VIBRANT WELLNESS Educational Guide

An in-depth educational overview of what Vibrant Wellness testing provides and how the Gut Zoomer evaluates the gastrointestinal ecosystem

1. What Vibrant Wellness Testing Provides

Vibrant Wellness is a specialty laboratory company offering advanced functional and systems-based testing. Its panels are designed to evaluate patterns across areas such as the microbiome, digestion, immune activity, inflammation, nutrient status, hormones, environmental exposures, cardiovascular risk, neurologic immune activity, and cellular function.

Many Vibrant panels are built around a systems-biology approach. Rather than asking only whether one marker is abnormal, the testing often combines several marker families to help show how multiple physiologic processes may relate to one another.

The broader questions these panels may help explore

- What biological systems appear stressed or out of balance?
- Are there patterns involving inflammation, immune activity, digestion, microbial ecology, nutrient metabolism, or detoxification?
- Are several abnormalities occurring together that may help explain a symptom pattern? Are there measurable functional markers that can be followed alongside symptoms and conventional care?
- Could a person's symptoms reflect several interacting processes rather than one isolated abnormality?

Key principle: Vibrant testing is best viewed as advanced laboratory information that adds context to the clinical picture. It is not a stand-alone diagnosis. Many Vibrant assays are laboratory-developed tests and should be interpreted with clinical history, symptoms, medications, diet, conventional testing, and appropriate follow-up.

2. The Gut Zoomer: What It Is

The Gut Zoomer is a comprehensive gastrointestinal assessment designed to examine the gut microbiome together with digestive, inflammatory, immune, metabolic, and gut-brain-related markers. Depending on the current panel configuration, it uses stool and urine testing and combines several laboratory methods rather than relying on one technology alone.

Domain	What it helps describe
Microbiome ecology	Commensal organisms, keystone species, relative abundance, diversity, major phyla and microbial balance.
Pathogens	Selected pathogenic bacteria, parasites/protozoa, fungi/yeast, viruses and other gastrointestinal organisms.
Inflammation	Markers such as calprotectin, lactoferrin and other immune-inflammatory proteins.
Digestion & absorption	Pancreatic elastase, fecal fat-related markers, pH and other digestive indicators.
Mucosal immunity	Secretory IgA and selected immune/antibody markers.
Microbial metabolites	Short-chain fatty acids, bile acids, beta-glucuronidase and other metabolic outputs.
Gut-brain chemistry	Selected neurotransmitters, precursors, metabolites and ratios reflecting peripheral/gut-related neurochemical pathways.

3. Gut Microbiome Composition

A major portion of the Gut Zoomer examines organisms that normally inhabit the gastrointestinal tract. These are commonly referred to as commensal organisms. Humans live in a complex symbiotic relationship with trillions of microorganisms, and many of them participate in digestion, immune regulation, metabolism and intestinal barrier support.

- Fermentation of dietary fiber
- Production of short-chain fatty acids
- Regulation of intestinal pH
- Support of intestinal barrier integrity
- Interactions with the immune system
- Bile-acid transformation
- Metabolism of dietary compounds
- Production or modification of certain vitamins
- Signaling along the gut-brain axis

Examples of commonly discussed organisms

Akkermansia muciniphila: Often studied for its relationship with the intestinal mucus layer, epithelial health and metabolic signaling.

Faecalibacterium prausnitzii: A prominent butyrate-associated organism often studied in relation to intestinal immune balance.

Roseburia species: Important fiber-fermenting organisms associated with short-chain fatty-acid production.

Bifidobacterium species: Common beneficial organisms involved in carbohydrate fermentation and intestinal ecology.

Lactobacillus species: Widely studied for interactions with intestinal immunity, fermentation and microbial balance.

Microbiome interpretation should not reduce organisms to a simple “good” versus “bad” classification. Context, abundance, diversity, neighboring organisms, diet, geography, age, medications and the overall ecosystem all matter.

4. Dysbiosis, Diversity and Major Phyla

Dysbiosis

Dysbiosis is a broad term for imbalance in the microbial ecosystem. It may involve loss of beneficial organisms, reduced diversity, excessive abundance of certain species, expansion of opportunistic organisms, loss of keystone organisms or altered fermentation and metabolic patterns. Dysbiosis is not itself a single disease diagnosis.

