Abstract OP0277-HPR – Table 1 Intergroup and intragroup comparisons

	Experimental group n=30				Control group n=30				p	p	p
	T0	T6	T12	Intergr.	T0	T6	T12	Intergr.			
Numerical pain scale (cm)	6.90 ± 1.50	6.00 ± 1.80	5.20 ± 2.00	<0.001	6.80 ± 1.40	7.00 ± 1.80	6.80 ± 2.00	0.794	0.002		
VAS score	5.60 ± 1.20	6.00 ± 1.70	4.70 ± 1.40	<0.001	5.00 ± 1.20	5.90 ± 1.00	5.90 ± 1.20	0.728	0.021		
F0 - Safety score	5.91 ± 2.87	5.43 ± 2.72	5.13 ± 2.53	<0.001	7.81 ± 1.74	7.53 ± 2.04	6.73 ± 2.18	0.587	0.001		
SP-36 scores											
Physical functioning	48.30 ± 21.30	58.00 ± 19.70	61.30 ± 19.40	0.001	37.00 ± 22.80	36.90 ± 23.40	35.70 ± 23.00	0.794	0.002		
Physical role functioning	15.00 ± 24.20	37.50 ± 38.10	39.20 ± 38.10	0.001	24.20 ± 38.80	15.00 ± 29.10	13.30 ± 29.05	0.068	<0.001		
Bodily pain	37.10 ± 16.40	46.10 ± 16.00	46.80 ± 14.60	0.002	33.20 ± 17.10	37.70 ± 17.40	32.00 ± 16.30	0.065	0.002		
General health perceptions	43.60 ± 22.70	45.80 ± 25.90	51.80 ± 25.50	0.044	38.70 ± 22.90	41.60 ± 24.30	37.80 ± 21.50	0.3	0.004		
Vitality	38.80 ± 19.80	50.30 ± 21.00	52.20 ± 22.40	<0.001	37.50 ± 17.80	35.30 ± 18.70	34.30 ± 19.90	0.561	0.002		
Social role functioning	50.40 ± 23.60	64.20 ± 24.90	62.90 ± 27.20	0.012	48.30 ± 32.80	40.40 ± 25.80	41.70 ± 24.20	0.332	0.013		
Emotional role functioning	12.20 ± 25.50	45.00 ± 45.00	48.70 ± 42.50	<0.001	28.70 ± 45.00	28.90 ± 42.60	23.30 ± 41.20	0.745	0.005		
Mental health	49.10 ± 23.00	56.70 ± 24.80	62.00 ± 22.60	<0.001	45.30 ± 18.60	43.70 ± 17.60	42.10 ± 19.00	0.301	<0.001		
5-Minute walk test (meters)	447.30 ± 89.00	465.50 ± 83.30	482.50 ± 72.60	0.002	420.80 ± 112.00	427.70 ± 101.40	429.40 ± 112.50	0.585	0.045		

Data presented as mean ± SD

Conclusions: The progressive resistance training program was effective in improving pain, quality of life, functional capacity and muscular strength of patients with fibromyalgia.

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OP0278-HPR PATIENT REPORTED OUTCOMES AND SAFETY IN PATIENTS UNDERGOING SYNOVIAL BIOPSY: COMPARISON OF ARTHROSCOPIC, ULTRASOUND-GUIDED PORTAL FORCEPS AND ULTRASOUND-GUIDED NEEDLE BIOPSY TECHNIQUES, IN FIVE CENTRES ACROSS EUROPE

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Background: Synovial tissue analysis could provide a step towards personalised medicine in daily clinical practice for patients with inflammatory arthritis. However systematic reports comparing the patient's perspective when undergoing synovial biopsy according to different synovial sampling techniques is currently missing from the literature. We here present a multicenter study across Europe, comparing patient reported outcomes (PRO) and safety data from patients undergoing synovial biopsy procedures using either ultrasound guided needle biopsy (US-NB), ultrasound guided portal and forceps (US-PF) or conventional arthroscopy.

Objectives: 1. Describe PRO data on joint indices of pain, stiffness and swelling, procedural discomfort and willingness to undergo a second biopsy for each biopsy technique.

2. Describe and compare safety data.

3. Evaluate the impact of intramuscular (IM) or intra-articular (IA) corticosteroid as part of the biopsy procedure, on PRO data and safety.

