Information on Tumor Marker Testing

Tumor marker tests have proven effective in cancer patients. They are used to monitor treatment progress and are covered by insurance for this purpose.

When used for screening in healthy individuals, however, these markers may yield false-positive results because non-cancerous conditions can also elevate their levels. In health screenings, the likelihood of a positive result varies by marker but can be as high as about 8%, and is typically around 2–3%.

The positive predictive value—the probability that cancer is actually present when the test result is positive—is approximately 8% for PSA (used for prostate cancer), 2–4% for commonly used markers such as CEA and CA19-9, and less than 2% for other markers. Nonetheless, these tests are considered meaningful as they offer a chance—however small—to detect cancer.

A positive tumor marker result alone does not definitively indicate cancer. It is critical to interpret the result in conjunction with imaging studies. When no abnormalities are found on imaging, it is essential to repeat the tumor marker test after an appropriate interval to monitor for any changes over time. If other tests show no abnormalities and only the tumor marker is slightly elevated—and remains stable or decreases over time—continued observation is typically sufficient, and excessive concern is generally considered unnecessary.

The negative predictive value—the probability that a negative result truly indicates the absence of cancer—is over 99.5%. Therefore, if tumor marker tests and other examinations including imaging studies are negative, you can be highly reassured. Still, we recommend undergoing an annual health checkup.