### **Prognostic Assessment**

Changes in the number and types of CTCs in patients with advanced malignant tumors hold significant prognostic value at different stages of treatment. CTC detection, as a real-time blood test, can assist in assessing patient prognosis in clinical settings.

### Target Population

Patients with advanced solid malignant tumors

### Clinical Value

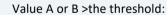
As an independent prognostic factor, it predicts and alerts on disease progression and survival time in patients.



Patients with advanced solid tumors

CTC testing 1-7 days before treatment initiation (Testing value A)

Or, CTC testing before any new treatment cycle initiation (Testing value B)



peers at the same stage.

Consider enhanced treatment or

preparation of a new treatment

plan based on standard/routine

treatment guidelines.

Value A or  $B \leq$  the threshold:

CTC-BI@PSY

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Indicate a worse prognosis with Indicate a better prognosis with the shorter PFS/OS, compared to the longer PFS/OS, compared to peers at the same stage.

> First-line or standard treatment protocols as referenced.

# **Dynamic Monitoring Recurrence/Metastasis**

CTC detection, assessing immediate presence of tumor cells in blood, can evaluate the risk of recurrence and metastasis post-radical surgery. Conducting dynamic, periodic monitoring through CTC counts alterations can effectively track the occurrence of recurrence and metastasis, guiding early clinical intervention for patient benefit.

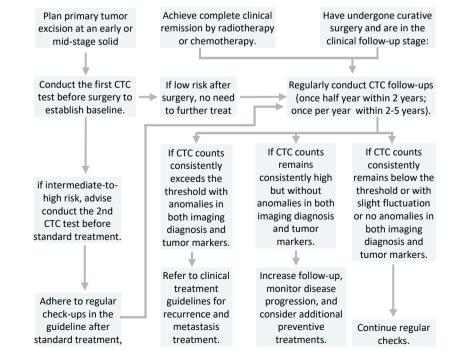
### **Target Population**

1. Preparing for primary tumor excision at an early or mid-stage. 2. Achieving complete clinical remission by radiotherapy or chemotherapy. 3. Have undergone curative surgery and are in the clinical follow-up stage.

### **Clinical Value**

There's a close association between tumor recurrence/metastasis and CTCs. CTC testing can identify tendencies of tumor recurrence and metastasis in real time, preceding routine imaging examinations.

# Testing Protocol



### **Efficacy monitoring**

The dynamic changes in CTCs reflect treatment responses, enabling continuous real-time monitoring during various stages of treatment, including neoadjuvant therapy, adjuvant therapy post-surgery, advancedstage chemo-radiation, targeted therapy, and immune-biological therapy. Not only does this real-time assessment swiftly judge treatment effectiveness but it also dynamically monitors drug resistance.

### Target Population

advanced solid tumors.

# Clinical Value

# **Testing Protocol**

1. One CTC test 1-7 days before radiotherapy: 2. One CTC test one week after the end of radiotherapy CTC levels below the threshold or lowered post-therapy. Judged by CR Follow-up observations Maintain existing therapy

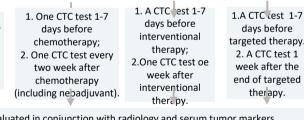
### **CTC-BIØPSY** Convinent · Efficient · Accurate

1. Patients undergoing or about to undergo radiotherapy, chemotherapy, interventional therapy, targeted therapy, or combination therapy for

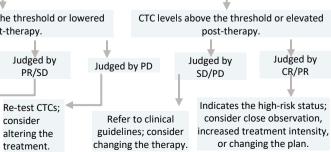
2. Patients requiring neoadiuvant chemotherapy before surgery.

Immediate evaluation of patient treatment responses facilitates personalized therapeutic strategies, enhancing survival rates.

A. Patients undergoing or about to undergo radiotherapy, chemotherapy, interventional therapy, targeted therapy, or combination therapy for advanced solid tumors. B. Patients requiring neoadjuvant chemotherapy before surgery.



CTC levels are evaluated in conjunction with radiology and serum tumor markers.



### **Auxiliary Diagnosis**

For patients without a definitive pathological diagnosis, CTCs, in conjunction with radiology and serology, assist in determining the malignancy of lesions. Simultaneously, CTCs comprehensively reflect primary and metastatic lesion information, compensating for shortcomings in traditional TNM staging, indicating early micro-metastasis risks, guiding clinical adjustments, and formulating more rational individualized diagnostic and treatment plans.

### Target Population

1. Patients with imaging-detected anomalies, uncertain malignancy, and the inability to undergo biopsy due to subjective or objective reasons.

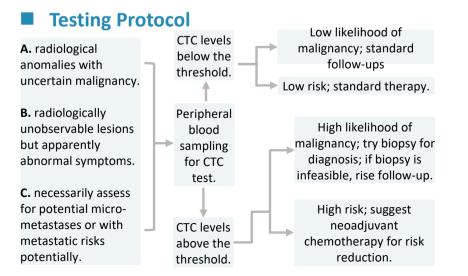
2. Patients with unobservable or untraceable lesions via imaging but significant clinical symptoms (e.g., abnormal tumor markers, pleural or peritoneal effusion), suspected tumor patients (including relapse patients). 3. Patients requiring assessment for potential micro-metastases or having

potential metastatic risks pre-surgery.

4. Patients requiring confirmation of tumor cells entering the bloodstream. supporting treatment evidence.

### Clinical Value

CTC detection, an independent indicator beyond traditional TNM staging, aids in identifying hidden early tumor existence, assisting in clinical staging, and facilitating precise diagnostic and staging decisions for tumor patients.



Research indicates that at any stage of tumorigenesis, chromosomal abnormal cells existing in the form of early cancerous cells may shed into the bloodstream. If abnormal cells enter the blood before the formation of the primary lesion (*i.e.*, the pre-cancerous stage), conducting CTC detection can facilitate earlier diagnosis than imaging results, making early diagnosis and treatment of tumors more achievable.

### Target Population

Applicable population: Individuals with a family history of tumors. carrying susceptible genes for tumors, or engaging in unhealthy habits (such as smoking or excessive drinking) are at high risk.

1. Those with mutations in anti-cancer genes or proto-oncogenes like APC, BRCA1/2, KRAS, PTEN, P53, etc.

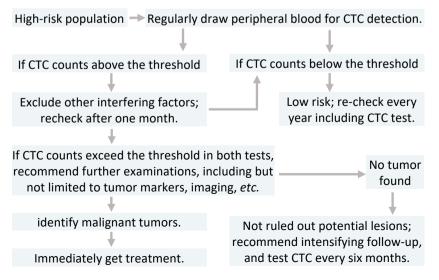
2.Patients with long-term severe infections of HBV, HPV, EBV.

3. Individuals with tumor-related diseases like chronic obstructive pulmonary disease, colorectal polyps, long-term helicobacter pylori infection, etc.

### **Clinical Value**

CTC detection aids in discovering concealed early tumors, truly emphasizing prevention as the priority, enabling early diagnosis, and increasing survival rates.

# Testing Protocol







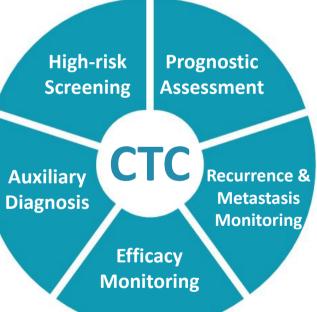


### CTC-BIØPSY Convenient · Efficient · Accurate



**Circulating Tumor Cell Detection** —— The Real-time Tumor Monitoring ——

# **Clinical Reference Manual**



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