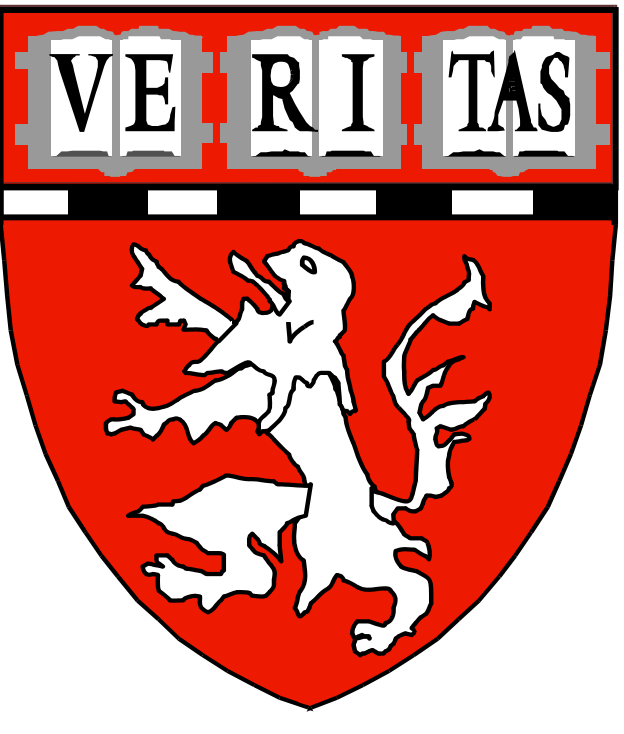




BRASS

Contemporary Trends in Rheumatoid Arthritis Disease Activity Reduction and Medication Use

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Introduction

Recent literature suggests that the course of RA has become milder over time, possibly due to more aggressive treatment strategies.

We studied trends of disease activity in a large single-center cohort of RA patients over two years.

Methods - Data Collection

Patients enrolled in Brigham Rheumatoid Arthritis Sequential Study (BRASS), a large single center cohort of RA patients in which demographic, genetic and functional status data is collected (2003-present).

Baseline and annual data collected:

- tender joint count (TJC)
- swollen joint count (SJC)
- patient global assessment (PGA)
- evaluator global assessment (EGA)
- physical function
- comorbidities
- inflammatory markers: ESR and CRP
- medication use

Every six months, subjects queried by mail regarding medication changes, physical function and comorbidities.

Methods - Statistical Analysis

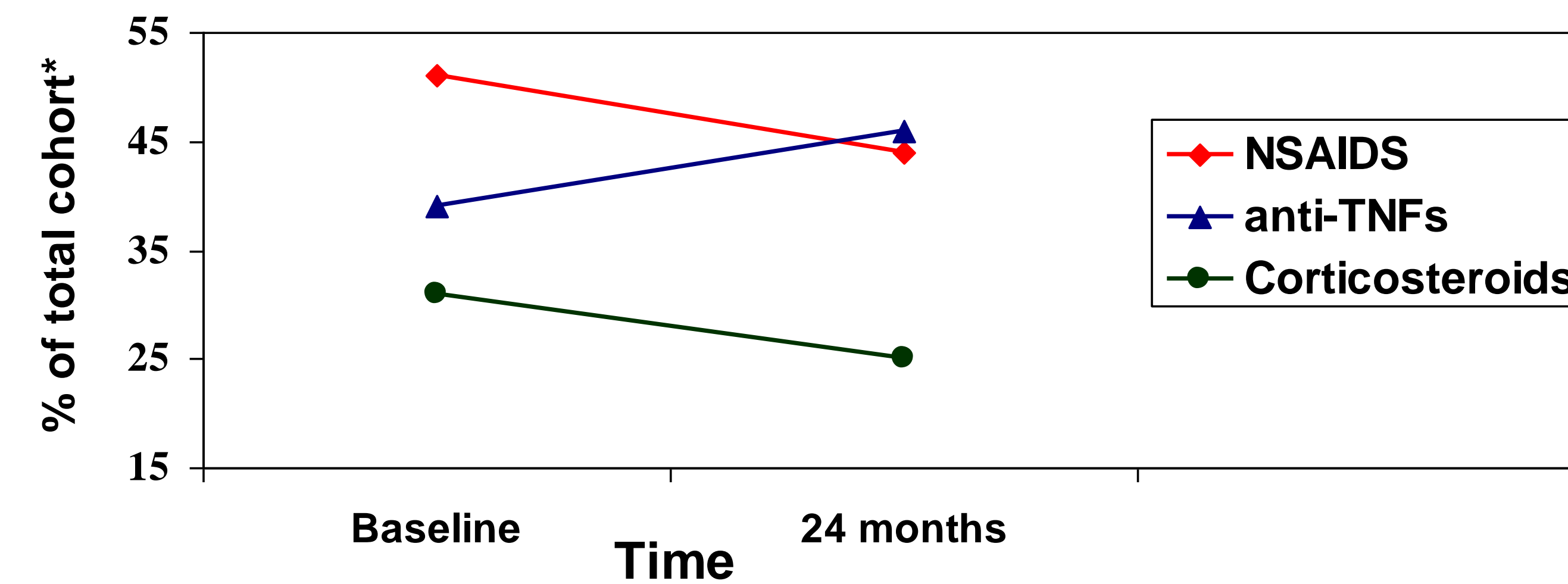
- Differences in medication use from baseline to 24 months analyzed using McNemar's Test
- Trends in DAS28-CRP over 24 months analyzed using mixed model, adjusting for age, gender, and disease duration.

