Abstract AB0402 – Table 1. Cardiorenal continuum features of rheumatoid arthritis patients (%)

	Features	Rituximab group			Control group			P_{R-C}
		1 year, n=50	3 years, n=47	6 years, n=31	1 year, n=30	3 years, n=26	6 years, n=16	
Risk factors	Hypertension	50.0	38.3	25.8 p_{6-1}=0.028	40.0	38.5	50.0	p_6=0.032
	Dyslipidaemia	44.0	36.2	38.7	40.0	46.2	50.0	>0.05
	Pre-diabetes	52.0	36.2	41.9	33.3	34.6	56.3	>0.05
	Metabolic syndrome	12.0	6.4	3.2	10.0	7.7	12.5	>0.05
	Diabetes mellitus	4.0	0	0	0	0	0	>0.05
	Anxiety/depression	83.2	41.5 p_{3-1}=0.006	35.3 p_{6-1}<0.001	80.0	73.1	68.8	p_3=0.009 p_6=0.008
Initial stages	Atherosclerosis	32.0	21.3	12.9 p_{6-1}=0.048	40.0	34.6	37.5	p_6=0.02
	Left ventricular hypertrophy	8.0	4.3	0	6.7	7.7	0	>0.05
	Diastolic dysfunction	48.0	38.3	22.6 p_{6-1}=0.022	46.7	50.0	56.3	p_6=0.04
	Albuminuria	8.0	0	0	0	0	6.3	>0.05
	Kidney impairment	6.0	2.1	0	13.3	0	0	>0.05
Progression	Angina	6.0	0	0	3.3	0	0	>0.05
	Chronic kidney disease	16.0	8.5	9.7	13.4	0	0	>0.05
End stage	Myocardial infarction/stroke	0	0	0	0	0	0	>0.05
	Heart failure	2.0	0	0	0	0	0	>0.05
	Acute/chronic renal failure	0	0	0	0	0	0	>0.05
	Death	0	0	12.9	0	0	0	>0.05

Disclosure of Interest: None declared
DOI: 10.1136/annrheumdis-2017-eular.5704

AB0403 ADHERENCE AND ACCESS TO BIOLOGICAL THERAPY AND TOFACITINIB IN A COHORT OF COLOMBIAN PATIENTS WITH RHEUMATOLOGICAL DISEASES

J.E. Machado-Alba, M.E. Machado-Duque, S. Granada on behalf of Grupo de Investigación en Farmacoepidemiología y Farmacovigilancia, Universidad Tecnológica de Pereira-Audifarma S.A, Pereira, Colombia. *Grupo de Investigación en Farmacoepidemiología y Farmacovigilancia, Universidad Tecnológica de Pereira-Audifarma S.A, Pereira, Colombia*

Background: Biological disease-modifying antirheumatic drug (bDMARD) and tofacitinib are highly effective, but with different pharmaceutical forms, adverse reactions and cost that could affect adherence therapy and drug access.
Objectives: To determine patient adherence and administrative access to the treatment with bDMARDs and tofacitnib in patients with rheumatological diseases in Colombia.
Methods: A retrospective cohort study, which included all patients in management with bDMARD and tofactinib initiated between July 1, 2015 and June 30, 2016. A monthly follow-up of the administrative adherence were evaluated by holding or applying the medication, as well as the application of Morisky-Green test in self-administered oral and subcutaneous therapies (non-adherent patient was considered when at least one doses is lost), other variables such as sociodemographic, comorbidities, and co-prescriptions were evaluated. A descriptive analysis, χ^2 for comparison and multivariate logistic regression were performed.
Results: A total of 1102 patients were evaluated, with a mean age of 52.8±15.4 years and a female predominance (72.8%). The most frequent comorbidities were hypertension (22.6%) and dyslipidemia (15.9%). The most prescribed drugs studied were adalimumab (31.9%), etanercept (22.2%) and tofacitinib (12.5%). 52.8% use conventional DMARDs and 42.2% use glucocorticoids. Global adherence was 66.3% as measured by Morisky-Green test. Adherence was better with self-administered subcutaneous drugs every week or longer, compared to daily dosing of oral drug; these data are detailed in table 1. In 42.4% of the patients, at least one delay per year in the application or dispensation occurred, leading to 36.1% of patients experiencing dose losses due to difficulties in access. The main reason (23%) for delays and dose losses is the failures by health-insurance companies to allow timely access to the therapy. In the multivariate analysis treatment with adalimumab or tofacitinib was associated with a greater probability of presenting delays in access after adjustment of variables.

