**Supplemental Table S4. The classification accuracy of different methods relating to the AD dataset.**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Method** | **Research** | **Accuracy (%)** | **Sensitivity (%)** | **Specificity (%)** | **BAC (%)** |
| **TBFN** | Fusion feature | 79.66 | 79.31 | 80.00 | 79.66 |
| **rs-HOFN** | Fusion feature | 90.91 | 92.11 | 89.29 | 90.70 |
| **rs-FHN** | Fusion feature | 90.15 | 94.74 | 85.71 | 90.23 |
| **rs-HOFHN** | Fusion feature | 93.18 | 94.74 | 92.86 | 93.80 |

TBFN represents traditional simple binary functional network model; rs-HOFN represents resting state high-order functional network; rs-FHN represents resting state functional hypernetwork; rs-HOFHN represents resting state high-order functional hypernetwork. BAC represents balanced accuracy. Fusion feature represents local properties combined with subgraph feature. AD represents patients with Alzheimer’s disease