

timed 50-foot walk; subjective perception of improvement; Likert scale (0-5) for improvement assessment; the need for nonhormonal anti-inflammatory medication and analgesics; and the number and type of local side effects. Statistical significance was set at  $p=0.05$ .

A total of 60 patients (mean age  $63.7 \pm 8.53$  years; mean disease duration  $5.69 \pm 5.01$  years). Thirty-three patients were KL II; 27 were KLIII. The study population was predominantly women (88.3%); 48.3% was white. The sample was homogeneous at baseline for all demographic variables as well as the use of symptom and chondroprotective medications, KL index, functional indexes, and previous IAIs.

Although both groups were found to have improved statistically in the intragroup analysis, there was no statistical difference in the intergroup analysis regarding any of the variables that were studied throughout the 12-week period (Tables 1 and 2).

**Table 1. Mean Clinical and Functional Measures at Baseline and Weeks 1, 4, 8, and 12.**

	JL/TH (n=30)		IAI/TH (n=30)		p
<b>VAS for pain at rest (0-10cm)</b>					
T0	(+)	6.27 ( $\pm 1.89$ )	(+)	6.40 ( $\pm 1.69$ )	0.23
T1	↓	1.90 ( $\pm 2.16$ )	↓	2.20 ( $\pm 1.95$ )	
T4	↓	1.17 ( $\pm 1.68$ )	↓	2.0 ( $\pm 1.98$ )	
T8	↓	2.30 ( $\pm 2.23$ )	↓	3.40 ( $\pm 3.10$ )	
T12	(-)	2.53 ( $\pm 2.70$ )	(-)	2.47 ( $\pm 3.10$ )	
<b>VAS for pain during movement (0-10cm)</b>					
T0	(+)	7.70 ( $\pm 0.84$ )	(+)	7.70 ( $\pm 0.70$ )	0.207
T1	↓	2.67 ( $\pm 2.40$ )	↓	3.0 ( $\pm 2.20$ )	
T4	↓	1.63 ( $\pm 1.97$ )	↓	2.83 ( $\pm 2.48$ )	
T8	↓	3.17 ( $\pm 2.63$ )	↓	4.0 ( $\pm 2.89$ )	
T12	(-)	3.27 ( $\pm 3.05$ )	(-)	3.47 ( $\pm 3.35$ )	
<b>Flexion (degrees)</b>					
T0	(+)	92.23 ( $\pm 15.19$ )	(+)	94.03 ( $\pm 13.51$ )	0.523
T1	↓	99.90 ( $\pm 12.19$ )	↓	102.73 ( $\pm 10.88$ )	
T4	↓	105.40 ( $\pm 9.36$ )	↓	108.17 ( $\pm 9.51$ )	
T8	↓	106.67 ( $\pm 10.45$ )	↓	107.67 ( $\pm 11.12$ )	
T12	(-)	109.83 ( $\pm 9.42$ )	(-)	108.83 ( $\pm 12.37$ )	

One septic post-trauma arthritis event occurred in Week 8 in the JL/TH group. There were 5 cases of local hypochromia and 1 case of seepage from the JL orifice that was resolved spontaneously in the JL/TH group. One

case of metrorrhagia and 1 case of hypochromia local were reported in the TH group.

The results of this study led the investigators to conclude that the combination of joint lavage and triamcinolone hexacetonide IAI is not more effective in the medium term than IAI triamcinolone hexacetonide alone for the treatment of moderate degrees of primary knee OA.

**Table 2. Womac Index Score at Baseline and Weeks 1, 4, 8, and 12.**

	JL/TH (n=30)		IAI/TH (n=30)		p
<b>Womac pain - Mean (<math>\pm</math>SD)</b>					
T0	(+)	9.07 ( $\pm 3.87$ )	(+)	10.03 ( $\pm 3.22$ )	0.275
T1	↓	2.60 ( $\pm 2.39$ )	↓	2.20 ( $\pm 1.92$ )	
T4	↓	1.90 ( $\pm 2.34$ )	↓	1.83 ( $\pm 1.91$ )	
T8	↓	1.80 ( $\pm 2.27$ )	↓	3.37 ( $\pm 3.53$ )	
T12	(-)	2.13 ( $\pm 3.10$ )	(-)	2.80 ( $\pm 3.93$ )	
<b>Womac function - Mean (<math>\pm</math>SD)</b>					
T0	(+)	4.30 ( $\pm 2.15$ )	(+)	4.10 ( $\pm 1.99$ )	0.745
T1	↓	0.93 ( $\pm 1.11$ )	↓	1.10 ( $\pm 1.24$ )	
T4	↓	1.07 ( $\pm 1.34$ )	↓	0.97 ( $\pm 1.25$ )	
T8	↓	1.13 ( $\pm 1.31$ )	↓	1.47 ( $\pm 1.53$ )	
T12	(-)	1.10 ( $\pm 1.47$ )	(-)	1.30 ( $\pm 1.74$ )	
<b>Womac stiffness - Mean (<math>\pm</math>SD)</b>					
T0	(+)	30.27 ( $\pm 13.89$ )	(+)	32.03 ( $\pm 2.07$ )	0.62
T1	↓	11.93 ( $\pm 8.22$ )	↓	10.97 ( $\pm 7.90$ )	
T4	↓	8.97 ( $\pm 9.16$ )	↓	8.17 ( $\pm 8.74$ )	
T8	↓	8.57 ( $\pm 9.73$ )	↓	11.77 ( $\pm 11.78$ )	
T12	(-)	8.33 ( $\pm 11.99$ )	(-)	10.20 ( $\pm 13.20$ )	

## The RADIATE Study

Although anti-TNF therapies are established treatments for rheumatoid arthritis (RA), significant proportions of patients do not achieve an adequate response, or become refractory to them. Paul Emery, MD, PhD, University of Leeds, Leeds, UK, presented data from the RADIATE study (NCT00106522), a randomized, double-blind study that investigated the efficacy and safety of treatment with tocilizumab (TCZ) plus methotrexate (MTX) in patients with moderate to severe RA and a prior history of failed anti-TNF therapy.

