**Table 1. Fuzzy Rules and their Corresponding MRI Classifications**

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| **Rule No.** | **Hippocampal Volume (HV)** | **Cortical Thickness (CT)** | **Gray Matter Density (GMD)** | **Classification Result** |
| 1 | HV > 3.0 cm³ (High) | CT > 2.7 mm (High) | GMD > 0.6 (High) | Cognitively Normal (CN) |
| 2 | 2.0 cm³ ≤ HV ≤ 3.0 cm³ (Moderate) | 2.2 mm ≤ CT ≤ 2.7 mm (Moderate) | 0.4 ≤ GMD ≤ 0.6 (Moderate) | Mild Cognitive Impairment (MCI) |
| 3 | HV < 2.0 cm³ (Low) | CT < 2.2 mm (Low) | GMD < 0.4 (Low) | AD |
| 4 | HV > 3.0 cm³ (High) | CT > 2.7 mm (High) | GMD ≤ 0.6 (Moderate/Low) | MCI |
| 5 | HV ≤ 3.0 cm³ (Moderate/Low) | CT > 2.7 mm (High) | GMD > 0.6 (High) | CN |
| 6 | HV ≤ 3.0 cm³ (Moderate/Low) | CT ≤ 2.7 mm (Moderate/Low) | GMD > 0.6 (High) | MCI |
| 7 | HV < 2.0 cm³ (Low) | CT > 2.7 mm (High) | GMD > 0.6 (High) | MCI |
| 8 | HV < 2.0 cm³ (Low) | CT < 2.2 mm (Low) | GMD > 0.6 (High) | MCI |
| 9 | HV > 3.0 cm³ (High) | CT < 2.2 mm (Low) | GMD < 0.4 (Low) | MCI |