

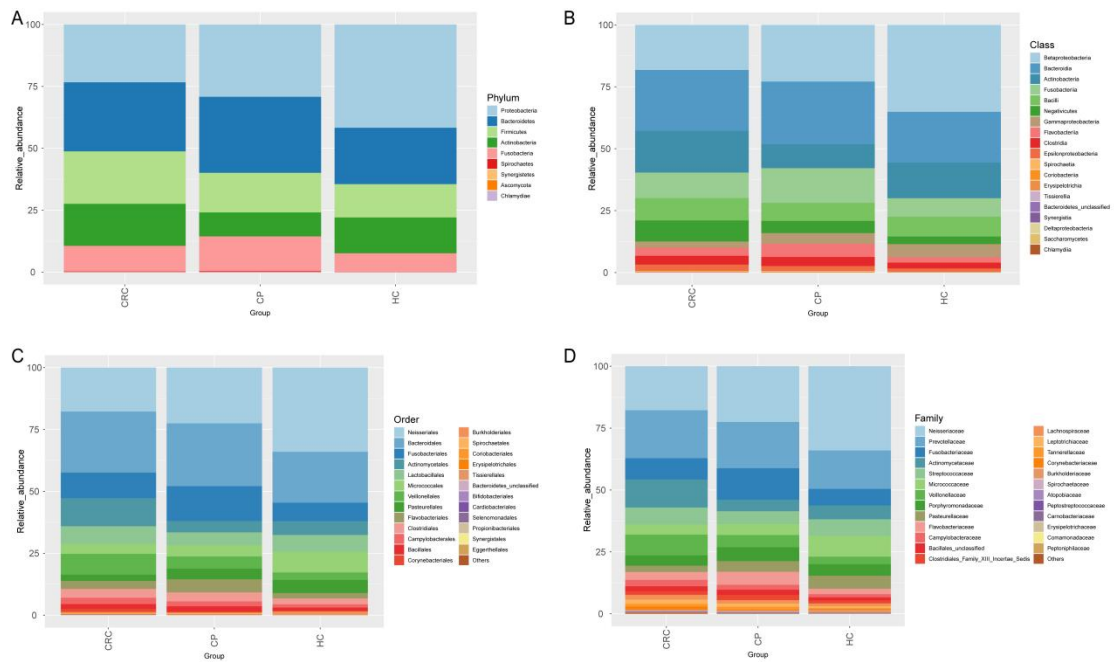
Table S1 Summary of all samples in this study with relevant clinical information

SampleID	Group	Date of Sample Collection	Age	Gender	Gender	BMI	RBC (10 ¹² /L)	WBC (10 ⁹ /L)	PLT (10 ⁹ /L)	NEU%	LY%	ALT (U/L)	AST (U/L)	TP (g/L)	ALB (g/L)	GLB (g/L)	Cr (μmol/L)
TG_001	CP	2021-11-25	63	0	female	25.84776822	4.28	4.60	204	75.2	20.1	11	14	67.9	41.7	26.2	66
TG_002	CP	2022-03-09	64	1	male	24.79338843	5.04	6.06	170	53.7	31.9	16	17	75.6	46.3	29.3	57
TG_003	CP	2022-01-17	52	0	female	31.17913832	3.92	4.57	231	51	43.8	39	27	67.4	42.7	24.7	49
TG_004	CP	2022-01-25	36	1	male	26.02510174	5.44	4.84	210	55.2	35.3	16	19	78.5	44.8	33.7	66
TG_005	CP	2021-12-09	71	1	male	27.43801653	5.04	5.05	197	58.2	32.4	17	20	71.6	46.1	25.5	73
TG_006	CP	2021-12-23	64	0	female	21.08281329	5.21	11.69	399	93.2	5.2	37	24	67.7	38.9	28.8	28
TG_007	CRC	2021-12-06	69	0	female	22.09478833	3.91	7.39	321	63.2	26.8	14	16	68.4	39.6	28.8	89
TG_008	CRC	2021-12-16	73	0	female	24.03460984	4.00	8.32	244	78.7	14.7	19	45	70.2	38.1	32.1	60
TG_009	CRC	2022-05-13	61	1	male	15.625	3.66	15.04	440	77.7	13.2	24	22	76.9	38.7	38.2	81
TG_010	CP	2021-12-13	65	0	female	19.33372992	4.64	7.04	221	57.7	34	12	22	77.5	44.6	32.9	74
TG_011	CP	2022-03-14	56	0	female	19.08327246	4.57	4.14	216	49.8	43	12	17	72.7	43.5	29.2	54
TG_012	CRC	2022-03-24	71	1	male	23.24459454	4.09	2.18	135	35.6	47.1	19	28	62.4	38.8	23.6	52
TG_013	CRC	2022-01-19	57	1	male	26.953125	4.37	4.99	196	70.7	16.3	27	33	75.3	41.9	33.4	85
TG_014	CP	2022-03-11	69	0	female	20.8456944	4.14	6.23	176	67.6	24.5	10	14	66.9	38.2	28.7	74
TG_015	CP	2022-04-02	61	1	male	22.85714286	4.37	5.83	261	70.9	19	10	17	71.7	44.4	27.3	66
TG_016	CP	2021-12-13	56	1	male	24.50894577	5.13	4.20	171	73.2	21.8	16	16	71.9	44.6	27.3	98
