**Supplementary Table 2.** (A) Shannon diversity index values for each sample. (B) Statistical output comparing adverse outcomes within IBD subtypes. (C) Statistical output comparing adverse outcomes within pathogen negative subtypes. (D) Statistical output comparing adverse outcomes within pathogen positive subtypes.

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| --- | --- | --- | --- |
| A | long\_term | pathogen | shannon |
| Cdiff05 | Hospitalization + ER | Cdiff | 1.7128828 |
| Cdiff17 | Hospitalization + ER | Cdiff | 1.393144 |
| Cdiff22 | Meds added/uptitrated | Cdiff | 2.74694162 |
| Cdiff28 | surgery | Cdiff | 0.8287393 |
| Cdiff30 | No medical events | Cdiff | 3.56665871 |
| Cdiff31 | Hospitalization + ER | Cdiff | 1.83054028 |
| Cdiff32 | Hospitalization + ER | Cdiff | 2.76347052 |
| Ecoli14 | Meds added/uptitrated | Ecoli | 3.34045912 |
| Ecoli26 | surgery | Ecoli | 2.46050394 |
| Ecoli28 | No medical events | Ecoli | 3.83331178 |
| Ecoli31 | surgery | Ecoli | 3.34315157 |
| Ecoli32 | No medical events | Ecoli | 2.80628062 |
| Neg10 | Meds added/uptitrated | Neg | 2.4273418 |
| Neg15 | No medical events | Neg | 3.43689551 |
| Neg20 | surgery | Neg | 3.0372995 |
| Neg27 | No medical events | Neg | 1.23604295 |
| Noro06 | Meds added/uptitrated | Noro | 1.26576771 |
| Noro17 | No medical events | Noro | 1.94690153 |
| Noro22 | Hospitalization + ER | Noro | 2.16723548 |
| Cdiff37 | surgery | Cdiff | 2.54619035 |
| Cdiff38 | Hospitalization + ER | Cdiff | 2.37181686 |
| Cdiff41 | No medical events | Cdiff | 2.62222384 |
| Cdiff43 | No medical events | Cdiff | 3.13526913 |
| Cdiff48 | Hospitalization + ER | Cdiff | 2.71511469 |
| Cdiff49 | surgery | Cdiff | 2.01479098 |
| Cdiff51 | Meds added/uptitrated | Cdiff | 2.84990628 |
| Ecoli35 | No medical events | Ecoli | 2.97899763 |
| Ecoli40 | No medical events | Ecoli | 3.44071664 |
| Ecoli41 | Meds added/uptitrated | Ecoli | 2.52853917 |
| Ecoli44 | Hospitalization + ER | Ecoli | 3.60122427 |
| Ecoli49 | No medical events | Ecoli | 2.04048034 |
| Ecoli52 | Meds added/uptitrated | Ecoli | 2.46917508 |
| Ecoli54 | No medical events | Ecoli | 3.40059428 |
| Ecoli55 | No medical events | Ecoli | 3.45283439 |
| Neg36 | surgery | Neg | 2.10042745 |
| Neg37 | Meds added/uptitrated | Neg | 1.54648482 |
| Neg38 | Meds added/uptitrated | Neg | 3.78181831 |
| Neg40 | Meds added/uptitrated | Neg | 1.47672851 |
| Neg41 | surgery | Neg | 0.34303583 |
| Neg42 | surgery | Neg | 2.27918015 |
| Neg43 | surgery | Neg | 2.26324387 |
| Neg44 | surgery | Neg | 2.04059252 |
| Neg45 | Hospitalization + ER | Neg | 2.33443358 |
| Neg46 | No medical events | Neg | 1.11218971 |
| Neg47 | Meds added/uptitrated | Neg | 3.1378321 |
| Neg48 | No medical events | Neg | 2.39992885 |
| Neg49 | Hospitalization + ER | Neg | 2.68893778 |
| Neg50 | surgery | Neg | 1.46064567 |
| Neg51 | Meds added/uptitrated | Neg | 1.68012273 |
| Neg52 | Hospitalization + ER | Neg | 2.40436659 |
| Neg53 | surgery | Neg | 0.46505868 |
| Neg54 | surgery | Neg | 2.33546424 |
| Neg55 | Hospitalization + ER | Neg | 0.49699324 |
| Neg56 | Hospitalization + ER | Neg | 2.83155036 |
| Neg57 | Hospitalization + ER | Neg | 2.70820596 |
| Neg58 | Hospitalization + ER | Neg | 3.26773235 |
| Neg59 | surgery | Neg | 2.83147448 |
| Neg60 | Meds added/uptitrated | Neg | 1.43954482 |
| Neg61 | Meds added/uptitrated | Neg | 3.4795319 |
| Neg62 | Meds added/uptitrated | Neg | 1.17207638 |
| Neg63 | Hospitalization + ER | Neg | 2.32739626 |