4. Evaluate how sequential biopsy procedures impacted on PRO and safety data.

Methods: Information on PROs, safety, diagnosis, disease activity and treatment were collected from five European biopsy centres. Joint pain, swelling and stiffness indices were recorded as 0–100 mm VAS; qualitative variables on balanced 5-point Likert scales. PRO data delta values between post and pre-values were calculated. Between group comparisons with unadjusted and adjusted robust linear regression, adjusting for disease activity, corticosteroid use during biopsy procedure and when relevant pre-biopsy value.

Results: 524 synovial biopsy procedures were included; 329 (78%) had Rheumatoid Arthritis and biopsies were primarily from wrist (n=296, 57%). PRO and safety data are presented in table 1. None of the biopsy techniques caused increase in pain, swelling or stiffness, and there were no differences in post biopsy and delta PROs between biopsy procedures. There was 9 adverse events (1.7%) with no difference between biopsy methods (p=0.85). 71.7% reported none or mild

discomfort during biopsy and 86.5% were positive or neutral to rebiopsy. Corticosteroid use, IM (n=62) or IA (n=38), did not result in more adverse events (p=0.81). However, it was associated with a reduction in post-swelling (p=0.005), but not pain or stiffness. Sequential biopsy procedures (n=103 patients), did not result in more adverse events (p=0.61) or worsening in PRO data between baseline and second biopsy procedure.

Abstract OP0278-HPR – Table 1 Patient reported outcomes and safety

	Needle	Portal & Forceps	Arthroscopic	Total	p-value	Adjusted p-value*
Biopsy procedures, n (%)	402 (76.7)	65 (12.4)	57 (10.9)	524 (100.0)		
Pain, swelling and stiffness before and after biopsy						
Pre pain, mean (SD)	52.21 (29.14)	45.60 (32.90)	62.44 (23.98)	52.51 (29.36)	<0.01	<0.01
Post pain, mean (SD)	39.47 (29.94)	32.46 (27.42)	43.16 (22.62)	38.91 (29.03)	0.06	0.19
Pre swelling, mean (SD)	50.29 (30.70)	41.02 (33.11)	53.09 (29.26)	49.40 (30.99)	0.07	<0.01
Post swelling, mean (SD)	35.95 (30.47)	31.18 (26.66)	36.46 (26.00)	35.35 (29.52)	0.92	0.17
Pre stiffness, mean (SD)	51.48 (30.32)	47.28 (33.89)	48.79 (30.13)	50.62 (30.77)	0.56	0.03
Post stiffness, mean (SD)	37.72 (30.45)	33.75 (28.01)	36.14 (24.91)	37.01 (29.57)	0.56	0.18
Delta pain, mean (SD)	-12.90 (27.74)	-13.14 (30.36)	-20.94 (28.91)	-13.76 (28.27)	0.17	0.19
Delta swelling, mean (SD)	-14.67 (29.57)	-9.83 (27.74)	-18.68 (35.03)	-14.43 (29.96)	0.28	0.17
Delta stiffness, mean (SD)	-13.70 (28.92)	-13.52 (32.25)	-14.18 (37.49)	-13.72 (30.32)	0.99	0.18
Safety						
Syncope or presyncope, n (%)	2 (0.8)	0 (0.0)	0 (0.0)	2 (0.4)		
Tenosynovitis	1 (0.3)	0 (0.0)	0 (0.0)	1 (0.2)		
Neurological affection, n (%)	4 (1.0)	1 (1.5)	0 (0.0)	5 (1.0)		
Tendon damage, n (%)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)		
Haemarthrosis, n (%)	1 (0.3)	0 (0.0)	0 (0.0)	1 (0.2)		
Deep vein thrombosis	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)		
Joint infection	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0.85*	

* adjusted for biopsy method, disease activity, intra-articular or intramuscular corticosteroid injection during biopsy and in Post and delta values also pre-value.

#) Test for difference in total number of adverse events between groups, by Fishers exact test.

Conclusions: Overall, our results do not suggest a significant difference in tolerability or safety between US-NB, US-PF or arthroscopic synovial sampling. Further, data suggests that use of IM or IA corticosteroid, as part of the biopsy procedure, is safe and improves tolerability. Finally, sequential synovial biopsies were well tolerated and safe when performed using all biopsy techniques.

Disclosure of Interest: None declared

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OP0279-HPR A NATIONAL SURVEY OF THE UTILISATION AND EXPERIENCE OF HYDROTHERAPY IN THE MANAGEMENT OF AXIAL SPONDYLOARTHRITIS: THE PATIENTS' PERSPECTIVE

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Background: Hydrotherapy is recommended in the United Kingdom (UK) by the National Institute for Health and Care Excellence (NICE) as an adjunctive therapy in the management of Axial Spondyloarthritis (AS). Despite these guidelines, NHS hospital hydrotherapy services are in decline. The impact on utilisation and patient experience are poorly understood.