TG_017	CP	2022-03-09	51	1	male	24.48979592	4.44	7.65	270	56.3	35	13	14	65.3	36.5	28.8	92
TG_018	CP	2022-01-04	59	1	male	16.67820069	4.99	7.09	277	61.2	27.1	14	13	69.2	42.8	26.4	87
TG_019	CP	2022-03-25	66	0	female	24.22145329	4.41	4.81	230	47.2	40.3	26	23	73.4	45.4	28	49
TG_020	CP	2022-03-28	41	1	male	25.4580659	5.31	6.73	239	42.4	39.8	15	17	74	41.6	32.4	77
TG_021	CP	2022-03-18	52	1	male	23.0400202	5.44	8.98	253	66.8	23.3	45	23	74.2	47.6	26.6	89
TG_022	CP	2021-12-20	63	0	female	25.29937595	4.14	4.59	213	62.3	27.1	29	34	69.5	41.8	27.7	71
TG_023	CP	2021-11-30	48	0	female	24.84098009	4.20	6.27	236	69.4	22.3	14	17	66.7	41	25.7	76
TG_024	CP	2022-04-02	52	1	male	20.2812331	4.40	7.45	243	58	33.3	NA	NA	NA	NA	NA	72
TG_025	CP	2021-12-13	70	0	female	23.828125	3.40	4.40	257	47.6	42.1	14	22	68.1	40.8	27.3	59
TG_026	CRC	2022-03-11	72	1	male	22.03856749	4.28	7.20	227	55.8	24.5	12	20	68.5	42.4	26.1	81
TG_027	CRC	2021-12-15	67	1	male	23.66143862	4.27	8.87	267	63.9	26.4	12	17	71.9	43.3	28.6	100
TG_028	CRC	2021-12-02	75	1	male	22.86236854	4.03	8.17	220	65.1	24	10	17	66.8	37.3	29.5	100
TG_029	CRC	2022-03-15	69	1	male	19.72318339	5.44	4.81	327	73.6	17.9	3	17	65.8	36.2	29.6	58
TG_030	CRC	2022-03-14	62	1	male	30.11621315	4.67	4.99	198	58.6	26.1	16	17	65.4	42.2	23.2	88

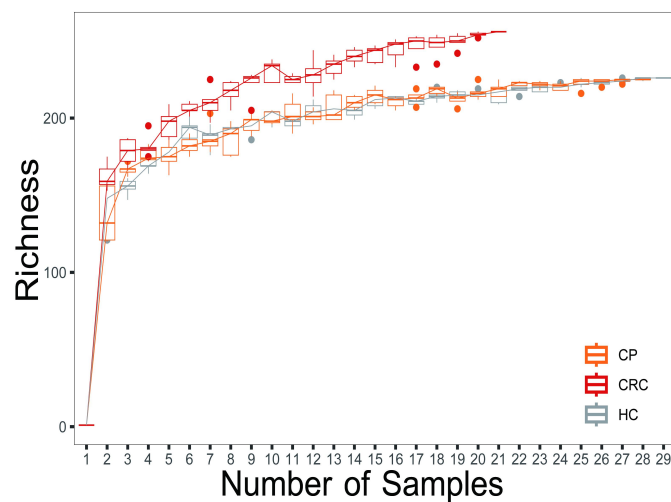
TG_031	CRC	2022-01-19	55	0	female	20.95717116	4.86	6.06	215	67.2	24.5	37	29	71.7	42.2	29.5	55
TG_032	CRC	2021-12-09	61	1	male	20.2020202	3.14	8.92	244	81.5	9.6	24	34	47.3	19.7	27.6	103
TG_033	CRC	2021-12-13	62	0	female	21.50446956	4.24	9.90	424	70.3	17.9	6	11	71.2	34.9	36.3	57
TG_034	CRC	2021-12-15	42	1	male	22.49134948	5.20	7.17	193	63.1	29.8	23	19	78.7	47.9	30.8	111
TG_035	CRC	2022-04-07	63	1	male	27.734375	6.71	9.89	354	60.4	25.2	15	19	73.7	44.3	29.4	92
TG_036	CRC	2022-01-18	75	1	male	27.39817568	4.41	6.17	231	70.8	21.3	31	27	70	44.4	25.6	98
