patients were excluded due to primary and secondary failure, complications, loss to 6-month follow-up, incomplete data, etc. Compared with a group of RA patients with depression remission (n=124), a group of patients with no depression remission (n=28) had a younger age (p=0.000), female sex (p=0.039), lower serum MMP-3 levels (p=0.021), lower HAQ-DI (p=0.018), lower HAM-D score (p=0.000), and higher Role/Social component summary score of the SF-36 (p=0.009) by univariate analyses. The binominal logistic analyses findings were as follows: younger age (p=0.0045, odd ratio: 0.94, 95% CI: 0.8–0.98), female sex (p=0.021, odd ratio: 0.21, 95% CI: 0.054–0.79), and lower HAM-D scores (p=0.0073, odd ratio: 0.85, 95% CI: 0.76–0.96).

Conclusions: It was suggested that RA patients who are female, younger in age and have lower depression scores at baseline are more likely to achieve depression remission status with the biologic treatment.

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SAT0086 THE ASSOCIATION BETWEEN ELDERLY RHEUMATOID ARTHRITIS PATIENTS USING BIOLOGICS AND ADVERSE EVENTS: RETROSPECTIVE COHORT STUDY

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Background: In Japan, the definition of the elderly was suggested as being over 75 years old by the Japan Geriatric Society. The effectiveness of biologics in elderly rheumatoid arthritis (RA) patients has been demonstrated in several clinical trials and cohort studies[1]. On the other hand, regarding safety, there are reports that the use of biologics in elderly RA patients is a significant risk for severe infections and that they do not increase the risk of serious infection [2,3]. There is little evidence to support the association between age of RA patients and adverse events caused by biologics.

Objectives: We aimed to examine whether the age of RA patients was associated with adverse events caused by biologics.

Methods: RA patients using biologics were eligible. The participants were collected at Showa University Hospital, Showa University Northern Yokohama Hospital and Showa University Koto Toyosu Hospital from 2005 to 2016 in a retrospective cohort study.

RA patients of 75 years and above compared with RA patients under 75 years.

The primary outcome was the rate of discontinuation due to adverse events caused by biologics. Statistical analysis was Pearson's chi-square test. Multivariable analysis was performed by multi linear analysis. Covariates were sex, glucocorticoids dose, csDMARDs, interstitial pneumonia, diabetes mellitus and chronic kidney disease.

Results: In total, 309 patients were enrolled. The mean age standard deviation was 57.1±15.6years, and 83.4% were women. 174 (56.3%) took glucocorticoid, and the mean glucocorticoid dose was 3.13±3.9mg.The patients over 75 years were 42 patients (13.6%), and those under 75 years were 267 patients (86.4%). The rate of discontinuation due to adverse events caused by biologics was 11/42 (26.2%) in the patients over 75 years and over, and 21/267 (7.9%) in the patients under the age of 75 (Relative Risk 1.24; 95% Confidential Interval (CI) 1.04 to 1.50; P 0.0003). Adverse events were bacterial pneumonia, pneumocystis pneumonia, exacerbation of interstitial pneumonia, urinary tract infection, herpes zoster, cytopenia, eruption, congestive heart failure. In the multivariable analysis adjusting for confounders, the rate of discontinuation in the group aged 75 years and older was significantly higher than that in the group under the age of 75 (regression coefficient 1.35; 95% CI 0.39–2.31; p=0.006).

Conclusions: Our results demonstrated that the rate of discontinuation due to adverse events by biologics was high significantly in RA patients over 75 years and above.

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SAT0087 THE RELEVANCE OF POOR PROGNOSTIC FACTORS FOR ACHIEVING LOW DISEASE ACTIVITY IN PATIENTS WITH RHEUMATOID ARTHRITIS: A COLLABORATIVE ANALYSIS OF THREE GERMAN COHORTS

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Background: Poor prognostic factors (PPF) are used as decision-criteria for treatment strategies in patients with rheumatoid arthritis (RA). However, their definition is based on the outcome of rapid radiologic progression.

Objectives: To investigate the impact of PPF in RA on achieving low disease activity (LDA) at follow-up.

