National Institute for Health and Care Excellence
Centre for Health Technology Evaluation

Pro-forma Response

Executable Model

Adalimumab, etanercept, infliximab, certolizumab pegol, golimumab, abatacept and tocilizumab for the treatment of rheumatoid arthritis (review of TA guidance 130, 186, 224, 234 and part review of TA guidance 225 and 247) [ID537]

The economic model enclosed and its contents are confidential and are protected by intellectual property rights, which are owned by the **School for Health and Related Research (ScHARR) at the University of Sheffield**. It has been sent to you for information only. It cannot be used for any other purpose than to inform your understanding of the appraisal. Accordingly, neither the model nor its contents should be divulged to anyone other than those individuals within your organisation who need to see to them to enable you to prepare your response. Those to whom you do show the documents must be advised they are bound by the terms of the Confidentiality Acknowledgement and Undertaking Form that has already been signed and returned to the Institute by your organisation.

You may not make copies of the file and you must delete the file from your records when the appraisal process, and any possible appeal, are complete. If asked, you must confirm to us in writing that you have done so. You may not publish it in whole or part, or use it to inform the development of other economic models.

The model must not be re-run for purposes other that the testing of its reliability.

Please set out your comments on reliability in writing providing separate justification, with supporting information, for each specific comment made. Where you have made an alteration to the model details of how this alteration was implemented in the model (e.g. in terms of programme code) must be given in sufficient detail to enable your changes to be replicated from the information provided. Please use the attached pro-forma to present your response.

Please prepare your response carefully. Responses which contain errors or are internally inconsistent (for example where we are unable to replicate the results claimed by implementing the changes said to have been made to the model) will be rejected without further consideration.

Results from amended versions of the model will only be accepted if their purpose is to test robustness and reliability of the economic model. Results calculated purely for the purpose of using alternative inputs will not be accepted.

No electronic versions of the economic model will be accepted with your response.

Responses should be provided in tabular format as suggested below (please add further tables if necessary).

December 2013

Issue 1 HAQ Progression

As a general comment on the economic model and approach used by the University of Sheffield, clinical experts consider the evidence used within the Assessment Group (AG) report as not being generalisable to today's UK patients, in particular, the evidence from the Early RA database dates back to the 1980s where the treatment regimens were vastly different to current clinical protocols. As biologics are now the standard of care for patients with severe RA, the evidence to support the trajectory of a patient's HAQ while on cDMARDs in patients who are eligible for biologics, is extremely limited**.**

We strongly believe that if the HAQ progression assumption were to be revised to the current AG approach, it must be supported by robust clinical evidence.

Issue 2 Treatment Strategies

Description of problem	Description of proposed amendment	Result of amended model or expected impact on the result (if applicable)
The treatment strategies employed by the assessment group poorly reflect UK clinical practice where patients are treated with several bDMARDs upon loss of response with another agent. We were unable to identify the length of time patients were assumed on average to be treated with bDMARDs. However, due to the restricted treatment strategies assumed, it would appear a large proportion of a patients time in both arms would be spent in the NBT health state. The treatment strategy limitation fails to assess an important factor of cost-effectiveness analysis seen in other manufacturer models; the effectiveness of bDMARDs in displacing time on palliative care.	More bDMARDs should be considered as options for patients who have failed or progressed on alternative bDMARDs.	Based on our own economic analysis, when additional treatment options are included within the treatment pathway, the ICER would reduce due to the benefit of delaying time patients would spend receiving palliative care.

Issue 3 Mortality Tables

Description of problem	Description of proposed amendment	Result of amended model or expected impact on the result (if applicable)
Formula error in the mortality tables, cell I25 to I108.	The VLOOKUP formula should be for column 5 instead of 3. VLOOKUP(H25,A9;E109,5).	This has an implication that the male life table is always used; even when a female patient is selected. However, this is unlikely to have any material effect to the overall incremental results.