

Cancer Therapy Based on Removing Circulating Tumor Cells From Whole Blood

September 2015

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This presentation highlights basic information about Viatar CTC Solutions Inc. Because it is a summary, it does not contain all of the information that should be considered before investing in its securities.

Viatar is a medtech company focused on the treatment of patients with metastatic cancer

Lead product, the *Viatar™ Therapeutic Oncopheresis System*, removes circulating tumor cells (CTCs) from whole blood much like dialysis removes toxins

- A periodic therapy to improve overall survival for a wide range of solid tumor types such as lung, breast, colon, prostate and gastric cancers
- Addressable market is ~10 million cancer patients with Stage IV or metastatic disease

Over the next 5 years genetic testing will become the standard of care for all cancer patients. Viatar's liquid biopsy products collect CTCs from a small quantity of blood for use in downstream molecular analysis

- Provides a significantly greater quantity and purity of CTCs for personalized medicine by genetic testing companies, researchers and medical oncologists
- Viatar already derives revenue from this segment

Timeline to Commercialization

1H 2016

- Complete engineering, manufacturing & animal test
- Apply for CE Mark regulatory approval



2H 2016

- Conduct pilot human clinical trial
- Obtain CE Mark regulatory approval
- Begin commercialization in Europe & Canada using direct sales force and distributors



2017

- Begin FDA regulatory process: PMA
- Conduct pivotal clinical studies

Investment Highlights

Therapeutic oncopheresis system addresses a large and under-served market: metastatic cancer

Compelling animal data shows that removing CTCs slows down metastasis

Liquid biopsy products address the hottest diagnostic market: personalized medicine

Near term commercialization opportunity for these products in Europe and Canada with CE Mark in late-2016

Printer cartridge business model provides long-term, high margin revenue

Seasoned management team with impressive record growing medical technology companies

Management Team

Ilan Reich: Founder, Chairman and CEO

- Founded Viatar in 2008; over 15 years of CEO experience in medical devices and life sciences
- 2001-2007: CEO of SpectruMedix; advisor to RainDance Technologies, Warburg Pincus, Gabelli Capital
- 1997-2001: Inamed Corporation (implants for plastic surgery, aesthetics and obesity which was later acquired by Allergan for \$3.5 billion)--roles included outside counsel, Director, President and Co-CEO
- Corporate and securities lawyer at Wachtell Lipton Rosen & Katz

Stephen Keaney: VP Research & Development

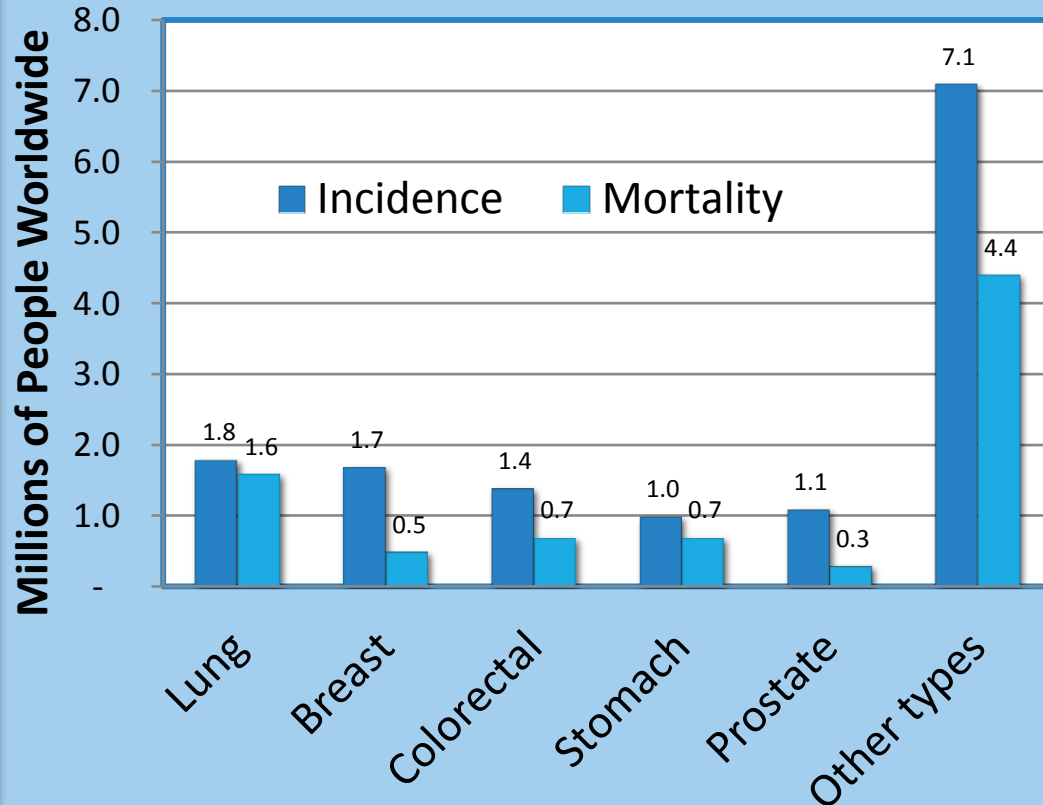
- Joined Viatar in 2012 with over 25 years engineering, product development and regulatory experience in bringing medical devices from the design stage to market at C.R. Bard, Boston Scientific, Volcano Corporation

