EE45

# Cost-Effectiveness of Venetoclax in Combination with Rituximab in Relapsed/Refractory Chronic Lymphocytic Leukemia in Four Gulf Countries

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## OBJECTIVES

- A cost-effectiveness analysis was performed to assess the cost-effectiveness of introducing a 24-month fixed duration of venetoclax in combination with rituximab for the treatment of relapsed/refractory chronic lymphocytic leukemia compared with available treatments in the public healthcare sector of four Gulf countries.

## METHODS

- An existing model using a three-state partitioned survival framework was adapted to the public healthcare sector in Kuwait, Oman, Qatar and the United Arab Emirates (UAE)
- Local data were obtained via literature review and a two-round Delphi technique
- Direct medical costs related to routine care and monitoring, adverse events, tumour lysis syndrome prophylaxis, drug treatment and terminal care were considered in the model
- This included lab tests, imaging, inpatient and outpatient visits, medical procedures, blood transfusion, ward fees, drug and drug administration costs
- Indirect costs, such as productivity losses, were not considered
- A willingness-to-pay threshold (WTP) of 1 x GDP per capita was used to determine whether the intervention was cost-effective compared to comparators
- The time horizon was 30 years (lifetime time horizon) and a discount rate of 3.5% was applied to costs and outcomes
- Comparators included in the model were: ibrutinib, fludarabine + cyclophosphamide + rituximab (FCR), bendamustine + rituximab (BR), ibrutinib + BR and acalabrutinib

## RESULTS

- VEN+R is a dominant strategy (less costly and more effective) compared to the following:
  - Ibrutinib
  - Ibrutinib + BR
  - Acalabrutinib
- At a WTP threshold of 1 x GDP per capita, VEN+R is not cost-effective compared to FCR and BR due to its higher cost, despite being more effective
- The total discounted costs and quality-adjusted life years (QALYs) per comparator is shown in Table 1, while the results from the cost-effectiveness analysis for all comparators compared to VEN+R is shown in Table 2

**Table 1: Total Discounted Cost and Quality-Adjusted Life Years (QALYs) per Comparator**

| Parameter | Kuwait | Qatar | Oman | UAE |
|---|---|---|---|---|
| **Total discounted cost (USD)** | | | | |
| VEN+R | 219 784 | 187 359 | 265 119 | 257 762 |
| Ibrutinib | 461 932 | 321 410 | 313 010 | 375 534 |
| FCR | 28 254 | 17 795 | 20 353 | 39 289 |
| BR | 30 635 | 19 175 | 46 733 | 48 173 |
| Ibrutinib+BR | 618 038 | 431 106 | 459 912 | 502 205 |
| Acalabrutinib | 462 239 | 479 968 | 312 040 | 832 354 |
| | | | | |
| **Total discounted quality-adjusted life years (QALYs)** | | | | |
| VEN+R | 5.661 | 5.131 | 4.016 | 5.366 |
| Ibrutinib | 3.733 | 3.318 | 2.544 | 3.517 |
| FCR | 2.413 | 2.125 | 1.612 | 2.264 |
| BR | 3.587 | 3.294 | 2.452 | 3.467 |
| Ibrutinib+BR | 4.488 | 4.014 | 3.095 | 4.237 |
| Acalabrutinib | 3.732 | 3.317 | 2.542 | 3.515 |

**Table 2: Cost-Effectiveness Analysis Results for Comparators Compared to VEN+R**

| Parameter | Kuwait | Qatar | Oman | UAE |
|---|---|---|---|---|
| **Incremental costs (USD)** | | | | |
| Ibrutinib | -242 148 | -134 051 | -47 892 | -117 772 |
| FCR | 191 530 | 169 564 | 244 766 | 218 473 |
| BR | 189 149 | 168 184 | 218 385 | 209 589 |
| Ibrutinib+BR | -398 254 | -243 747 | -194 793 | -244 443 |
| Acalabrutinib | -242 455 | -292 609 | -46 921 | -574 592 |
| | | | | |
| **Incremental QALY** | | | | |
| Ibrutinib | 1.928 | 1.813 | 1.472 | 1.850 |
| FCR | 3.248 | 3.006 | 2.404 | 3.102 |
| BR | 2.074 | 1.837 | 1.564 | 1.899 |
| Ibrutinib+BR | 1.173 | 1.117 | 0.921 | 1.129 |
| Acalabrutinib | 1.929 | 1.814 | 1.473 | 1.851 |
| | | | | |
| **Incremental cost-effectiveness ratio per QALY (ICER/QALY)** | | | | |
| Ibrutinib | Dominant | Dominant | Dominant | Dominant |
| FCR | 58 976 | 56 415 | 101 819 | 70 436 |
| BR | 91 198 | 91 574 | 139 602 | 110 361 |
| Ibrutinib+BR | Dominant | Dominant | Dominant | Dominant |
| Acalabrutinib | Dominant | Dominant | Dominant | Dominant |

## CONCLUSIONS

- Venetoclax + rituximab (VEN+R) as a fixed treatment duration regimen is a cost-effective treatment option compared to BTK inhibitors (acalabrutinib and ibrutinib) in the Gulf region

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