Figure 1. Correlation of RRS with IL-6

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AB0252

RACIAL DISPARITIES IN OUTCOMES FOR PATIENTS WITH RHEUMATOID ARTHRITIS UNDERGOING TOTAL KNEE OR TOTAL HIP ARTHROPLASTY

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Background: Race is linked to delays in healthcare. Black and Hispanic patients with osteoarthritis have worse pain and function than Whites before arthroplasty. Whether Black and Hispanic patients with RA similarly delay care is unknown.

Objectives: To assess whether Black and/or Hispanic (minority) RA patients have worse pain, function and disease activity at the time of arthroplasty.

Methods: We used prospectively acquired data on RA patients between 10/2013 and 11/2018 prior to total knee arthroplasty (TKA) or total hip arthroplasty (THA). Pain, function, and disease activity were assessed using the visual analogue scale (VAS), the Multidimensional Health Assessment Questionnaire (MD HAQ), and the Disease Activity Score (DAS28). Race, ethnicity, education, income, insurance and medications were collected via self-report questionnaire. Multivariable linear and logistic models examined whether minority status predicted pain, function and disease activity.

Results: 37 (23%) of the 164 patients were minorities (Table 1). MD HAQ and DAS28 were worse in minorities, only VAS was significant (p-value= 0.029). There was no significant difference in education. Unadjusted comparisons indicated no difference in pain, function, disease activity or medication use between groups. Insurance varied significantly between groups (p= <0.0001). In the multivariable analyses (Table 2), minority status was not significantly associated with worse function (MD

Table 1. Cohort

	Overall (N=164)	Minority* (N=37)	Non-minority (N=127)	p-value
Age, years, median [IQR]	62.5 [54.7, 71.2]	56.8 [51.0, 68.8]	64.0 [55.1, 71.5]	0.063
VAS Pain Score, median [IQR]	6.0 [4.0, 8.0]	7.5 [4.0, 8.0]	6.0 [4.0, 8.0]	0.029
MD HAQ Score, mean ± SD	11.8 ± 5.3	12.3 ± 5.1	11.6 ± 5.3	0.528
DAS28, mean ± SD	3.8 ± 1.3	4.1 ± 1.3	3.8 ± 1.2	0.181
Sex				
Males	22 (13.41%)	3 (8.11%)	19 (15.08%)	0.412
Education				
Graduated HS	18 (11.76%)	4 (12.90%)	14 (11.48%)	0.762
Some college or above	135 (88.24%)	27 (87.10%)	108 (88.52%)	
Insurance				
Commercial	54 (33.13%)	9 (29.03%)	45 (41.28%)	<0.001
Medicare	77 (47.24%)	13 (41.94%)	64 (58.72%)	
Medicaid	9 (5.52%)	9 (29.03%)	0 (0.0%)	
N/A	23 (14.11%)	6 (16.22%)	17 (13.49%)	
Biologics				
Yes	90 (55.56%)	23 (62.16%)	67 (53.60%)	0.452

*Minority status: Black or African American, Hispanic or Mixed.

IQR: Interquartile Range

VAS: Visual Analogue Scale

MD HAQ: Multidimensional Health Assessment Questionnaire

DAS28: Disease Activity Score28

HS: High School

Table 2. Multivariable analysis to determine the risk of DAS28, VAS Pain Score, and MD HAQ Score (Generalized Logistic Model)

	DAS28-ESR Odds ratio (95% CI)	VAS Pain Score β ± SE	MD HAQ Score β ± SE
Minority (Yes)	1.29 (0.41, 4.05)	0.87 ± 0.66	1.44 ± 1.27
Education (Some college +)	9.57 (2.17, 42.21)	0.12 ± 0.77	-0.24 ± 1.49
Medicaid*	4.30 (0.28, 66.69)	-0.13 ± 1.37	-2.60 ± 2.66
Medicare*	1.48 (0.49, 4.45)	0.22 ± 0.67	2.31 ± 1.28
Age	0.97 (0.92, 1.02)	0.02 ± 0.03	-0.17 ± 0.06
Sex (Female)	2.35 (0.74, 7.49)	0.16 ± 0.70	0.26 ± 1.37
Biologics (Yes)	0.64 (0.27, 1.48)	0.81 ± 0.50	0.13 ± 0.97
MD HAQ Score	1.09 (1.00, 1.17)	0.17 ± 0.05	

*Ref: Commercial

Significant variables in bold

HAQ) [p=0.26], disease activity (DAS28-ESR) [p=0.658], or VAS pain [p=0.18]. Increased age was significantly associated with better function (p=0.004).

Conclusion: For Black and/or Hispanics with RA undergoing THA or TKA at a high-volume specialty hospital, minority status was not significantly associated with pain, disability or RA disease activity at the time of elective arthroplasty.

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AB0253

BIOMARKERS OF CLINICAL RESPONSE TO IL6-R BLOCKADE IN DMARDS INCOMPLETE RESPONDERS (AR-BIOM TRIAL): IL23 AND BAFF AS BIOLOGICAL TARGETS, AND ALBUMIN AS BIOLOGICAL PREDICTOR

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Background: The therapeutic algorithm in persistently active Rheumatoid Arthritis, despite conventional synthetic DMARDs (csDMARDs), identifies TNFα blockers and other biologics as first line treatment, without clear indications of which biologic should be adopted first in persistently active patients.

Objectives: In the AR-BIOM trial we analyzed several biomarkers to define which one could help to identify the best responder to IL6-R blockade.

Methods: Sixty-nine RA persistently active despite csDMARDs treatment, were enrolled in this Interventional Phase IV, prospective, multicenter, non-randomized, no-profit study (Clinical Trial: n.2012-001760-30) and followed for 18 months after Tocilizumab (TCZ) treatment monotherapy or in combination with csDMARDs. The study was conducted in 10 outpatient clinics of "Gruppo Italiano di Studio sulle Early Arthritis" network (GISEA Study Group) in Italy. The primary end point was the clinical response to TCZ, as LDA (DAS<2.4) at 12 months follow-up (FU), correlated with Matrix 1 (pathway of Innate inflammation: IL-8, MCP1, Chemerin) vs Matrix 2 (Pathway of IL1/IL6/TH17: IL1α, IL1β, IL17, IL23) along with the Pathway of regulatory T cells activity (IL-10, BAFF) and acute phase reactants (Albumin, Fibrinogen, CRP, ESR) as biomarkers of interest. DAS and SDAI remission were secondary end-points at 12 and 18 months FU. A ROC analysis of soluble biomarkers was performed to obtain thresholds allowing the prediction of DAS-remission or LDA at 12 months FU. A multivariate logistic analysis, in which "LDA or DAS/SDAI remission at 12 months FU" were the dependent variables, was performed.

Results: During the 18 months of the study, 9/69 patients (13.0%) discontinued the study because of treatment failure, 2 (2.9%) for an AE, 2 for a SAE, and 5 (7.2%) for other reasons. At 12 months FU, LDA was achieved in 75.0% and DAS-R and SDAI-R in 63.3% and 41.7%