Supplemental Table 5. Sensitivity analysis - models without adjusting BMI

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  |  | Physical activity levels | | | | |
| Protein expression (Outcome)a | No. | No | Insufficient |  | Sufficient |  |
|  |  |  | Difference or odds ratio (95% CI) | P value | Difference or odds ratio (95% CI) | P value |
| **mTOR** |  |  |  |  |  |  |
| Linear model | 599 | Ref. | 0.15 (-17.57 - 17.87) | 0.99 | 8.44 (-4.36 - 21.24) | 0.2 |
| **p-mTOR** |  |  |  |  |  |  |
| Logistic modelb | 594 | Ref. | 1.54 (0.7 - 3.78) | 0.31 | 1.52 (0.86 - 2.79) | 0.16 |
| Gamma modelc | 523 | Ref. | 6.6% (-21.9% - 48%) | 0.69 | 4.5% (-16.4% - 30.9%) | 0.7 |
| **p-AKT** |  |  |  |  |  |  |
| Logistic modelb | 599 | Ref. | 1.61 (0.9 - 2.99) | 0.12 | 1.36 (0.9 - 2.05) | 0.15 |
| Gamma modelc | 422 | Ref. | 9.9% (-22.4% - 58.7%) | 0.6 | 12.4% (-13.7% - 47%) | 0.38 |
| **p-P70S6K** |  |  |  |  |  |  |
| Logistic modelb | 596 | Ref. | 1.32 (0.72 - 2.53) | 0.38 | 1.58 (1 - 2.55) | 0.054 |
| Gamma modelc | 468 | Ref. | 8.3% (-25.2% - 60.3%) | 0.67 | 33.7% (1.7% - 76.3%) | 0.031 |
| **Total phosphoprotein** |  |  |  |  |  |  |
| Logistic modelb | 586 | Ref. | NA | NA | 1.42 (0.52 - 4.35) | 0.51 |
| Gamma modelc | 567 | Ref. | 16.1% (-10.2% - 51.9%) | 0.26 | 25.2% (3.6% - 51.7%) | 0.019 |
| **p-mTOR/mTOR** |  |  |  |  |  |  |
| Logistic modelb | 587 | Ref. | 1.45 (0.65 - 3.58) | 0.39 | 1.67 (0.91 - 3.16) | 0.11 |
| Gamma modelc | 490 | Ref. | 14.7% (-15.3% - 58%) | 0.38 | 1.5% (-18.7% - 27.1%) | 0.89 |

aAll models adjusted for age, race, educational level, menopausal status, diabetes history, molecular subtype, tumor grade, tumor size, and breast cancer stage.

bThe first part of the gamma hurdle model, i.e., modeling positive (H-score >0) vs. negative (H-score =0) expression with a logistic model.

cThesecond part of the gamma hurdle model, i.e., modeling the positive expression (H-score >0) with a gamma model.

Abbreviations: CI, confidence interval; NA, not applicable; Ref., reference.