Michael Patz: VP Clinical & Regulatory

- Joined Viatar in 2015 with over 20 years clinical trial and regulatory experience for medical devices at GI Dynamics, Conmed, Johnson & Johnson Lifescan

Cancer Demographics

Top 5 Cancers = 50% of Patients



14.1 million new cancer cases annually

Top 5 cancers account for 50% of patients

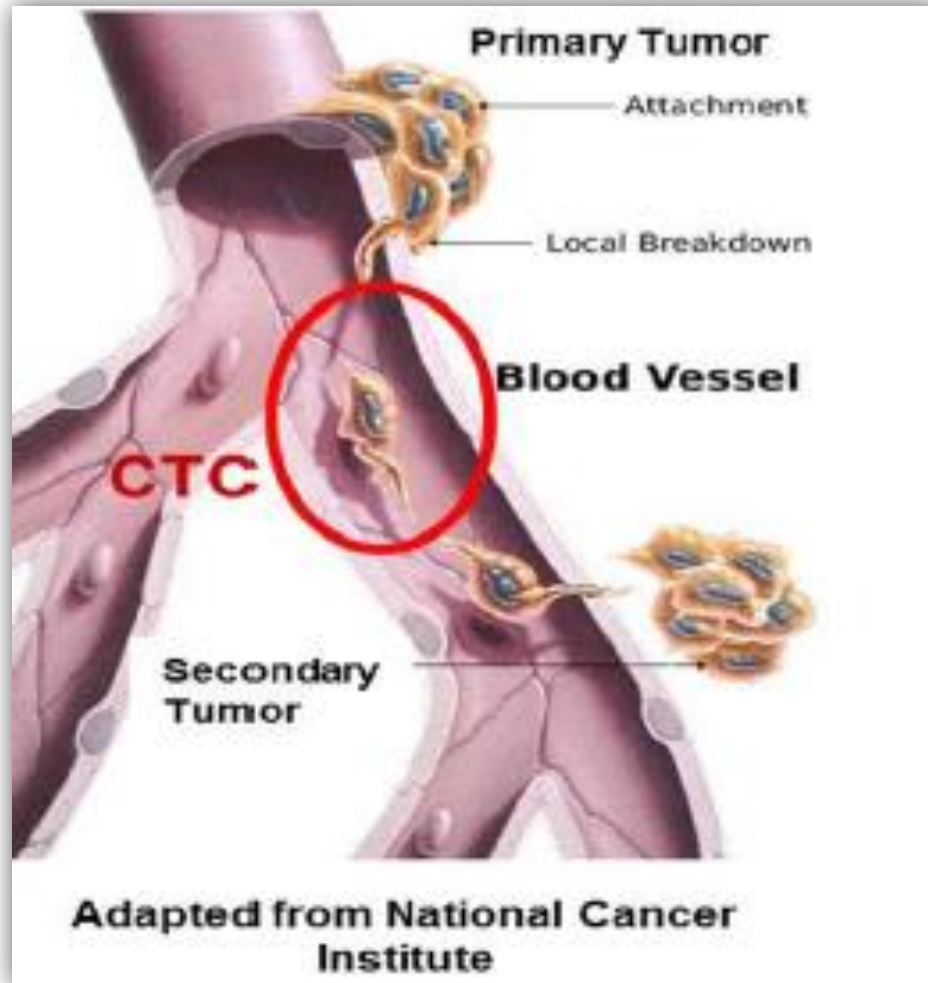
8.2 million cancer deaths annually

10 million patients annually have Stage IV metastatic disease

90% of cancer deaths are due to metastatic disease: *unchanged after decades of research*