TG_037	CRC	2022-03-15	68	0	female	21.484375	4.37	7.72	431	62.9	30.1	6	16	67.5	41.5	26	73
TG_038	CRC	2021-11-24	75	1	male	24.97398543	3.42	8.92	703	83.7	10.5	6	11	72.5	37.3	35.2	42
TG_039	CRC	2022-03-22	59	0	female	22.42727156	3.88	8.67	349	74.1	18.4	8	16	74.6	40.3	34.3	71
TG_040	CRC	2022-04-01	48	0	female	20.95717116	4.58	5.85	323	63.8	26.4	11	12	69	38.7	30.3	47
TG_041	CRC	2021-12-01	34	0	female	19.45858295	3.77	5.52	298	64.1	26.5	5	15	63.7	41.6	22.1	55
TG_042	CRC	2021-12-29	68	1	male	22.47658689	5.22	9.19	222	73.2	17.7	13	18	71.3	42.2	29.1	88
TG_043	CRC	2022-03-18	56	1	male	25.59373706	4.94	7.54	412	50.7	42.8	10	14	66.9	40.1	26.8	96
TG_044	CRC	2021-12-02	67	0	female	28.44444444	3.97	11.86	405	80.9	13.7	25	26	68.7	35.7	33	64
TG_045	CRC	2022-01-21	82	1	male	27.54820937	2.89	12.29	350	80.2	7.9	11	15	62.8	33.9	28.9	170
TG_046	CRC	2021-12-21	63	1	male	20.86111966	4.91	4.92	195	49.5	36.3	10	15	64.9	38	26.9	92
TG_047	CRC	2022-03-16	41	1	male	21.14631991	3.98	5.16	211	44.5	47	13	15	64.9	40.6	24.3	96
TG_048	CRC	2022-01-20	39	0	female	18.49112426	4.54	10.94	473	83.8	10.4	3	19	65.6	29.5	36.1	46
TG_049	HC	2021-12-03	59	1	male	22.87197232	4.32	6.25	234	67.2	24.2	19.3	18.7	68.4	46.4	22	78.1
TG_050	HC	2021-12-24	55	1	male	23.05175491	4.70	6.87	258	56.4	32.5	22.5	25.7	73.5	44.5	29	72.7
TG_051	HC	2022-03-29	57	0	female	23.0625112	4.71	6.88	216	60.9	31	21.3	23.6	77.5	42.7	34.8	68
TG_052	HC	2022-05-16	59	1	male	21.59539936	6.21	3.63	305	61.4	28	11.9	12.7	73.7	46.5	27.2	86.1
TG_053	HC	2022-03-22	57	1	male	25.74285608	4.38	5.01	255	52.3	39.3	20.8	20.4	75	46.9	28.1	80.9
TG_054	HC	2021-12-08	59	0	female	26.65471838	5.72	6.97	352	67	24.4	11.8	18.9	72.6	47.1	25.5	56.9
TG_055	HC	2021-11-29	55	1	male	27.91208103	5.25	5.30	284	56.9	32.4	23.3	21.3	71.8	44	27.8	75.4
