

SMART CATCH

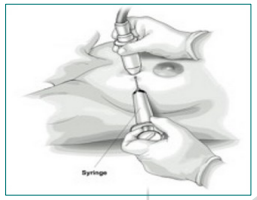
INVESTIR L'AVENIR

BEST DIGITAL HEALTH SOLUTION + PRIX GALIEN USA NOMINEE 2024

The First and Only Gateway to Personalized Multi-Omics Medicine

Powered by Micro/Nanotechnologies

The advent of Precision Medicine is happening now



1990

- ***Trial and error treatments***
- ***Disease detected late.***

Non-invasive, frequent sampling of circulating tumor biomarkers

.

2020

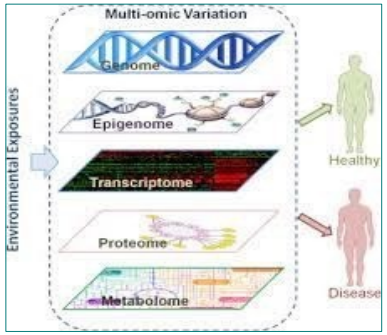


About 17,900 Publications on CTCs and Liquid Biopsy

2030

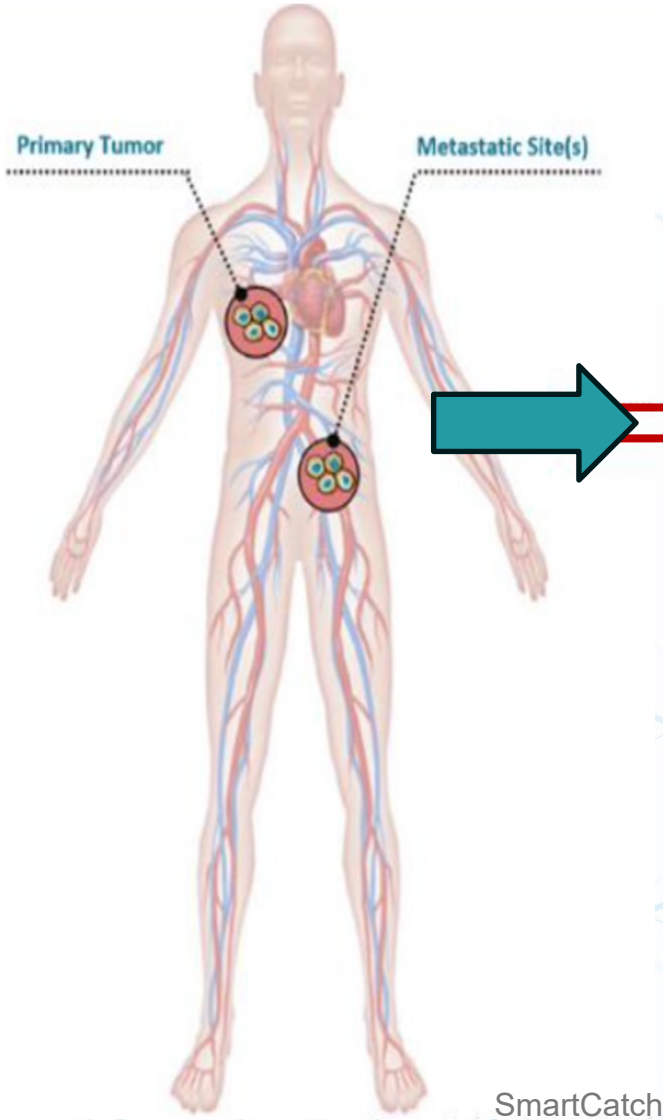
Multi-omics Precision medicine

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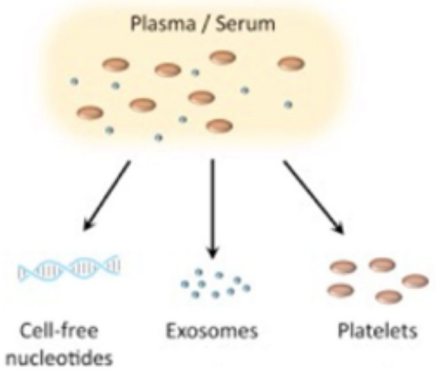
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The missing link in the liquid biopsy workflow is the isolation of circulating tumor biomarkers in higher numbers and with higher quality