http://globocan.iarc.fr/Pages/fact_sheets_cancer.aspx

CTCs Drive Metastasis



Millions of CTCs detach daily from a tumor and enter the bloodstream

CTCs contain DNA from the primary tumor

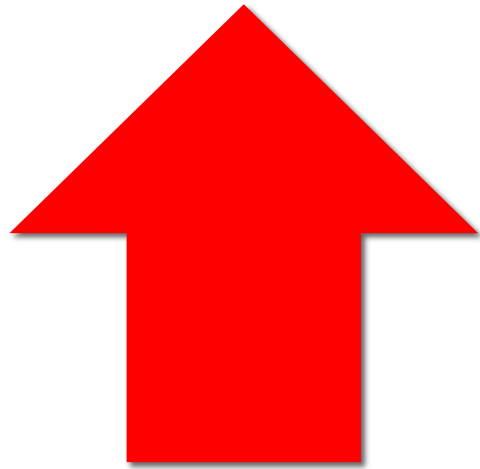
CTCs are responsible for starting the metastatic cascade at distant sites **and** accelerated growth at the primary tumor

CTCs are a predictive biomarker for overall survival

Comen, E., Norton, L. & Massague, J. Clinical implications of cancer self-seeding. *Nature Reviews Clinical Oncology* 8, 369-377 (2011)

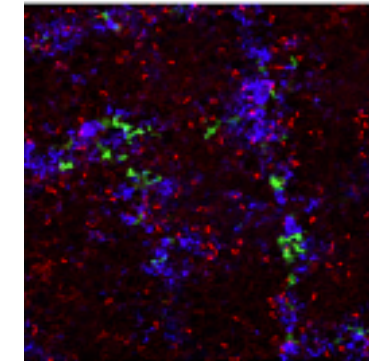
Animal Data:

Three Ingredients Necessary for Metastasis

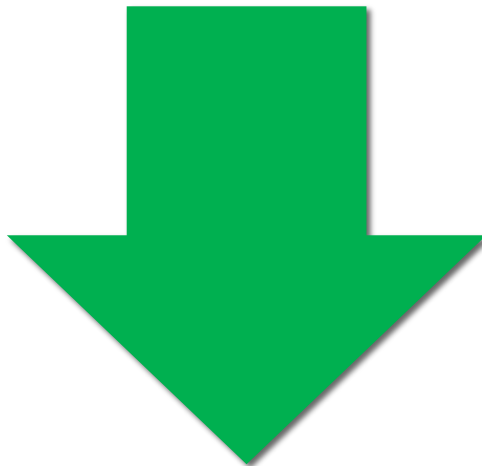
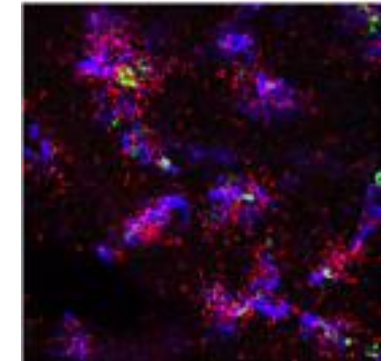


CTCs emit signals which attract **platelets**, which then attract **white blood cells** to form metastatic niches within 2 hours

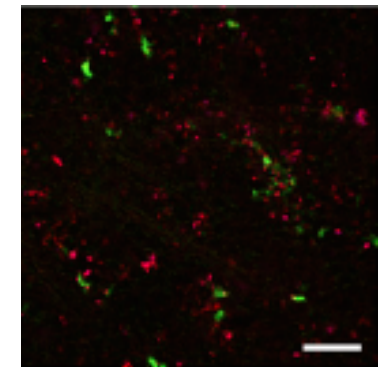
1 min



2 h



MIT study (2014) showed that interfering with either CTCs, platelets or WBCs **stops** the metastatic process

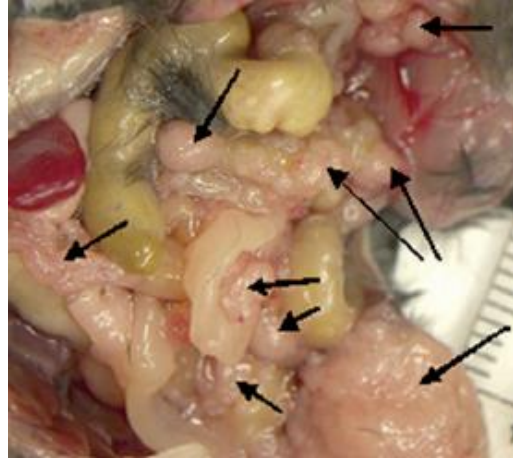


Circulating Tumor Cells
Platelets
WBCs (White Blood Cells)

