knee was the most frequent (21.38%), followed by DC in right knee (17.24%) and DC in 1st MTP (10.24%).

Conclusion: Almost 100% of patients with recently diagnosed gout without ULT, presented on at least one of the scanned locations MSUS images suggestive by MSU crystals deposition. Most of MSU crystals deposits were on knees and 1st MTP. Patients with non-treated longer than 6 months of disease duration gout had a greater number of MSU crystals deposit locations detected by MSUS. The presence of tophi and HA was statistically higher in patients with disease duration longer than 6 months (table 2).

Table 2. MSU crystals median locations and MSUS images in both groups

	<6months (n,%)	>6months (n,%)	p value
Deposits locations	56 (43,07)	74 (56,92)	0,075 ¹
MSUS images with deposits -Tophi	8 (28,57) 0 (0-0)	20 (71,43) 0 (0-1)	0,018 ¹
Median, IR () - HA Median, IR () -	7 (21,21) 0 (0-0) 39	26 (78,79) 0 (0-1)	0,023 ¹
DC Median, IR ()	(46,43) 0,5 (0-1)	45 (53,57) 0 (0-2)	0,853 ¹

¹Mann-Whitney U test comparing medians between both groups IR: interquartile range

References:

- [1] Norkuviene E, Petraitis M, Apanaviciene I, Virviciute D and Baranauskaite A. An optimal ultrasonographic diagnostic test for early gout: A prospective controlled study. *J Int Med Res.* 2017 Aug.
- [2] Neogi T, Jansen TLA A, Dalbeth N, Fransen J, Schumacher HR, Berendsen D et al. 2015 Gout Classification Criteria. *An American College of Rheumatology/European League Against Rheumatism Collaborative Initiative. Arthritis & Rheumatology.* Vol. 67, No. 10, October 2015.

Disclosure of Interests: : Luis A Torrens Cid: None declared, Juan Molina Col-lada: None declared, Christian Y Soletto: None declared, Liz R. Caballero Motta: None declared, Ana Melissa Anzola Alfaro: None declared, Alfonso Ariza: None declared, Isabel Castrejón Fernández: None declared, Javier Rivera: None declared, Jose-Maria Alvaro-Gracia Grant/research support from: Abbvie, Elli-Lilly, MSD, Novartis, Pfizer, Consultant of: Abbvie, BMS, Janssen-Cilag, Elli-Lilly, MSD, Novartis, Pfizer, Sanofi, Tigenix, Roche, UCB, Paid instructor for: Elli-Lilly, Pfizer, Roche, Speakers bureau: Abbvie, BMS, Janssen-Cilag, Elli-Lilly, Gedeon Richter, MSD, Novartis, Pfizer, Sanofi, Tigenix, Roche, UCB, Juan Carlos Nieto Speakers bureau: Pfizer, Abbvie, MSD, Novartis, Janssen, Lilly, Nordic Pharma, BMS, Gebro, FAES Farma, Roche, Sanofi

DOI: 10.1136/annrheumdis-2020-eular.4098

THU0446

SUCCESSFUL TREATMENT OF GOUT IS FREQUENT IN CLINICAL PRACTICE WHEN APPLYING A TREAT-TO-TARGET STRATEGY: RESULTS FROM THE NOR-GOUT STUDY

T. Uhlig¹, L. F. Karoliussen¹, T. K. Kvien¹, E. A. Haavardsholm¹, H. Berner Hammer¹. ¹Diakonhjemmet Hospital, Rheumatology, Oslo, Norway

Background: International EULAR and ACR recommendations support lifestyle changes, diet and urate lowering therapy (ULT) in gout. Treat-to-target ULT is often not performed, resulting in insufficient treatment of gout. We studied how many patients achieved the recommended treatment target of <360 µmol/l for serum urate (SUA) when a treat-to-target approach was applied in clinical practice, and which factors predicted reaching this target.

Objectives: We studied how many patients achieved the recommended treatment target of <360 µmol/l for serum urate (SUA) when a treat-to-target approach was applied in clinical practice, and which factors predicted reaching this target.

Methods: 211 patients with crystal proven gout were included into the prospective, observational NOR-Gout study if they recently had a gout flare as well as insufficiently treated serum urate SUA >360 µmol/l).

The intervention consisted of individual verbal information on lifestyle, including factors related to physical activity, diet and the importance of drug adherence. ULT (mainly allopurinol) was initiated and escalated monthly according to EULAR recommendations. Patients were during the first year seen by physician and nurse every three months with additional visits after month 1 and month 2, with further visits monthly as necessary until the treatment target of SUA <360 µmol/l (or <300 if tophi) was met.

Baseline age was 53.6 (SD 12.2) years, disease duration 7.8 years (SD 7.6), BMI 28.8 (SD 4.5) kg/m², 95.3% were males. Baseline SUA was 500 (77) µmol/l and 16.6% had subcutaneous tophi. Assessments included questions on frequency of alcohol use, and application of the self-efficacy scales for symptoms (SES, range 10-100) as well as the beliefs in medicines questionnaire (BMQ), which included a scale for general overuse of medicines (range 4-16).

186/211 (88.2%) patients completed the visit for the primary SUA endpoint at 12 months.