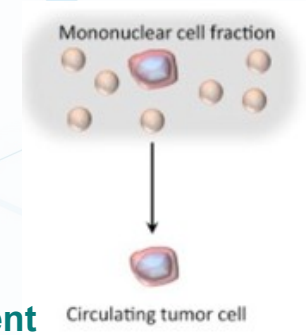


Ideally all biomarkers combined

ctDNA and exosomes: a fraction of the genome

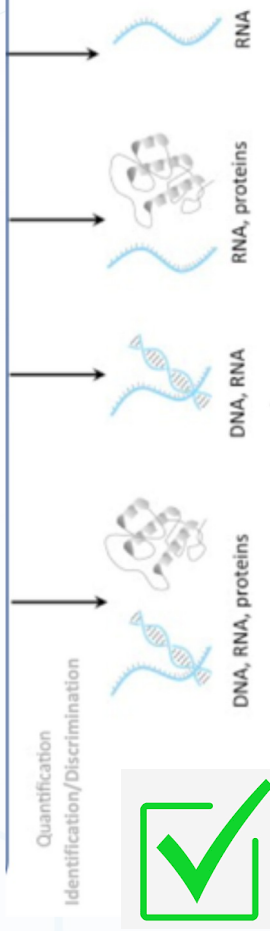


Circulating Tumor Cells (CTCs) : full genome, the most aggressive fraction of cancer, highly evolving, resistant to treatment, responsible for metastasis



Enrichment

As a source of genomic and proteomic information



Clinical Applications

Screening - Diagnosis - Prognosis

Targeted therapies

improved cancer staging
early detection of relapse
real-time monitoring of therapeutic efficacy
detection of therapeutic targets
Prediction of response/resistance to treatments
early cancer detection

NGS, single cell, flow cytometry, IA

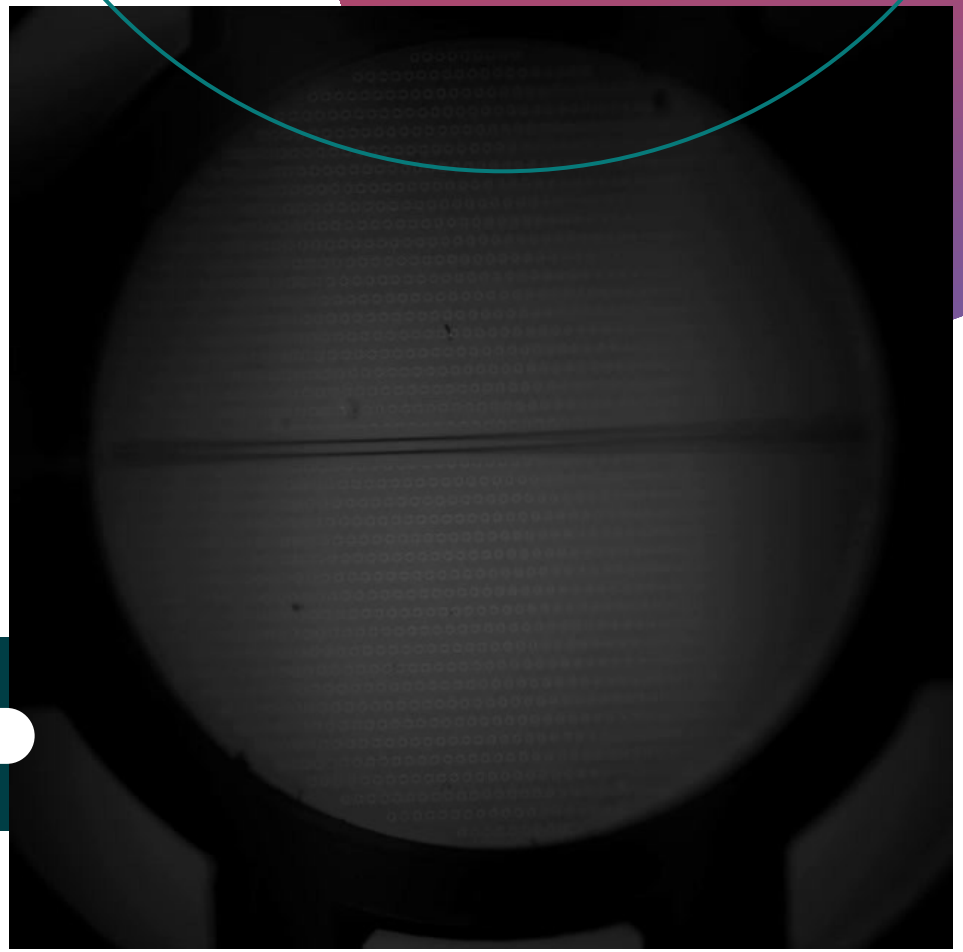
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HOW

