

Pemetrexed for the treatment of
relapsed non-small cell lung
cancer

**ERG
Report:
Additional
Analysis**

*Confidential:
not for release*

In confidence information: **None**

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CORRECTIONS AND ADJUSTMENTS TO COMPANY MODEL RESULTS: comparison of Pemetrexed to Best supportive Care (BSC)

Introduction

In the ERG report dated 1st September 2006 on Pemetrexed for Non-Small Cell Lung Cancer, results were presented in Table 4-7 showing revised cost-effectiveness results obtained by making a number of corrections or adjustments to the base case analysis included in the company submission. These results concerned a comparison of treatment with pemetrexed to current standard chemotherapy with docetaxel.

On 4th October 2006 LRiG received a request to provide a similar set of results for a comparison of Pemetrexed to Best Supportive Care (BSC). This paper presents the requested information to assist the Appraisal Committee in their deliberations.

Assumptions

The new calculations have been carried out on the following basis:

1. Estimates of costs and outcomes relating to Pemetrexed are identical to those employed in Table 4-7 of the ERG report except for non-treatment related / BSC costs (see point 3 below).
2. Estimates of outcomes (life years and QALYs) for BSC are identical to those included in the company submission.
3. The ERG do not consider that the inclusion of separate BSC costs only in respect to the BSC arm is a legitimate approach. Although BSC is itself not well-defined, it is clear that all patients with locally advanced or metastatic cancer will receive the elements of BSC regardless of whether or not they undergo any active chemotherapy. The company model only includes supportive care in respect of drug-related adverse events, omitting all other treatments for disease-related conditions and events (i.e. BSC). Therefore we must conclude that BSC will be required in both

arms of the comparison, and have based our estimates on the cost per cycle (£182) used in the company submission, pro-rata to mean survival time.

Results

The ERG corrected/amended cost-effectiveness results are summarised in Table A1 below, and the effects of sensitivity analysis for pemetrexed dosing calculations, and limited numbers of treatment cycles are shown in Table A2.

Table A1 Cost-effectiveness summary table updated for identified corrections and amendments to the company model: Pemetrexed vs. Best Supportive Care

	Pemetrexed	BSC	Incremental
Costs results			
Drug acquisition and administration	£8,678	£0	£8,678
Non-treatment related / BSC	£2,303	£1,878	£425
Adverse event treatment	£71	£0	£71
Palliative care	£3,599	£3,655	£-56
Total cost	£14,651	£5,533	£9,118
Effectiveness results			
Overall mean survival (months)	8.76	7.14	1.62
Total QALYs	0.4396	0.2862	0.1534
ICER			
Cost per QALY			£59,431

Conclusions

These additional calculations suggest that it is unlikely that pemetrexed may be considered cost-effective compared to BSC, even allowing for extreme assumptions about treatment duration and how treatment costs are estimated.

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Table A2 Sensitivity analyses: Cost-effectiveness of Pemetrexed vs. Best Supportive Care

	Pemetrexed cost per patient	Incremental cost per patient	Incremental cost per QALY gained
<i>Dosing</i>			
BSA 1.75	£8,340	£8,779	£57,222
BSA 1.75 -5%	£8,458	£8,897	£57,993
BSA 1.75 +5%	£8,371	£8,811	£57,429
BSA 1.833 (base case)	£8,678	£9,118	£59,431
BSA 1.833 - 5%	£8,656	£9,095	£59,282
BSA 1.833 +5%	£8,834	£9,273	£60,442
<i>Maximum cycles limit</i>			
All (base case)	£8,678	£9,118	£59,431
4	£5,912	£6,352	£41,402
6	£7,329	£7,769	£50,635
10	£8,246	£8,686	£56,612
<i>Minimum cost (2-way)</i>			
BSA 1.75 & 4 cycles	£5,573	£6,013	£39,193