CI[1.69- 21.77]). The same finding was observed between high concentrations of HDLc and the prevalence of VF adjusted in the same variables ($p=0.006$, OR: 197.01, 95% CI [4.64-8363.51]).

Conclusion: Although there was no relation between lipid plasma levels and BMD in our population. There was a significant association between high concentrations of TC, HDLc and the prevalence of VF.

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FRI0069

EFFECTS OF ADALIMUMAB ADDED TO TREAT-TO-TARGET STRATEGY WITH METHOTREXATE AND INTRA-ARTICULAR TRIAMCINOLONE ON LIPIDS IN EARLY- AND TREATMENT NAÏVE RHEUMATOID PATIENTS: SECONDARY ANALYSES FROM THE MULTICENTER DOUBLE-BLIND, RANDOMIZED, PLACEBO-CONTROLLED OPERA TRIAL

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Background: Systemic inflammation in rheumatoid arthritis (RA) is associated with reduced serum lipid levels (LL) and treatment with disease modifying anti-rheumatic drugs has been associated with increased serum LL [1]. It is unclear whether the changes in serum LL reported in association with adalimumab (ADA) treatment are due to suppressed inflammation or the ADA treatment *per se*.

Objectives: The primary objective was to compare the effect of ADA + methotrexate (MTX) to placebo (PBO) + MTX on changes in low density lipoprotein cholesterol (LDL-C) from baseline to month 12 in patients with early- and treatment naïve RA. Secondary objectives were to compare the treatment groups on changes in total cholesterol (TC), high density lipoprotein cholesterol (HDL-C), triglycerides, very low density lipoprotein cholesterol (VLDL-C) and non-HDL-C (=TC – HDL-C).

Methods: We present secondary analyses from the OPERA trial, which was an investigator-initiated, multicenter double-blind, placebo-controlled, treat-to-target trial of 180 early and treatment naïve RA patients, who were randomized (1:1) to oral MTX 20mg once a week in combination with either PBO or ADA 40mg SC EOW [2]. Any swollen joint was injected with triamcinolone hexacetonide. Lipid profiles of each patient were assessed at baseline and 12 months. All randomized patients with available LDL-C at baseline were included in Intention To Treat (ITT) analysis. Sensitivity analyses were performed on the Per Protocol (PP) and the ITT population with baseline observations carried forward (BOCF). All analyses were based on repeated measurements using mixed linear models.

Results: In total, 174 patients (97% of the original OPERA trial population) were included in ITT analysis (ADA n=86; PBO n=88) and 156 patients (ADA n=78; PBO n=78) completed the study with LDL-C measurements at both baseline and 12 months (PP). At baseline mean LDL-C was 2.9 mmol/L (SD 0.9) with 63 (36.2%) patients having an LDL-C above 3.0 mmol/L. There was

Table. Change in primary and secondary outcomes in the ITT analysis

	Adalimumab (n=86)		Placebo (n=88)		Difference between means	(95% CI)	P value
	Mean	SE	Mean	SE			
Δ LDL-C*, mmol/L	0.26	0.08	0.07	0.08	0.18	(-0.05; 0.42)	0.12
Δ TC, mmol/L	0.49	0.10	0.22	0.10	0.27	(-0.002; 0.54)	0.052
Δ HDL-C, mmol/L	0.27	0.04	0.23	0.04	0.05	(-0.06; 0.15)	0.38
Δ TG, mmol/L	-0.07	0.07	-0.18	0.07	0.11	(-0.08; 0.29)	0.25
Δ VLDL-C, mmol/L	-0.03	0.03	-0.07	0.03	0.03	(-0.05; 0.12)	0.43
Δ non-HDL-C, mmol/L	0.22	0.09	0.00	0.09	0.22	(-0.02; 0.46)	0.07
Δ LDL-C, Sensitivity Analyses							
Per Protocol	0.27	0.08	0.08	0.08	0.19	(-0.04; 0.42)	0.11
BOCF	0.26	0.08	0.08	0.08	0.18	(-0.03; 0.40)	0.10

Δ = 12 months - baseline. *Primary outcome. ITT: Intention To Treat. BOCF: Baseline Observation Carried Forward. LDL-C: low-density lipoprotein cholesterol. TC: total cholesterol. HDL-C: high-density lipoprotein cholesterol. TG: triglycerides. VLDL-C: very-low-density lipoprotein cholesterol. non-HDL-C = TC – HDL-C.

no significant difference in LDL-C change between ADA+MTX and PBO+MTX groups after 12 months. A nearly statistically significant between-group difference in TC change was found. Other changes in LL were comparable across the two groups. Results in ITT, PP and ITT with BOCF populations were similar.

