### Table 1. Changes in patient-reported outcomes after the treatment period

<table>
<thead>
<tr>
<th></th>
<th>Placebo (n=124)</th>
<th>rTMS (n=122)</th>
<th>p value (t-test)</th>
</tr>
</thead>
<tbody>
<tr>
<td>BDI</td>
<td>Mean</td>
<td>SD</td>
<td>Mean</td>
</tr>
<tr>
<td>POST BDI</td>
<td>13.00</td>
<td>10.15</td>
<td>19.40</td>
</tr>
<tr>
<td>A</td>
<td>4.67</td>
<td>4.51</td>
<td>5.11</td>
</tr>
<tr>
<td>FQIR</td>
<td>48.05</td>
<td>29.35</td>
<td>51.65</td>
</tr>
<tr>
<td>POST FQIR</td>
<td>44.78</td>
<td>31.78</td>
<td>38.18</td>
</tr>
<tr>
<td>Δ</td>
<td>-3.27</td>
<td>15.49</td>
<td>-16.37</td>
</tr>
<tr>
<td><em>MOS sleep disturbance</em></td>
<td>54.17</td>
<td>26.94</td>
<td>52.38</td>
</tr>
<tr>
<td>POST MOS</td>
<td>35.83</td>
<td>17.34</td>
<td>50.42</td>
</tr>
<tr>
<td>Δ</td>
<td>-18.33</td>
<td>11.55</td>
<td>-3.06</td>
</tr>
<tr>
<td>^SF-36 vitality</td>
<td>30.00</td>
<td>20.00</td>
<td>24.50</td>
</tr>
<tr>
<td>POST SF-36 vitality</td>
<td>31.67</td>
<td>22.55</td>
<td>33.89</td>
</tr>
<tr>
<td>Δ</td>
<td>1.67</td>
<td>2.89</td>
<td>12.22</td>
</tr>
</tbody>
</table>

Abb. Δ = delta changes after the treatment phase (POST – BASELINE); ^ - considered as statistically significant; * only one subscale within questionnaire was presented

### REFERENCES: NIL.

### Acknowledgements: NIL.

### Disclosure of Interests: None Declared.

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### POS1344 CLINICAL AND HISTOLOGICAL FEATURES OF RESIDUAL PAIN IN RHEUMATOID ARTHRITIS REMISSION STATUS

#### Keywords: Pain, Synovium, Rheumatoid arthritis

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#### Background: Rheumatoid arthritis (RA) is a chronic disease characterized by a high degree of disability and pain. Remission is the optimal goal but, even when it is reached, the pain can persist as “residual pain”.

#### Objectives: The aims of the study were (i) to characterize the size and perception of residual pain and (ii) to evaluate the possible impact of residual synovitis on pain perception in remission RA patients.

#### Methods: One hundred twenty-seven RA patients (defined by 2010 ACR/EULAR criteria), of which 68 in clinical and ultrasound remission (REM-RA) and 29 in the possible non-inflammatory nature of residual pain. It emerges that the features of pain in patients in remission is different from other conditions (high disease activity or fibromyalgia), suggesting different underlying biological mechanisms.

#### References: NIL.

### Acknowledgements: NIL.

### Disclosure of Interests: Simone Perniola Speakers bureau: AbbVie, Eli Lilly Italia, Galapagos Biopharma, Pfizer, Novartis, Consultant of: AbbVie, Eli Lilly Italia, Galapagos Biopharma, Luca Petriccia: None declared, Marco Gessi: None declared, Maria Rita Gigante: None declared, Martina Calabretta: None declared, Dario Bruno: None declared, Annunziata Capacci: None declared, Clara Di Mario: None declared, Barbara Tolusso: None declared, Stefano Alivernini Speakers bureau: AbbVie, Eli Lilly Italia, Pfizer, Novartis, Consultant of: AbbVie, Eli Lilly Italia, Pfizer, Novartis, Grant/research support from: Pfizer, Elisa Gremese Speakers bureau: AbbVie, Eli Lilly Italia, Pfizer, Novartis, Consultant of: AbbVie, Eli Lilly Italia, Pfizer, Novartis, Grant/research support from: AbbVie, Pfizer, Novartis.

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### POS1345 PAIN OVER 5 YEARS IN OUR EARLY RHEUMATOID ARTHRITIS UCLouvain BRUSSELS COHORT: RESULTS AND CORRELATION WITH CLINICAL RESPONSE, QUALITY OF LIFE

#### Keywords: Quality of life, Rheumatoid arthritis, Patient reported outcomes

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#### Background: Pain is a major patient reported outcome in early rheumatoid patients (ERA). Pain is associated with disease activity but could be also related to non-inflammatory conditions. Chronic pain has a negative impact on quality of life in ERA patients. The main treatment objective in ERA is remission or low disease control, but relief of pain is a priority of patient.

#### Objectives: To evaluate the pain course and the proportion of unacceptable pain (VASp >4) during a five-years follow-up in ERA patients and to investigate correlation with clinical response and quality of life.

