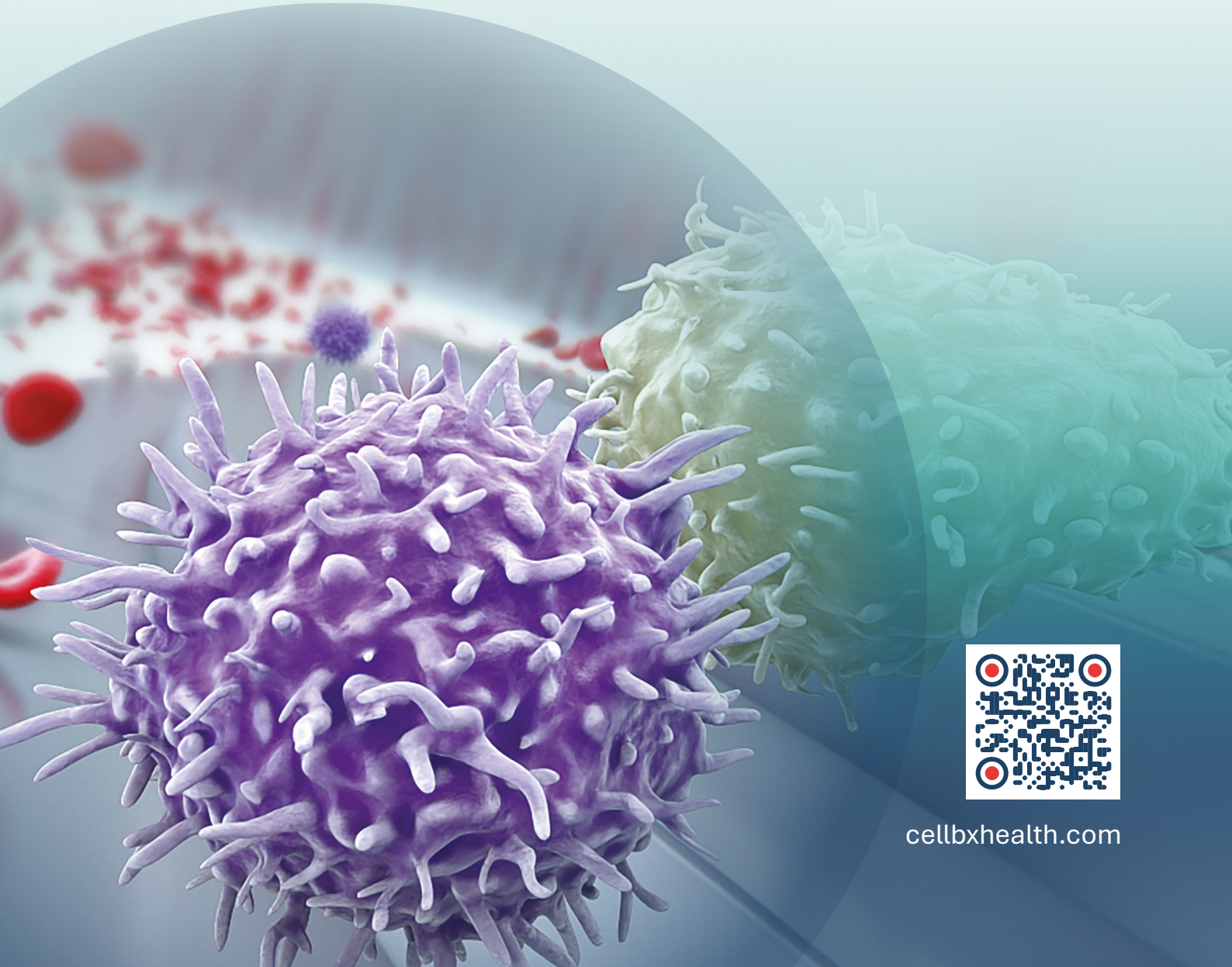
CellBx Health

Parsortix® Platform

ISOLATE | ANALYZE | PERSONALIZE



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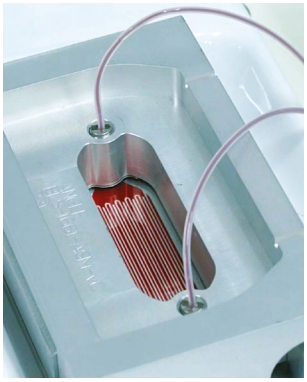
Powerful cancer insights from blood

Parsortix® platform for Circulating Tumor Cell (CTC) enrichment



- Semi-automated, microfluidic cell enrichment platform
- Cell size and deformability-based cell capture
- Recover intact cells enabling multi-omic analysis using a wide range of molecular and imaging techniques
- Enables real-time biomarker assessment with the potential to support drug discovery and development, therapy selection and disease monitoring

CLICK TO WATCH...

