

Supplementary table 17: Nearest sequence taxon index (NSTI) scores (Xi'an cohort)

Sample_ID	Diagnosis	Metric	NSTI scores
104HK_2FT.v4	IM	Weighted NSTI	0.086554642
226973_2DT.v4	AG	Weighted NSTI	0.060548585
29HK_34T.v4	SG	Weighted NSTI	0.094059179
973_1_Di.v4	AG	Weighted NSTI	0.082733303
973_1_T.v4	AG	Weighted NSTI	0.111154508
973_12_Di.v4	SG	Weighted NSTI	0.131722863
973_12_Dou.v4	SG	Weighted NSTI	0.071613148
973_12_T.v4	SG	Weighted NSTI	0.059767511
973_13_Di.v4	SG	Weighted NSTI	0.0990924
973_13_Dou.v4	SG	Weighted NSTI	0.095971913
973_13_T.v4	SG	Weighted NSTI	0.103507204
973_14_Di.v4	SG	Weighted NSTI	0.085388171
973_14_Dou.v4	SG	Weighted NSTI	0.079217185
973_14_T.v4	SG	Weighted NSTI	0.095495423
973_15_Di.v4	AG	Weighted NSTI	0.079928578
973_15_Dou.v4	AG	Weighted NSTI	0.089760785
973_15_T.v4	AG	Weighted NSTI	0.090540534
973_16_Di.v4	AG	Weighted NSTI	0.102600582
973_16_Dou.v4	AG	Weighted NSTI	0.092918569
973_16_T.v4	AG	Weighted NSTI	0.091501933
973_17_Di.v4	AG	Weighted NSTI	0.107865613
973_17_Dou.v4	AG	Weighted NSTI	0.090966681
973_17_T.v4	AG	Weighted NSTI	0.080083417
973_18_Di.v4	SG	Weighted NSTI	0.059035563
973_18_Dou.v4	SG	Weighted NSTI	0.074966578
973_18_T.v4	SG	Weighted NSTI	0.066053697
973_19_Di.v4	AG	Weighted NSTI	0.101446922
973_19_Dou.v4	AG	Weighted NSTI	0.093074968
973_19_T.v4	AG	Weighted NSTI	0.073583881
973_2_DOU.v4	AG	Weighted NSTI	0.0879571
973_2_T.v4	AG	Weighted NSTI	0.071167573
973_20_Di.v4	AG	Weighted NSTI	0.040549352
973_20_Dou.v4	AG	Weighted NSTI	0.058119845
973_20_T.v4	AG	Weighted NSTI	0.048917438
973_21_Di.v4	SG	Weighted NSTI	0.068488052
973_21_Dou.v4	SG	Weighted NSTI	0.079106755
973_21_T.v4	SG	Weighted NSTI	0.065759248
973_22_Di.v4	SG	Weighted NSTI	0.074082651
973_22_T.v4	SG	Weighted NSTI	0.074071608
973_23_Di.v4	SG	Weighted NSTI	0.043911779
973_23_Dou.v4	SG	Weighted NSTI	0.093930017
973_23T224.v4	SG	Weighted NSTI	0.092554054
973_4_Di.v4	SG	Weighted NSTI	0.098965158