TG_056	HC	2022-03-31	60	1	male	18.39162397	4.32	6.52	192	64.5	24.9	13.5	19.2	74.6	43.6	31	78.5
TG_057	HC	2021-12-10	56	0	female	26.63891779	4.42	9.49	314	61.2	32.6	26.8	23.5	70.2	44.4	25.8	59.5
TG_058	HC	2022-04-07	59	0	female	18.28356615	4.00	3.49	176	51	42.5	10.9	19.5	70.6	45	25.6	69.7
TG_059	HC	2021-12-08	55	1	male	22.25754398	4.96	3.41	219	60.7	23.7	11	14.7	65.4	43.1	22.3	96.2
TG_060	HC	2022-01-12	59	0	female	18.51638281	4.19	6.98	283	55.8	32.6	9.8	15	71.8	44.5	27.3	65.3
TG_061	HC	2022-05-16	56	1	male	21.02113116	5.48	7.06	202	61.9	31.5	28.7	27.3	79.2	50	29.2	93
TG_062	HC	2022-04-02	59	0	female	19.00194856	4.30	4.90	176	51.2	41.1	12.3	16.9	70.8	44.4	26.4	67
TG_063	HC	2022-01-28	59	1	male	24.50617284	4.78	6.55	207	60.2	23.8	10.8	17.2	71.7	46.1	25.6	76.8

TG_064	HC	2021-11-25	58	1	male	24.10086533	4.84	5.26	249	53.3	34.1	18.7	18.5	72.5	45.8	26.7	87
TG_065	HC	2021-12-31	58	0	female	22.1875	4.49	4.82	286	53.1	37.9	18	17.9	83.2	47.7	35.5	47.1
TG_066	HC	2021-12-08	55	1	male	26.66459073	5.13	5.86	235	51.3	39	18.8	16.3	68.7	42.2	26.5	88
TG_067	HC	2021-12-20	59	1	male	20.84663205	4.31	4.66	209	57.1	25.3	13.7	21.4	71.3	44.4	26.9	88.5
TG_068	HC	2021-12-23	55	1	male	24.96716097	5.12	10.88	306	53.5	38.3	18.1	12.1	76.5	43.3	33.2	64.5
TG_069	HC	2021-12-20	59	0	female	23.81460389	4.29	6.21	290	59.1	31.9	29.8	23	70.4	45.2	25.2	59
TG_070	HC	2022-03-23	57	1	male	28.48739783	4.72	7.33	230	58	31.1	22.6	16.2	81.2	45.1	36.1	75.3
TG_071	HC	2022-03-30	55	0	female	20.46479682	4.31	6.79	278	57.4	27.6	16.7	23.8	75	44.7	30.3	62.6
TG_072	HC	2022-03-21	60	0	female	25.19132653	4.35	4.60	216	45	50.3	22.1	25.1	70	42.2	27.8	58.4
TG_073	HC	2021-12-23	56	1	male	24.67552049	5.71	6.65	235	64.9	26.1	28.6	24.2	71.6	46	25.6	77.4
TG_074	HC	2022-01-25	55	1	male	26.6766698	4.89	5.68	229	64.3	30	26.3	22	72	44.5	27.5	73.5