Results

Table 1: Baseline Characteristics of BRASS Cohort (N=961)

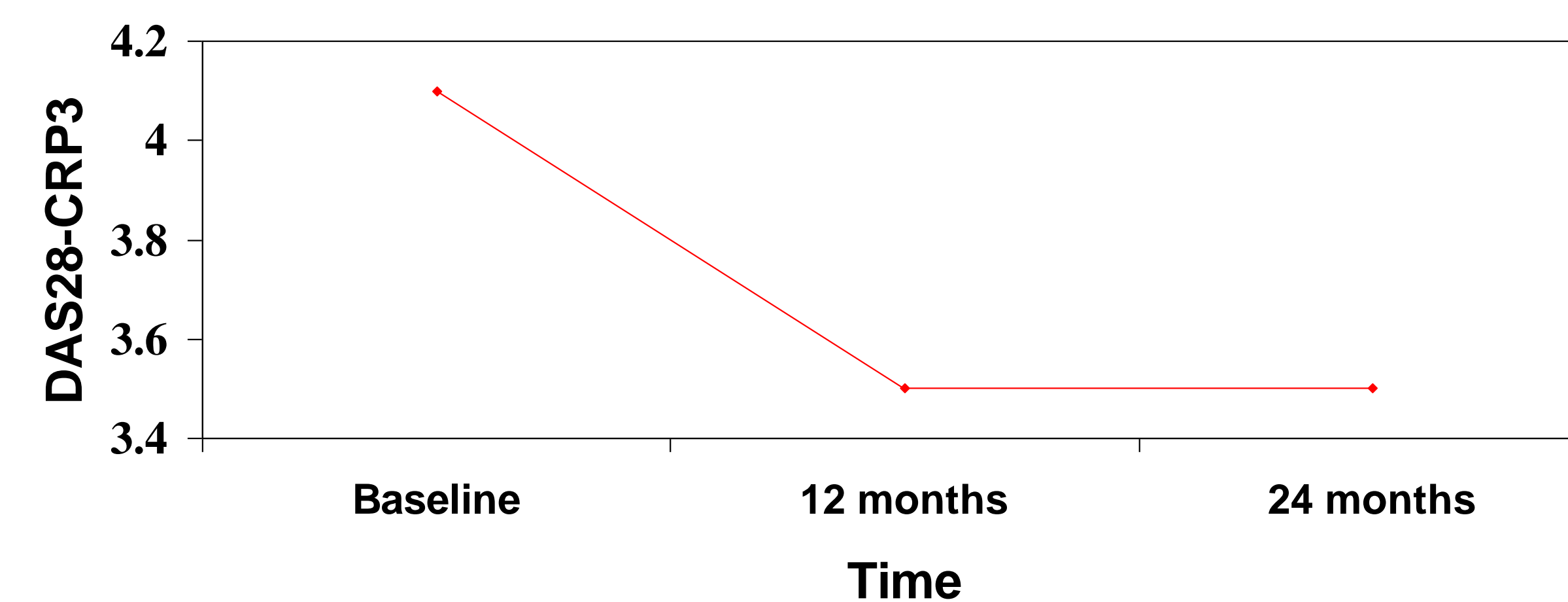
| | |
|-----------------------------------|---------------|
| Female, n (%) | 790 (82.2) |
| Age, mean years (SD) | 57.05 (14.1) |
| Disease Duration, mean years (SD) | 14.18 (12.4) |
| MDHAQ, median | 0.6 (0.0-1.6) |
| DAS28-CRP3, mean (SD) | 4.07 (1.5) |
| RF positive, n (%) | 568 (65.6) |
| CCP positive, n (%) | 596 (65.5) |
| Medications, n (%) | |
| None | 41 (4.3) |
| Narcotics | 99 (10.3) |
| NSAIDS | 479 (49.8) |
| Corticosteroids | 318 (33.1) |
| Plaquenil | 168 (17.5) |
| Sulfasalazine | 70 (7.3) |
| Leflunomide | 100 (10.4) |
| Azathioprine | 1 (0.1) |
| MTX without anti- TNF | 286 (29.8) |
| MTX with anti-TNF | 146 (15.2) |
| Anti-TNF without MTX | 188 (19.6) |

