

COMPARATIVE EFFECTIVENESS OF BIOLOGICAL THERAPIES IN RHEUMATOID ARTHRITIS IS INFLUENCED BY RESPONSE MEASURES AND DISEASE ACTIVITY STATE

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Background

DAS28	CDAI	SDAI
Tender Joints-28	Tender Joints-28	Tender Joints-28
Swollen Joints-28	Swollen Joints-28	Swollen Joints-28
PGH	PGA	PGA
ESR	PhGA	PhGA
		CRP
2.6 / 3.2 / 5.1	2.8 / 10 / 22	3.3 / 11 / 26

CRP, C-reactive protein; ESR, erythrocyte sedimentation rate; PGA, patient global assessment; PGH, patient global health; PhGA, physician global assessment;

Background

Data from Reuma.pt - response at 6 months

	ADA	ETA	GOLI	INFLI	TOCI
N	123	204	31	110	52
DAS at baseline (p=0.12 ANOVA)	5.3±1.2	5.6±1.2	5.4±1.3	5.6±1.3	5.7±1.2
DAS 6m (p<0.0001 ANOVA)	3.7±1.3	3.8±1.3	3.5±1.3	3.7±1.4	1.6±0.99
EULAR good response 6m (chisq p<0.0001)	25.0%	30.7%	40%	27.7%	88.9%

Background

Data from Reuma.pt - remission at 6 months

	ADA	ETA	GOLI*	INFLI	TOCI
CDAI \leq 2.8 (Fisher p=0.15)	31.6%	9.7%		21.1%	33.3%
SDAI \leq 3.3 (Fisher p=0.07)	31.6%	9.7%		26.3%	44.4%
DAS28<2.6 (Fisher p=0.005)	36.8%	25.8%		26.3%	88.9%

* Golimumab not assessed for small sample size

- To assess whether the influence of disease activity indexes on comparative effectiveness persists in other RA disease activity states

Material and Methods



Sociedade
Portuguesa de
Reumatologia

Registo Nacional de Doentes Reumáticos
Rheumatic Diseases Portuguese Register

- **Inclusion criteria:**
 - RA patients
 - Registered in Reuma.pt
 - First biological therapy users
 - Starting treatment after January 1st 2008
 - Treated with anti-TNF (infliximab, adalimumab, golimumab) or anti-IL6 (tocilizumab) antibodies

Material and Methods

- **Primary outcome:**
 - Proportion of patients in each disease activity state - remission, low, moderate, high
 - At 6 months
 - Applying DAS28, CDAI, SDAI
- Univariate and multivariate logistic regressions to compare the groups

Results

Baseline characteristics (n = 220)

	anti-TNF (180)	Tocilizumab (40)	p
Age (y)	53.02 ± 12.52	53.76 ± 11.73	0.74
Female (%)	80.0	90.6	0.06
Smokers (%) (n=196)	22.5	16.0	0.34
Education (y) (n=174)	6.99 ± 4.50	6.41 ± 3.61	0.64
Disease duration (y) (n=204)	12.23 ± 13.42	8.25 ± 7.61	0.043*
RF-positive (%) (n=187)	81.1	76	0.51
Steroids (%)	70.0	77.2	0.33
MTX (%)	85.0	80.6	0.51