Our breakthrough CTC microfiltration innovation

We have developed a 3D microengineered capture device that enables a one-step isolation of CTCs based on their physical traits from high volumes keeping the biofluid unaltered for a 2nd analysis.”

- Superior number
- Superior viability
- Exhaustivity
- Cost efficiency



PATENTED

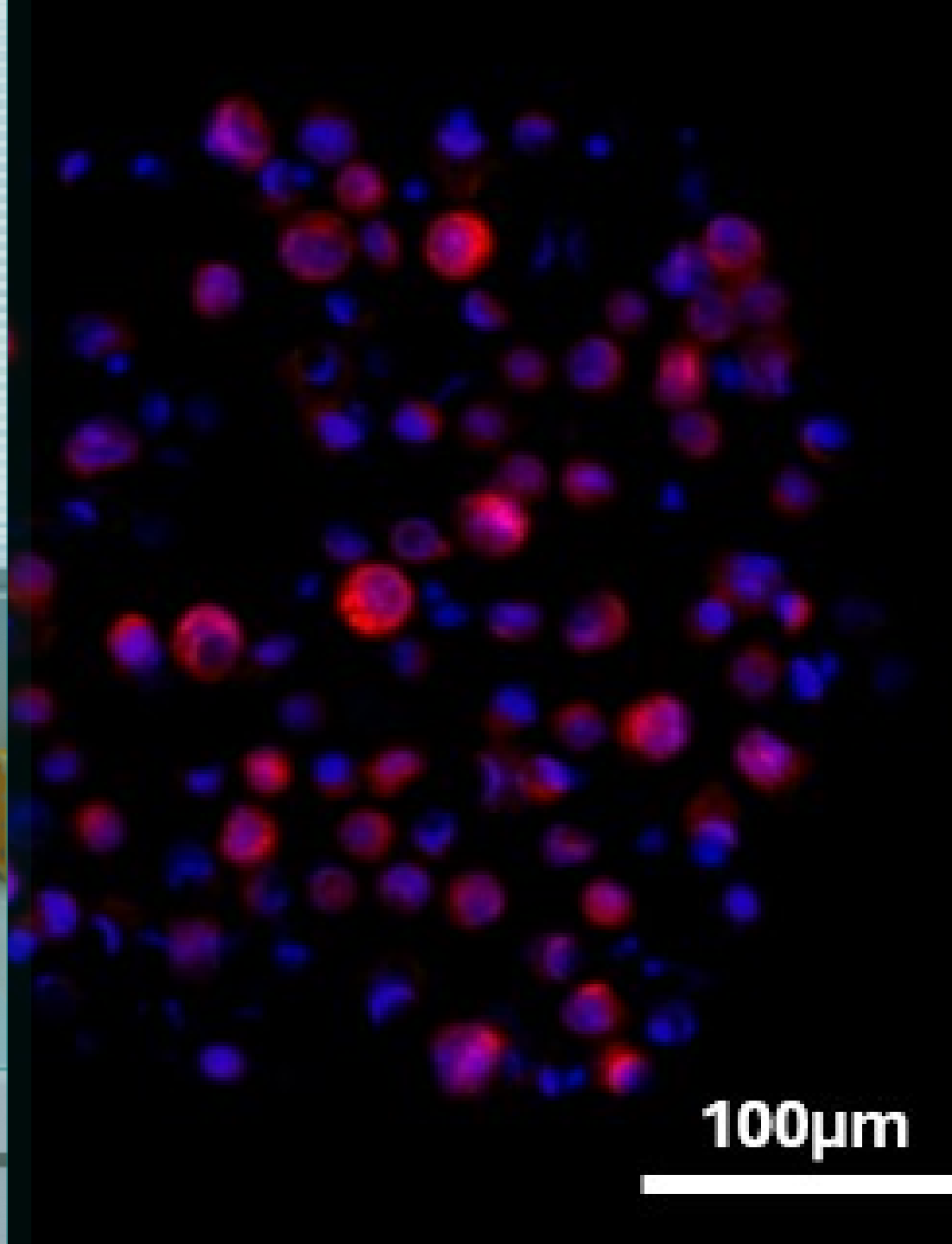
1 International Patent (delivered)