Drug	(n)	(%)	Drug administration route and interval	Morisky-Green test adherence (%)	At least one dose application delay in the year of follow up (%)	Missed dose (%)
Adalimumab	351	31.9	SC – Every two weeks	74.8	62.7	51.3
Etanercept	245	22.2	SC – weekly	72	27.3	22.4
Tofacitinib	138	12.5	OA – every 12 hours	48.8	52.2	52.2
Golimumab	82	7.4	SC - monthly	64.7	32.9	28
Rituximab	66	6.0	IV - biannual and annual	Not apply	3.0	1.5
Certolizumab	58	5.3	SC - monthly	83.3	32.8	32.8
Infliximab	40	3.6	IV - monthly and every two months	Not apply	35.0	27.5
Abatacept	62	5.6	IV y SC - monthly and weekly	42.9 - (SC route)	38.7	27.4
Tocilizumab	60	5.4	IV y SC - monthly	50.0 - (SC route)	36.7	33.3

Conclusions: Subcutaneous self-applications of bDMARD have better adherence rates compared to oral drug. However, the limitations in access to treatment decrease the adherence. On the other hand the impact of the adherence could be major in the case of self-administered DMARD when weekly or longer intervals doses are lost, compared with the loss of one daily dose of tofacitinib.

References:
[1] Scott DL, et al. Rheumatoid arthritis. Lancet. 2010;376(9746):1094–108.
[2] Machado-Alba JE, et al. Effectiveness of treatment with biologic- and DMARD in rheumatoid arthritis patients in Colombia. Int J Clin Pract. 2016;70(6):506–11.
[3] Jorgensen TS, et al. Effectiveness and drug adherence of biologic monotherapy in routine care of patients with rheumatoid arthritis: a cohort study of patients registered in the Danish biologics registry. Rheumatology. 2015;54(12):2156–65.

Acknowledgements: To Universidad Tecnológica de Pereira and Audifarma S.A.
Disclosure of Interest: J. Machado-Alba Grant/research support from: The authors declare that Pfizer Colombia financed the data collection process in medical records. There was no intervention in the stages of processing, analysis or publication of that data. No non-financial conflicts of interest exist for any of the authors., M. Machado-Duque: None declared, S. Granada: None declared
DOI: 10.1136/annrheumdis-2017-eular.5263

AB0404 SIMILAR REMISSION RATES AMONG RHEUMATOID ARTHRITIS PATIENTS TREATED WITH ANTI TNF AND NON-ANTI TNF THERAPIES: REAL-LIFE DATA

J.A. Gómez-Puerta [1,2], N. Duque [1], M. Saldarriaga [1], L.A. González [1,2], C. Cerón [1], L. Uribe Botero [1], O.J. Felipe-Díaz [1]. *[1]Medicarte IPS; [2]Grupo de Reumatología, Universidad de Antioquia, Medellín, Colombia*

Background: Several biological DMARD (bDMARD) therapies have been approved for use in rheumatoid arthritis (RA) and are classified according to their respective therapeutic target: Anti TNF therapies and non-Anti TNF therapies. They are very effective in most of patients but their comparative efficacy in daily clinical is less well known.
Objectives: Our aim was to compare the efficacy of anti-TNF therapies vs non-Anti TNF therapies in a cohort of Colombian RA patients followed in different arthritis clinics under daily clinical practice conditions.
Methods: We conducted a cross-sectional study including with RA patients treated at Medicarte IPS from March 2009 to December 2016. Medicarte is a referral center for the integral medical care and pharmaco-surveillance of patients under biologic therapies in 13 cities in Colombia for inflammatory arthropathies, mainly RA, psoriatic arthritis and spondyloartropathies. Clinical information was obtained from electronic clinical records and medical claims. Only those patients with disease activity scores (DAS-28) at baseline and at the last visit were included. Remission was defined as DAS-28 <2.6 on the last visit. Patients treated only with conventional DMARD and/or tofacitinib were excluded.
Results: A total of 1,020 patients with RA were identified. 844 patients (88% female) were included in the final analysis, 416 patients with anti TNF and 428 with non-anti TNF therapies (Rituximab 199, Tocilizumab 125 and Abatacept in 104 patients). The mean age was 55.2±11.8 years, with a mean disease duration