*p<0.05

Results

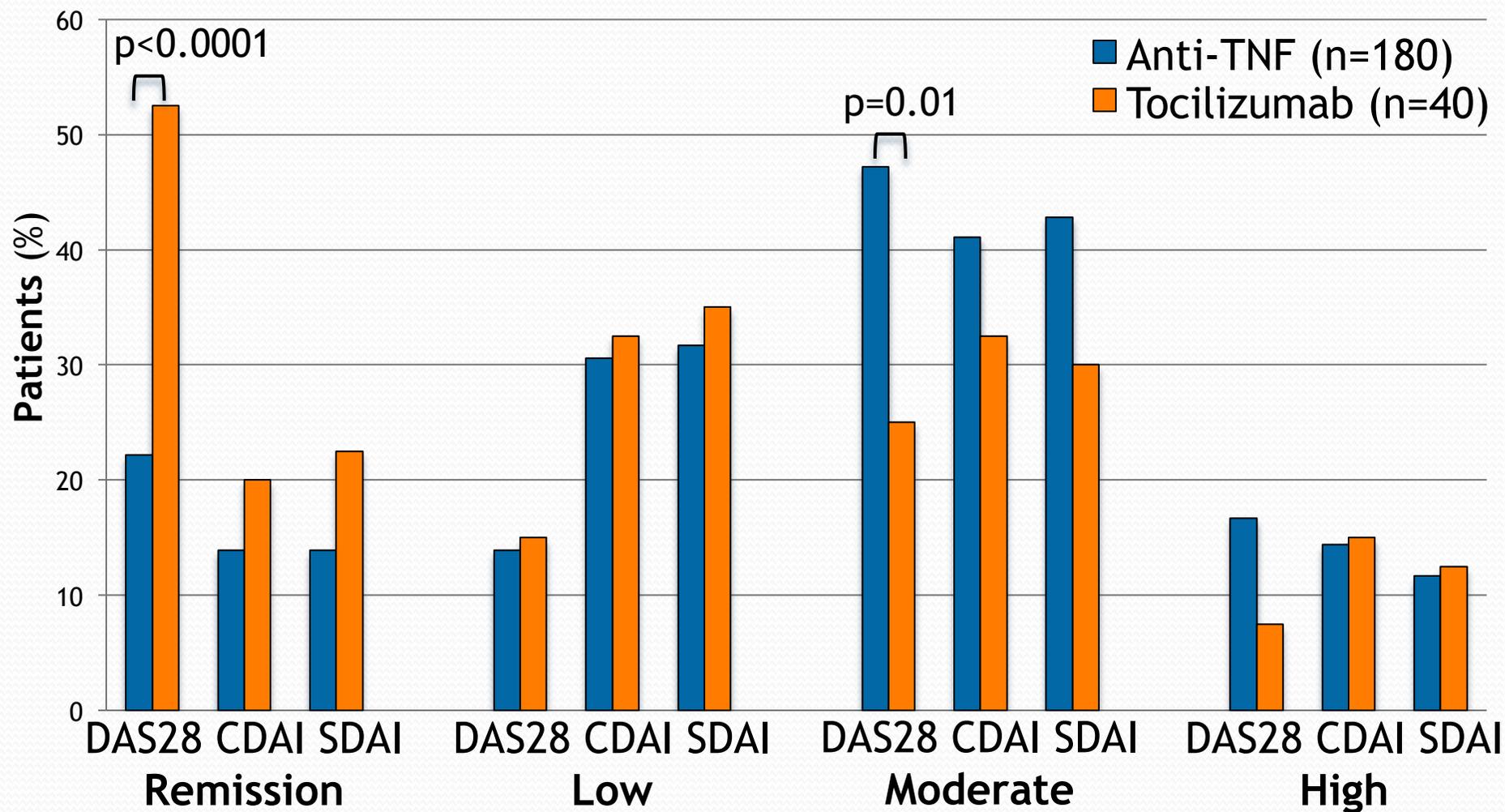
Baseline characteristics (n = 220)

	anti-TNF (180)	Tocilizumab (40)	p
TJC (n=181)	9.95 ± 7.52	12.23 ± 8.24	0.13
SJC (n=182)	6.69 ± 5.05	10.03 ± 5.46	0.001*
HAQ (n=152)	1.45 ± 0.63	1.55 ± 0.59	0.40
DAS28 (n= 185)	5.39 ± 1.30	5.93 ± 1.26	0.027*
SDAI (n=150)	29.77 ± 14.51	36.37 ± 14.54	0.046*
CDAI (n=158)	27.21 ± 13.58	34.11 ± 14.18	0.029*