Results: SUA continuously declined over 12 months and the frequency of responders increased (table 1):

Table 1. Responders and SUA levels during the treat-to-target intervention

Month	Month 0	1	2	3	6	9	12	
% n Responders	0	21.3	43/202	48.7	69.3	86.7	81.9	85.5
SUA<360	0/211			94/193	131/189	151/187	136/166	159/186
SUA µmol/l (mean, SD)	500 (78)	413 (77)		371 (64)	341 (61)	327 (59)	316 (56)	311 (49)

At 12 months 87.6% (163/186) of patients used allopurinol and 13.4% (23/186) febuxostat with mean daily doses of 289 mg (range 100-900) and 59 (20-120) mg, respectively.

Reaching the treatment target of SUA after 12 months was bivariate related to work status, alcohol use, and beliefs in general overuse of medicines. In multivariable analyses in the final model also adjusted for baseline SUA, several variables predicted reaching the SUA target of <360 µmol/l: age (per 10 years) (OR 1.5; 95% CI 1.06 – 1.96, p=0.026), alcohol use no more than monthly vs. at least weekly (OR 6.9, 95% CI 1.90 – 25.2, p=0.003), self-efficacy for symptoms (per 10 units) (OR 1.31; 95% CI 1.00 – 1.63; p=0.05), and low belief that medicines are generally overused (per decreasing unit) (OR 1.30; 1.04 – 1.62, p=0.019).

Conclusion: Most patients (85.5%) with recent gout flare und increased SUA reached the target SUA after 12 months. A good treatment result was predicted by increasing age, less frequent alcohol use, when patients believed they could cope with symptoms and when they did not believe that drugs are generally overused.

Disclosure of Interests: : Till Uhlig Consultant of: Lilly, Pfizer, Speakers bureau: Grünenthal, Novartis, Lars Fridtjof Karoliussen: None declared, Tore K. Kvien Grant/research support from: Received grants from Abbvie, Hospira/Pfizer, MSD and Roche (not relevant for this abstract), Consultant of: Have received personal fees from Abbvie, Biogen, BMS, Celltrion, Eli Lilly, Hospira/Pfizer, MSD, Novartis, Orion Pharma, Roche, Sandoz, UCB, Sanofi and Mylan (not relevant for this abstract), Paid instructor for: Have received personal fees from Abbvie, Biogen, BMS, Celltrion, Eli Lilly, Hospira/Pfizer, MSD, Novartis, Orion Pharma, Roche, Sandoz, UCB, Sanofi and Mylan (not relevant for this abstract), Speakers bureau: Have received personal fees from Abbvie, Biogen, BMS, Celltrion, Eli Lilly, Hospira/Pfizer, MSD, Novartis, Orion Pharma, Roche, Sandoz, UCB, Sanofi and Mylan (not relevant for this abstract), Espen A Haavardsholm Grant/ research support from: AbbVie, UCB Pharma, Pfizer Inc, MSD Norway, Roche Norway, Consultant of: Pfizer, AbbVie, Janssen-Cilag, Gilead, UCB Pharma, Celgene, Lilly, Paid instructor for: UCB Pharma, Speakers bureau: Pfizer, AbbVie, UCB Pharma, Celgene, Lilly, Roche, MSD, Hilde Berner Hammer: None declared

DOI: 10.1136/annrheumdis-2020-eular.5571

THU0447

HOME-MONITORING GOUT FLARES WITH A SMARTPHONE APP – RESULTS OF A FEASIBILITY STUDY

B. Pouls^{1,2}, C. Bekker², B. Van den Bemt^{1,2}, A. Gaffo³, M. Flendrie¹. ¹Sint Maartenskliniek, Ubbergen, Netherlands; ²Radboud University Medical Center, Nijmegen, Netherlands; ³University of Alabama Medical Centre, Tuscaloosa, United States of America

Background: Gout flares are considered a key clinical and research outcome in gout. Early treatment of gout flares increases patient well-being and warrants timely notification of the treating clinician.

Objectives: To test the feasibility of a smartphone app to home-monitor gout flares real-time for both patients with a suspicion of and established gout.

Methods: Thirty patients were recruited during their visit at the outpatient rheumatology clinic. Inclusion criteria were age ≥ 18 years, smartphone possession, established gout (crystal proven) or a clinical suspicion of gout and at least one flare reported in the last three months.

A straight-forward query app was used to incorporate an adapted version of the 2017 four-criteria gout flare definition.[1] For 90 consecutive days the app asked patients to report their current pain score on an 11-points scale as screening question. Scoring pain below 4 terminated the query, otherwise the app posed the remaining criteria: does the patient experience warm and/or swollen joints and are symptoms regarded as a gout flare. Responses were transmitted in real-time to the dashboard and the clinician was alerted via email if predefined conditions were met. End of study evaluation consisted of the number of generated alerts, duration of (possible) flares and actions taken. Patient feasibility was assessed by measuring app attrition and using a questionnaire based on the Technology Acceptance Model. [2] All constructs were analysed using descriptive statistics.

Results: All 30 recruited patients finished the trial. Three minor, resolvable technical issues were reported. Seventeen participants never missed a question. In total 110 responses (4.1%) were missed with three participants responsible for