Labelle, et al, Platelets guide the formation of early metastatic niches. www.pnas.org/cgi/doi/10.1073/pnas.1411082111

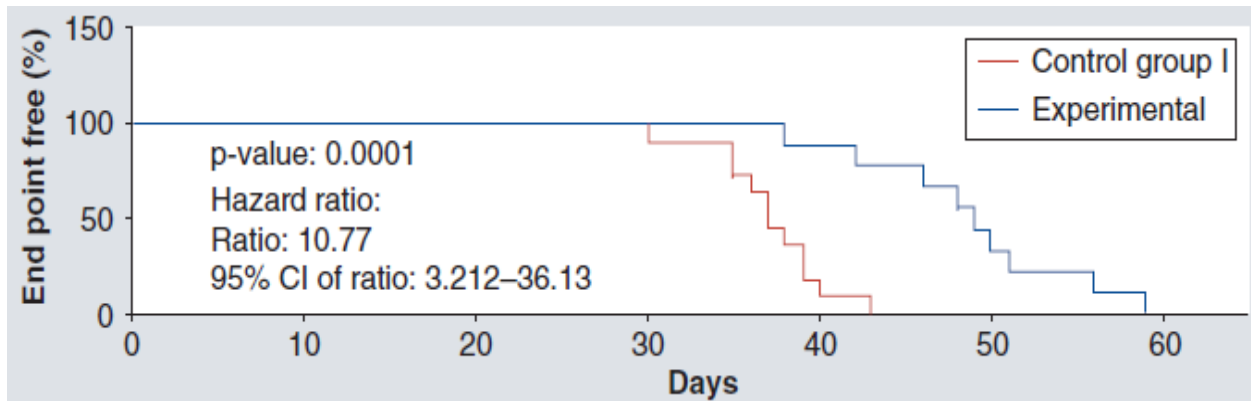
Animal Data:

Removing CTCs = Increased Survival



Georgia Tech study (2011) removed CTCs ***just once*** from mice with ovarian cancer

- Significantly slowed tumor progression (10.77 times)
- Increased overall survival by 32%



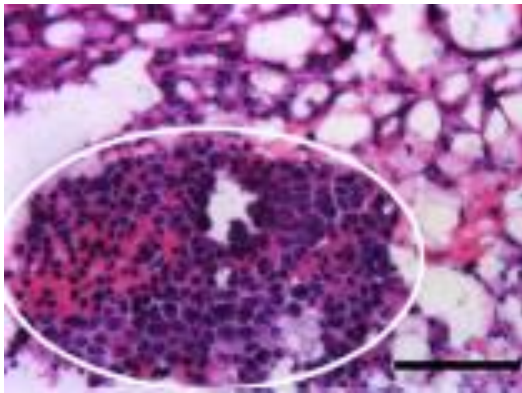
Scarberry, et al, Targeted removal of migratory tumor cells by functionalized magnetic nanoparticles impedes metastasis and tumor progression. *Nanomedicine* (2011) 6(1), 69-79

Animal Data:

Collecting CTCs = Fewer Metastatic Tumors

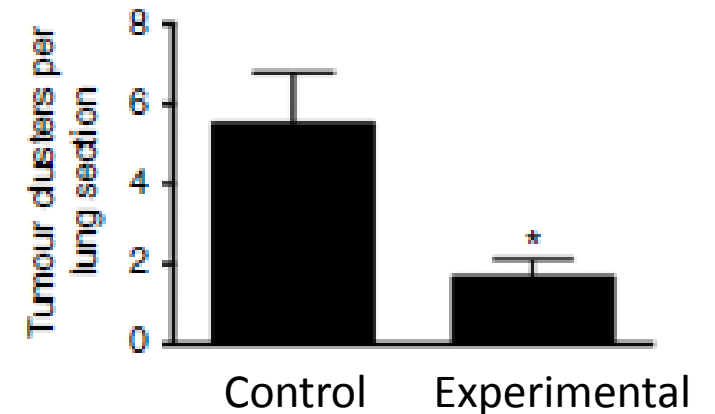
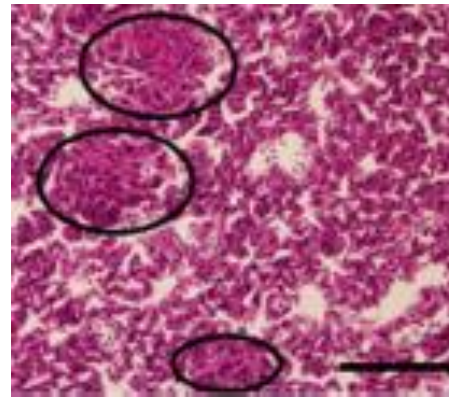
University of Michigan study (2015) collected CTCs for 28 days from mice with breast cancer using an implanted “sponge”

