were included in the study. Musculoskeletal manifestations of patients were seen in FMF patients attacks more than half of the time. It was determined that the musculoskeletal manifestations were explained and recurrent musculoskeletal symptoms, especially in ethnicities with the high frequency of FMF, can help reveal the underlying cause.

REFERENCES:

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POS1303 EXPERIENCE WITH ADAHIMUB MAB SIMILAR USE IN CLINICAL PRACTICE: DATA FROM THE GERMAN BIKER-REGISTRY

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Background: In 2017, Adalimumab Biosimilars became approved. Comparative studies to the originator have been performed in adult patients with rheumatoid arthritis, ankylosing spondylitis and psoriasis and extrapolation led to approval for juvenile idiopathic arthritis (JIA).

Objectives: So far there is limited experience with biosimilars in JIA. The large national data base of the BIKER-registry was used to describe experience with Adalimumab biosimilars in clinical practice

Methods: This retrospective analysis used data of the German BIKER-registry. The data basis was screened for patients exposed to Adalimumab. Subcohorts with initiation of treatment after 2017, use of the originator and of biosimilars were built. The course of JADAS10, Physician global assessment VAS 0–100 mm, Parent/patient global assessment VAS 0–100 cm, Active joint count 0–71, truncated at 10, ESR and CHAQ-DI was analyzed. Descriptive statistics was used for demographic, clinical data, drug exposure, adverse events (AEs) and events of special interest (ESI).

Results: Until 31.10.2020, 1173 JIA patients were reported to have received Adalimumab. 352 treatments have been started after January 1, 2017. A biosimilar was used first line in 44 patients. Further 55 patients switched for the originator to a biosimilar. 2 patients switched from a biosimilar to the originator. 3 patients switched to a second biosimilar while 5 patients who switched from the originator to a biosimilar reswitched back to the originator.

After 2017, 33 pediatric rheumatology centres reported initiation of Adalimumab treatment. 17 have used a biosimilar, 15 centres have switched at least 1 patient from the originator to a biosimilar. 14 have used first line a biosimilar in at least 1 patient. In a single centre, initiation of a biosimilar was used more frequently (8/17). The patients' characteristics and disease activity parameters were slightly different compared to the JIA category rheumatoid factor (RF) negative polyarthritis. The JIA category RF positive polyarthritis was less frequent in the biosimilar first cohort while RF positive polyarthritides and psoriatic arthropathy were more frequent. In patients with idiopathic uveitis the originator was used more often. In the switching cohort, more patients had RF positive polyarthritides, persistent oligoarthritis but less had psoriatic arthritis and no had RF positive polyarthritides.

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POS1302 THE MUSCULOSKELETAL SYSTEM MANIFESTATIONS IN CHILDREN WITH FAMILIAL MEDITERRANEAN FEVER

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Background: Familial Mediterranean fever (FMF) is a monogenic inherited periodic fever syndrome presenting with episodes of self-limiting fever and inflammation of serosal membranes. The attacks emerge with arthritis were defined as one of the major diagnostic criteria besides involvement of serosal membranes. Non-specific musculoskeletal findings such as myalgia, arthralgia, transient synovitis, and more rare manifestations like protracted febrile myalgia can also be seen in FMF patients attacks.

Objectives: We aim to reveal the frequency and genotype association of musculoskeletal manifestations in children with FMF.

Methods: The patients diagnosed with FMF between January 1, 2017 and June 1, 2019, and followed for at least 6 months in our pediatric rheumatology clinic were included in the study. Musculoskeletal manifestations of patients were enrolled. The patients were grouped according to the “Mediterranean Fever” (MEVF) gene variants. Musculoskeletal manifestations of the patients were compared between the groups.

Results: The study group included 634 children with FMF (336 female and 298 male, FM/F: 1.13/1). The clinical manifestations of patients in attack period were as follows: 99% of the patients had fever, 87.3% had abdominal pain, 20.7% had chest pain, 11.3% had vomiting, 10.7% had erysipelas like erythema, and 9.3% had headache. The musculoskeletal symptoms were accompanied by 58.6% (n: 372) of the patients during the attack period. The most common musculoskeletal manifestation was found as arthralgia (32.6%). Also, the other musculoskeletal manifestations were found as follows during attacks; arthritis in 23.7% (n: 150), myalgia in 20.5% (n: 130), exertional calf pain in 6.5% (n: 41), and protracted febrile myalgia in 1% (n: 7) of the patients. It was observed that the musculoskeletal manifestations were significantly higher in patients with homozygous M694V variant in exon 10 (p=0.017). Also, it was found that the musculoskeletal manifestations are more common in the attack periods of patients carrying the M694V variant in at least one allele (p = 0.019).

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No difference in disease activity parameters between patients receiving the originator or biosimilars were noted, neither at baseline, during the course of treatment nor at last observation upon treatment (Figure 1). At the time of switching, 46 (92%) had JADAS minimal disease activity (MDA) and 30 (69%) were in MDA remission. At last observation, those numbers were comparable with 42 (86%) with JADAS MDA and 28 (57%) with JADAS remission.

