Supporting Scientific References

Organized by the categories measured in a comprehensive metabolic blood panel

Metabolic Environment

Every cell in the body is surrounded by conditions it did not choose, such as the level of insulin circulating in the blood, the degree of chronic inflammation, and how much oxygen reaches the tissue. In cancer, these conditions fall into two nested layers. Some reflect the tumor *microenvironment*, the immediate pocket of tissue surrounding the cancer. Others reflect the tumor *macroenvironment*, the whole-body metabolic state that this pocket sits within and that continually shapes it. Together they form the *metabolic environment* (also known as the "terrain") and it either feeds the cancer or helps starve it. A growing body of evidence indicates that this metabolic environment can drive tumor initiation, growth, spread, treatment resistance, and disease recurrence. This reframes a central question in oncology. Rather than solely asking what is happening inside the cancer cell, it asks what the body is supplying to that cell, and whether that environment can be changed.

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