Microbial diversity

Gut Zoomer reporting may include diversity metrics such as Shannon and Simpson indices. These summarize different aspects of the microbial ecosystem.

Shannon index: Reflects richness and diversity - broadly, how many different types of organisms are represented and how distributed they are.

Simpson index: Places greater emphasis on evenness and dominance - broadly, whether a few organisms dominate the community or the ecosystem is more balanced.

Major bacterial phyla and ratios

The report may summarize major microbial phyla such as Firmicutes, Bacteroidetes, Proteobacteria, Actinobacteria, Verrucomicrobia, Fusobacteria and Euryarchaeota, and may calculate ratios such as Firmicutes:Bacteroidetes or Prevotella:Bacteroides. These measures can be useful as ecological context, but they should not be interpreted as stand-alone disease markers. For example, the Firmicutes:Bacteroidetes ratio is not a reliable single-marker diagnosis of obesity or metabolic dysfunction.

5. Keystone Organisms and Pathogens

Keystone organisms

Keystone species can exert disproportionately large effects on the ecosystem. They may support mucus integrity, fiber fermentation, cross-feeding between organisms, beneficial metabolite production, immune regulation and ecological stability. Depletion of several keystone or butyrate-associated organisms can sometimes be more informative than one isolated elevated organism.

Pathogen testing

The panel evaluates a broad range of gastrointestinal pathogens and potentially problematic organisms using molecular methods. Categories can include pathogenic bacteria, parasites and protozoa, fungi and yeast, viruses, and selected helminths. PCR-based methods detect microbial genetic material rather than relying solely on culture.

Important: Detection of microbial DNA does not automatically prove that the organism is the cause of symptoms. Colonization, abundance, host response, timing, symptoms and other findings must be considered.

Antibiotic-resistance genes

The Gut Zoomer may also report selected antibiotic-resistance genes. These indicate the presence of genetic mechanisms associated with resistance to certain antibiotic classes. They should not be used independently to select or prescribe antibiotics.

6. Intestinal Inflammation and Immune Activity

One of the clinically important portions of the Gut Zoomer is its assessment of intestinal inflammatory and immune markers. These help show whether the gut is demonstrating signs of active immune stimulation or mucosal inflammation.

Calprotectin: A well-established stool marker of neutrophil-driven intestinal inflammation. Significant elevation can occur with inflammatory gastrointestinal disease and may warrant conventional medical evaluation.

Lactoferrin: Another neutrophil-associated marker that can rise with active intestinal inflammation.

S100A12: An inflammatory protein associated with innate immune-cell activation.

MMP-9: A matrix metalloproteinase involved in tissue remodeling and inflammatory processes.

Beta-defensin 2: An antimicrobial peptide made by epithelial cells as part of innate mucosal defense.

Lysozyme: An innate antimicrobial protein involved in defense against microbes.

Eosinophil Protein X: A marker associated with eosinophil activity and potentially relevant to allergic or eosinophilic intestinal inflammation.

Secretory IgA

Secretory IgA (sIgA) is one of the primary antibodies protecting mucosal surfaces. It helps bind microorganisms, neutralize toxins, regulate colonization and maintain immune tolerance. Low or high sIgA can provide useful context, but neither value identifies a cause by itself. Interpretation should consider symptoms, inflammatory markers, pathogens, medications, diet, stress and the rest of the microbiome pattern.

7. Digestion and Malabsorption

Pancreatic elastase-1

Pancreatic elastase-1 is a stool marker used as a surrogate measure of exocrine pancreatic digestive capacity. The pancreas produces enzymes needed to digest proteins, carbohydrates and fats. Low pancreatic elastase can be associated with exocrine pancreatic insufficiency or reduced pancreatic enzyme output and may accompany greasy stools, bloating, diarrhea, weight loss or nutrient deficiencies. Markedly abnormal results deserve medical follow-up.

Fat digestion and absorption

The test may include markers related to fecal fat, triglycerides or phospholipids. Abnormal fat digestion can reflect problems involving pancreatic enzymes, bile production or flow, intestinal absorption, or small-intestinal disease. Persistent fat malabsorption can affect absorption of vitamins A, D, E and K.

Fecal pH

Stool pH partly reflects microbial fermentation and the production of organic acids in the colon. It is not diagnostic by itself but can add context to the intestinal fermentation environment.