- 88% reduction of tumor cells in the lungs
- 30% fewer metastatic lesions in the lungs
- Only 2 out of 8 mice had tumor cells in the liver versus all in control group



Metastatic lesions in lung

“Sponge” implant placed in peritoneal area



Azarin SM, et al, In vivo capture and label-free detection of early metastatic cells, Nature Communications, (2015) 6:8094, DOI: 10.1038/ncomms9094

Viatar Engineering Challenge

Wright Brothers: 1 person

Boeing 747: 450 people

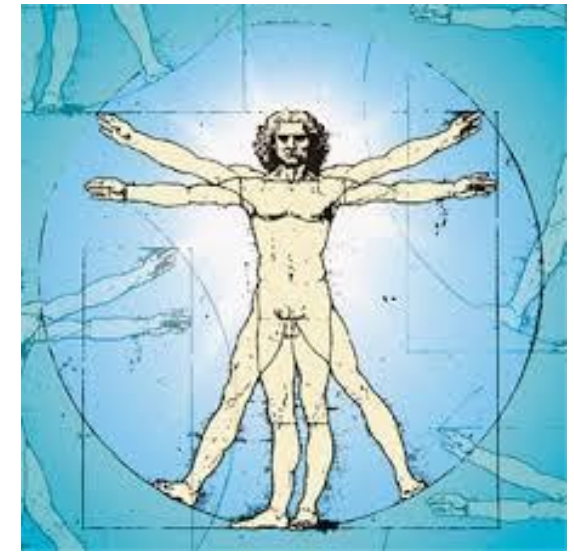
450x capacity increase



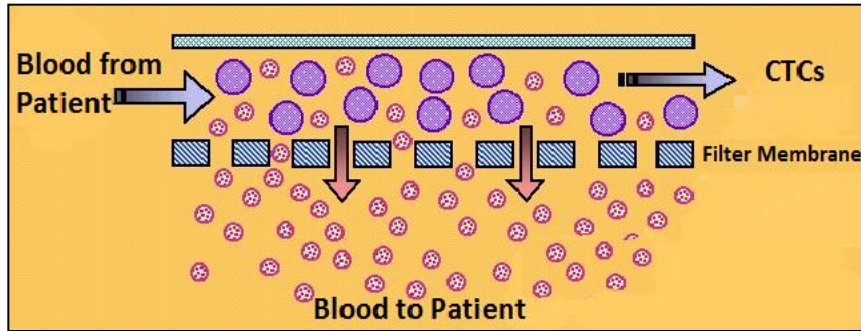
Mouse: 2.5 mL of blood

Human: 5,000 mL of blood

2,000x capacity increase



Key Viatar Technology Aspects



Filters out CTCs using label-free cross-flow filtration, with precise pores and blood flow rates

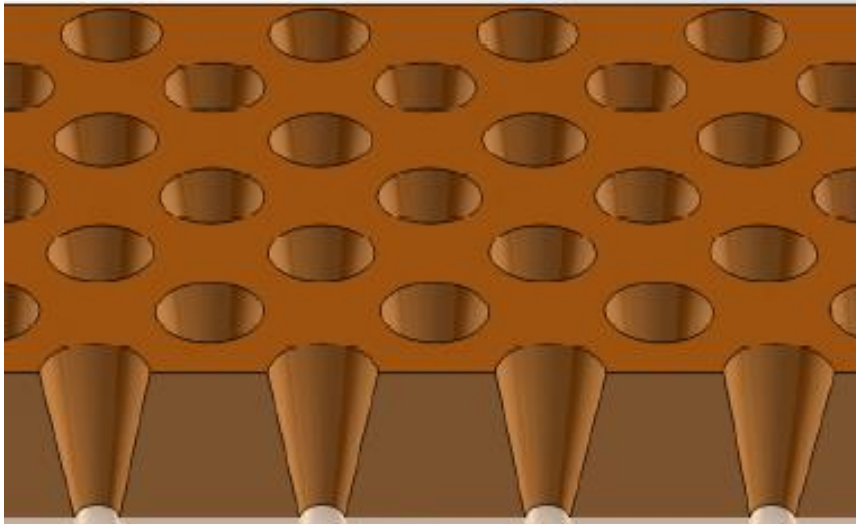
Exploit size, shape and deformation differences between CTCs and normal blood components

