

## 1.0 Abstract

### Title

RELIVE study – An observational study of Rheumatoid arthritis patients on adalimumab to Evaluate quality of Life Variables, Effects on work productivity and functional outcomes in Malaysia

### Keywords

Rheumatoid arthritis, RELIVE, adalimumab,

### Rationale and Background

Rheumatoid arthritis (RA) is among the oldest diseases identified and accounts for considerable disability and physical suffering worldwide.<sup>1,2</sup> It causes decreased quality of life and premature mortality and loss of productivity and increased health care costs.<sup>1-4</sup> For this reason, new treatment options offer great hope for patients with

Traditional disease modifying anti-rheumatic drugs (DMARD), in particular methotrexate (MTX), are still the cornerstone of most RA treatment regimens. However, toxicity may limit their use, and many patients do not respond adequately to traditional DMARD therapy. EULAR recommends that patients with poor prognostic indicators, who failed initial MTX or other traditional DMARDs, should be initiated on biologic DMARDs – specifically Tumor Necrosis Factor (TNF) inhibitors. The EULAR also suggests that some DMARD naïve patients with very active disease should be considered for first line treatment with biologic DMARD and TNF inhibitors are licensed for use in these patients.<sup>9</sup>

TNF antagonists including infliximab, etanercept and adalimumab have shown to substantially improve the signs and symptoms, disability, and quality of life while significantly inhibiting joint damage in early and longstanding RA.<sup>10</sup>

Five meta-analysis of randomized controlled trials (RCTs) provide good evidence

about the general efficacy of anti-TNF drugs for treating patients with RA.<sup>13-17</sup>

Adalimumab has been studied in 2,334 patients enrolled in placebo-controlled trials and in long-term follow-up studies, including 2,073 patients exposed for 6 months and 1,497 patients exposed for greater than one year. The efficacy and safety of adalimumab have been assessed in four randomized, double blind studies in patients age 18 with established RA diagnosed according to ACR criteria.<sup>21-24</sup> However, the response observed in randomized clinical trials can be different from the response achieved in daily clinical practice.<sup>25,26</sup> In daily clinical practice, patients generally are older, have more co-morbidities and lower disease activity.

This study was therefore designed to evaluate adalimumab therapy in Malaysia using non-invasive epidemiological methods like the validated instruments like the Health Assessment Questionnaire - Disability Index (HAQ-DI) and the SF-36 which is a validated in clinical trials involving RA patients worldwide.<sup>27-33</sup>

### **Research Question and Objectives**

The primary objective was to evaluate the changes on QoL outcomes in anti-TNF naïve Malaysian RA patients after 6 months of adalimumab treatment.

The secondary objectives of this study were to evaluate the changes on QoL outcomes after 1 month and 3 months of adalimumab treatment; describe previous RA treatment used prior to adalimumab treatment (DMARD, steroid, and/or analgesics); describe RA concomitant treatments (DMARD, steroid, and/or analgesics) at adalimumab treatment initiation and after 1 month, 3 months and 6 months of adalimumab treatment; and provide an assessment of the safety and tolerability of adalimumab in anti TNF naïve Malaysian RA patients.

### **Study Design**

This was a prospective, single country, multisite, single arm, observational study.

Data was collected on the basis of HAQs that was designed to assess the change of QoL of Malaysian subjects with long history of RA and were under treatment through assessment of the subject's ability to perform daily routine work. There were no additional diagnostic or monitoring visits designed for the subjects apart from the HAQ and the epidemiological methods.

Assessment was based on the collection of data during 4 visits – Baseline visit (enrolment visit) and one visit at 1, 3 and 6 months after the Baseline visit.

### **Setting**

The study was conducted in Malaysia in government medical institutions where RA patients were undergoing medical treatment. Investigators were recruited voluntarily.

### **Subjects and Study Size, Including Dropouts**

Subjects were Malaysian nationals who had a long history of RA and who were under treatment of RA. The subjects for the study were not enrolled new by the investigators. The subjects enrolled in this study were those who fit the requirements for administering adalimumab as per the product literature of adalimumab [REDACTED] marketed in Malaysia. These patients are newly prescribed adalimumab but are otherwise anti-TNF naïve. Other requirements were as per the inclusion and exclusion criteria that are mentioned elsewhere in this document. redacted information 03Jul2014

A total of 71 subjects were enrolled into the study. Majority were females (n = 62 [82%]) and majority as per age group was in the 50 – 60 years of age (n = 26 [37%]). Among these 63 went on to complete the study.

### **Variables and Data Sources**

This study was based on outcomes gauged through epidemiological methods. The primary effectiveness outcome was a measure of the changes in patients' QoL based on the comparison of the scoring of the following health assessment questionnaires at baseline (Visit 1) and after 6 months of adalimumab treatment (Visit 4) – Health

Assessment Questionnaire – Disability Index (HAQ-DI) assesses patient's level of functional ability and includes questions of fine movements of the upper extremity, locomotor activities of the lower extremity, and activities that involve both upper and lower extremities; Health Assessment Questionnaire – Visual Analog Score (HAQ-VAS), designed to assess the presence or absence of arthritis-related pain and its severity. It consists of a doubly anchored, horizontal VAS, that is scored from 0 (no pain) to 100 (severe pain); and Health Assessment Questionnaire – Short Form 36 (SF-36), a 36-item general health self-administered questionnaire consisting of 8 scales measuring: Physical Function, Physical Role limitations, Vitality, General Health, Pain, Social Function, Emotional Role limitations, and Mental Health.

Other parameters assessed were changes in QoL outcomes after 1 month and 3 months of adalimumab treatment based respectively on the comparison of the scoring of the health assessment questionnaires (HAQ-DI, HAQ-VAS, SF-36); description of previous RA treatment used prior to adalimumab treatment (DMARD, steroid, and/or analgesics); description of RA concomitant treatments (treatment type, dosage) during the 4 visits.

## **Results**

Results show a significant improvement in the QoL of Anti TNF naïve Malaysian RA patients started on adalimumab after starting the medication. The improvement in QoL was continuing throughout the period of assessment. There was an improvement of QoL from baseline to the 1<sup>st</sup> month and there was an improvement during the 3<sup>rd</sup> and 6<sup>th</sup> months in comparison to the results of the 1<sup>st</sup> month. There is an improvement in their daily activities and there is also an improvement in the severity of arthritis pain.

## **Discussion**

Treatment with Adalimumab caused a significant improvement in the QoL of anti-TNF naïve Malaysian RA patients. There was a significant improvement in the ability to perform daily activities 1 month after initiating the therapy. More