2 Exclusive Licenses

2 Patents in Preparation

X-Tracker®

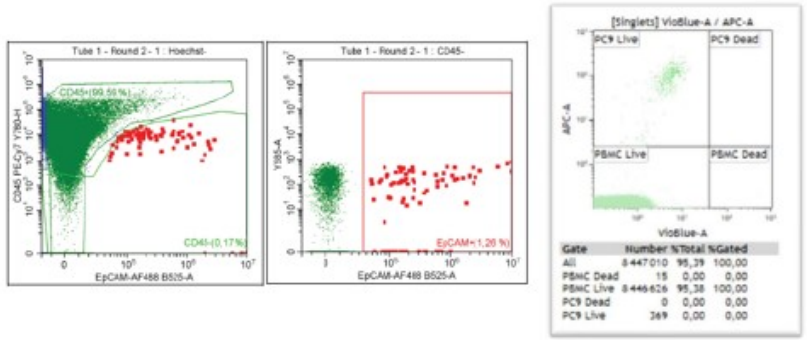

SMART CATCH
ELUTION BUFFER
ETHANOL
FIXATIVE
BIOFLUID
EMPTY LOAD
ELUATE
BUFFER
DI-WATER
DETERSENT
BLEACH


100µm

X-Tracker© solution fully compatible with all downstream assays

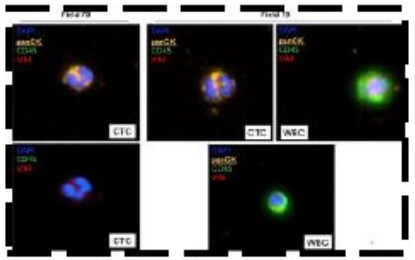
High-throughput single cell PROTEOMICS

Flow cytometry
Expression : PanCK, EpCAM, PD-L1, PSMA HER2



Enumeration and morphology





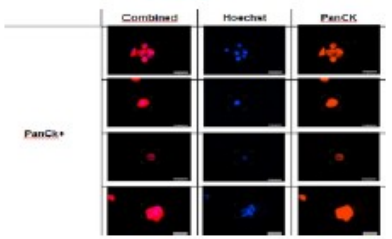
Microscopy characterization + IA classification



