

# CONFIDENTIAL UNTIL PUBLISHED

## **Atezolizumab for treating locally advanced or metastatic urothelial carcinoma: updated ERG base-case analyses using the company's Patient Access Scheme price**

Confidential appendix to the Evidence Review Group report

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## 1.1 Introduction

This document is an appendix to the Evidence Review Group (ERG) report to NICE. It provides updated ERG analyses with the confidential patient access scheme (PAS) discount for atezolizumab of [REDACTED] applied. Full details of the analysis approaches are given in the ERG report.

## 1.2 Sensitivity analyses on the ERG base case

Table 1 lists the assumptions used for the ERG base case, along with their justifications (this is the same as Table 47 in the ERG report).

**Table 1 Assumptions for the ERG base case analysis**

| Treatment line         | Parameter | Value                     | Justification                                           |
|------------------------|-----------|---------------------------|---------------------------------------------------------|
| First- and second-line | Utility   | As shown in Table 4 below | Clinical expert advice to ERG                           |
| First-line             | OS        | K-M + exponential tail    | Best fit for atezolizumab and gemcitabine + carboplatin |
|                        | TTD       | Weibull                   | Best fit according to AIC and BIC                       |
| Second-line            | OS        | KM + Weibull tail         | Best fit for atezolizumab and BSC                       |
|                        | TTD       | Log-logistic              | Best fit according to AIC and BIC                       |

AIC Akaike information criterion; BIC Bayesian information criterion BSC: best supportive care; ICER: incremental cost-effectiveness ratio; K-M: Kaplan-Meier; OS: overall survival; QALY: quality-adjusted life year; TTD: time to treatment discontinuation;

Tables 2, 3 and 5 show the effects of changes in the parametric functions for extrapolating time to treatment discontinuation (TTD) and overall survival, and varying utility values, as used in the ERG base case.

### i) Time to treatment discontinuation / overall survival extrapolation

The TTD was varied in the ERG base case using the Weibull distribution for first-line treatment and using the log-logistic distribution for second-line treatment. For overall survival, the ERG base case uses the Kaplan-Meier distribution with an exponential tail for first-line treatment and the Kaplan-Meier distribution with a Weibull tail for second-line treatment. The results are shown in Table 2 and Table 3.

**Table 2 ERG sensitivity analyses selecting different parametric functions for extrapolating TTD and overall survival for first-line treatment**

| <b>First-line</b> |                                            |                                                   |
|-------------------|--------------------------------------------|---------------------------------------------------|
| <b>Parameter</b>  | <b>Value</b>                               | <b>ICER (£/QALY) vs gemcitabine + carboplatin</b> |
| TTD               | Company base case (gamma)                  | ██████                                            |
|                   | Weibull                                    | ██████                                            |
| OS                | Company base case (cure generalised gamma) | ██████                                            |
|                   | K-M + Exponential tail                     | ██████                                            |

ICER: incremental cost-effectiveness ratio; OS: overall survival; QALY: quality-adjusted life year; TTD: time to treatment discontinuation

**Table 3 ERG sensitivity analyses selecting different parametric functions for extrapolating TTD and overall survival for second-line treatment**

| <b>Second-line</b> |                                            |                                   |                                    |                             |
|--------------------|--------------------------------------------|-----------------------------------|------------------------------------|-----------------------------|
| <b>Parameter</b>   | <b>Value</b>                               | <b>ICER (£/QALY) vs docetaxel</b> | <b>ICER (£/QALY) vs paxlitaxel</b> | <b>ICER (£/QALY) vs BSC</b> |
| TTD                | Company base case (gamma)                  | ██████                            | ██████                             | ██████                      |
|                    | Log-logistic                               | ██████                            | ██████                             | ██████                      |
| OS                 | Company base case (cure generalised gamma) | ██████                            | ██████                             | ██████                      |
|                    | K-M + Weibull tail                         | ██████                            | ██████                             | ██████                      |

ICER: incremental cost-effectiveness ratio; OS: overall survival; QALY: quality-adjusted life year; TTD: time to treatment discontinuation

**ii) Utility values**

The ERG used the assumptions for utility values as shown in Table 4 (which is the same as Table 45 in the ERG report). The results of the sensitivity analyses using the ERG's assumptions for the utility values are shown in Table 5.

**Table 4 Pre-progression utility values used in the CS and the ERG analysis**

|               | <b>CS Pre-progression utility</b> |             | <b>ERG pre-progression utility values</b> |             |
|---------------|-----------------------------------|-------------|-------------------------------------------|-------------|
|               | Atezolizumab                      | Comparators | Atezolizumab                              | Comparators |
| On-treatment  | 0.75                              | 0.75        | 0.75                                      | 0.71        |
| Off-treatment | 0.71                              | 0.75        | 0.75                                      | 0.75        |

**Table 5 ERG sensitivity analyses with changes to the assumptions for pre-progression health state utility values**

| Parameter      | First-line         | ICER (£/QALY)                |                      |               |
|----------------|--------------------|------------------------------|----------------------|---------------|
|                |                    | vs gemcitabine + carboplatin |                      |               |
| Utility values | Base case          | ████████                     |                      |               |
|                | ERG assumption     | ████████                     |                      |               |
|                | <b>Second-line</b> | <b>vs docetaxel</b>          | <b>vs paxlitaxel</b> | <b>vs BSC</b> |
|                | Base case          | ████████                     | ████████             | ████████      |
|                | ERG assumption     | ████████                     | ████████             | ████████      |

BSC: best supportive care; ICER: incremental cost-effectiveness ratio; QALY: quality-adjusted life year

### 1.3 ERG base case analysis results

Using the assumptions for the ERG base case as listed in Table 1 above, the ERG's base case cost-effectiveness results are shown in Table 6 for first-line treatment and in Table 7 for second-line treatment.

**Table 6 ERG first-line base case analysis results**

|                           | Costs    | Incremental costs | QALYs | Incremental QALYs | ICER (£/QALY) |
|---------------------------|----------|-------------------|-------|-------------------|---------------|
| Atezolizumab              | ████████ |                   | 1.32  |                   |               |
| Gemcitabine + carboplatin | £12,469  | ████████          | 0.81  | 0.51              | ████████      |

ICER: incremental cost-effectiveness ratio; QALY: quality-adjusted life year

The ERG base case ICER for first-line atezolizumab compared to gemcitabine + carboplatin is ██████████ per QALY gained.

**Table 7 ERG second-line base case analysis results**

|              | Costs    | Incremental costs | QALYs | Incremental QALYs | ICER (£/QALY) |
|--------------|----------|-------------------|-------|-------------------|---------------|
| Atezolizumab | ████████ |                   | 0.84  |                   |               |
| Docetaxel    | £8,196   | ████████          | 0.64  | 0.20              | ████████      |
| Paclitaxel   | £13,615  | ████████          | 0.55  | 0.29              | ████████      |
| BSC          | £4,090   | ████████          | 0.47  | 0.37              | ████████      |

BSC: best supportive care; ICER: incremental cost-effectiveness ratio; QALY: quality-adjusted life year

The ERG base case ICERs for second-line atezolizumab compared to docetaxel, paclitaxel and best supportive care are [REDACTED], [REDACTED] and [REDACTED] per QALY gained respectively.