

Supplementary Table 2. Within-group comparison of IgG glycan peaks (IGP1–IGP24) and eight derived glycosylation traits between t0 (before surgery) and t1 (24 h after surgery) in Group 1 (children undergoing elective surgery) and Group 2 (children with appendicitis). Values represent median normalized abundances at each timepoint. p-values indicate nominal statistical significance for the t0–t1 comparison within each group, while q-values represent p-values adjusted for multiple testing using the Benjamini–Hochberg false discovery rate (FDR) correction.

| IGP number | Group 1 between operation difference | | | | Group 2 between operation difference | | | |
|------------|--------------------------------------|---------|--------|--------|--------------------------------------|---------|--------|--------|
| | median | median | p | q | median | median | p | q |
| | 1 | 2 | | | 1 | 2 | | |
| 1 | 0,1054 | 0,0970 | 0,8754 | 0,9926 | 0,1007 | 0,0972 | 0,6794 | 0,9342 |
| 2 | 0,2151 | 0,2394 | 0,2951 | 0,8617 | 0,2152 | 0,2228 | 0,8288 | 0,9341 |
| 3 | 0,1129 | 0,1146 | 0,3309 | 0,8617 | 0,1301 | 0,1284 | 0,6507 | 0,9342 |
| 4 | 21,2184 | 21,0426 | 0,5361 | 0,8617 | 20,4215 | 20,4880 | 0,7680 | 0,9387 |
| 5 | 0,2488 | 0,2452 | 0,9926 | 0,9926 | 0,1767 | 0,1998 | 0,5412 | 0,9342 |
| 6 | 3,6081 | 3,5699 | 0,9779 | 0,9926 | 3,2856 | 3,2154 | 0,1336 | 0,9342 |
| 7 | 0,1546 | 0,1521 | 0,9192 | 0,9926 | 0,1647 | 0,1654 | 0,1819 | 0,9342 |
| 8 | 20,7854 | 21,1714 | 0,5361 | 0,8617 | 21,1211 | 21,5594 | 0,6226 | 0,9342 |
| 9 | 8,2593 | 8,2305 | 0,7053 | 0,9491 | 8,6355 | 8,6597 | 0,1134 | 0,9342 |
| 10 | 3,2716 | 3,2816 | 0,2169 | 0,8617 | 3,5635 | 3,5629 | 0,4653 | 0,9342 |
| 11 | 0,3616 | 0,3591 | 0,5361 | 0,8617 | 0,4029 | 0,4076 | 0,1042 | 0,9342 |
| 12 | 0,3967 | 0,3955 | 0,8609 | 0,9926 | 0,4591 | 0,4635 | 0,5949 | 0,9342 |
| 13 | 0,1754 | 0,1753 | 0,2699 | 0,8617 | 0,1862 | 0,1935 | 0,3955 | 0,9342 |

| | | | | | | | | |
|----|---------|---------|--------|--------|---------|---------|--------|--------|
| 14 | 16,1123 | 16,0238 | 0,9485 | 0,9926 | 15,9418 | 15,6951 | 0,1688 | 0,9342 |
| 15 | 1,3731 | 1,3322 | 0,5000 | 0,8617 | 1,4251 | 1,4485 | 1,0000 | 1,0000 |
| 16 | 2,7219 | 2,6850 | 0,7053 | 0,9491 | 2,9635 | 2,8737 | 0,4180 | 0,9342 |
| 17 | 1,2461 | 1,1724 | 0,4105 | 0,8617 | 0,8540 | 0,9224 | 0,5153 | 0,9342 |
| 18 | 11,9585 | 11,8053 | 0,3498 | 0,8617 | 11,0175 | 10,9166 | 0,6507 | 0,9342 |
| 19 | 1,3862 | 1,3348 | 0,7190 | 0,9491 | 1,4264 | 1,4605 | 0,9843 | 1,0000 |
| 20 | 0,5174 | 0,4720 | 0,3896 | 0,8617 | 0,2816 | 0,3437 | 0,6226 | 0,9342 |
| 21 | 1,3527 | 1,2613 | 0,5239 | 0,8617 | 0,7383 | 0,9150 | 0,5153 | 0,9342 |
| 22 | 0,1662 | 0,1567 | 0,0908 | 0,8617 | 0,1424 | 0,1493 | 0,2935 | 0,9342 |
| 23 | 2,5151 | 2,4898 | 0,8754 | 0,9926 | 2,2612 | 2,4099 | 0,3525 | 0,9342 |
| 24 | 1,5032 | 1,5512 | 0,9046 | 0,9926 | 1,5093 | 1,4860 | 0,9530 | 1,0000 |
| G0 | 24,8760 | 25,2391 | 0,5483 | 0,8617 | 25,0687 | 25,0853 | 0,8288 | 0,9431 |
| G1 | 35,7488 | 35,7423 | 0,4000 | 0,8617 | 37,6431 | 38,1133 | 0,6507 | 0,9342 |
| G2 | 38,7777 | 38,4411 | 0,4883 | 0,8617 | 36,0436 | 36,1610 | 0,8906 | 0,9796 |
| S | 23,0005 | 22,6532 | 0,4653 | 0,8617 | 21,5828 | 22,1631 | 0,6794 | 0,9342 |
| S1 | 17,6460 | 17,1038 | 0,3217 | 0,8617 | 16,5966 | 16,8313 | 0,3736 | 0,9342 |
| S2 | 5,7325 | 5,4497 | 0,6117 | 0,9175 | 4,8556 | 4,9628 | 0,7680 | 0,9387 |
| B | 12,0018 | 11,6495 | 0,3794 | 0,8617 | 12,3964 | 12,1867 | 0,7381 | 0,9387 |
| CF | 95,3665 | 95,4022 | 0,5239 | 0,8617 | 96,1225 | 96,0648 | 0,5412 | 0,9342 |

IGP- IgG glycan peak, median 1 – median of group 1 (elective surgery), median 2 – median of group 2 (appendicitis), p – calculated p value, q– Benjamini-Hochberg corrected p value