In total, 45 adverse events (AE) were reported in 45 patients upon biosimilar treatment. 26 patients had 1, 12 patients had 2 and 6 patients reported 3 and 1 reported 4 events. Adverse event of special interest were infection associated leukopenia (n=1), COVID 19 infection (n=1), Uveitis flare (n=8), other disease deterioration (arthritis flare) (n=20), injection site reaction n=2. A single serious AE was reported. A 16 year old female adolescent was admitted for unexpected CK elevation. In 10 patients, Adalimumab was discontinued, in 2 it was temporarily paused.

**Conclusion:** This article is the first attempt to present a large sample of data on JIA patients exposed to Adalimumab biosimilars. Since approval of Adalimumab Biosimilars, limited experience from clinical practice is available. Biosimilars are used in a minority of patients and by a minority of centers although no difference in efficacy or safety was noted from our analysis.

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### Table 1. Demographic and clinical characteristics of jSSc patients with and without overlap features.

<table>
<thead>
<tr>
<th></th>
<th>Whole Cohort N=175</th>
<th>Patients without overlap N=145</th>
<th>Patients with overlap N=30</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female to Male Ratio</td>
<td>4.3:1 (142/33)</td>
<td>4.1 (116/29)</td>
<td>6.5:1 (26/4)</td>
<td>0.39</td>
</tr>
<tr>
<td>Cutaneous subtype</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diffuse subtype (N)</td>
<td>73% (128)</td>
<td>112</td>
<td>16</td>
<td></td>
</tr>
<tr>
<td>Limited subtype (N)</td>
<td>27% (47)</td>
<td>33</td>
<td>17</td>
<td></td>
</tr>
<tr>
<td>Mean disease duration (years)</td>
<td>3.1 ± 2.7</td>
<td>3.2 ± 2.8</td>
<td>3.1 ± 2.2</td>
<td>0.291</td>
</tr>
<tr>
<td>Mean age of onset of Raynaud’s (years)</td>
<td>10.0 ± 3.8</td>
<td>10.0 ± 3.8</td>
<td>10.0 ± 3.7</td>
<td>0.931</td>
</tr>
<tr>
<td>Mean age of onset of non-Raynaud’s (years)</td>
<td>10.2 ± 3.8</td>
<td>10.2 ± 3.9</td>
<td>9.8 ± 3.7</td>
<td></td>
</tr>
<tr>
<td>Disease modifying drugs (N)</td>
<td>88% (154)</td>
<td>89% (129)</td>
<td>83% (25)</td>
<td>0.388</td>
</tr>
<tr>
<td>Raynaud’s phenomenon (N)</td>
<td>90% (158)</td>
<td>93% (135)</td>
<td>77% (23)</td>
<td>0.006</td>
</tr>
<tr>
<td>Anti-PMScI (N)</td>
<td>18% (26)</td>
<td>16% (5/33)</td>
<td>47% (7/15)</td>
<td>0.001</td>
</tr>
<tr>
<td>Gottron Papules (N)</td>
<td>27% (46/171)</td>
<td>23% (33/144)</td>
<td>48% (13/27)</td>
<td>0.007</td>
</tr>
<tr>
<td>DLCO &lt;80% (N)</td>
<td>44% (39/88)</td>
<td>39% (28/71)</td>
<td>60% (11/17)</td>
<td>0.06</td>
</tr>
<tr>
<td>Proportion of patients with swollen joints</td>
<td>18% (32)</td>
<td>14% (21)</td>
<td>37% (11)</td>
<td>0.019</td>
</tr>
<tr>
<td>Muscle Weakness (N)</td>
<td>21% (31/149)</td>
<td>16% (20/123)</td>
<td>42% (11/26)</td>
<td>0.003</td>
</tr>
<tr>
<td>Physician global disease activity (0-100)</td>
<td>35 (0-90)</td>
<td>30 (0-90)</td>
<td>141</td>
<td>41 (0-80)</td>
</tr>
</tbody>
</table>

**Conclusion:** Results from this large international cohort of jSSc patients demonstrate significant differences between patients with and without overlap features. Patients with overlap have significantly more intestinal lung disease and more physician rated disease activity and should not be considered to have multiple disease.

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### POS1305 TREATMENT RESPONSE TO TUMOR NECROSIS FACTOR INHIBITORS IN ADULTS WITH JUVENILE IDIOPATHIC ARTHRITIS: DATA FROM THE NOR-DMARD STUDY


**Background:** Juvenile idiopathic arthritis (JIA) can cause considerable pain and disability in childhood and adulthood. Studies exploring the efficacy of medications in adult JIA patients are limited, although tumor necrosis factor inhibitors (TNFi) have been increasingly used in this patient group.

**Objectives:** To explore the efficacy of TNFi ± comedication on disease activity in adult JIA patients, compared to a weighted rheumatoid arthritis (RA) cohort.

**Methods:** Data from NOR-DMARD, a longitudinal observational study including patients > 18 years starting or switching DMARD treatment, was used [1].

**Results:** Patients with a clinical JIA diagnosis, or patients with other inflammatory joint diseases diagnosed before 16 years were identified from the study population. RA patients were included for comparative purposes.

Disease activity measurements and remission rates among patients starting treatment with TNFi ± comedication were collected at baseline, 3 and 6 months.