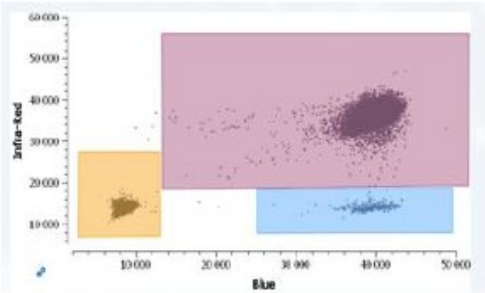
Diagnostic and theranostic analysis

Need for standardized ICC, cellular staining

Urine



GENOMICS / TRANSCRIPTOMICS



- NGS (WS, Exome) / FISH / dPCR

(Ex: Lung : EFGR, KRAS, BRAF, ALK CRC ; Breast : PIK3CA)

- RNA Sequencing • SC-RNA sequencing • mRNA Hybridation

Access to more than one Biomarker CTC + (cfDNA/exosomes) from the same sample

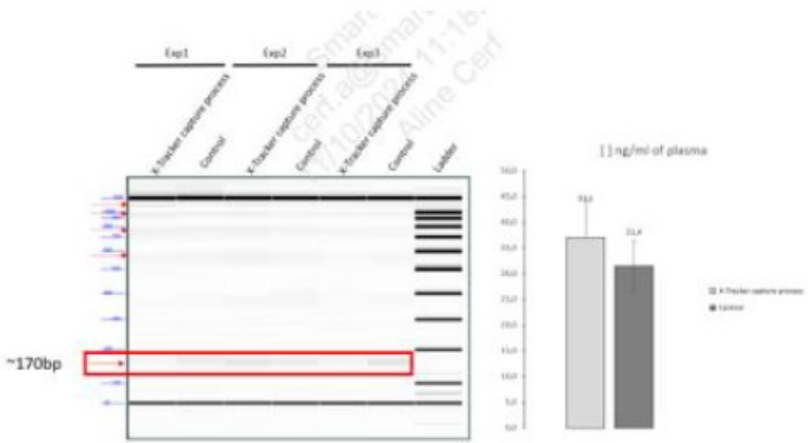
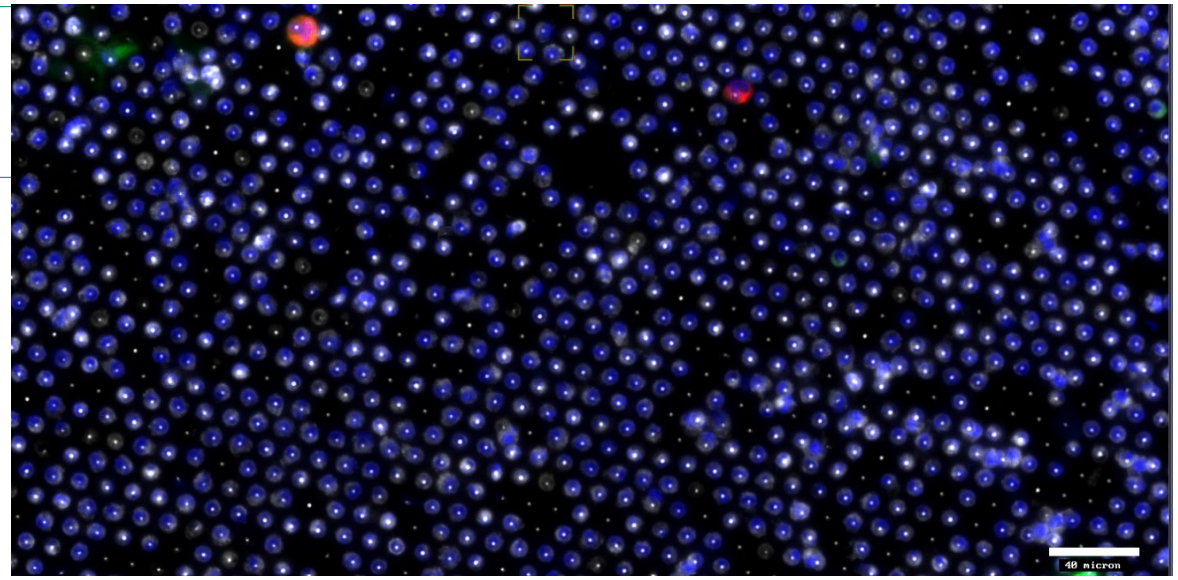