973_4_Dou.v4	SG	Weighted NSTI	0.092186591
973_4_T.v4	SG	Weighted NSTI	0.10117369
973_5_DI.v4	AG	Weighted NSTI	0.091452653
973_5_Dou.v4	AG	Weighted NSTI	0.076479161
973_5_T.v4	AG	Weighted NSTI	0.07202296
973_6_Di.v4	AG	Weighted NSTI	0.088788068
973_6_Dou.v4	AG	Weighted NSTI	0.067316916
973_6_T.v4	AG	Weighted NSTI	0.084503307
973_7_Di.v4	AG	Weighted NSTI	0.084950491
973_7_Dou.v4	AG	Weighted NSTI	0.087158699
973_7_T.v4	AG	Weighted NSTI	0.104996871
973_9_DI.v4	AG	Weighted NSTI	0.092387363
973_9_DOU.v4	AG	Weighted NSTI	0.104118724
973_9_T.v4	AG	Weighted NSTI	0.066961955
97HK_9T.v4	AG	Weighted NSTI	0.1108027
HK_1_Dou.v4	AG	Weighted NSTI	0.113945857
HK_1_T.v4	AG	Weighted NSTI	0.087042267
HK_10_Di.v4	SG	Weighted NSTI	0.030697611
HK_10_Dou.v4	SG	Weighted NSTI	0.07507932
HK_10_T.v4	SG	Weighted NSTI	0.0637238
HK_11_DI.v4	IM	Weighted NSTI	0.099274074
HK_11_T.v4	IM	Weighted NSTI	0.078304156
HK_13_T.v4	SG	Weighted NSTI	0.106671667
HK_14_Di.v4	AG	Weighted NSTI	0.097392722
HK_15_Dou.v4	AG	Weighted NSTI	0.111993563
HK_15_T.v4	AG	Weighted NSTI	0.101917437
HK_16_Di.v4	IM	Weighted NSTI	0.123085712
HK_16_DOU.v4	IM	Weighted NSTI	0.099051875
HK_16_T.v4	IM	Weighted NSTI	0.112548689
HK_17_Di.v4	AG	Weighted NSTI	0.106424112
HK_17_Dou.v4	AG	Weighted NSTI	0.110184431
HK_17_T.v4	AG	Weighted NSTI	0.114689466
HK_19_Di.v4	SG	Weighted NSTI	0.102083248
HK_19_Dou.v4	SG	Weighted NSTI	0.11342224
HK_19_T.v4	SG	Weighted NSTI	0.109586013
HK_2_Di.v4	SG	Weighted NSTI	0.087347155
HK_2_T.v4	SG	Weighted NSTI	0.099290259
HK_20_Di.v4	AG	Weighted NSTI	0.081635188
HK_20_Dou.v4	AG	Weighted NSTI	0.082333975
HK_20_T.v4	AG	Weighted NSTI	0.1222729
HK_21_Dou.v4	SG	Weighted NSTI	0.084932844
HK_21_T.v4	SG	Weighted NSTI	0.093136376
HK_21DT202.v4	SG	Weighted NSTI	0.079467113
HK_22_Di.v4	SG	Weighted NSTI	0.104896516
HK_22_Dou.v4	SG	Weighted NSTI	0.089689402

HK_22_T.v4	SG	Weighted NSTI	0.104079604
HK_23_Di.v4	IM	Weighted NSTI	0.079705473
HK_23_Dou.v4	IM	Weighted NSTI	0.063516663
HK_23_T.v4	IM	Weighted NSTI	0.081561841
HK_24_Di.v4	IM	Weighted NSTI	0.073304305
HK_24_Dou.v4	IM	Weighted NSTI	0.077838848
HK_24_T.v4	IM	Weighted NSTI	0.068883861
HK_26_Di.v4	IM	Weighted NSTI	0.086740725
HK_26_Dou.v4	IM	Weighted NSTI	0.073667941
HK_26T.v4	IM	Weighted NSTI	0.047460192
HK_27_Di.v4	IM	Weighted NSTI	0.089975701
HK_27_Dou.v4	IM	Weighted NSTI	0.093767033
HK_28_Di.v4	AG	Weighted NSTI	0.086664675
HK_28_T.v4	AG	Weighted NSTI	0.088536185
HK_28Dou.v4	AG	Weighted NSTI	0.096177152
HK_29_Di.v4	SG	Weighted NSTI	0.085384278
HK_29_Dou.v4	SG	Weighted NSTI	0.050172846
HK_29_T.v4	SG	Weighted NSTI	0.037493365
HK_3_Di.v4	IM	Weighted NSTI	0.038367334
HK_3_Dou.v4	IM	Weighted NSTI	0.062767241
HK_3_T.v4	IM	Weighted NSTI	0.05815905
HK_30_Di.v4	IM	Weighted NSTI	0.102680566
HK_30_T.v4	IM	Weighted NSTI	0.094430926
HK_31_Di.v4	AG	Weighted NSTI	0.034000387
HK_31_Dou.v4	AG	Weighted NSTI	0.051760416
HK_31_T.v4	AG	Weighted NSTI	0.04621701
HK_32_Di.v4	IM	Weighted NSTI	0.069753513
HK_32_Dou.v4	IM	Weighted NSTI	0.098301002
HK_32_T.v4	IM	Weighted NSTI	0.108102213
HK_33_Di.v4	AG	Weighted NSTI	0.098723339
HK_33_Dou.v4	AG	Weighted NSTI	0.070786857
HK_33_T.v4	AG	Weighted NSTI	0.076392574
HK_34_Di.v4	SG	Weighted NSTI	0.061083136
HK_34_Dou.v4	SG	Weighted NSTI	0.068369247
HK_35_Di.v4	IM	Weighted NSTI	0.061629579
HK_35_Dou.v4	IM	Weighted NSTI	0.074470844
HK_36_Di.v4	AG	Weighted NSTI	0.089273255
HK_36_Dou.v4	AG	Weighted NSTI	0.071927042
HK_36_T.v4	AG	Weighted NSTI	0.021080062
HK_37_Di.v4	IM	Weighted NSTI	0.066158105
HK_37_Dou.v4	IM	Weighted NSTI	0.058184164
HK_37_T.v4	IM	Weighted NSTI	0.074791147
HK_38_Di.v4	SG	Weighted NSTI	0.067131409
HK_38_Dou.v4	SG	Weighted NSTI	0.066716756
HK_4_Di.v4	AG	Weighted NSTI	0.073427159