Table 1. General Characteristics of patients with RA under bDMARD therapy

	Total N=844	Anti TNF N=416	Non-Anti TNF N=428	p value
Gender (female) %	88.0	88.7	87.6	NS
Age (years, SD)	55.2±11.8	55.0±11.8	55.4±11.8	NS
Disease duration (years, SD)	15.2±9.5	15.0±9.9	15.5±9.0	NS
bDMARD therapy duration (years)	3.2±2.5	3.2±2.5	3.2±2.4	NS
First line bDMARD therapy,%	64.0	75.2	53.2	p<0.001
Combined therapy, %	83.0	90.9	75.0	p<0.001
Seropositive (either CCP and/or RF) %	80.1	82.0	78.3	NS
DAS-28 at baseline (± SD)	4.3±1.1	4.20±1.14	4.4±1.21	NS
HAQ at baseline (± SD)	1.13±0.77	1.09±0.78	1.16±0.77	NS

of 15.2±9.5 years. bDMARD therapy was used for a mean time period of 3.2±2.5 years. Eighty three percent of patients were treated in combination therapy and 80% of patients were seropositive (CCP and/or RF). Both groups did not differ significantly on baseline clinical characteristics (see Table), with 2 exceptions: patients who received Anti-TNF therapies were treated more frequently as first line therapy (75.2% vs 53.2%, $p<0.001$) and received in a higher proportion combined therapy (90.9% vs 75.0%, $p<0.001$). A total of 59% of patient achieved remission at the last visit. Three year remission rates were slightly higher but not significant in patients treated with non-anti TNF therapies vs anti-TNF therapies (59.6% vs 53.3%, p=NS). We did not find significant differences in remission rates according serological status.

Conclusions: In real-life setting, a meaningful proportion of RA patients achieved remission on the last visit. Patients treated with anti-TNF and non-anti TNF therapies had similar baseline characteristics and after a mean time period of treatment of 3 years, achieved similar remission rates.

Disclosure of Interest: None declared

DOI: 10.1136/annrheumdis-2017-eular.5293

AB0405 SAFETY OF RITUXIMAB THERAPY IN AUTOIMMUNE DISEASES:SYSTEMATIC REVIEW AND META-ANALYSIS

K. Kobayashi[1], K.M. Minegishi[1], N. Horita[2], S. Ohno[1], H.N. Nakajima[3]. *[1]Center for Rheumatic Diseases, Yokohama City University Medical Center; [2]Department of Pulmonology; [3]Department of Stem Cell and Immune Regulation, Yokohama City University Graduate School of Medicine, Yokohama, Kanagawa, Japan*

Background: Treatment with rituximab (RTX), a chimeric CD20 monoclonal antibody, has demonstrated efficacy for patients with several autoimmune diseases. There is a growing concern, however, safety evidence of RTX is still lacking.

Objectives: We conducted to evaluate the safety of rituximab (RTX) for autoimmune diseases.

Methods: A literature review was performed based on the randomized clinical trials (RCTs) that assessed adverse events by comparing RTX and placebo or no treatment for autoimmune diseases. The same add-on treatment for both arms were allowed. Study selection and data extraction were independently conducted in duplicate. Meta-analyses were performed for each outcome separately using fixed model and generic inverse variance method.

Results: In the primary analysis, 16 eligible RCTs, with a total of 4147 patients for five autoimmune diseases (n=8: rheumatoid arthritis, n=3: Sjogren syndrome, n=1: systemic lupus erythematosus, multiple sclerosis, ulcerative colitis, Graves orbitopathy, immune thrombocytopenia) were analyzed. The incidence of infusion related reactions and the human antichimeric antibody (HACA) were higher in RTX group than placebo/no treatment group (OR 1.49, 95% CI 1.25–1.77 and OR 2.25, 95% CI 1.35–3.76, respectively). However, there were no significant differences the odds of total adverse events, serious adverse events, withdrawal for adverse events, infections, serious infections, malignancy, and all-cause death between two groups.