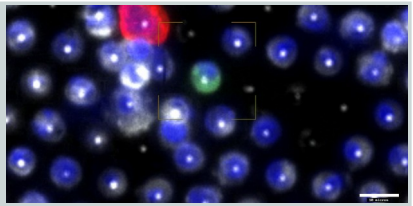
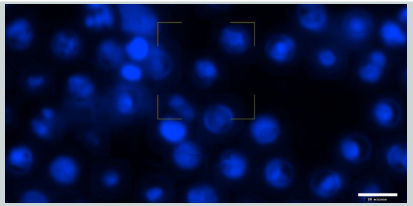
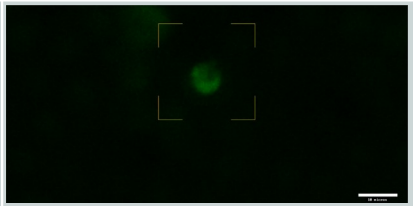
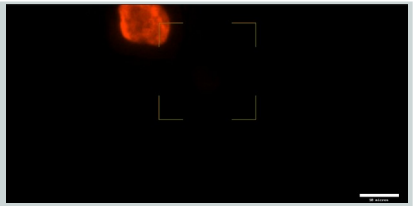
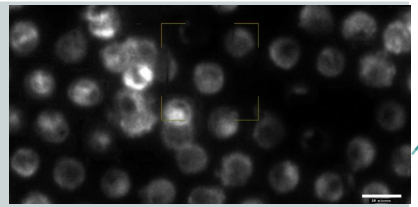
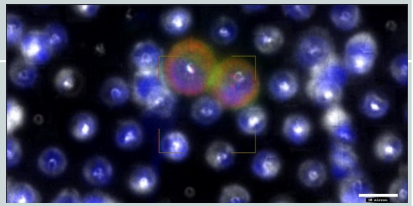
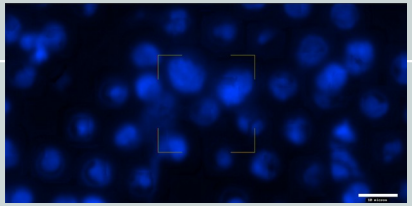
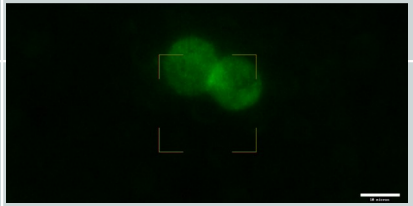
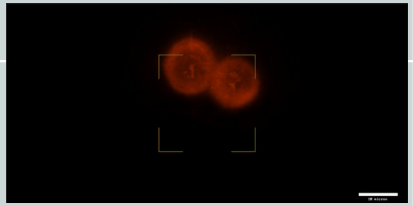
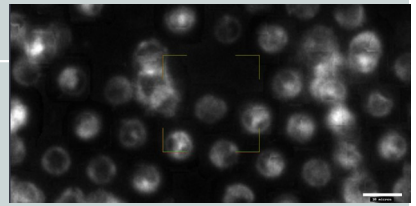
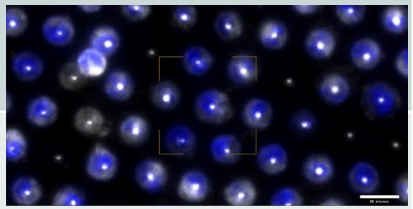
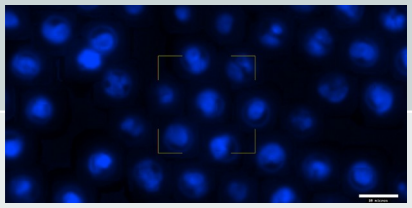
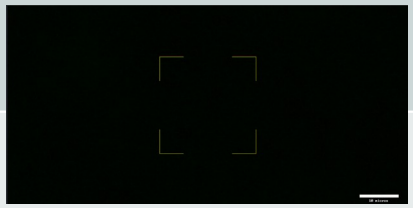
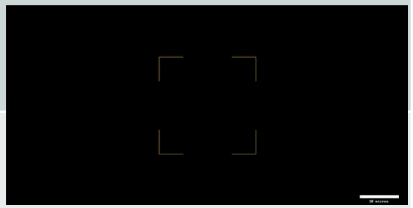
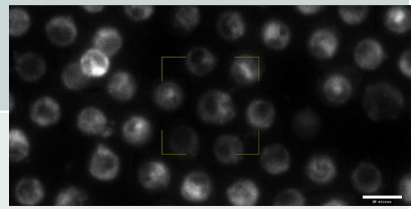
Figure 1. (a) Quantitative analysis of DNA using Fragments Analysis Agilent. In red (~170 bp) the typical size of cfDNA. (b) Quantitative analysis of cfDNA concentration using Qubit.