HK_4_Dou.v4	AG	Weighted NSTI	0.066615178
HK_4_T.v4	AG	Weighted NSTI	0.055251508
HK_5_Di.v4	IM	Weighted NSTI	0.046559438
HK_5_Dou.v4	IM	Weighted NSTI	0.091951148
HK_5_T.v4	IM	Weighted NSTI	0.077803312
HK_6_Di.v4	IM	Weighted NSTI	0.067966233
HK_6_Dou.v4	IM	Weighted NSTI	0.063070792
HK_6_T.v4	IM	Weighted NSTI	0.092584196
HK_7_Di.v4	SG	Weighted NSTI	0.073342713
HK_7_Dou.v4	SG	Weighted NSTI	0.068037276
HK_7_T.v4	SG	Weighted NSTI	0.106566937
HK_8_Di.v4	IM	Weighted NSTI	0.037905109
HK_8_Dou.v4	IM	Weighted NSTI	0.033280033
HK_8_T.v4	IM	Weighted NSTI	0.021616315
HK_9_Di.v4	AG	Weighted NSTI	0.100908527
HK_9_Dou.v4	AG	Weighted NSTI	0.075211943
HK12T244.v4	SG	Weighted NSTI	0.052693157
HK14Dou246.v4	AG	Weighted NSTI	0.105280523
HK14T247.v4	AG	Weighted NSTI	0.077722775
HK15DT248.v4	AG	Weighted NSTI	0.076407428
HK25Dou200.v4	IM	Weighted NSTI	0.118108618
HK25DT199.v4	IM	Weighted NSTI	0.107880391
HK25T198.v4	IM	Weighted NSTI	0.120157985
HK35T.v4	IM	Weighted NSTI	0.110600676
YJ_Ca_10.v4	GC	Weighted NSTI	0.090188674
YJ_CA_12.v4	GC	Weighted NSTI	0.077707081
YJ_Ca_13.v4	GC	Weighted NSTI	0.060125684
YJ_Ca_14.v4	GC	Weighted NSTI	0.055715377
YJ_Ca_15.v4	SG	Weighted NSTI	0.075632011
YJ_Ca_16.v4	GC	Weighted NSTI	0.062169293
YJ_Ca_17.v4	IM	Weighted NSTI	0.072416755
YJ_Ca_18.v4	GC	Weighted NSTI	0.033175534
YJ_Ca_19.v4	SG	Weighted NSTI	0.091603953
YJ_Ca_20.v4	AG	Weighted NSTI	0.100250096
YJ_Ca_22.v4	GC	Weighted NSTI	0.084443207
YJ_Ca_23.v4	GC	Weighted NSTI	0.088026832
YJ_Ca_24.v4	GC	Weighted NSTI	0.088012187
YJ_Ca_25.v4	GC	Weighted NSTI	0.100365843
YJ_Ca_7.v4	GC	Weighted NSTI	0.050303398
YJ_ca_8.v4	GC	Weighted NSTI	0.093400061
YJ_Ca_9.v4	GC	Weighted NSTI	0.108391282
YJ_Ca2.v4	GC	Weighted NSTI	0.055140421
YJ_ca21.v4	GC	Weighted NSTI	0.089218144
YJ_Ca3.v4	GC	Weighted NSTI	0.082390502
YJ_Ca4.v4	GC	Weighted NSTI	0.076185217

YJ_Ca5.v4	GC	Weighted NSTI	0.070675106
YJ_Ca6.v4	GC	Weighted NSTI	0.055590825
YJ_N_15.v4	SG	Weighted NSTI	0.091958316
YJ_N_17.v4	IM	Weighted NSTI	0.07484037
YJ_N_19.v4	SG	Weighted NSTI	0.077759271
YJ_N_20.v4	AG	Weighted NSTI	0.099310437
YJCall265.v4	GC	Weighted NSTI	0.094753788

SG: Superficial gastritis

AG: Atrophic gastritis

IM: Intestinal metaplasia

GC: Gastric cancer