

**Table 3:** Receiver operating characteristic analysis for the evaluation of the diagnostic significance of serum 25-hydroxyvitamin D concentrations for (i) mild cognitive impairment and (ii) Alzheimer's disease.

|                       | <b>(i) HS vs MCI</b>  | <b>p value</b> | <b>(ii) HS vs AD</b>  | <b>p value</b> |
|-----------------------|-----------------------|----------------|-----------------------|----------------|
| AUC (95 % CI)         | 0.598 (0.522 - 0.675) | 0.013          | 0.696 (0.630 - 0.762) | <0.001         |
| Cut-off               | $\leq 18.35$          |                | $\leq 13.95$          |                |
| Sensitivity (%)       | 70.6 (61.2 - 79.0)    |                | 62.3 (53.7 - 70.4)    |                |
| Specificity (%)       | 51.5 (41.4 - 61.4)    |                | 68.9 (59.1 - 77.7)    |                |
| PPV (%)               | 60.6 (55.0 - 66.0)    |                | 72.9 (66.2 - 78.7)    |                |
| NPV (%)               | 62.4 (54.0 - 70.1)    |                | 57.7 (51.5 - 63.7)    |                |
| Overall agreement (%) | 61.3 (54.4 - 67.9)    |                | 65.2 (58.8 - 71.2)    |                |
| Cohen's kappa         | 0.222                 | 0.001          | 0.305                 | <0.001         |
| OR (95 % CI)          | 2.55 (1.45 - 4.49)    | 0.001          | 3.67 (2.14 - 6.30)    | <0.001         |

HS: healthy subjects, MCI: individuals with mild cognitive impairment, AD: individuals with Alzheimer's disease, AUC: area under the curve, CI: confidence interval, PPV: positive predictive value, NPV: negative predictive value, OR: odds ratio.