

Microbial richness

Marker Guide

What this marker measures

This marker measures the number of distinct microbial species detected within the gut community. Unlike diversity, which also accounts for evenness, richness captures only how many species are present. Low richness may indicate reduced community complexity and resilience^{1,2}, while high richness may reflect dietary diversity^{3,4}.

Clinical associations

Consider this marker when your patient presents with:

GI symptoms

Constipation, bloating, IBS-type presentation, altered bowel habits

Inflammatory conditions

Suspected systemic inflammation, obesity, metabolic syndrome

Microbiome resilience

Post-antibiotic recovery, recurrent dysbiosis, frequent illness

Interpreting the result

All results are compared to Microba's healthy cohort to determine whether they fall within or outside the expected range.

LOW

Microbial richness is lower than expected

May indicate reduced community complexity and resilience.

Action: see patient management insights below.

WITHIN RANGE

Microbial richness is within expected parameters

This suggests species count is not reduced and may support community resilience.

HIGH

Microbial richness is higher than expected

Usually not a concern in isolation and may reflect a varied diet. High richness can sometimes coincide with pathobiont-associated species or slower gut transit. Review the species table alongside symptoms, transit time, and other markers.



Tips for patients discussion

Your report shows that the number of different microbial species in your gut is lower than we would ideally see. A more varied microbiome is generally more resilient. A richer microbiome is generally considered more resilient. A key way to support this is through a varied, minimally processed diet with a wide range of plant foods.

How results are calculated

All microbiome marker results are compared against the Microba Healthy Cohort — a purpose-built group of more than 450 healthy individuals, with samples collected and analysed using the same workflow as patient samples.

Each marker is scored by comparing the patient's relative abundance against the cohort average. The distance from this average is expressed as standard deviations, and determines whether a result is classified as Low, Borderline, or High.

How the result scale works



The patient's relative abundance is compared to the Healthy Cohort average. A **negative** distance from average means the microbial group is less abundant than the Healthy Cohort. A **positive** distance means it is more abundant. Results falling outside the expected range are classified as borderline or high/low (borderline high/low: +/-0.68, and high/low: +/-1.28).

GRADE	DESCRIPTION
A	Body of evidence can be trusted to guide practice
B	Body of evidence can be trusted to guide practice in most situations
C	Body of evidence provides some support for recommendation, but care should be taken in its application
D	Body of evidence is weak, and recommendation must be applied with caution
PP H	Body of evidence is observational only and must be applied with caution
PP IV	Body of evidence is in vitro and must be applied with a high degree of caution

Evidence grading for patient management insights

The letter grades shown next to each patient management insight show the quality of the research behind it. Every insight provided has been through a rigorous review of the scientific literature and graded using the NHMRC Levels of Evidence, so you can see exactly how strong the evidence is before applying it in practice.