A PHQ-2 score ≥ 3 points has a sensitivity of 87% and a specificity of 78% for detecting a major depressive disorder compared to a structured clinical interview. [3] A positive screening result was either addressed during subsequent medical consultation or by notifying the patient's general practitioner. The PHQ-2 is a short form of the PHQ-9 which previously had been validated in rheumatoid arthritis. [4].

Results: Overall, 26% of patients stated depressive symptoms (PHQ score ≥ 3). Table 1 shows the prevalence of depressive symptoms by disease entity which was not significantly different among the subgroups ($\chi^2(5)=6$, p=0.3). However, given our results indicating depressiveness to be common across subgroups, all of these patients merit further evaluation. The PHQ-2 was widely accepted by patients, and seemed very feasible due to its concise form.

	Age				PHQ-2				PHQ-2 ≥ 3	
	Mean	Median	N	SD	Mean	Median	N	SD	N	%
Rheumatoid Arthritis, RF+	62.1	61.0	169	11.9	1.7	2.0	169	1.4	37	22
Rheumatoid Arthritis, RF-	63.1	64.0	51	13.7	1.9	2.0	51	1.7	16	31
Psoriatic Arthritis	54.6	55.0	59	11.4	1.5	1.0	59	1.4	11	19
Ankylosing Spondylitis	47.7	48.0	47	13.0	1.7	2.0	47	1.6	13	28
Various rheumatic diseases *	60.0	63.0	82	14.8	2.0	2.0	82	1.6	25	30
Not diagnosed yet/initial assessment	55.8	55.0	77	17.8	1.9	2.0	77	1.7	24	31

* Polymyalgia, Connective tissue diseases, and other.

Conclusion: The PHQ-2 questionnaire is a highly feasible and well accepted tool in routine clinical practice, helping to screen for depressive symptoms as a highly prevalent condition across rheumatic diseases. Real world evidence of depressive symptoms may improve healthcare by shedding light on the patients' mental well-being and comorbidity.

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THU0685 THE IMPACT OF ACHIEVEMENT OF RESPONSE AT ONE YEAR AFTER STARTING THERAPY ON THE LONG-TERM OUTCOME OF LUPUS NEPHRITIS

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Background: A variable percentage of lupus nephritis (LN) patients (pts) achieve response after the start of induction therapy. The impact of response on long-term renal outcome of LN is still unclear.

Objectives: To establish the response rate at one year after starting induction therapy and its impact on long-term development of chronic kidney disease (CKD) in LN.

Methods: 381 biopsy proven LN pts (86% females, mean age 31.3 ±12.1years), (18 pts:class II; 88 pts:class III; 199 pts:class IV; 76 pts: class V ISN/RPS) with estimated glomerular filtration rate (eGFR) 89.8 ±40.4 and proteinuria 4.3±3.9g/24h entered this study. As induction therapy, pts received methylprednisolone pulses (72%), oral prednisone (28%), cyclophosphamide (55%), mycophenolate mofetil (24%), azathioprine (5,5%), other immunosuppressants (15.5%). During a follow-up of 13.5 years after LN diagnosis, 53 pts (13.9%) developed CKD and 22 (5.8%) died.

Definitions: Complete response (CR) at one year: eGFR>60ml/min and proteinuria≤0.5/die, partial response (PR): eGFR>60ml/min, 50% reduction of proteinuria to sub-nephrotic range, no response (NoR): all the other cases. Survival curves were drawn using the Kaplan-Meier estimate and compared using the log-rank test. Cox regression model was used to test variables at univariate and at multivariate analysis.

Results: One year after the start of therapy, 220 pts (58%) achieved CR, 100 pts (26%) PR and 61 pts NoR. CKD developed in 11 out of 220 CR pts (5%), 18 out of 100 PR pts and 24 out of 61 NoR (39%). CKD free survival at 5, 10, 15 and 20 years were 99.5%, 96.5% 95.2% and 92.5 in CR pts, 99%, 90%, 87,6% and 83% in PR pts, and 81%, 65%, 54% and 44% in NoR pts (p<0.0001). In detail: CR vs RP p=0.067, RP vs NoR p<0.0001, and CR vs NoR p<0.0001. We have searched for the predictors of NoR among the clinical/therapeutic characteristics at diagnosis of LN. At univariate analysis, chronicity index at renal biopsy (p=0.0001), serum creatinine (p=0.001), eGFR (p=0.036), presentation with nephritic syndrome or rapid progressive renal failure (p=0.02), serum albumin (p=0.02) and arterial hypertension (p=0.001), were the predictors of NoR at one year. At multivariate analysis chronicity index (p=0.013) and arterial hypertension (p=0.017) were the independent predictors.

