

Supplementary Table 1 Comparison of Serum IL-6 and TNF-α Levels Between Groups

Group	IL-6 (pg/mL)	TNF-α(pg/mL)
Study group	48.32 ± 12.47	36.75 ± 8.93
Control group	12.15 ± 3.82	8.64 ± 2.51
t	11.738	6.816
p	<0.001	<0.001

Supplementary Table 2. Inflammatory Cytokine Levels Across Microbiota Dysbiosis Groups

Group	IL-6 (pg/mL)	TNF-α (pg/mL)
Normal Microbiota (n=50)	34.21±9.15	28.43±6.72
Mild Dysbiosis (n=43)	52.67±11.38*	39.56±7.85*
Severe Dysbiosis (n=27)	68.92±13.24*△	48.31±9.12*△
F	58.345	42.172
P	<0.001	<0.001

*P<0.01 vs. normal group; △P<0.05 vs. mild dysbiosis group.

Supplementary Table 3 Correlation Between Inflammatory Cytokines and S100A12/sRAGE

Cytokine	S100A12 (r)	P	sRAGE (r)	P
IL-6	0.712	<0.001	0.685	<0.001
TNF- α	0.698	<0.001	0.663	<0.001

Supplementary Table 4 Post-Chemotherapy Recovery of Beneficial Bacteria

Indicator	Pre-chemotherapy	Post-chemotherapy	t	P
<i>Escherichia coli</i> (CFU/g, $\times 10^6$)	2.13 $\pm$ 0.84	5.82 $\pm$ 1.27	2.176	<0.001
<i>Enterococcus faecalis</i> (CFU/g, $\times 10^6$)	1.72 $\pm$ 0.63	4.35 $\pm$ 1.08	1.533	<0.001
<i>Bifidobacterium</i> (CFU/g, $\times 10^7$)	8.56 $\pm$ 2.37	3.21 $\pm$ 1.14	0.622	0.003
<i>Lactobacillus</i> (CFU/g, $\times 10^7$)	6.93 $\pm$ 1.85	2.74 $\pm$ 0.92	0.611	0.008