Animation showing operation of the Parsortix cassette

The Parsortix platform uses patented microfluidic technology in the form of a single use cassette to enrich and recover viable CTCs and CTC clusters from blood, based on their less deformable nature and larger size.

This enables the isolation of a broad range of phenotypes including more invasive and treatment resistant mesenchymal cells and those undergoing epithelial-to-mesenchymal transition (EMT).

CLICK TO WATCH...

Click to watch patient blood flowing in the Parsortix cassette

The Parsortix workflow

1 **BLOOD COLLECTION:**
Collection of blood sample into vacutainer.

2 **AUTOMATED BLOOD PROCESSING:**
Prime the cassette. Insert your sample and press start – no preprocessing required. Blood is pumped through the cassette with minimal user input.

3 **CELL CAPTURE:**
Proprietary single use cassette captures CTCs within the 6.5 µm critical gap.

4 **CELL IMAGING OR RECOVERY:**
Examine cells in the cassette or reverse the flow to recover the cells in buffer for multiple downstream analysis techniques.

Cells recovered from the Parsortix platform are suitable for multi-omic analysis and are compatible with numerous downstream analysis techniques

Proteomic

Downstream applications such as FISH and IF imaging enable the assessment of specific nucleic acid targets and protein expression.

Transcriptomic

As intact cells, Parsortix-enriched CTCs are suitable for molecular applications including RNA sequencing.

Genomic

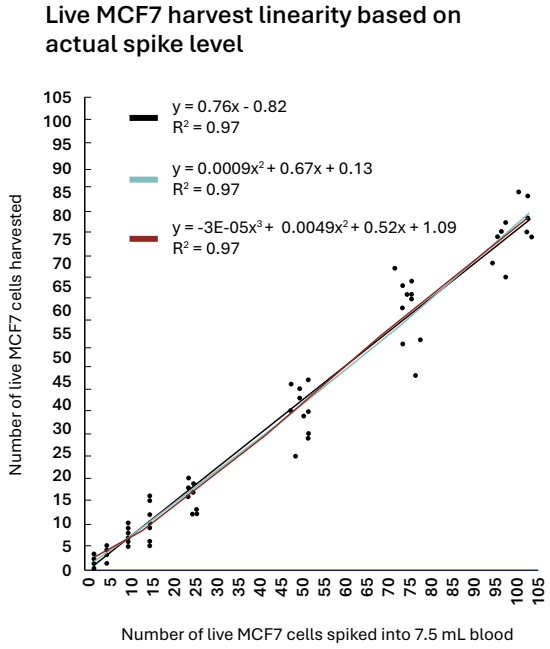
Parsortix-enriched CTCs are suitable for both targeted and whole-genome analyses, including PCR and NGS.

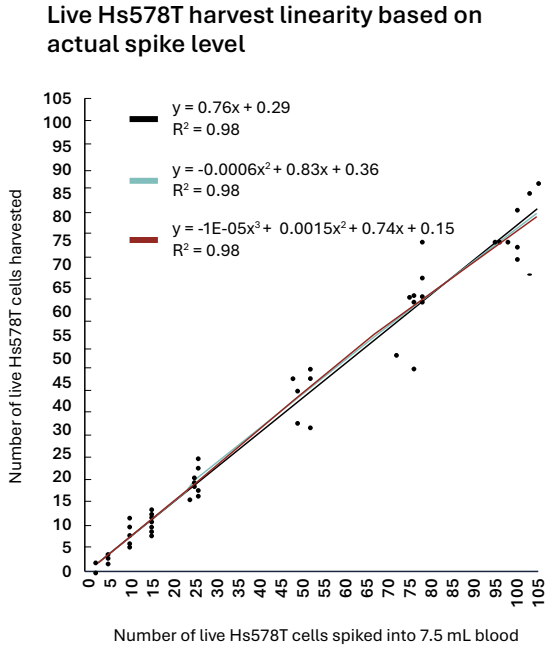
Functional

As viable cells, Parsortix-enriched CTCs can be cultured and used for preclinical studies e.g. xenografts.