| Neg64 | No medical events | Neg | 3.75399659 |
| Neg65 | Meds added/uptitrated | Neg | 2.89424266 |
| Neg66 | surgery | Neg | 2.24008121 |
| Neg67 | Meds added/uptitrated | Neg | 2.90471194 |
| Neg68 | Meds added/uptitrated | Neg | 2.42020629 |
| Neg69 | Meds added/uptitrated | Neg | 2.3568699 |
| Neg70 | Meds added/uptitrated | Neg | 2.81469896 |
| Neg71 | Hospitalization + ER | Neg | 2.94990095 |
| Neg72 | Meds added/uptitrated | Neg | 3.55253615 |
| Neg73 | No medical events | Neg | 3.72711942 |
| Neg74 | Meds added/uptitrated | Neg | 3.43039587 |
| Neg75 | No medical events | Neg | 3.38659107 |
| Neg76 | Meds added/uptitrated | Neg | 2.07399154 |
| Neg77 | No medical events | Neg | 2.94302927 |
| Neg78 | Meds added/uptitrated | Neg | 3.18886548 |
| Neg79 | Meds added/uptitrated | Neg | 2.96408283 |
| Neg80 | Meds added/uptitrated | Neg | 2.41352529 |
| Neg81 | No medical events | Neg | 2.49122506 |
| Neg82 | Hospitalization + ER | Neg | 1.18700853 |
| Neg83 | Meds added/uptitrated | Neg | 3.47455541 |
| Neg84 | surgery | Neg | 2.38537975 |
| Neg85 | No medical events | Neg | 1.12184465 |
| Neg93 | No medical events | Neg | 2.28261125 |
| Noro38 | Hospitalization + ER | Noro | 2.28964 |
| Noro47 | No medical events | Noro | 1.68985241 |
| Noro48 | Hospitalization + ER | Noro | 2.95394485 |
| Noro54 | No medical events | Noro | 2.34561222 |
| Noro57 | No medical events | Noro | 2.24088558 |

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| B | .y. | group1 | group2 | n1 | n2 | statistic | df | p |
| 1 | shannon | No medical events | Meds added/uptitrated | 25 | 24 | 0.31551654 | 46.7961242 | 0.754 |
| 2 | shannon | No medical events | Hospitalization + ER | 25 | 19 | 1.77697204 | 41.6678041 | 0.083 |
| 3 | shannon | No medical events | surgery | 25 | 15 | 2.79040977 | 30.4282891 | 0.009 |
| 4 | shannon | Meds added/uptitrated | Hospitalization + ER | 24 | 19 | 1.53253564 | 40.0252554 | 0.133 |
| 5 | shannon | Meds added/uptitrated | surgery | 24 | 15 | 2.60594 | 28.1737471 | 0.015 |
| 6 | shannon | Hospitalization + ER | surgery | 19 | 15 | 1.28650371 | 27.6337609 | 0.209 |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| C | .y. | group1 | group2 | n1 | n2 | statistic | df | p |
| 1 | shannon | No medical events | Meds added/uptitrated | 11 | 21 | -0.1866203 | 16.4992426 | 0.854 |
| 2 | shannon | No medical events | Hospitalization + ER | 11 | 10 | 0.52944759 | 18.8644742 | 0.603 |
| 3 | shannon | No medical events | surgery | 11 | 12 | 1.41842642 | 19.3800302 | 0.172 |
| 4 | shannon | Meds added/uptitrated | Hospitalization + ER | 21 | 10 | 0.88375529 | 16.7567076 | 0.389 |
| 5 | shannon | Meds added/uptitrated | surgery | 21 | 12 | 2.09181036 | 22.0735131 | 0.048 |
| 6 | shannon | Hospitalization + ER | surgery | 10 | 12 | 0.9384721 | 19.166772 | 0.36 |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| D | .y. | group1 | group2 | n1 | n2 | statistic | df | p |
| 1 | shannon | No medical events | Meds added/uptitrated | 14 | 6 | 0.85423754 | 9.40046552 | 0.414 |
| 2 | shannon | No medical events | Hospitalization + ER | 14 | 10 | 1.59935945 | 20.0634172 | 0.125 |
| 3 | shannon | No medical events | surgery | 14 | 5 | 1.29197129 | 5.65807471 | 0.247 |
| 4 | shannon | Meds added/uptitrated | Hospitalization + ER | 6 | 10 | 0.43768272 | 10.152981 | 0.671 |
| 5 | shannon | Meds added/uptitrated | surgery | 6 | 5 | 0.58915955 | 7.35584178 | 0.573 |
| 6 | shannon | Hospitalization + ER | surgery | 10 | 5 | 0.30606603 | 6.09624822 | 0.77 |