TG_075	HC	2022-03-22	56	0	female	25.00740529	4.15	3.99	189	59.4	27.9	22.9	22.5	70.2	44.9	25.3	55.6
TG_076	HC	2022-03-31	55	1	male	23.60650784	5.03	6.82	333	55.8	34	17.7	29.3	77.6	44.7	32.9	94.3
TG_077	HC	2022-01-25	56	1	male	20.89965398	4.68	7.34	211	52.6	37.1	13.8	19.8	69.3	42.6	26.7	98.9
TG_078	HC	2022-05-13	58	1	male	24.53512397	5.52	5.25	232	59.2	29.9	28.8	25	69.8	42.6	27.2	91.4
TG_079	CP	2022-01-26	60	0	female	26.03749399	4.40	6.59	259	53.6	32.6	NA	NA	NA	NA	NA	NA
TG_080	CP	2021-12-07	61	1	male	26.60971255	4.87	6.70	206	56.9	36.4	NA	NA	NA	NA	NA	NA
TG_081	CP	2021-12-02	59	1	male	25.64891762	5.15	5.53	159	58.3	29.8	NA	NA	NA	NA	NA	NA
TG_082	CP	2021-12-31	54	0	female	25.77777778	4.31	5.35	241	61.3	30.8	NA	NA	NA	NA	NA	NA
TG_083	CP	2021-12-14	39	1	male	26.12244898	5.19	7.08	272	60.1	28.8	NA	NA	NA	NA	NA	NA
TG_084	CP	2022-04-07	42	1	male	20.38062284	5.14	7.96	240	61.6	25.8	NA	NA	NA	NA	NA	NA
TG_085	CP	2021-12-23	29	1	male	19.84126984	5.31	6.20	231	54.4	37.3	NA	NA	NA	NA	NA	NA
TG_086	CRC	2021-11-29	71	1	male	26.25958475	4.15	13.11	279	13.64	1.02	20	14	58.2	37.4	20.8	76
TG_087	CP	2021-11-29	68	0	female	25.18210198	4.42	5.23	278	59.9	33.6	37	22	60.3	40.1	20.2	38
TG_088	CRC	2022-03-11	70	0	female	24.5603263	4.66	12.87	320	79	13.4	8	16	69.6	37.1	32.5	68
TG_089	CP	2021-12-31	36	1	male	24.34175829	4.94	7.08	379	58.9	33.2	NA	NA	NA	NA	NA	NA
TG_090	CP	2022-03-25	35	1	male	25.56495392	5.46	6.72	236	44	44	NA	NA	NA	NA	NA	NA

HC: Healthy controls, CP: Patients with colorectal polyps (CP), CRC: Patients with colorectal cancer; BMI:Body mass index; RBC: Red blood cell count; WBC: White blood cell count; PLT: Platelet count; NEU%:Neutrophil%; LY%: Lymphocyte%; ALT:Alanine amiotransferase; AST:Aspartate aminotransferase; TP: Total protein; ALB:Albumin; GLB:Globulin; Cr: Creatinine.

