**Supplementary Table S5. Comparison between nonIBD control subjects with primary colon adenocarcinoma with non-IBD subjects without primary colon adenocarcinoma.** Continuous variables (e.g. age, BMI, relative frequency of bacterial groups) were compared using the Wilcoxon rank sum test and categorical variables (e.g. genotype, smoking, race) were compared using the chi-square test. Note that none of the non-IBD control subjects had a positive C. difficile toxin or were taking any IBD medications. To address multiple comparison issues, the Benjamini-Hochberg method was applied to adjust P-values to the false discovery rate (FDR). Variables with FDR ≤ 0.05 are bolded.

|  |  |  |
| --- | --- | --- |
| **Variable** | **P-value** | **FDR** |
| NOD2 composite genotype (NOD2R/R + NOD2R/NR, NOD2NR/NR) | 0.13 | 0.3 |
| ATG16L1T300 A genotype (ATG16L1R/R, ATG16L1R/NR, ATG16L1NR/NR) | 0.48 | 0.68 |
| Gender (male, female) | 0.84 | 0.88 |
| Race (Caucasian, not Caucasian) | 0.64 | 0.84 |
| **Age of surgery** | **0.001** | **0.05** |
| Smoker (current, not current) | 0.88 | 0.88 |
| BMI | 0.77 | 0.88 |
|  |  |  |
| **Relative frequency phyla/subphyla categories (Sanger)** |  |  |
| Actinobacteria | 0.86 | 0.88 |
| Bacteroidetes | 0.76 | 0.88 |
| Firmicutes. Clostridium Group IV | 0.054 | 0.33 |
| Firmicutes Clostridium Group XIVa | 0.11 | 0.33 |
| Firmicutes Bacillus | 0.81 | 0.88 |
| Proteobacteria | 0.10 | 0.33 |
| Other Taxa | 0.40 | 0.67 |
|  |  |  |
| **Relative frequency phyla/subphyla categories (V1-V3)** |  |  |
| Actinobacteria | 0.44 | 0.67 |
| Bacteroidetes | 0.08 | 0.33 |
| Firmicutes. Clostridium Group IV | 0.06 | 0.33 |
| Firmicutes Clostridium Group XIVa | 0.42 | 0.67 |
| Firmicutes Bacillus | 0.07 | 0.33 |
| Proteobacteria | 0.65 | 0.84 |
| Other Taxa | 0.86 | 0.88 |
|  |  |  |
| **Relative frequency phyla/subphyla categories (V3-V5)** |  |  |
| Actinobacteria | 0.33 | 0.64 |
| Bacteroidetes | 0.28 | 0.58 |
| Firmicutes. Clostridium Group IV | 0.05 | 0.33 |
| Firmicutes Clostridium Group XIVa | 0.35 | 0.65 |
| Firmicutes Bacillus | 0.14 | 0.33 |
| Proteobacteria | 0.25 | 0.55 |
| Other Taxa | 0.45 | 0.67 |
|  |  |  |
| **Relative frequency of targeted microbial groups (qPCR)** |  |  |
| *C. coccoides-E. rectales* | 0.12 | 0.33 |
| *F. prausnitzii* | 0.14 | 0.33 |