study. The same is true for the effect of functional impairment – it would be interesting to know whether this was due to inflammation or structural damage.

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Figure 1. Treatment trajectories of ADA therapy in patients with CIRD during two years ADA: adalimumab; bDMARD: biological disease modifying anti-rheumatic drug.

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AB0824

ANALYSIS OF GUT MICROBIOTA IN RHEUMATOID ARTHRITIS PATIENTS

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Background: Gastrointestinal microbiota, particularly gut microbiota is an indispensable environmental factor in the progression of Rheumatoid Arthritis (RA). Understanding the diversity and function of the intestinal flora in patients with RA is part and parcel to understand the relationship between microbiota and human health.

Objectives: This study aimed to identify the diversity and function of the intestinal flora in patients with RA.

Methods: A total of 166 participants were recruited in this study, comprising 93 RA patients and 73 age and sex-matched healthy controls (HCs). Microbial genome was extracted from approximately 250mg fresh fecal samples from all participants using QIAamp PowerFecal DNA Kit (Qiagen). The V3-V4 variable regions of bacterial 16S rRNA genes were sequenced with the Illumina Miseq PE300 system. Sequence data were compiled and processed using Qiime2. Sequences were grouped into operational taxonomic units (ASVs)¹. Microbial diversity was estimated by the Simpson index. PICRUST2 was used to predict KEGG functional pathway differences between RA and HC intestinal flora functions based on ASV Tables². Linear Discriminant Analysis (LDA) Effect Size (LEfSe) analysis was performed using LEfSe software to discover the different intestinal flora and functions between RA and healthy.

Results: The alpha-diversity index of Simpson the microbiome in RA patients was lower than that of HCs (Figure 1a, $P < 0.05$). Compared with HCs, bacterial Bacilli and Lactobacillales were more abundant in patients with RA (Figure 1b, $P < 0.05$). In contrast, Marinifilaceae, Peptococcaceae, Peptococcales and Phascolarcto bacterium were less abundant in the RA group (Figure 1b, $P < 0.05$). As shown in Figure 1c, propanoate metabolism, taurine and hypotaurine metabolism, ascorbate and aldarate metabolism, biosynthesis of siderophore group nonribosomal peptides and glutathione metabolism were the most significantly altered pathways in RA ($P < 0.05$). Epithelial cell signaling in Helicobacter pylori infection, RNA transport, RNA degradation and plant-pathogen interaction were the most significantly altered pathways in HC ($P < 0.05$). The different KEGG

metabolic pathways were mainly concentrated in carbohydrate and amino acid metabolism.

Conclusion: Gut dysbiosis in RA patients mainly characterized by reduced the diversity and impaired abundance of the intestinal flora, which severely influence the metabolism of gastrointestinal microbiota. The discovery of the associated intestinal microbiota of RA may provide a new idea for RA treatment.

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Figure 1 (a) Comparison of Simpson index between HC and RA groups was shown using boxplot. (b) LEfSe was used to detect difference in Flora according to RA and HC. (c) LEfSe was used to detect difference in Flora functions according to RA and HC. Pathway differences plot as LDA score (log 10). Bars to the right of zero represent bacterial functions enriched in the RA, and bars to the left of zero represent bacterial functions in HC. *P < 0.05.

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AB0825

JAK2 (V617F) MUTATION AND ASSOCIATION TO IMMUNE MEDIATED DISEASES. STUDY OF 130 PATIENTS FROM A SINGLE UNIVERSITY HOSPITAL

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Background: Janus Kinases (JAK) are tyrosin-kinases that can promote cytokine production in immune and hematopoietic cells. The JAK-2 (V617F) mutation is the most frequently detected mutation in myeloproliferative neoplasms (MPN) which include essential thrombocythemia (ET), polycythemia vera (PV), primary myelofibrosis (PMF) and undifferentiated MPN. JAK-2 (V617F) mutation displays a pro-inflammatory phenotype that may be associated to a higher risk of immune mediated diseases (IMD), thromboembolic complications or other cancers (1-3).

