

## COMMENTS ON THE REPORT FROM PFIZER (UK) Ltd

We welcome the economic analysis undertaken by Connock et al in “*The clinical effectiveness and cost-effectiveness of pegvisomant for the treatment of acromegaly: a systematic review*”. Accurate assessment of the cost-effectiveness of an intervention is important when deciding whether or not to recommend its use within the NHS.

Robust modelling in acromegaly is problematic due to the sparsity of data in a number of key areas. These include the long-term effectiveness of treatments, the cost of treating co-morbidities and accurate measurement of the reduction in health related quality of life associated with this rare disease.

Whilst accepting a lack of robust data for many of the relevant variables, the base-case analysis undertaken by Connock et al represents an exceedingly conservative estimate of the cost-effectiveness of pegvisomant. In particular:

- Dosing of pegvisomant. The cost-effectiveness results obtained by Connock et al. are particularly sensitive to the cost of pegvisomant therapy. The authors assumed a pegvisomant dose of 20 mg/day/patient (hence an annual cost of £36,500 per patient). However, an analysis of all patients in the UK receiving pegvisomant shows an average daily dose of 16 mg per patient (equivalent to £29,200 per patient per year). This dosing data is very similar to that reported in the one RCT that has investigated pegvisomant in its licenced indication. This clinical study showed the average daily use to be 15 mg. Pfizer have provided the clinical practice dosing information to the authors.
- Treating co-morbidities. As well as reduced life expectancy, uncontrolled acromegaly is associated with an increased incidence of cancer and cardiovascular problems, and a “variety of detrimental symptoms and clinical changes including enlargement of hands, feet and other organs”. The cost of treating these co-morbidities is not incorporated fully in the analyses undertaken by the authors. It should be noted that pegvisomant is a highly effective intervention for the management of uncontrolled acromegaly, where trials have shown that around 90% of patients achieve IGF-1 control.
- Detrimental impact on HR-QoL. The authors used an average utility gain of 0.11 for treatment with pegvisomant. This figure was taken from one cross-sectional study. However, this study was not reflective of the patient population for which pegvisomant is licenced (“*Patients who have had an inadequate response to surgery and/or radiation therapy and in whom an appropriate medical treatment with somatostatin analogues did not normalise IGF-1 concentrations...*”), as 34% of patients had both GH and IGF-1 levels within target.

Whilst accepting that there will be uncertainty around the results due to data limitations, modeling more credible values for variables such as the daily dose of pegvisomant required & the utility decrement due to acromegaly, as well as inclusion of the significant costs associated with treating the co-morbidities of uncontrolled acromegaly, would generate a more realistic ICER than that reported within the Connock et al paper.