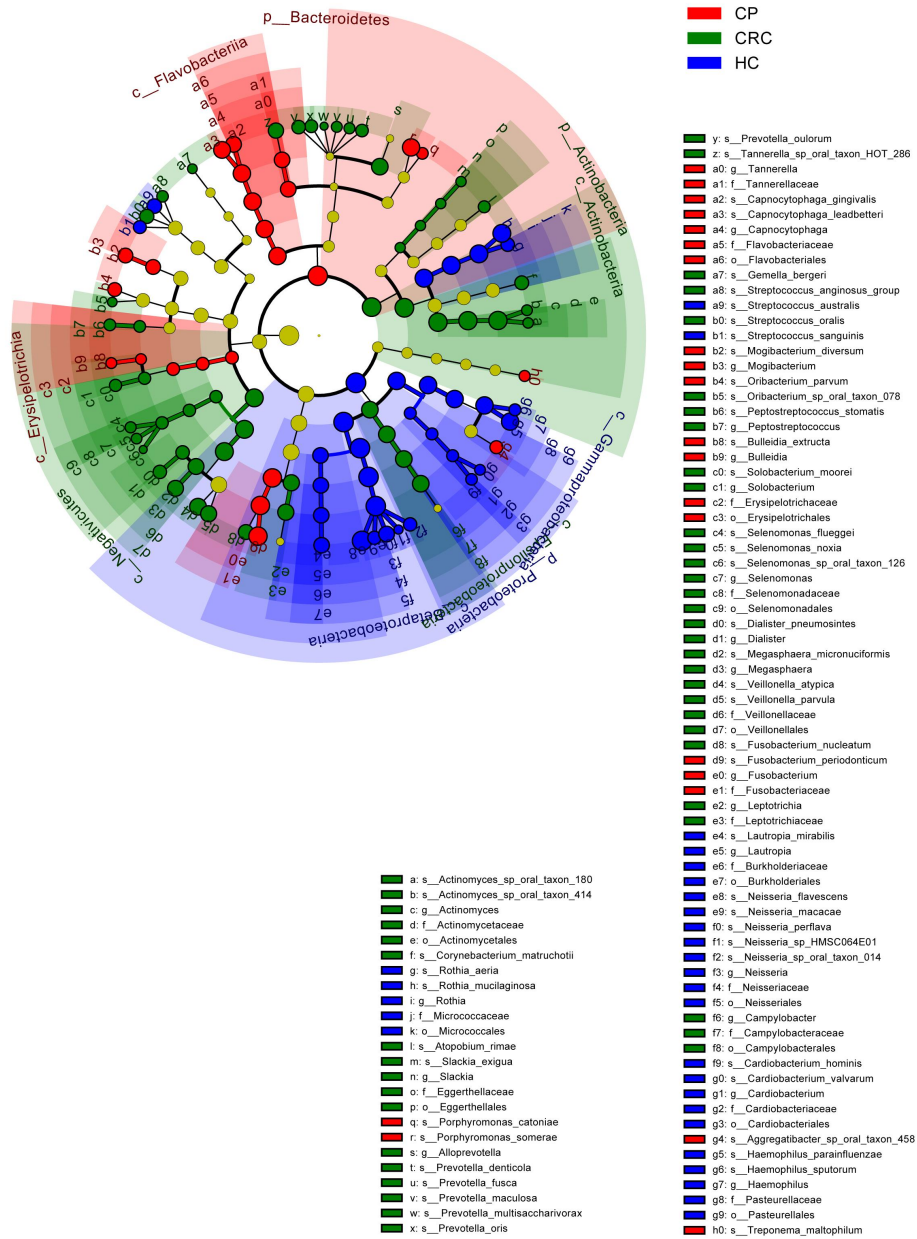


Supplementary Figure S1. Microbiome composition of the three groups from the phylum to family level. (A) phylum level. (B) class level. (C) order level. (D) family level. HC: Healthy controls, CP: Patients with colorectal polyps (CP), CRC: Patients with colorectal cancer



Supplementary Figure S2. Species accumulation curves of samples from three groups at the species level.

Cladogram



Supplementary Figure S3. Cladograms of bacterial lineages with obvious differences between three groups at various levels from phylum to species. HC: Healthy controls, CP: Patients with colorectal polyps, CRC: Patients with colorectal cancer