Objectives: To evaluate the presence of a) IMID (rheumatic and non-rheumatic), b) cancer and, c) Deep vein thrombosis/ Venous thromboembolism (DVT/VTE) events in a cohort of patients with a positive JAK-2 (V617F) mutation.

Methods: We studied all the patients diagnosed with a positive JAK-2 (V617F) mutation in a single University Hospital between January, 2004 and December, 2019.

Results: The study included 130 patients (73 men/57 women; mean age, 70.1±14.5 years). They were diagnosed of ET (n=64, 49.2%), PV 46 (35.4%), undifferentiated MPN (n=12, 9.2%) and PMF (n=8, 6.1%). Of these patients, 54 (41.5 %) (44 non rheumatic and 10 rheumatic) were diagnosed with at least one IMID, 46 (35.4%) with other cancer different of MPN and 36 (27.7%) with DVT/VTE events. (Table 1/Figure 1).

Conclusion: Due to its prevalence and potential complications, IMID should be taken into consideration when a patient is diagnosed with a positive JAK-2 (V617F) mutation.

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Table 1. Associated diseases in 130 patients with JAK2 (V617F) mutation. Data are n (%)

Myeloproliferative neoplasms (MPN)	130 (100)
Essential thrombocythemia (ET)	64 (49.2)
Polycythemia vera (PV)	46 (35.4)
Undifferentiated MPN	12 (9.2)
Primary myelofibrosis (PMF)	8 (6.5)
Non-rheumatic IMID	44 (33.8)
Diabetes mellitus	22 (50)
Asthma	10 (22.7)
Psoriasis	6 (13.6)
Crohn disease	2 (4.5)
Autoimmune thyroiditis	2 (4.5)
Rheumatic IMID	10 (7.7)
Rheumatoid arthritis	4 (40)
Polymyalgia rheumatica	3 (30)
Sjögren disease	1 (10)
Antiphospholipid syndrome	1 (10)
Adult-onset Still's disease	1 (10)
Malignancies different of MPN	44 (33.8)
Solid tumours // Hematologic malignancies // Skin cancer	22 (50) // 13 (29.5) // 9 (20.4)
Deep vein thrombosis/Venous thromboembolism (DVT/VTE) events	35 (26.9)

Figure 1. Associated diseases accordingly to the subtype of Myeloproliferative neoplasm. Data are n.

ABBREVIATIONS: DVT/VTE: Deep vein thrombosis/ Venous thromboembolism. ET: Essential Thrombocythemia, IMID: Immune Mediated Diseases, PV: Polycythemia Vera; MPN: Myeloproliferative Neoplasms; PMF: Primary myelofibrosis; UMPN: Undifferentiated myeloproliferative neoplasms.

Disclosure of Interests: Carmen Álvarez-Reguera: None declared, Lara Sanchez-Bilbao: None declared, Ana Battle-López: None declared, Sara Fernández López: None declared, Miguel Á. González-Gay Speakers bureau: Abbvie, Pfizer, Roche, Sanofi and MSD., Grant/research support from: Abbvie, MSD, Janssen and Roche, Ricardo Blanco Speakers bureau: Abbvie, Pfizer, Roche, Bristol-Myers, Janssen, Lilly and MSD., Grant/research support from: Abbvie, MSD and Roche

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AB0826

IMPORTANCE OF PRECONCEPTION CARE AND PLANNING FOR PREGNANCY IN WOMEN OF CHILDBEARING AGE COMPLICATED WITH CONNECTIVE TISSUE DISEASES

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Background: Previous reports showed that connective tissue disease (CTD) have a high risk for adverse pregnancy outcomes (APOs) such as preterm birth, light-for-date, or preeclampsia¹. It was revealed that these APOs were associated with high disease activity or treatment agents, particularly in glucocorticoid². Some patients, who have no or insufficient preconception care and became unplanned pregnant, exacerbate the underlying disease, and lead to disappointing pregnancy outcomes. Therefore, preconception care and planning for pregnancy is very important to control disease activities and manage the appropriate treatment agents, including glucocorticoid, immunosuppressants, biologics, hydroxychloroquine, and anticoagulants³.