8. Intestinal Barrier-Related Markers and FIT

Fecal zonulin

Zonulin is frequently discussed in relation to intestinal tight-junction regulation and intestinal permeability. The underlying biology of intestinal permeability is real; however, commercial zonulin assays deserve cautious interpretation because assay specificity and exactly what some tests detect remain debated. A result should not be presented as definitive proof of “leaky gut.”

Fecal immunochemical test (FIT)
FIT detects human blood in stool. Gastrointestinal bleeding can arise from many causes, including hemorrhoids, polyps, inflammation, ulcers and colorectal cancer. A positive FIT should not be managed solely with supplements or lifestyle strategies; it warrants appropriate medical evaluation.

9. Short-Chain Fatty Acids (SCFAs)

Short-chain fatty acids are microbial metabolites produced largely when intestinal bacteria ferment dietary fibers and other fermentable substrates. Gut Zoomer reporting may include acetate, butyrate, propionate, valerate and total SCFAs.

Butyrate: An important fuel source for colon cells and a participant in epithelial barrier support, immune regulation, inflammatory signaling and gene regulation.

Acetate: The most abundant SCFA and an important participant in peripheral energy metabolism and microbial cross-feeding.

Propionate: Participates in hepatic metabolism, glucose regulation and signaling pathways related to satiety and energy balance.

Valerate: A less abundant SCFA that can contribute additional information about fermentation patterns.

SCFAs are especially valuable conceptually because they move interpretation beyond “which microbes are present?” toward “what is the microbial community producing?” Two people with similar organism lists may have very different metabolic outputs.

10. Bile Acids and Beta-Glucuronidase

Bile acids
The panel may measure primary and secondary bile acids such as cholic acid, chenodeoxycholic acid, deoxycholic acid and lithocholic acid, along with selected ratios. The liver produces primary bile acids, while intestinal microbes transform them into secondary bile acids. Bile acids support fat digestion and also act as signaling molecules affecting glucose metabolism, cholesterol metabolism, intestinal motility, microbial ecology and metabolic regulation.

Beta-glucuronidase

Beta-glucuronidase is an enzyme that can be produced by intestinal microorganisms. The liver often uses glucuronidation to attach glucuronic acid to hormones, medications, environmental compounds and metabolic waste to support elimination. Intestinal beta-glucuronidase can remove this group, potentially allowing some compounds to be reabsorbed through enterohepatic circulation.

This is why beta-glucuronidase is often discussed in relation to hormone metabolism and toxin recirculation. However, a high value does not independently diagnose “estrogen dominance” or impaired detoxification.

11. Gut Antibody Markers

Gut Zoomer reporting may include selected antibody markers related to gastrointestinal tissues or antigens, including markers associated with Saccharomyces cerevisiae, tissue transglutaminase, gliadin, gliadin peptides and actin. These can add information about immune reactivity but should not be interpreted in isolation.

Clinical caution: Celiac disease, inflammatory bowel disease and other immune-mediated gastrointestinal conditions have established diagnostic pathways. Specialty antibody findings can support clinical reasoning but do not replace guideline-based diagnosis.

12. Gut-Brain and Neurotransmitter-Related Markers

Newer versions of the Gut Zoomer include a substantial gut-brain component with selected excitatory and inhibitory neurotransmitters, neuroactive metabolites, precursors and ratios. These are intended to provide information about peripheral and gut-related neurochemical pathways.

The gastrointestinal tract and microbiome can influence tryptophan metabolism, serotonin-related pathways, GABA pathways, catecholamine metabolism, inflammatory signaling and vagal signaling. However, stool or urine neurotransmitter results do not directly measure neurotransmitter concentration or activity inside the brain.

Best educational wording: These markers reflect peripheral and gut-related neurochemical metabolism. They should not be used as direct measurements of brain neurotransmitter levels or as stand-alone psychiatric or neurologic diagnoses.

13. Pattern and Risk Categories

Gut Zoomer reports may aggregate microbial or metabolic abnormalities into broader association categories involving intestinal permeability, intestinal gas, SIBO-associated patterns, IBS-associated patterns, inflammatory bowel disease-associated patterns, autoimmune health, metabolic health, liver health, nutrition, cardiovascular health, neurologic health, probiotic health or keystone health.