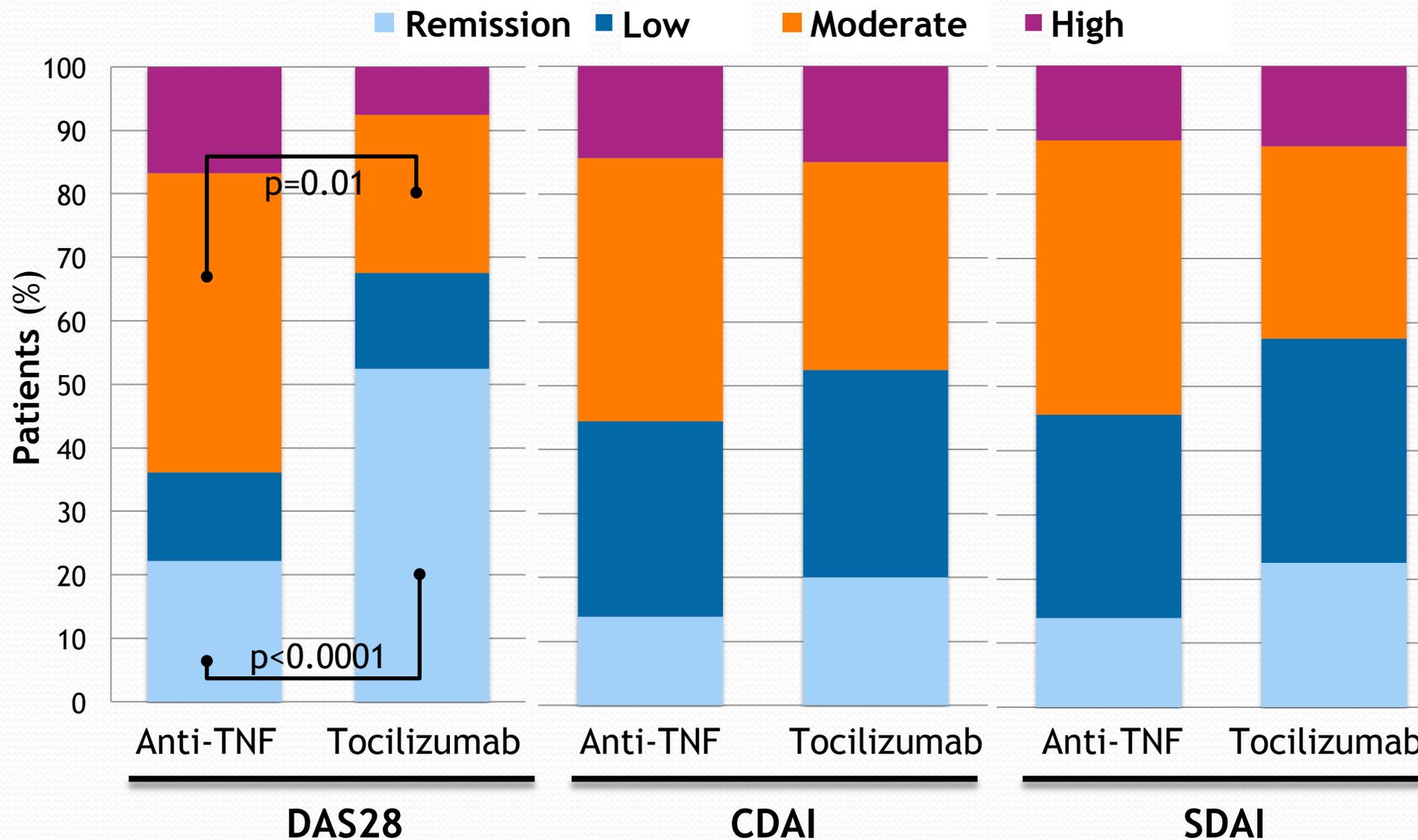
*p<0.05

Results

Disease activity at 6 months



Results



Results

	OR univariate (95% CI)	p	OR multivariate [⌘] (95% CI)	p
DAS28 _{remission}	0.26 (0.13-0.53)	<0.0001*	0.16 (0.06-0.38)	<0.0001*
CDAI _{remission}	0.65 (0.27-1.56)	0.33	0.41 (0.13-1.25)	0.12
SDAI _{remission}	0.56 (0.24-1.31)	0.18	0.29 (0.09-0.91)	0.033*
DAS28 _{low}	0.91 (0.35-2.4)	0.86	0.63 (0.22-1.78)	0.38
CDAI _{low}	0.91 (0.44-1.90)	0.81	0.56 (0.23-1.38)	0.21
SDAI _{low}	0.86 (0.42-1.77)	0.68	0.68 (0.28-1.64)	0.39

*p<0.05

[⌘]adjusted for disease duration and baseline DAS28/CDAI/SDAI

Results

	OR univariate (95% CI)	p	OR multivariate [⌘] (95% CI)	p
DAS28 _{moderate}	2.68 (1.24-5.82)	0.012*	3.49 (1.44-8.43)	0.006*
CDAI _{moderate}	1.45 (0.70-2.99)	0.32	2.20 (0.89-5.44)	0.09
SDAI _{moderate}	1.74 (0.83-3.65)	0.14	2.48 (0.94-6.53)	0.07
DAS28 _{high}	2.47 (0.71-8.53)	0.15	6.13 (1.32-30.89)	0.028*
CDAI _{high}	0.96 (0.37-2.50)	0.93	1.71 (0.45-6.49)	0.43
SDAI _{high}	0.86 (0.33-2.62)	0.68	2.01 (0.42-9.60)	0.39

*p<0.05

[⌘]adjusted for disease duration and baseline DAS28/CDAI/SDAI

Conclusions

- Magnitude of tocilizumab treatment effect is dependent on:
 - The disease activity measure used: >> DAS28
 - The disease activity state analyzed: >> remission
- Patients are classified into different disease activity states by distinct indexes

Thank you