Objectives: To identify the utilisation of hospital hydrotherapy services for AS in the UK and capture the patients' experience to inform future services and research.

Methods: An online survey was distributed to the National Ankylosing Spondylitis Society (NASS) patient membership between September and November 2017, with social media updates. The survey design included open and closed questions. Thematic analysis of the qualitative responses was conducted.

Results: 250 members completed the survey (40.4% male; average age 50.4 years; average delay to diagnosis 11.4 years). **Utilisation:** 157 (65.7%) accessed a hospital hydrotherapy service. 102 (63.0%) were referred by rheumatologist, 26 (16.0%) via a specialist AS Physiotherapist and 3 (1.9%) self-referring via a telephone helpline. The most frequent service offered was six weekly sessions. 85 (62.5%) reported no access to hospital hydrotherapy when in flare. Barriers to access in a flare included long waiting times, a limit on the sessions offered and pool closures. 'Pay as you Go' hospital hydrotherapy sessions were accessed by 35 (16.1%) with 119 (77.3%) interested in doing so. 59 (26.9%) received written hydrotherapy resources for continuation in a non-hospital pool following discharge. 77 (50.7%) were advised to continue with hydrotherapy for self-management. Barriers to utilising a non-hospital pool were high cost, lower pool temperature, pool crowding and a lack of knowledge of exercises. 28 (18.5%) reported a current threat of closure of their hospital hydrotherapy pool. **Experience:** Five themes emerged from the qualitative data. 1) *Emotional well-being:* Patients described greater control over their condition when exercising in water. 2) *Exercise Behaviour:* Patients performed a wider variety of exercise, often challenging themselves, and not attempted on land. 3) *Group Effect:* Patients described a sense of motivational support when exercising with others. 4) *Professional Support:* Patients cited the benefit of hydrotherapy sessions led by a physiotherapist who shared their expertise and discussed problems. 5) *Pool Environment:* Patients described gains from non-impact exercise and

weightlessness in the water. The warmer pool temperature was stated as a reason for the benefits obtained.

Reported benefits of hydrotherapy are illustrated in graph 1:

Conclusions: This survey suggests variability in utilisation of hospital hydrotherapy services by a national AS patient group in the UK, with barriers to access, lack of promotion and pool closures. Similar benefits of hydrotherapy to those stated in the NICE guidance were experienced.¹ Future service recommendations which focus on flexible access for flare management, 'Pay as you Go' schemes, group exercise and self-management may increase utilisation, optimise experience and reverse decline. Research to assess the benefits of these service recommendations in a clinical population is needed.

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OP0280-HPR PHYSICAL ACTIVITY IN ESTABLISHED RA AND VARIABLES ASSOCIATED WITH PHYSICAL ACTIVITY MAINTENANCE OVER A SEVEN YEAR PERIOD

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Background: Interventions to promote a healthy lifestyle also in patients with rheumatoid arthritis (RA) have been in focus over the last years. Physical activity (PA) defined as moderate-to-vigorous physical activity (MVPA) has the possibility to reduce disease burden in RA and may contribute to improved quality of life (QoL). It is well known that a large number of patients with RA have a sedentary life style and are less active than their healthy peers. However, less information is known about the long term change of MVPA and possible associated variables.

Objectives: To study self-reported change of MVPA over seven years in a well-defined RA cohort.

Methods: A lifestyle questionnaire was sent twice to patients in the BARFOT cohort, in 2010 (n 1525) and in 2017 (n 1046) with a response rate of 73% and 68% respectively and 950 patients responded to both questionnaires. All patients fulfilled the ACR criteria for classification of RA and had a disease duration at inclusion (1992 to 2006) of ≤ 12 months. Patients were dichotomized as being active on recommended levels of MVPA (MVPA_{rec}; physically active on a moderate level ≥ 150 min/week (MPA) or on an intense level ≥ 75 min/week (VPA)) or not (sedentary). The patients reported body mass index, smoking habits, tender (TJC) and swollen joint count (SJC, 28-joints), patient global assessment (PatGA), pain intensity (NRS) and distribution (pain mannequin), fatigue (NRS), physical function (HAQ), health related QoL (EQ5D), comorbidities and medical treatment. Possible associated variables with meeting MVPA_{rec} at both time points or not (dependent variable) was studied by using a logistic regression analysis. All variables were adjusted for age, gender and smoking habits.