These are best understood as association or pattern scores - not diagnoses. For example, a high IBD-associated score does not diagnose Crohn's disease or ulcerative colitis. Likewise, a SIBO-associated microbiome pattern does not replace a validated clinical evaluation or breath-testing strategy when SIBO is suspected.

14. Where the Gut Zoomer Can Be Most Useful

The greatest value of a comprehensive panel is often pattern recognition. Instead of reducing the report to one abnormal organism or one "red" marker, the practitioner can look for linked patterns across the microbiome, digestion, inflammation, mucosal immunity and microbial metabolism.

For example, a report might show low microbial diversity, depletion of butyrate-producing organisms, low butyrate, abnormal secretory IgA, elevated beta-glucuronidase, low pancreatic elastase and elevated intestinal inflammatory markers. That tells a very different story than simply saying "dysbiosis." It suggests that microbial balance, digestive capacity, mucosal immunity, inflammation and microbial metabolism may all need to be considered together.

A seven-question interpretation framework

1. Who is living there? Commensals, keystone organisms, abundance, diversity and dysbiosis.

2. Is anything potentially harmful present? Pathogenic bacteria, parasites, fungi, viruses and resistance genes.

3. Is the gut inflamed? Calprotectin, lactoferrin, S100A12, MMP-9 and related markers.

4. Is digestion working? Pancreatic elastase, fecal fats, pH and other digestive markers.

5. Is mucosal immunity functioning appropriately? Secretory IgA, defensins, antibodies and barrier-related markers.

6. What are the microbes producing? SCFAs, bile acids, beta-glucuronidase and other metabolites.

7. How might the gut interact with the rest of the body? Immune, metabolic and gut-brain signaling patterns.

15. What the Gut Zoomer Does Not Diagnose

The Gut Zoomer should not independently diagnose the following conditions:

- Crohn's disease
- Ulcerative colitis
- Celiac disease
- Irritable bowel syndrome (IBS)
- Small intestinal bacterial overgrowth (SIBO)
- Autoimmune disease
- Pancreatic disease
- Colorectal cancer
- Psychiatric conditions
- Neurologic disease
- "Estrogen dominance"

Instead, the test may identify biomarkers or patterns that justify additional investigation, conventional testing, referral, or closer clinical follow-up.

16. Patient-Friendly Explanation

"TheGut Zoomer does much more than look for 'bad bacteria.' It evaluates the gastrointestinal ecosystem - which organisms are living in the gut, how diverse the microbiome is, whether important beneficial organisms are depleted, whether selected pathogens are present, how well digestion appears to be working, whether there are signs of intestinal inflammation or immune activity, and what metabolic compounds the gut bacteria are producing.

The goal is not to find one abnormal number. The goal is to understand patterns across digestion, the microbiome, mucosal immunity, inflammation, metabolism and gut-brain signaling. Those patterns should then be interpreted alongside symptoms, diet, medical history, medications and conventional laboratory findings."

17. Sources and Further Reading

Primary manufacturer resources referenced for this educational overview:

- Vibrant Wellness - Tests overview: https://vibrant-wellness.com/tests
- Vibrant Wellness - Gut Zoomer: https://vibrant-wellness.com/tests/gut-zoomer
- Vibrant Wellness - Gut Zoomer sample report: https://vibrant-wellness.com/hubfs/Tests/Gut-Zoomer/Gut-Zoomer-Sample-Report-Full-Report.pdf
- Vibrant Wellness - Gut Zoomer complete markers list: https://vibrant-wellness.com/hubfs/Tests/Gut-Zoomer/Gut-Zoomer-Complete-Markers-List.pdf Vibrant
- Wellness - Gut Zoomer key clinical messages: https://vibrant-wellness.com/hubfs/Tests/Gut-Zoomer/Gut-Zoomer-Key-Clinical-Messages.pdf

Note: Test menus, marker counts, methodologies and reporting conventions can change. Always verify the current Vibrant Wellness test description and sample report before making clinical or business decisions based on a specific panel configuration.

Educational use only

This guide explains laboratory concepts and potential interpretation frameworks. It does not diagnose disease, replace medical evaluation, or establish treatment. Abnormal or concerning results should be interpreted in clinical context by an appropriately qualified healthcare professional.