Conclusions: Our meta-analysis revealed that RTX was not associated with an increased risk of adverse events except for infusion related reactions and the incidence of HACA compared with placebo.

Acknowledgements:

Disclosure of Interest: None declared

DOI: 10.1136/annrheumdis-2017-eular.5643

AB0406 STABLE EFFICACY AND SAFETY AFTER SWITCHING FROM TOCILIZUMAB INTRAVENOUS TO SUBCUTANEOUS IN RHEUMATOID ARTHRITIS: RESULTS OF A COHORT OF 200 PATIENTS

L. Joffres[1], E. Ricard[2], C. Pereira Gillion[3], M. Herbette[4], C. Lucas[5], J.B. Cren[6], E. Bergeal[7], Y. Maugars[8], C. Saillot[2], P. Goupille[3], A. Saraux[4], A. Perdriger[5], B. Bouvard[6], E. Solau Gervais[1,9]. *[1]Rheumatology, University Hospital, Poitiers; [2]Rheumatology, General Hospital, Orleans; [3]Rheumatology, University Hospital, Tours; [4]Rheumatology, University Hospital, Brest; [5]Rheumatology, University Hospital, Rennes; [6]Rheumatology, University Hospital, Angers; [7]Medical information, General Hospital, la Rochelle; [8]Rheumatology, University Hospital, Nantes; [9]LITEC, Immunology Laboratory, Poitiers, France*

Background: Intravenous tocilizumab has been used since 2009 in Europe for the treatment of active rheumatoid arthritis. Since 2015, a subcutaneous formulation is available. The switch from a monthly, intravenous, with dose adjusted for bodyweight treatment to a weekly, subcutaneous, fixed dose, leads to various questions about efficacy and toxicity.

Objectives: The objectives were to evaluate the efficacy maintenance (maintenance rate and DAS28 variation), the safety, the dose variation after the switch and the characteristics of patients switching to the subcutaneous form respect to those following with the intravenous tocilizumab.

Methods: Multicenter and retrospective study was performed from a cohort of 203 patients undergoing intravenous tocilizumab from the rheumatology unit of 7 university hospitals between September 2015 and May 2016. Assessment has been done on the records, effectiveness was assessed using the DAS28, adverse events and reasons for staying on IV form were reported.

Results: On the 203 records analyzed, 3 were secondarily excluded. Of the 200 patients, 77 have switched for the subcutaneous form. Mean age of the 200 patients was 58 years (+/- 13.3) with 155 women (78%) and the mean duration of rheumatoid arthritis was 14 years (+/- 10.4). 72% of patients received a standard intravenous dose (8mg/kg/month) at baseline.

At the first visit after the prescription of the subcutaneous treatment, 58 patients on 65 (89%) maintained the treatment. The mean DAS28 was 1.53 (+/-1.00) at baseline and 1.19 (+/-0.78) at T1 (45 patients). Three patients received a reduced subcutaneous dose of 162mg/2 weeks following a reduced IV dose (<8 mg/kg/month) and maintained the subcutaneous treatment.

About safety, there was no new case of neutropenia $<1000/mm^3$. One severe adverse effect occurred (gastro intestinal perforation).

Regard to the dose variation, for the 77 patients switching, the mean difference between intravenous and subcutaneous dose was + 29mg/week (+/-35mg) with the subcutaneous tocilizumab.

Reasons for staying on IV form were essentially: the subcutaneous tocilizumab was not proposed in 55% of the cases and 17% of patients refused the subcutaneous form.

Conclusions: 89% of patients maintained the subcutaneous treatment after 4 months; efficacy was maintained in patients who received a reduced subcutaneous dose. Despite the higher dose after the switch (+29mg/week), there was no new case of neutropenia.