Methods: We performed a collaborative analysis of three large German RA cohorts. Patients under routine care were either DMARD-naïve (n=991, early arthritis cohort CAPEA), on 1st conventional synthetic (cs)DMARD (n=2,547, National Database of the German Arthritis Centres (NDB)), or switching to a 2nd (n=1,959) or a 3rd DMARD (n=1,854, both biologics register RABBIT). Disease activity based on DAS28, autoantibody positivity (RF+/ACPA+), erosions, disability (HAQ≥1.2) and intake of glucocorticoids (>5mg/d) were evaluated as PPF at baseline. The outcome was DAS28 at 0, 3, 6 and 12 months. With multinomial logistic regression analyses, predictors of either LDA (DAS28<3.2) at 12 months or treatment escalation (adding or switching to cs/biologic (b)DMARD) were investigated.

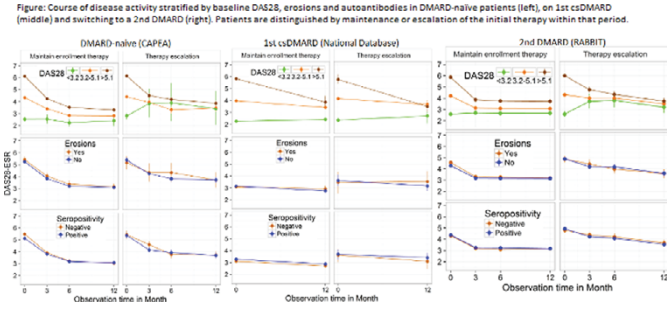
Results: Patients had a mean age of 57 to 60 years; 63% of DMARD-naïve patients and 71–72% of all others were female. Disease duration was 13 weeks in early RA (CAPEA) and 5–8 years in other cohorts. Patients with more treatment failures had more often PPF (not shown).

The figure shows the course of disease activity stratified by baseline DAS28, erosions and RF/ACPA. Values of DAS28 at baseline did not differ depending on presence/absence of erosions and autoantibodies. In all cohorts, irrespective of maintaining or escalating the initial treatment, patients with or without erosions and autoantibodies had similar DAS28 outcomes, whereas patients with moderate or high baseline DAS28 had higher disease activity during follow-up. The proportion of patients that did not achieve LDA at 12 months was 46% in DMARD-naïve, 34% on 1st DMARD, 47% switching to 2nd and 49% switching to 3rd DMARD.

In the multinomial model, a 1-unit increase in DAS28 was associated with a decreased probability to achieve LDA in all cohorts (table). In contrast, autoantibodies (OR from 0.8 to 1.3) and erosions (OR from 0.8 to 1.6) had no impact on achieving LDA at month 12 or on treatment escalation. The latter applied for DAS28 (OR from 0.9 to 1.5) and HAQ (OR from 0.7 to 1.2) regarding only treatment escalation.

Table 1. Selected OR (95% CI) of multinomial logistic regression

	DMARD-naïve	1st DMARD	2nd DMARD	3rd DMARD
Predictiors of LDA				
Age (by 5 yrs)	0.96 (0.9–1.0)	0.9 (0.8–0.99)	0.95 (0.91–0.99)	0.96 (0.9–1.0)
DAS28 (per 1 unit)	0.8 (0.6–0.9)	0.6 (0.4–0.9)	0.7 (0.6–0.8)	0.6 (0.6–0.7)
HAQ ≥1.2	0.9 (0.6–1.3)	1.1 (0.6–1.9)	0.6 (0.5–0.8)	0.6 (0.4–0.7)
GC >5 mg/d	1.6 (1.2–2.3)	0.6 (0.3–1.3)	1.0 (0.8–1.3)	0.99 (0.8–1.3)
b vs. csDMARD	–	–	1.4 (1.0–1.9)	1.4 (1.0–1.8)
Predictors for treatment escalation				
Age (by 5 years)	0.9 (0.9–0.98)	0.8 (0.7–0.9)	0.9 (0.8–0.9)	0.9 (0.9–0.96)
GC >5 mg/d	1.3 (0.8–1.9)	4.2 (1.6–11.0)	1.5 (1.1–2.0)	1.5 (1.2–2.0)



Conclusions: Although autoantibodies and erosions were associated with treatment failure, their absence did not predict LDA. Instead, baseline disease activity, functional status and glucocorticoid use may be more useful to guide treatment strategies when LDA is the target.

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