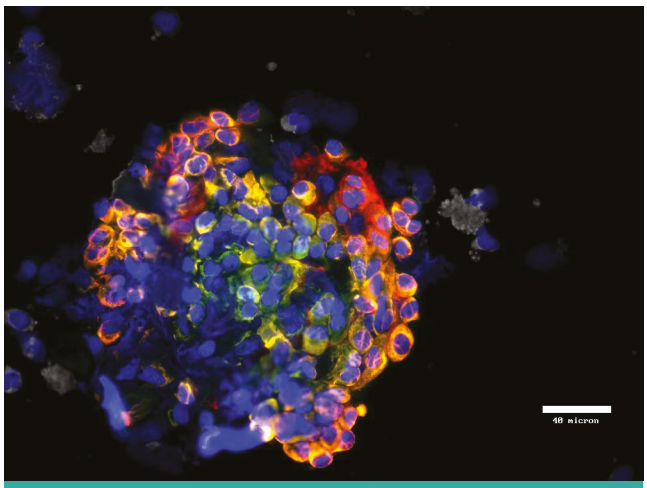
Efficient performance...

- Capture individual CTCs and CTC clusters of varying sizes, independent of cell phenotype *(Figures 1 and 2)*.
- High capture and recovery rates across multiple cancer types, with reliable cell enrichment from samples containing low cell numbers *(Figures 1 and 3)*.





▲ *Figure 1*. Efficient cell recovery of cell lines with different phenotypes. Strong linear correlation between recovery efficiency and low cell inputs between 2 and 100 cells per 7.5 mL blood.



▲ *Figure 2*. Breast cancer CTC cluster containing epithelial, mesenchymal and epithelial-to-mesenchymal transition (EMT) phenotypes. Nuclear (*blue*), epithelial (*green*), mesenchymal (*red*), EMT (*yellow/orange*), blood cell (*white*).

CANCER TYPE	CELL LINE	CAPTURE EFFICIENCY %	RELEASE EFFICIENCY %
BREAST	SKBR3	94	80
	MCF7	74	73
	Hs578T	96	80
	BT549	64	91
LUNG	A549	72	90
PROSTATE	DU145	66	91
OVARIAN	CaOV3	84	84

▲ *Figure 3*. Efficient cell capture and release for multiple cell lines.

...with widespread adoption

Over 120 peer reviewed journal articles from independent study centers around the globe

- Most published marker independent CTC enrichment platform
- Parsortix platform utilized by 49 independent study centers and institutes globally
- Published literature investigates 19 cancer types representing >65% of all solid tumors
- Parsortix-enriched CTCs are suitable for a variety of multi-omic analysis techniques

VARIETY OF DOWNSTREAM ANALYSIS TECHNIQUES

RT-qPCR
dPCR and ddPCR
RNA-seq
Immunofluorescence
Fluorescence in situ hybridization (FISH)
NGS/TGS
WGA, WES and WTA
Mass spectrometry
Cell culture and xenotransplantation

CLINICALLY RELEVANT BIOMARKERS INCLUDING

EGFR	TP53
ESR1	AR
BRAF	AR-V7
KRAS	PIK3CA
PD-L1	DLL3
HER2	PSMA

NUMBER OF PUBLICATIONS BY CANCER TYPE: TOP 9

Breast	43
Lung	32
Prostate	18
Melanoma	8
Ovarian	7
Pancreatic	7
Colorectal	6
Brain	6
Head and Neck	6

Published use cases for Parsortix-enriched CTCs

- Prognostic assessment[1,2]
- Biomarker assessment for personalized medicine[3]
- Minimally invasive, repeatable biomarker assessment to address tumor evolution[4]
- Combined assessment of ctDNA and CTCs for complementary biomarker assessment[5]
- Drug discovery and development[6]
- Unravelling the biology of cancer and the metastatic cascade[7]

Publications as of 31 Dec 2025

Independent expert consensus highlights the Parsortix platform as a next-generation CTC technology for future clinical applications[8]

To discuss how we can support you, contact us at sales@cellbxhealth.com or visit cellbxhealth.com

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