136/annrheumdis-2020-eular.1227

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**OP0312**

**THE IMPACT OF AN ULTRASOUND ATLAS FOR SCORING SALIVARY GLANDS IN PRIMARY SJÖGREN’S SYNDROME: A RELIABILITY EXERCISE**

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**Background:** Salivary gland ultrasound (SGUS) may have the potential of facilitating diagnosis and therapy monitoring of salivary gland disease in patients with primary Sjögren’s syndrome (pSS). A novel consensus based OMERACT SGUS scoring system for the parotid and submandibular glands has recently been developed.(1)

**Objectives:** To assess the reliability of 3 readers using the written definition of the scoring system provided by the OMERACT group and subsequent the impact of a SGUS-atlas based on the OMERACT SGUS scoring system.

**Methods:** Three sonographers with 7-8 years of US experience performed a US exercise of 30 SGUS images of patients with SS. 16 images were of the submandibular gland (SMG) and 14 images of the parotid gland (PG) ranging from normal to varying degrees of abnormalities. The images were scored using the US scoring system provided by the OMERACT-group and subsequently using a SGUS atlas made for the study consisting of 4 images of every grade 0-3 of both the SMG and the PG. The readings were performed over 4 rounds: the first reading without using the atlas and second reading using the atlas 1 week later. The 30 images were scrambled by a physician not included in the readings and a third and fourth reading were performed without and with the atlas respectively— with 1 week in between. Inter- and intra-reader reliability were calculated by kappa-tests.

**Results:** Light weighted Kappa for intra- and inter-reliability was determined for each reading. The results of the intra-reader reliability was ranging from moderate to almost perfect with improvement in the 2nd round of readings and with use of the atlas. The inter-reader reliability was moderate and better in the 2nd round of readings. Readings improved with the atlas. Details are shown in table 1.

**Table 1**

<table>
<thead>
<tr>
<th></th>
<th>Intrareader reliability Weighted Kappa</th>
<th>Interreader reliability Weighted Kappa</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reading 1 without atlas vs. reading 2 with atlas</td>
<td>0.93, 0.85, 0.80</td>
<td>0.93, 0.93, 0.86</td>
</tr>
<tr>
<td>Reading 2 without atlas vs. reading 2 with atlas</td>
<td>0.78, 0.93, 0.78</td>
<td>0.55 (0.33 – 0.93)</td>
</tr>
<tr>
<td>Reading 1 without atlas vs. reading 2 without atlas</td>
<td>0.78, 1.00, 0.58</td>
<td>0.60 (0.40 – 0.93)</td>
</tr>
<tr>
<td>Reading 1 with atlas vs. reading 2 with atlas</td>
<td>0.93, 0.93, 0.86</td>
<td>0.60 (0.40 – 0.93)</td>
</tr>
</tbody>
</table>

**Conclusion:** The results of the inter- and intra-reliability showed a moderate to almost perfect agreement respectively, of scoring SGUS in patients with pSS and especially in the 2nd round of readings indicating that training and the SGUS atlas increased the reliability.

**References:**

**Disclosure of Interests:** Nanna Surlenmont Schmidt: None declared, Viktoria Fana: None declared, Hanne Merete Lindegaard: None declared, Lena Terslev Speakers bureau: LT declares speakers fees from Roche, MSD, BMS, Pfizer, AbbVie, Novartis, and Janssen.

**DOI:** 10.1136/annrheumdis-2020-eular.3639

**Fractures, more than bone alone: the role of sarcopenia**

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**Background:** There is a strong association between osteoporosis and skeletal muscle dysfunction. Heparan-sulfate proteoglycans are abundant in skeletal muscles and may represent a target for RANKL inhibitor. It was noted that patients who completed their planned denosumab therapy course (5-years) started to sustain falls.

**Objectives:** To assess the effect of Denosumab on falls risk, physical performance, grip strength and gait speed and whether there is a relation with bone mineral density.

**Methods:** 127 osteoporotic patients treated with denosumab were assessed prior to starting denosumab therapy for: baseline BMD using DXA scan, blood test for osteoporosis bone profile, self-reported falls risk using (FRAS score [1]), fracture risk using FRAX, handgrip strength using a calibrated dynamometer (the best of three trials of the dynamometer testing was recorded), the patient’s physical performance assessed by testing for: Short Physical Performance Battery (SPPB), Timed Up and Go (TUG), and the 4 Meter Walk Gait Speed. Same measures were assessed again after completing 5-years of denosumab therapy. Comparison groups included 112 patients diagnosed to have osteoporosis and treated with zoledronate (Zol), once yearly IV injection, for 3-years; and 134 patients treated with once weekly oral alendronate (Aln) 70mg for 5-years. The patients were assessed for the same parameters as in the denosumab therapy. All the measures were reassessed 1-year after stopping the osteoporosis therapy.