SmartCatch Confidential

IF results

- Easy to implement IF protocols
- Compatibility with high-resolution imaging
- One cell per pore
- Automatized characterization



x20		Combined BF	DAPI	Epcam	PanCk	CD45
Positive control Glass slide	PBMC False + Epcam					
	PC3					
	PBMC					

Standardized Workflow for the Isolation and Characterization of Circulating Tumor Cells (CTCs) from whole blood

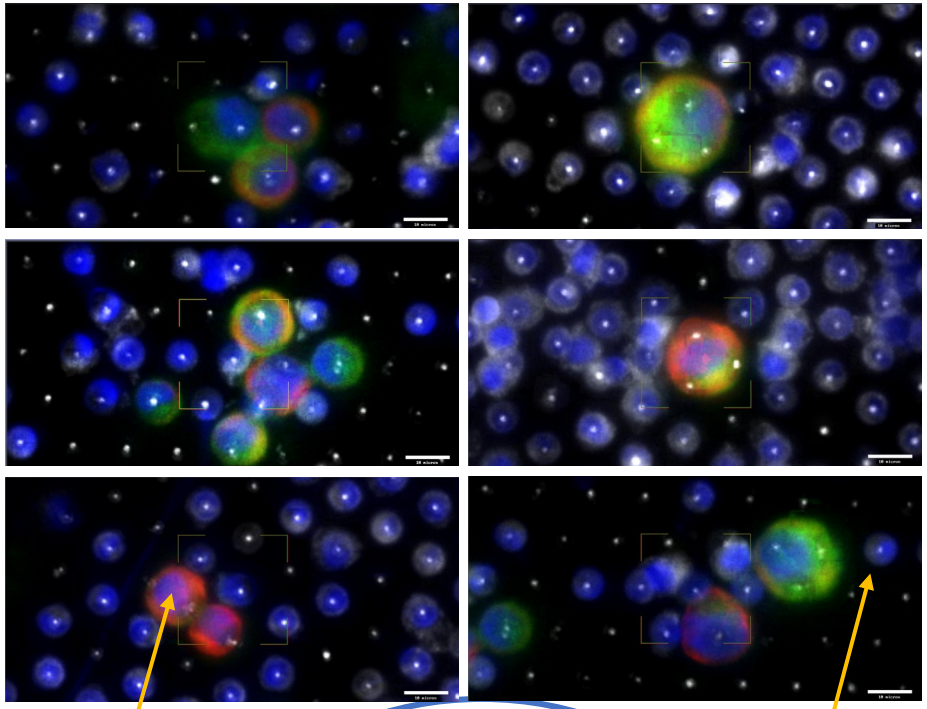
X-TRACKER®

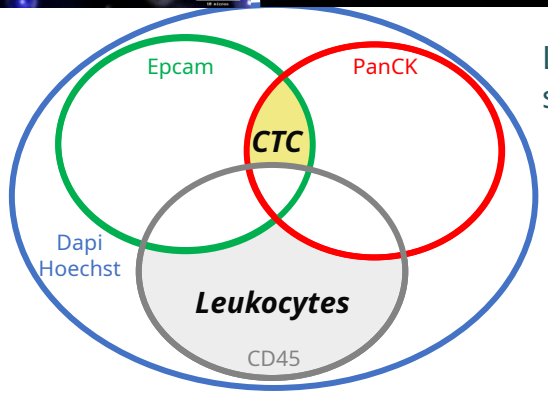
Real-time capture of viable tumor cells



- **Fully automatized label-free CTC isolation process**
  ~15min and up to 45mL of whole blood
- **Cell characterization directly on the filter or in suspension**
- **Compatible with analytical techniques**
  ddPCR, immunostaining…
- **Compatible with AI suported imaging technologies**
- **Possibility to recover filtrate for additional tumor biomarkers isolation**

PC3 cells captured from whole blood using X-Tracker. Imaging and analysis performed with Cytoview.





CytoView™

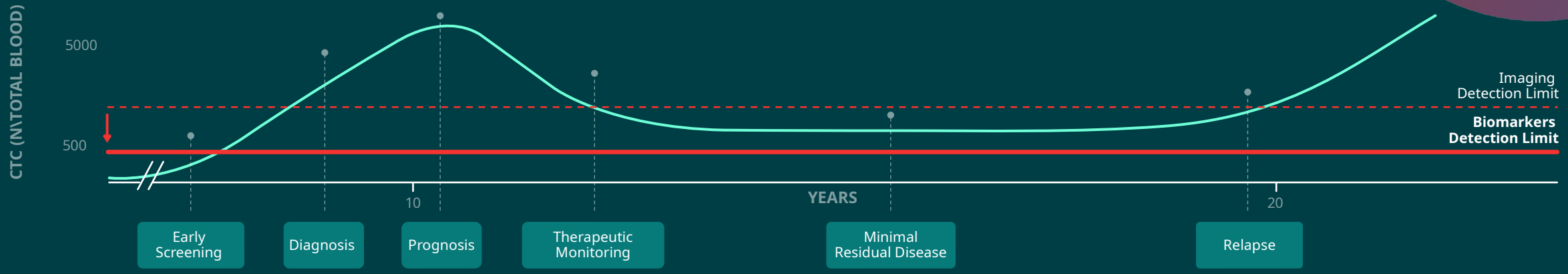
All-in-One Imaging System with Artificial Intelligence Solution



