**Supplemental Table S3 Relative abundance of top taxa in different CSTs**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Taxa** | **LD Group** |  |  | **LLD Group** |
| **I** | **I-III** | **II** | **III** | **V** |  | **IV-A** | **IV-B** |
| *Lactobacillus crispatus* | 0.96572  | 0.52692  | 0.01619  | 0.02893  | 0.03439  |  | 0.05704  | 0.16834  |
| *Lactobacillus iners* | 0.01763  | 0.41918  | 0.13119  | 0.91950  | 0.32364  |  | 0.34444  | 0.10977  |
| *Lactobacillus gasseri* | 0.00261  | 0.00700  | 0.84511  | 0.01554  | 0.00253  |  | 0.00425  | 0.01297  |
| *Lactobacillus jensenii* | 0.00562  | 0.01615  | 0.00182  | 0.00813  | 0.62826  |  | 0.00485  | 0.01665  |
| *Megasphaera* | 0.00021  | 0.00033  | 0.00015  | 0.01362  | 0.00064  |  | 0.41949  | 0.00924  |
| *Dialister* | 0.00021  | 0.00789  | 0.00005  | 0.00375  | 0.00046  |  | 0.11225  | 0.16301  |
| *Lactobacillus reuteri* | 0.00207  | 0.01431  | 0.00149  | 0.00155  | 0.00508  |  | 0.00000  | 0.00000  |
| *Aerococcus* | 0.00002  | 0.00000  | 0.00268  | 0.00304  | 0.00005  |  | 0.03350  | 0.08671  |
| *Gardnerella* | 0.00049  | 0.00172  | 0.00000  | 0.00117  | 0.00106  |  | 0.00227  | 0.00000  |
| *Pseudomonas* | 0.00060  | 0.00025  | 0.00004  | 0.00065  | 0.00046  |  | 0.00392  | 0.00000  |
| *Gemella* | 0.00001  | 0.00000  | 0.00006  | 0.00009  | 0.00014  |  | 0.00010  | 0.12867  |
| *Enterococcus* | 0.00005  | 0.00000  | 0.00000  | 0.00017  | 0.00079  |  | 0.00000  | 0.07750  |
| *Ureaplasma* | 0.00024  | 0.00056  | 0.00025  | 0.00071  | 0.00000  |  | 0.00295  | 0.01634  |
| *Acinetobacter* | 0.00099  | 0.00004  | 0.00000  | 0.00011  | 0.00028  |  | 0.00000  | 0.01322  |
| *Stenotrophomonas* | 0.00024  | 0.00007  | 0.00000  | 0.00010  | 0.00022  |  | 0.00226  | 0.01186  |
| *Streptococcus* | 0.00013  | 0.00000  | 0.00007  | 0.00032  | 0.00004  |  | 0.00000  | 0.01758  |
| *Prevotella* | 0.00010  | 0.00046  | 0.00000  | 0.00029  | 0.00029  |  | 0.00383  | 0.00000  |
| *Lactobacillus buchneri* | 0.00003  | 0.00000  | 0.00000  | 0.00003  | 0.00014  |  | 0.00000  | 0.03960  |
| *Mycoplasma*  | 0.00000  | 0.00355  | 0.00000  | 0.00026  | 0.00000  |  | 0.00020  | 0.00000  |
| *Lactococcus* | 0.00033  | 0.00057  | 0.00000  | 0.00023  | 0.00032  |  | 0.00062  | 0.00334  |

CST= community state type; LD= lactobacilli-dominant group; LLD= less lactobacilli-dominant group.