Disclosure of Interest: None declared

DOI: 10.1136/annrheumdis-2017-eular.6008

AB0407 COMPARATIVE EFFECTIVENESS OF TOCILIZUMAB (TCZ) MONOTHERAPY WITH TUMOR NECROSIS FACTOR INHIBITORS (TNFI) IN COMBINATION WITH VARYING DOSES OF METHOTREXATE (MTX) IN PATIENTS WITH RHEUMATOID ARTHRITIS

L.R. Harrold[1,2], G.W. Reed[1,2], J. Best[3], S. Zlotnick[3], G. Persuitte[2], J.M. Kremer[2,4]. *[1]University of Massachusetts Medical School, Worcester; [2]Corrona, LLC, Southborough; [3]Genentech, Inc, South San Francisco; [4]Albany Medical College and The Center for Rheumatology, Albany, United States*

Background: Clinical studies have shown that the efficacy of TCZ monotherapy (TCZ mono) is superior to that of TNFi monotherapy and comparable to that of TCZ in combination with MTX.

Objectives: To compare the effectiveness of TCZ mono vs TNFi plus varying doses of MTX in patients with rheumatoid arthritis (RA) and prior exposure to TNFi in routine clinical practice.

Methods: Eligible participants were TCZ-naïve patients from the Corrona RA registry who had prior exposure to ≥1 TNFi, initiated TCZ mono or a TNFi + MTX between 2010 and 2016 and had a 6-month follow-up visit. The primary outcome was mean change from baseline in Clinical Disease Activity Index (CDAI) at 6 months. Secondary outcomes included achievement of low disease activity (LDA; CDAI ≤10) at 6 months. Patients initiating a TNFi + MTX were grouped by MTX dose (≤10 mg; >10 to ≤15 mg; >15 to ≤20 mg; >20 mg); outcomes in each group were compared with those initiating TCZ mono using trimmed populations, excluding patients outside the propensity score (PS) distribution overlap (not on common support). The PS included age, sex, race, body mass index, smoking status, work status, disease duration, concomitant prednisone use/dose, prior biologic use, American College of Rheumatology functional class and baseline modified Health Assessment Questionnaire, CDAI and patient pain scores. As a sensitivity analysis, stratified-matched populations were created (stratified by 1 vs ≥2 prior biologics, then matched on PS). Linear and logistic regression models were estimated in the trimmed populations, adjusting for the same covariates as in the PS.

Results: Baseline demographics were generally comparable between the TNFi + MTX groups and their matched TCZ mono groups. Overall, the mean age was 54 to 59 years, and the mean disease duration was 10.5 to 15 years. A higher proportion of patients initiating TCZ mono had received ≥3 prior biologics compared with those initiating TNFi + MTX. Patients initiating TCZ mono had significantly longer mean disease duration than those initiating TNFi + MTX >15 to ≤20 mg (13.0 vs 10.5 years) or TNFi + MTX >20 mg (12.3 vs 9.3 years) and a higher mean baseline CDAI than those initiating TNFi + MTX ≤10 mg (28.1 vs 25.4). Patients in all groups had improvement in CDAI scores at 6 months. In adjusted models, improvement in CDAI and the likelihood of achieving LDA were similar between the TCZ mono group and all TNFi + MTX groups (Table). Similar results were observed in the PS-matched cohorts.

Conclusions: TCZ mono was as effective as TNFi + MTX, regardless of MTX dose, for improving disease activity in patients with prior TNFi exposure. These data suggest that TCZ mono is an effective treatment option for patients with RA who cannot tolerate or prefer not to use MTX.

Acknowledgements: This study is sponsored by Corrona, LLC. Corrona, LLC, has been supported through contracted subscriptions in the past 2 years by AbbVie, Amgen, BMS, Crescendo, Eli Lilly and Company, Genentech, GSK, Horizon Pharma USA, Janssen, Momenta Pharmaceuticals, Novartis, Pfizer, Roche and UCB.

Disclosure of Interest: L. Harrold Shareholder of: Corrona, LLC, Grant/research support from: Pfizer, Consultant for: Roche, Employee of: University of Massachusetts Medical School; Corrona, LLC, G. Reed Shareholder of: Corrona, LLC, Employee of: Corrona, LLC, J. Best Employee of: Genentech, Inc, S. Zlotnick