- **Fully unattended operation of 8 slides per scan batch**
- **Fast scanning of multi-probe panels set to one slide**
- **Quick detection of rare cells according to fluorescent signal pattern**

Seamless workflow for standardized characterization of rare cells

Cancer management WITH SmartCatch



We lower the detection limit with higher sensitivity and precision in the access to circulating biomarkers

The one-step label-free isolation and high quality preservation of CTCs captured with X-TRACKER open avenues for the future of cancer research.
Pr Pierre Saintigny, Centre Léon Bérard CRCL, Cancer Center France

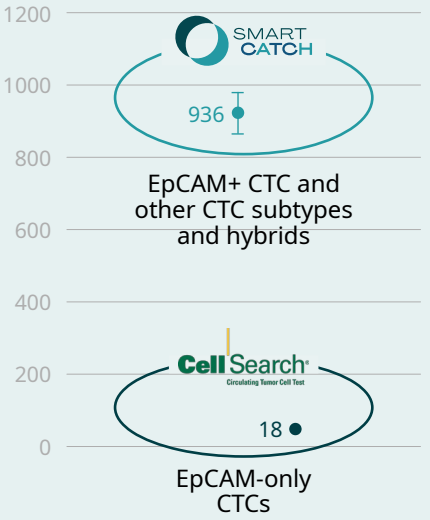
PATIENT
Metastatic prostate cancer

Superior number of CTCs

A more exhaustive population of CTCs than competitors

Benefit for the clinician:

- Prediction of response up to 6 months earlier
- More accurate and comprehensive picture of the disease explaining its evolution and resistance to treatment mechanisms
- Faster and more confident clinical and treatment decision-making




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