**ESM Table 1** – Spearman’s rank correlation coefficients of the tested glycaemic variability parameters with AUC\textsubscript{120-150min} C-peptide ($r_a$, $p_a$) and $M_{120-150min}$ ($r_b$, $p_b$) during hyperglycaemia for all parameters with $r_a$ or $r_b \geq |0.700|$, and ranked according to decreasing mean $r$ for the 2 correlations.

| Tested glycemic variability parameters | $r_a$  | $p_a$ value | $r_b$  | $p_b$ value | $|r_a + r_b|/2$ |
|--------------------------------------|-------|------------|-------|------------|--------------|
| SD day\textsuperscript{a}, SMBG       | -0.631| <0.001     | -0.852| <0.001     | 0.742        |
| CV day\textsuperscript{a}, CGM        | -0.632| <0.001     | -0.767| <0.001     | 0.700        |
| SD day\textsuperscript{a}, CGM        | -0.595| <0.001     | -0.797| <0.001     | 0.696        |
| SD 3h-post-meals, CGM                 | -0.598| <0.001     | -0.794| <0.001     | 0.696        |
| SD 3h-post-breakfast, CGM             | -0.647| <0.001     | -0.735| <0.001     | 0.691        |
| IQR day\textsuperscript{a}, CGM       | -0.590| <0.001     | -0.791| <0.001     | 0.691        |
| CV 3h-post-meal, CGM                  | -0.633| <0.001     | -0.734| <0.001     | 0.684        |
| Range day\textsuperscript{a}, SMBG    | -0.555| 0.001      | -0.800| <0.001     | 0.678        |
| AUC >7.8 mmol/l 3h-post-meals, CGM    | -0.528| 0.002      | -0.820| <0.001     | 0.674        |
| CV 2h-post-meals, CGM                 | -0.613| <0.001     | -0.715| <0.001     | 0.664        |
| MAGE 24h, CGM                         | -0.559| 0.001      | -0.762| <0.001     | 0.661        |
| SD 2h-post-meals, CGM                 | -0.571| 0.001      | -0.737| <0.001     | 0.654        |
| % Time >7.8 mmol/l day\textsuperscript{a}, CGM | -0.481| 0.006      | -0.807| <0.001     | 0.644        |
| % Time >7.8 mmol/l 3h-post-meal, CGM  | -0.489| 0.005      | -0.799| <0.001     | 0.644        |
| AUC >7.8 mmol/l day\textsuperscript{a}, CGM | -0.481| 0.006      | -0.796| <0.001     | 0.639        |
| SD 24h, CGM                           | -0.556| 0.001      | -0.708| <0.001     | 0.632        |
| % Time >7.8 mmol/l 2h-post-meals, CGM | -0.479| 0.006      | -0.784| <0.001     | 0.632        |
| AUC >7.8 mmol/l 2h-post-meals, CGM    | -0.474| 0.007      | -0.787| <0.001     | 0.631        |
| SD 3h-post-lunch, CGM                 | -0.502| 0.004      | -0.758| <0.001     | 0.630        |
| IQR 3h-post-meals, CGM                | -0.510| 0.003      | -0.740| <0.001     | 0.625        |
| IQR 2h-post-meals, CGM                | -0.519| 0.003      | -0.710| <0.001     | 0.615        |
| AUC >7.8 mmol/l 24h, CGM              | -0.454| 0.012      | -0.771| <0.001     | 0.613        |
| Mean 1h-post-breakfast, CGM           | -0.487| 0.005      | -0.729| <0.001     | 0.608        |
| % Time >7.8 mmol/l 24h, CGM           | -0.449| 0.011      | -0.759| <0.001     | 0.604        |
| AUC >7.8 mmol/l 3h-post-lunch, CGM    | -0.463| 0.009      | -0.740| <0.001     | 0.602        |
| % Time >7.8 mmol/l 1h-post-meals, CGM | -0.456| 0.010      | -0.730| <0.001     | 0.593        |
| % Time >7.8 mmol/l 3h-post-lunch, CGM | -0.452| 0.011      | -0.734| <0.001     | 0.593        |
| AUC >7.8 mmol/l 1h-post-meals, CGM    | -0.445| 0.012      | -0.730| <0.001     | 0.588        |
| % Time >7.8 mmol/l 2h-post-lunch, CGM | -0.431| 0.016      | -0.726| <0.001     | 0.579        |
| AUC >7.8 mmol/l 2h-post-lunch, CGM    | -0.426| 0.017      | -0.723| <0.001     | 0.575        |

\textsuperscript{a}Day values are between awakening and bedtime; MAGE: Mean amplitude of glucose excursions