Table S2 Feature Importance analyses, top 20 OTUs (corresponds with Fig. 4D in main text).

| OTU                              | mean decrease in AUROC | standard deviation | % models | rank |
|----------------------------------|-------------------------|--------------------|----------|------|
| Enterobacteriaceae (OTU 7)       | -0.0078371              | 0.0121111          | 58.0     | 1    |
| Erysipelotrichaceae (OTU 222)    | -0.0022672              | 0.0047096          | 86.4     | 2    |
| Porphyromonadaceae (OTU 14)      | -0.0022489              | 0.0041229          | 69.4     | 3    |
| Erysipelotrichaceae (OTU 10)     | -0.0017732              | 0.0045827          | 78.4     | 4    |
| Ruminococcaceae (OTU 56)         | -0.0015730              | 0.0047184          | 60.6     | 5    |
| Lachnospiraceae (OTU 54)         | -0.0015468              | 0.0051692          | 65.8     | 6    |
| Lachnospiraceae (OTU 27)         | -0.0012169              | 0.0046644          | 59.6     | 7    |
| Bifidobacterium (OTU 12)         | -0.0010722              | 0.0034798          | 75.0     | 8    |
| Lachnospiraceae (OTU 98)         | -0.0009233              | 0.0031928          | 86.4     | 9    |
| Firmicutes (OTU 69)              | -0.0008873              | 0.0051307          | 77.6     | 10   |
| Clostridium IV (OTU 126)         | -0.0007600              | 0.0042812          | 45.2     | 11   |
| Lachnospiraceae (OTU 23)         | -0.0007161              | 0.0036369          | 60.4     | 12   |
| Oscillibacter (OTU 164)          | -0.0006656              | 0.0034880          | 78.2     | 13   |
| Porphyromonadaceae (OTU 29)      | -0.0006512              | 0.0032917          | 65.4     | 14   |
| Lactobacillus (OTU 26)           | -0.0006454              | 0.0030530          | 85.2     | 15   |
| Acetatifactor (OTU 172)          | -0.0006135              | 0.0026414          | 87.8     | 16   |
| Lactobacillus (OTU 15)           | -0.0005947              | 0.0026614          | 85.4     | 17   |
| Dorea (OTU 149)                  | -0.0005938              | 0.0025554          | 84.8     | 18   |
| Lachnospiraceae (OTU 38)         | -0.0005561              | 0.0030798          | 85.6     | 19   |
| Helicobacter (OTU 21)            | -0.0005545              | 0.0023031          | 93.6     | 20   |