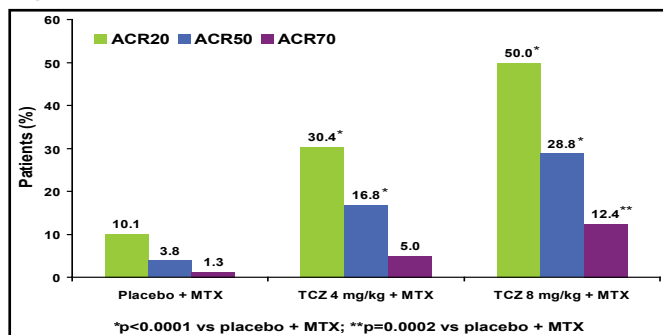
Patients who enrolled in the RADIATE study received placebo (n=158), TCZ 4 mg/kg (n=161), or TCZ 8 mg/kg (n=170) every 4 weeks plus MTX for 24 weeks. The primary study

endpoint was ACR20 response; safety and secondary endpoints also were assessed.

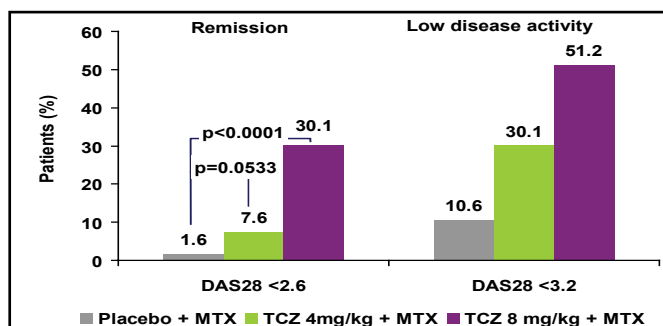
Significantly more patients who received TCZ achieved improvement across all 3 ACR response criteria versus those who received placebo (Figure 1). DAS28 also was significantly improved in TCZ patients versus those who received placebo (Figure 2). TCZ was effective irrespective of the number of or the most recently failed anti-TNF treatments.

Both 8 mg/kg and 4 mg/kg doses of TCZ were generally well tolerated. The adverse event (AE) profile was consistent with data from other studies of tocilizumab and with the immunomodulatory properties of the drug. AEs were seen in 81%, 87%, and 84% and serious AEs in 11%, 7%, and 6% of the placebo, 4 mg/kg, and 8 mg/kg groups, respectively. Infections occurred in 41%, 47%, and 50% and serious infections in 3%, 2%, and 5% of the placebo, 4 mg/kg, and 8 mg/kg groups, respectively. There was no difference in safety or tolerability based on prior anti-TNF treatment.

**Figure 1. Clinical Response at Week 24.**



**Figure 2. Remission and low disease activity (DAS28) at Week 24.**



Combination therapy using TCZ plus MTX resulted in clinical improvements in efficacy and safety in this refractory population, irrespective of the number of, or most recently failed, anti-TNF treatments. The dose response favored the 8 mg/kg TCZ dose, and a low proportion of patients in this group experienced serious AEs or serious infections.

Patients who are refractory to one or more courses of anti-TNF therapy have very limited options, so the findings of this trial may have significant impact on clinical management for a select group of patients who are “particularly responsive to IL-6 inhibition,” Prof. Emery said.

## Adalimumab Therapy is Effective and Well Tolerated in AS, RA, and PsA Patients with a History of Insufficient Response or Intolerance to Other Anti-TNF Therapies

G.R. Burmester, MD, PhD, Berlin University Hospital, Berlin, Germany, presented data from 3 open-label trials that examined the effectiveness of adalimumab treatment in patients with ankylosing spondylitis (AS), rheumatoid arthritis (RA), or psoriatic arthritis (PsA) who had a history of anti-TNF therapy.

The objective of this post hoc analysis of data from the RHAPSODY (NCT00478660; AS), ReAct (NCT00650026; RA), and STEREO (NCT00235885; PsA) trials was to investigate the effectiveness and safety of adalimumab treatment in patients who had received prior anti-TNF therapy with etanercept or infliximab but did not have a satisfactory response. Patients who had prior TNF experience could enroll in the original studies only if infliximab had been discontinued  $\geq 2$  months before baseline and/or if etanercept had been discontinued  $\geq 3$  weeks before baseline in RHAPSODY and STEREO or  $\geq 2$  months before entry in ReAct. Subjects in these studies received adalimumab 40 mg subcutaneously every other week in addition to their current antirheumatic treatment regimens for 12 weeks.

Patients who had failed prior anti-TNF therapy with etanercept and/or infliximab achieved a significant clinical response with adalimumab, which was similar to the response of patients who were naïve to anti-TNF therapy.

After 12 weeks of treatment with adalimumab, patients with AS who previously were treated with etanercept and/or infliximab had a mean reduction in the BASDAI of 2.6 versus 3.5 for patients who had no prior anti-TNF therapy. Patients with RA who had previously received treatment with etanercept and/or infliximab had a mean reduction of 1.9 in DAS28 score versus 2.2 in patients who were not previously treated with a TNF inhibitor. Baseline disease characteristics and effectiveness data are shown in Table 1.