Figure 1: Anti-TNF Use Increases Over 24 Months



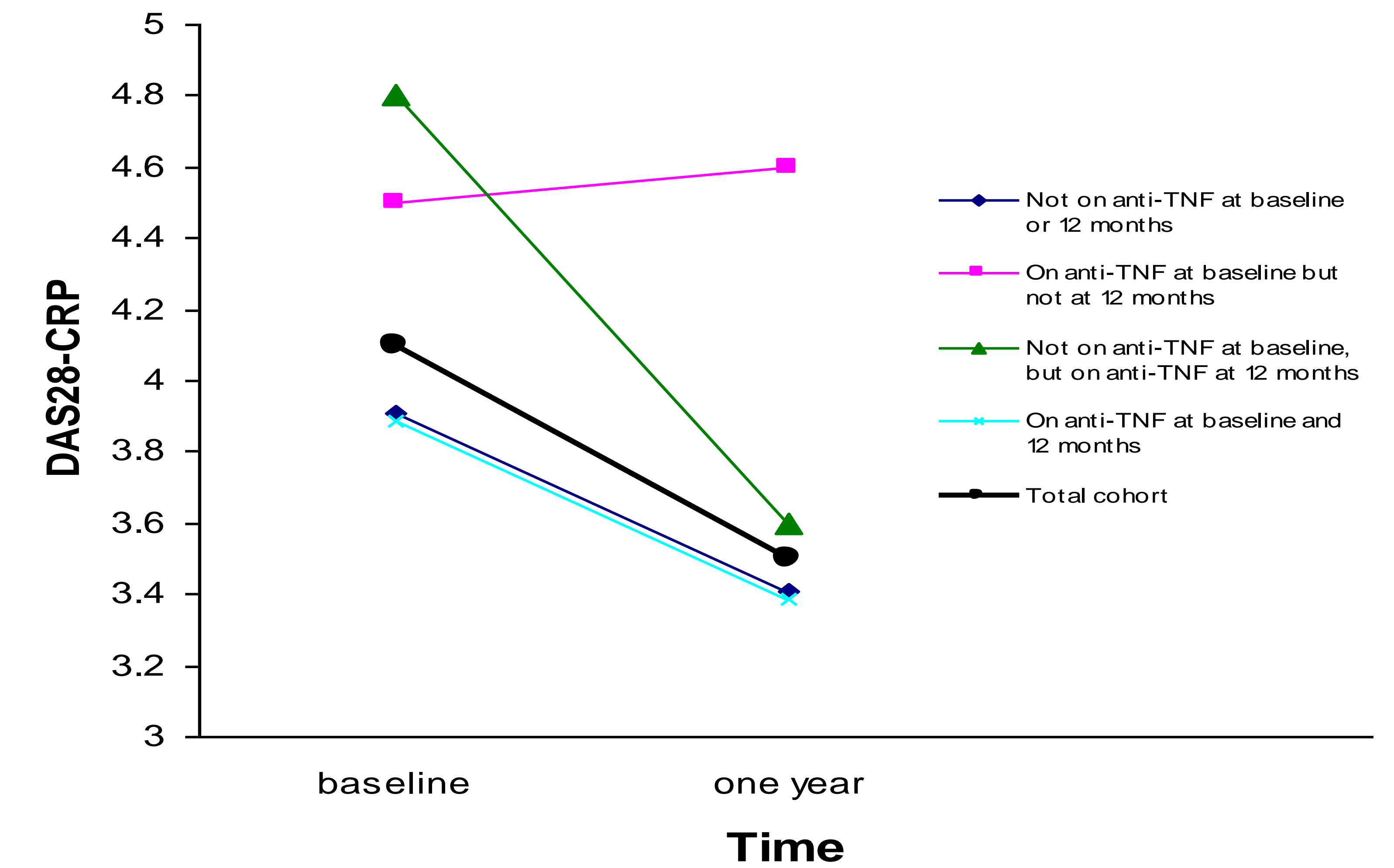
*For 591 subjects for whom medication data is available at baseline and 24 month follow up

Figure 2: Mean DAS28-CRP Decreases Over 24 Months



Results cont'd

Figure 3: Change in DAS28-CRP According to Anti-TNF Use at Baseline and 1 Year



Conclusion

•In this large single-center clinical cohort, there was a significant trend toward a decrease in average disease activity from baseline to 24 months of follow-up

•During this same time period, utilization of TNF inhibitors increased and NSAID and steroid use decreased.

•While it is difficult to correlate these observations in a non-trial setting, the trends are compelling, and consistent with findings in large clinical trials of biologic therapies.

Limitation

•Anti-TNFs associated with greatest improvement, but also administered to subjects with worst DAS28-CRP. (Possible confounding by indication)