Conclusion: The achievement of CR or PR at one year is associated with preservation of renal function in the long-term. For this reason, any effort should be made to achieve response. Patients with impaired renal function, with high chronicity index at renal biopsy and arterial hypertension should be more tightly monitored as they have the highest risk of NoR.

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THU0686 EARLY MENOPAUSE AND/OR DURATION OF MENOPAUSAL HORMONAL TREATMENT MAY INCREASE THE RISK OF RHEUMATOID ARTHRITIS IN TOBACCO EXPOSED WOMEN: RESULTS OF THE E3N COHORT

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Background: Smoking has been reproducibly reported as associated with an increased risk of ACPA-positive Rheumatoid Arthritis (RA) [1]. The involvement of female hormones in the pathogenesis of RA is supported by numerous observations: a 2-4 female to male ratio before age 50, but below 2 after the age of 60, an increased incidence in the first year post-partum, and a peak of RA incidence around the age of menopause. To date, many studies have evaluated the association between hormonal

treatments and other reproductive factors, and RA risk with conflicting results [2, 3].

Objectives: To assess the relationships between endogenous and exogenous female hormonal exposures and the risk of RA in women involved in the E3N cohort.

Methods: E3N is an ongoing French prospective cohort that included 98,995 women aged 40-65 years in 1990. Women completed mailed questionnaires every 2-3 years on lifestyle, reproductive factors, and health-related information. Female endogenous hormonal exposures were assessed using age at menarche, age at menopause, and the duration of reproductive life. Exogenous hormonal exposures included oral contraception and menopausal hormonal treatment (MHT). Hazard ratios (HRs) and 95% confidence intervals (CIs) for the risk of incident RA were estimated using Cox proportional hazards regression models with age as the time scale, first applied to the overall population, then stratified for smoking exposure.

Results: A total of 698 incident RA cases were validated among and 78,452 women over 1,865,213 women-years. Multivariate models for age at menopause and cumulative duration of MHT appear in Table. After stratification for smoking exposure, early age at menopause was associated with a somewhat stronger RA risk in women exposed to smoking (HR=1.6, 95% CI: 1.1-2.4; $p_{linear\ trend}$=0.0270) than in those with no smoking exposure (HR=1.3, 95% CI: 0.8-2.2; $p_{linear\ trend}$ =0.1811). However when adjusting for cumulative duration of MHT, early age at menopause was no longer associated with incident RA, even in women exposed to smoking (HR=1.3, 95% CI: 0.8-2.2; $p_{linear\ trend}$ =0.7973), while a cumulative duration of MHT > 4 years was borderline associated with RA in women exposed to smoking [HR=1.3, 95%CI: 1.0-1.7; $p_{linear\ trend}$=0.09] in comparison with women who did not received MHT. Age at menopause and duration of THM were strongly correlated: in women with early menopause duration of MHT was significantly longer: 7.01 (7.3) years *versus* 4.8 (5.0) years (p<0.001). There was no evidence of an association between oral contraception use, age at menarche and duration of reproductive life with the risk of RA.

	RA	HR (95% CI) for RA	*P* for trend
Age at menopause (N=78,452)			
≤45 years	68	1.50 (1.1-2.1)	
]45-53[years	482	1.22 (0.9-1.5)	
≥53 years	148	1	0.0096
Cumulative duration of MHT in menopausal women (N=71,616)			
0	178	1	0.2417
]0-4] years	102	1.15 (0.9-1.4)	
> 4 years	308	1.14 (0.9-1.4)	
Multivariate models adjusted for age, smoking status, passive smoking during childhood, educational level, BMI, type of menopause (surgical or natural).			

