IDgenetix-Guided Medication Management for Major Depressive Disorder: Confirmation of Randomized Controlled Trial Outcomes by Real-World Evidence

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Background

- With the current standard of care medication prescribing strategy, more than 53% of patients with major depressive disorder (MDD) have an inadequate response to first-line treatment and over 72% of patients fail to achieve remission.1,2
- Pharmacogenomic (PGx) testing aims to detect variants in the human genome that affect individual response to medications.
- IDgenetix is an advanced 3-in-1 PGx test that incorporates the results of a multi-gene variant panel with drug-drug interactions and lifestyle factors to improve drug efficacy and tolerability in patients treated for MDD, anxiety, or other neuropsychiatric illnesses.
- In a previously published randomized controlled trial (RCT), IDgenetix-guided medication management significantly improved patient outcomes after 12 weeks of treatment.3,4

Objective

- In this study, we compared the clinical outcome results from a previously published, multi-center, RCT5 with real-world evidence (RWE) from a single-center, non-randomized, open-label study.5

Methods

- Participants with moderate to severe depression at baseline were included in the analysis for the RCT (HAM-D17 ≥20, n=261) and real-world evidence (PHQ-9 ≥10, n=242).
- In both studies, response and remission rates were analyzed using Fisher’s exact test for patients provided IDgenetix-guided medication management (IDgenetix-Guided) compared to patients receiving the standard of care (Unguided).

Results

Figure 1. Response and remission rates

<table>
<thead>
<tr>
<th></th>
<th>RWE</th>
<th>IDgenetix-Guided</th>
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<tbody>
<tr>
<td>Response</td>
<td></td>
<td></td>
</tr>
<tr>
<td>RR</td>
<td>1.32</td>
<td>[1.03, 1.71]</td>
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<tr>
<td>Remission</td>
<td></td>
<td></td>
</tr>
<tr>
<td>RR</td>
<td>1.57</td>
<td>[1.00, 2.45]</td>
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Figure 2. Risk ratios for response and remission rates

Forest plot of the clinical outcome results from the RWE (8 weeks) and RCT (12 weeks) that support the clinical utility of IDgenetix-guided medication management in patients with moderate to severe depression.

Conclusion

- The response and remission rates from the RWE strongly correlate with those from the RCT.
- No single source accounts for the majority of drug recommendations, which is why a multi-gene PGx test that incorporates drug-drug interactions and lifestyle factors is important.
- This study provides robust evidence-based research that supports the clinical utility of IDgenetix to guide medication management in patients with MDD.

References


Disclosures

FC, AH, and RC are employees and stock/option holders at Castle Biosciences, Inc.