Results: Forty-one percent (n 389) of the patients met MVPA_{rec} at both occasions, and they reported better EQ5D scores compared with the sedentary group (mean 0.77 (SD 0.18) vs 0.68 (0.27)). The patients who met MVPA_{rec} were younger, (mean age (SD) 59¹³ years vs 62¹³ years, $p < 0.001$) and were to higher extent never smokers 46% vs 38%, $p = 0.021$. There was a negative association

with meeting MVPA_{rec} and being overweight (OR 0.58, 95% CI: 0.43 to 0.96) or obese (OR 0.38, 95% CI: 0.25 to 0.59), the presence of cardiovascular (OR 0.56, 95% CI: 0.41 to 0.75) and pulmonary diseases (OR 0.51, 95% CI: 0.31 to 0.85), TJC (OR 0.98, 95% CI: 0.95 to 0.995), high pain intensity (OR 0.99, 95% CI: 0.987 to 0.998), and pain distribution (OR 0.93, 95% CI: 0.90 to 0.96), worse fatigue (OR 0.99, 95% CI: 0.998 to 0.997) and a worse physical function (HAQ, OR 0.58, 95% CI: 0.45 to 0.76). Patients with higher values in QoL (EQ5D, OR 3.1, 95% CI: 1.52 to 6.2) were positively associated with meeting MVPA_{rec}. In 2010 there were no differences in medical treatment between the groups, $p = 0.377$. In 2017 the group meeting MVPA_{rec} included a lower number of untreated patients compared to 2010 (25% vs 34%, $p = 0.017$).

Conclusions: Only four out of ten patients with established RA reported to maintain recommended levels of PA over a seven year period. Experiencing high quality of life seems to be important for PA maintenance together with lower levels of pain, fatigue and better physical function. Health care professionals need to take the patient perspective into account and support maintenance of physical activities accordingly.

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OP0281-HPR PREFERENCES OF PATIENTS WITH RHEUMATOID ARTHRITIS REGARDING DISEASE MODIFYING ANTI-RHEUMATIC DRUGS: A DISCRETE CHOICE EXPERIMENT

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Background: Adherence to disease modifying anti-rheumatic drugs (DMARDs) is suboptimal in rheumatoid arthritis (RA) patients. Adherence rates vary from 30% to 90%, which may be partly due to patients' preferences regarding treatment benefits and drawbacks of DMARD therapy. Tailoring treatment options to these preferences might motivate patients to adhere to their drugs and eventually improve adherence.

Objectives: The primary objective is to identify subgroups in RA patients based on their preferences towards DMARD characteristics. The secondary objective is to identify characteristics associated with subgroup membership.

Methods: A discrete choice experiment (DCE) based on a literature review, expert recommendations and focus groups was used to elicit preferences in RA patients. Patients were asked to state their choice over two different hypothetical treatment options, which were described by seven DMARD characteristics and three levels within each characteristic (e.g. route of administration with the levels: oral, subcutaneous and intravenous). Patients were eligible to participate if they were diagnosed with RA according to the ACR/EULAR 2010 criteria, current user of at least one DMARD, and aged ≥ 18 years. Latent class analysis was used to identify subgroups based on stated preferences towards DMARD characteristics and multinomial logistic regression was used to identify characteristics (i.e. beliefs about medicines, patient- and disease-related variables) associated with subgroup membership.

Results: A total of 1317 RA patients were invited to participate in this study with an overall response rate of 24.8% (n=326). Three subgroups with segment sizes of 46.5% (SG1), 24.6% (SG2) and 28.9% (SG3) were found. SG1 was most strongly influenced by chance of efficacy, which contributed for 43.6% in their choice for a DMARD. In contrast with SG1, route of administration, risk of cancer and frequency of administration contributed most in SG2 (relative importance (RI) of 22.3%, 17.0% and 16.2% respectively). In SG3, route of administration (RI: 38.2%) contributed most in their choice for a DMARD with a strong preference for tablets/capsules. Current and previous use of other cDMARDs (i.e. leflunomide, azathioprine, ciclosporin or gold therapy) and indifferent (low necessity, low concerns) beliefs were significantly associated with assignment to SG2 (Relative Risk Ratio (RRR) 6.03, $p = 0.0012$, RRR=3.64, $p = 0.013$ and RRR:14.91, $p = 0.003$ respectively). Current and previous use of sulfasalazine, other cDMARDs, medium educational level and (early) retirement were significantly associated with assignment to SG3 (RRR:3.91, $p = 0.009$; RRR:0.34, $p = 0.010$, RRR:3.38, $p = 0.020$, RRR:3.12, $p = 0.005$ and RRR:0.358, $p = 0.034$).