#### Methods: 474 ERA patients fulfilling the 2010 EULAR/ACR criteria included in our ERA UCLouvain Brussels cohort were retrospectively analyzed. All were naive to csDMARDs (MTX), b- or tsDMARDs with symptoms duration < 12 months. Pain was assessed using a visual analogue scale (0-100 mm) and unacceptable pain was defined as a VAS pain > 40mm (VASp >4) based on the patient acceptable symptom state. VASp, HAQ and DAS28-CRP scores were assessed at baseline (BL), 6, 12, 36 and 60 months in order to correlate the % of ERA with an unacceptable pain (VASp>4), non clinical response (DAS28-CRP> 3.2) and no restored quality of life (HAQ >0.5).

#### Results: Data from 474 eligible ERA patients were collected. The average age of the population is 48.5 years, and the BMI is 25.3. 70.5% of the patients are women, 27.1% are smokers and 68.8% are positive for anti-citrullinated protein antibody (ACPA). The evolution of VAS pain over 5 years of follow-up is shown in Figure 1:

![Figure 1](http://ard.bmj.com/)

At BL, the mean VAS pain at the baseline was at 60.2 +/- 26.5mm (range 0-100mm). VASp pain was reduced by 45% (mean 33.1+/- 28.5 mm) at 6 months and remained stable with 51.7% reduction (mean 29.0 +/-27.6mm) at 5 years. 78% of patients (n=368) reported an unacceptable pain at diagnosis which was reduced to 40.4% (n=163) at 6 months and 33% at year 5 (Figure 2):
Methods: In this monocentric five-armed study (ethical approval under Institutional Review Board #065/20), four groups of each 20 patients with RA, PsA, axSpA or SSc, and one control group consisting of 20 healthy individuals were collected and a somatosensory profile using the standardized procedure of QST was created for each one of the 100 participants. QST included both small fiber mediated stimuli and large fiber mediated stimuli, via all categories shown in Figure 1. The vibration detection threshold where the detection of vibration is ranked on a scale from zero to eight, with ‘8’ being normal perception of vibration, serves as an example for large fiber mediated stimuli. Additionally, standard questionnaires incorporating laboratory parameters, joint manifestations and pain condition were used to determine disease activities (BASDAI, PASDAS, CDAI and mRSS).

Results: A preliminary data analysis of all 100 study participants found occurrence of allodynia in 5% of patients with SSc, 15% of RA, 25% of PsA, and 15% of all axSpA patients, compared with 0% in the control group. Considering the vibration detection threshold, there was little difference between all disease groups, also in comparison to the control group: SSc (mean ± SD: 7.79 ± 0.34), RA (mean ± SD: 7.66 ± 0.4), PsA (mean ± SD: 7.76 ± 0.34), AxSpA (mean ± SD: 7.69 ± 0.57) and control group (mean ± SD: 7.98 ± 0.16).

Conclusion: The analysis for allodynia occurrence indicates the presence of sensory gain towards small fiber mediated stimuli in all four disease groups studied. Until now, our vibration detection threshold studies do not suggest a loss or gain of sensory function for large fiber mediated stimuli. The full analysis completion is expected in March 2023.

REFERENCE:

Figure 2. Clinical response: VASp, DAS28-CRP and HAQ throughout the follow-up

No statistical difference was observed for age, sex ratio, BMI, ACPA, or RF except for smoking (27.3% vs 15.6%) between patients with unacceptable pain or not. A strong correlation was observed between the decrease of VAS pain, DAS28-CRP and HAQ at all time points. Among the patients with an unacceptable pain at 6 months, HAQ BL score was statistically higher (1.30 +/- 0.69 vs 1.15 +/- 0.67), while the BL DAS28-CRP scores were similar (4.66 +/- 1.41 vs 4.67 +/- 1.24). We identified also 20 patients with unacceptable pain throughout the 5 years follow-up, BL DAS28-CRP and HAQ values were statistically increased (5.4 +/- 1.1 vs 4.7 +/- 1.4 and 1.41 +/- 0.86 vs 1.21 +/- 0.62). By contrast, 31 patients reached a complete response defined by a VAS pain <4 + DAS28-CRP<3.2 + HAQ< 0.5 throughout the 5 years follow up). Baseline VAS pain, DAS28-CRP and the HAQ scores assessed at diagnosis were statistically lower in this group. (38.9 +/- 28.4 vs 61.9 +/- 25.7, 4.3 +/- 1.1 vs 4.8 +/- 1.4 and 0.86 +/- 0.60 vs 1.2 +/- 0.71). All patients were treated according the standard of care, mainly with Methotrexate.

Conclusion: We demonstrate that control of pain is achieved in a majority of ERA patient in our cohort. Decrease of pain was correlated with decrease of the disease activity score, meaning that the positive effect is mainly related to inflammation in ERA.

REFERENCES: NIL.

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