Conclusion: Early age at menopause and/or duration of MHT > 4 years use may increase the risk of RA. Further studies are requested to disentangle the effect of early menopause to that of long-term MHT.

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THU0687

THE RISK OF SCHIZOPHRENIA AND EPILEPSY AMONG FAMILIAL MEDITERRANEAN FEVER PATIENTS: A BIG DATABASE ANALYSIS

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Background: Several autoimmune diseases have been associated with schizophrenia and epilepsy, however little is known about putative links with the auto-inflammatory conditions.

Objectives: We investigated the association between familial Mediterranean fever (FMF), a paradigmatic auto-inflammatory disease, schizophrenia and epilepsy, and assessed the impact of the latter disorders on the survival of FMF patients utilizing a large sample database.

Methods: A case-control study was performed by utilizing the database of Clalit Health Services. FMF patients were compared to age- and sex-matched counterparts in terms of prevalence of schizophrenia and epilepsy. The chi-squared test was used to assess the distribution of categorical variables, while the t-test were applied for continuous variables. Analysis regarding survival were performed using Kaplan-Meier curves, log rank test and multivariate Cox proportional-hazards method.

Results: The study included 7,747 FMF patients, and 10,080 age- and sex- matched controls. At the univariate analysis, schizophrenia and epilepsy as co-morbidities, 50 FMF patients (0.6%) and 89 controls (0.9%) had schizophrenia, respectively. On multiple logistic regression model, FMF was inversely associated with schizophrenia (OR 0.64 [95%CI 0.43-0.90], p=0.0173), while there was no association between FMF and epilepsy. Subjects having either FMF (HR 1.43 [95%CI 1.23-1.66]), schizophrenia (HR 3.97 [95%CI 1.47- 10.70]) or epilepsy (HR 2.54 [95%CI 1.72-3.75]) were independently associated with all-cause mortality. However, schizophrenia as co-morbidity in FMF subjects did not worsen their prognosis (HR 2.17 [95%CI 0.60-7.86]).

Conclusion: FMF patients have a significantly lower proportion of schizophrenia than controls. Patients with either FMF, schizophrenia or epilepsy are at higher risk of all-cause mortality**,** a finding that calls for assessment of better medical management on mortality outcome.

Table 1. Overall population basic characteristics.

Characteristic	All population (n=17,827)	Controls without FMF (n=10,080)	FMF patients (n=7,747)	Statistical significance (p-value)
Age (mean±SD)	38.43±19.62	37.69±19.55	39.38±19.68	NS
Age at diagnosis (mean±SD)	26.41±18.41	25.67±18.35	27.37±18.45	NS
Gender (female; %)	9,000 (50.5%)	5,121 (50.8%)	3,879 (50.1%)	NS
BMI (mean±SD)	24.81±63.91	24.42±50.61	25.30±77.41	NS
SES (n;%)[a]				p=0.0054 (p=0.0200 for trend)
Low	8,370 (50.6%)	4,729 (50.3%)	3,641 (51.1%)	
Medium	5,609 (33.9%)	3,153 (33.5%)	2,455 (34.5%)	
High	2,548 (15.4%)	1,524 (16.2%)	1,024 (14.4%)	
Smoking (n;%)	5,000 (28.0%)	2,588 (25.7%)	2,412 (31.1%)	<0.001
Schizophrenia (n;%)	139 (0.8%)	89 (0.9%)	50 (0.6%)	NS
Epilepsy (n;%)	267 (1.5%)	146 (1.4%)	121 (1.6%)	NS
All-cause mortality (n;%)	707 (4.0%)	341 (3.4%)	366 (4.7%)	<0.001

Table 2. Multivariate logistic regression assessing covariates associated with schizophrenia and epilepsy.

Variable	Coefficient	Std. Error	Wald	P	OR	95% CI
Schizophrenia						
Age	0.02	0.00	10.75	0.0010	1.02	1.01 to 1.03
Sex (female)	-0.28	0.19	2.16	0.1421	0.76	0.52 to 1.10
FMF	-0.45	0.19	5.67	0.0173	0.64	0.44 to 0.92
SES (medium)	0.26	0.20	1.66	0.1974	1.29	0.87 to 1.91