Objectives: We investigate whether the presence or absence of preconception care before pregnancy affects clinical disease course and pregnancy outcomes.

Methods: We examined 200 CTD women who delivered their newborns in our institution from March 2006 to January 2021. We analyzed the association between preconception care and the clinical course of underlying diseases during pregnancy or pregnancy outcomes.

Results: Of all 200 cases, 133 (55.9%) cases had preconception care in our institution, while the others had no or insufficient preconception care. We showed the comparison of treatment agents and pregnancy outcomes between the cases with and without preconception care in Table 1. There was no significant difference in the rate of glucocorticoid use and the mean prednisolone dose during pregnancy between these two groups. However, the rate of increased dose of glucocorticoid or pulse therapy was significantly higher in the cases without preconception care. As for pregnancy outcomes, there was no significant difference in the live birth rate. On the other hand, the gestational weeks at delivery were significantly shorter, and the rate of preterm birth was higher in the cases without preconception care. In addition, the rate of the hospitalization of neonatal intensive care unit (NICU) was also significantly higher in the cases without preconception care.

Conclusion: We revealed that preconception care before pregnancy reduced the need for intensified treatment such as increasing dose of glucocorticoid or pulse therapy. The rate of preterm birth and NICU hospitalization was also shown to decrease. Therefore, it is important for our rheumatologists to provide an appropriate preconception care for CTD women of childbearing age and to make a plan for pregnancy.

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Table 1. Comparison of treatment agents and pregnancy outcomes between the cases with and without preconception care

	Preconception care (+) (n=113)	Preconception care (-) (n=89)	P value
Treatment agents during pregnancy			
Glucocorticoid use (n (%))	64 (56.6)	50 (56.2)	1.00
Mean glucocorticoid dose (mg/day)	6.3±3.9	8.4±6.1	0.09
Dose-up of glucocorticoid (n (%))	11 (9.7)	26 (29.2)	<0.01*
Glucocorticoid pulse therapy (n (%))	0 (0)	8 (9.0)	0.01*
Immunosuppressant (n (%))	14 (12.5)	4 (4.5)	0.08
Hydroxychloroquine (n (%))	7 (6.2)	6 (6.7)	1.00
Anticoagulant therapy (n (%))	21 (18.8)	16 (17.8)	1.00
Pregnancy outcome			
Spontaneous abortion (n (%))	8 (7.1)	6 (6.7)	1.00
Live birth (n (%))	100 (88.5)	78 (87.6)	1.00
Gestational weeks at delivery (week)	38.7±1.4	37.3±3.5	0.01*
Birth weight of newborn (gram)	2888.8±453.7	2678.4±732.6	0.25
Adverse pregnancy outcomes (n (%))	26 (26.0)	28 (35.0)	0.20
Preterm birth (n (%))	5 (5.0)	19 (23.8)	<0.01*
Light-for-date (n (%))	10 (10.0)	9 (11.3)	0.81
Hypertensive disorder (n (%))	5 (5.0)	8 (10.0)	0.25
NICU management (n (%))	13 (13.0)	24 (30.0)	<0.01*

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AB0827

SERUM NESPHATIN-1 IN PATHOGENESIS RHEUMATOID ARTHRITIS

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Background: Interest in highly specialized tissue cytokines contributed to the discovery of new biologically active molecules. Nesfatin-1 (NF) - discovered in 2006 as an anorexigenic factor. NF-1 is believed to be involved in the regulation of energy homeostasis by regulating appetite and water intake. The role of NF-1 in the pathogenesis of inflammatory diseases is poorly understood. Recently, studies have found a relationship between an increased level of NF-1 and inflammatory markers in various pathologies.

Objectives: Study of the level of nesfatin-1 in the blood serum of healthy people, determination of the correlation between the level of NF-1 with the severity of clinical symptoms and classic markers of inflammation in patients with RA.