Conclusion: In early RA patients treated to target with methotrexate and intra-articular triamcinolone, 12 months with the addition of adalimumab did not affect lipid levels.

References:

[1] England BR *et al.*, *Bmj* 2018;**361**:k1036

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FRI0070

PREGNANCY AND OFFSPRING OUTCOME IN RA FEMALE PATIENTS- A BOW BETWEEN CENTURIES

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Background: Clinical and preclinical rheumatoid arthritis (RA) may negatively impact several pregnancy and offspring outcome parameters [1,2].

Objectives: Assessing pregnancy and offspring outcome in RA patients and controls.

Methods: RA pregnant patients (G1) were prospectively recruited. Demographic data, disease activity scores, immunology and obstetric/offspring outcome parameters were recorded. The same parameters were retrospectively collected (interview) in RA patients who delivered children before RA onset (G2) and in healthy subjects (C). Ethical committee approval for the study was obtained and all participants signed informed consents.

Results: Table 1 presents demographic and disease related data. Table 2 shows the outcome parameters in the 3 groups. G1 delivered babies between the years 2008-2019. CsDMARDs were stopped by the majority of patients in the 1st trimester of pregnancy; 2 patients continued low dose corticosteroids throughout pregnancy (Fig 1). G2 and C delivered the babies between the years 1963 and 2000.

Table 1.

Parameter	G1	G2	C
Subjects ^Δ	22	27	36
Disease duration (y±SD)	5.92±6.14	-	-
Disease activity*			
T1-R/LDA/HDA ^Δ	9/15/5	-	-
T2- R/LDA/HDA ^Δ	15/6/8		
T3- R/LDA/HDA ^Δ	18/6/5		
RF + (%)	86.36	92.59	-
ACPA + (%)	36.36	62.96	-
Contraception ^Δ	0	3	5
Fertility treatment ^Δ	1	1	1

^Δ- number, y- years, SD- standard deviation, R-remission, LDA-low disease activity, HDA-high disease activity, * DAS 28 3 variables, T-trimester

Overall, RA pregnant patients were older at conception, had a lower number of pregnancies/deliveries and a higher rate of spontaneous abortions and 'C' sections compared to G2 and C. Time to pregnancy (TTP) was increased in G1 when compared to G2 and C. Both G1 and G2 newborns were smaller for their gestational age versus C, the majority of them still being in the normal range. All these aforementioned parameters showed statistical significance. Number of premature deliveries and pregnancy/offspring pathology events showed a low frequency and no difference was identified between groups when comparing them.

Table 2.

Parameter	G 1	G 2	C	p G1 vs G2	p G1 vs C	p G2 vs C
Pregnancies [^]	29	70	88	<0.0001	<0.05	<0.05
Children/mother [^]	1.31	2.59	2.14	-	-	-
Age at conception y [^]	34;6	23;4.5	23;6.5	<0.0001	<0.0001	<0.05
m:IQR (min-max)	(28-44)	(17-38)	(16-39)			
TTP >12 months (%) [£]	37.93	48.57	30.68	<0.0001	<0.05	>0.05
Births [^]	28	53	67	<0.0001	<0.0001	>0.05
Spontaneous abortions ^{^£}	10	14	22	<0.0001	<0.0001	>0.05
Stillbirths [^]	0	1	0	-	-	-
'C' section delivery [£] (%)	21.42	1.85	1.51	<0.0001	<0.0001	>0.05
Premature delivery [£] (%)	7.14	5.66	3.07	>0.05	>0.05	>0.05
Eclampsia (%)	3.57	0	0	-	-	-
Birth weight g (mean ± SD) [^]	2950±461	3250±652	3500±463	<0.05	<0.0001	<0.05
Birth weight < 2500g (%)	7.14	13.33	1.49	-	-	-
Malformations [^]	0	0	1	-	-	-
Transfer to NICU [^]	0	1	1	-	-	-
Other child pathologies [^]	2 (autism)	0	0	-	-	-

[^] number, y- years, g-gram, NICU- newborn intensive care unit, [^] Mann Whitney U test,

[£] Fisher's exact test, m-median

Fig 1:

Conclusion: Current pregnancy management guidelines implementations in RA assure a good pregnancy course in patients that have achieved remission and LDA status. RA patients show lower fertility and more miscarriages in comparison to both preclinical RA and general population. Newborns from RA mothers are healthy and show a normal gestational age/weight at delivery, yet smaller family sizes were observed. Preclinical RA does not influence fertility, pregnancy outcome and family size. Newborns belonging to G1 and G2 are smaller in comparison to general population but true hypotrophy is a rare event.

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FRI0071

ANALYSIS OF DATA GAPS IN RHEUMATOID ARTHRITIS

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Background: Although ideally Recommendations for the management of rheumatoid arthritis (RA) should be supported by the highest level of evidence, many of which are based on "expert opinion". This means that there are

knowledge gaps to which a part of the research efforts in this disease should be directed.

Objectives:

- 1.- Analyze the causes of the low level of evidence in some of the recommendations on diagnosis and management of RA in the main published documents
- 2.- Identify the knowledge gaps that justify said low level of evidence
- 3.- Design actions to respond to the knowledge gaps identified.

Methods: Qualitative study. A group of six experts in systematic review of the literature was selected. Fourteen documents of national and international recommendations on RA (EULAR, ACR and SER) of the last 5 years were analyzed by a peer review. They selected recommendations with low level of evidence (Oxford 4 and 5) / grade of recommendation (C and D), and classified by areas (diagnosis, monitoring, treatment, others) and then possible causes of low level of evidence were analyzed. These were submitted to a Delphi to select the 10 recommendations in which participants considered it more critical to obtain quality evidence. Subsequently, actions were proposed to improve the levels of evidence in general and, through the PICOS structure (population, intervention, comparator, study design) specific studies were proposed to respond to the issues raised in these 10 recommendations

Results: 185 recommendations were found that had a low level of evidence / grade of recommendation, most related to the treatment of RA. The two most frequent causes of this low level of evidence and / or the degree of recommendation were the absence of studies and an incorrect classification of the level of evidence and / or degree of recommendation. In addition, other reasons and methodological barriers were found for which nine critical recommendations were finally selected for which new PICOs were developed with which to propose targeted research projects

Conclusion: It is necessary to improve the methodological approach in the RA recommendations guidelines to correct errors and fill gaps with appropriate studies.

Table 1. Actions to increase the level of evidence / recommendation.

#	Action
1	Prioritization of research towards knowledge gaps with the design and development of specific studies
2	Increase knowledge of experts in the methodology of consensus documents (including RSL, formulation of recommendations, etc.)
3	Supervision of the entire process by expert methodologists, to ensure a correct allocation of the levels of evidence and degree of recommendation
4	Review and select those topics that are really of interest and should be reviewed and can be answered
5	Expert opinion should never become a recommendation, but will be included in the text that accompanies that recommendation.
6	Clear syntax will be used and short recommendations will be made
7	Establishment and application of homogeneous criteria to formulate recommendations

Key words: Rheumatoid arthritis, recommendations, data gaps

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FRI0072

DISCONTINUATION OF DMARD USE IN RHEUMATOID ARTHRITIS PATIENTS WITH LUNG DISEASE

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Background: Pulmonary manifestations such as interstitial lung disease (ILD) and chronic obstructive pulmonary disease (COPD) are frequent extra-articular features that carry a poor prognosis in Rheumatoid Arthritis (RA). Little data is available on how RA patients (pts) with pulmonary disease are managed in real-world settings.