Made from micro-machined polymer that passes ~3.5 billion blood cells per second

Five pending patents with coverage until 2035

Extracorporeal processing of blood

Diagnostic and therapeutic uses



Viatar: Therapeutic Oncopheresis

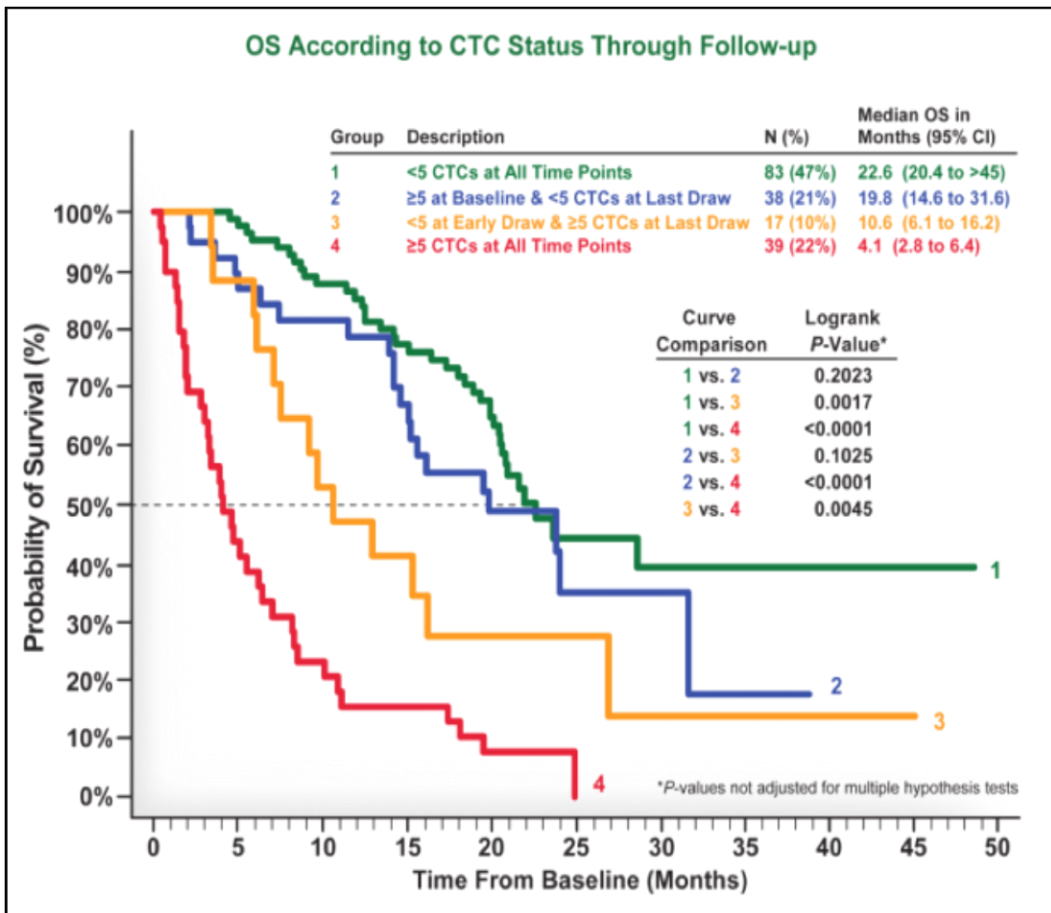
Viatar's technology impedes the metastatic cascade by simply removing CTCs from a patient's circulating blood using our innovative filtration technology



- Will remove a significant number of CTCs from whole blood during a 4 hour session, similar to dialysis extracting toxins
- Pilot study (2016): 18 patients will be treated an average of 3x per week for 3 months

Endpoints	When Measured
Number of CTCs	Every 2 weeks: blood test
Response rate	Beginning and end of trial: CT scan

Pilot Study Endpoint: Number of CTCs



Numerous clinical studies show:

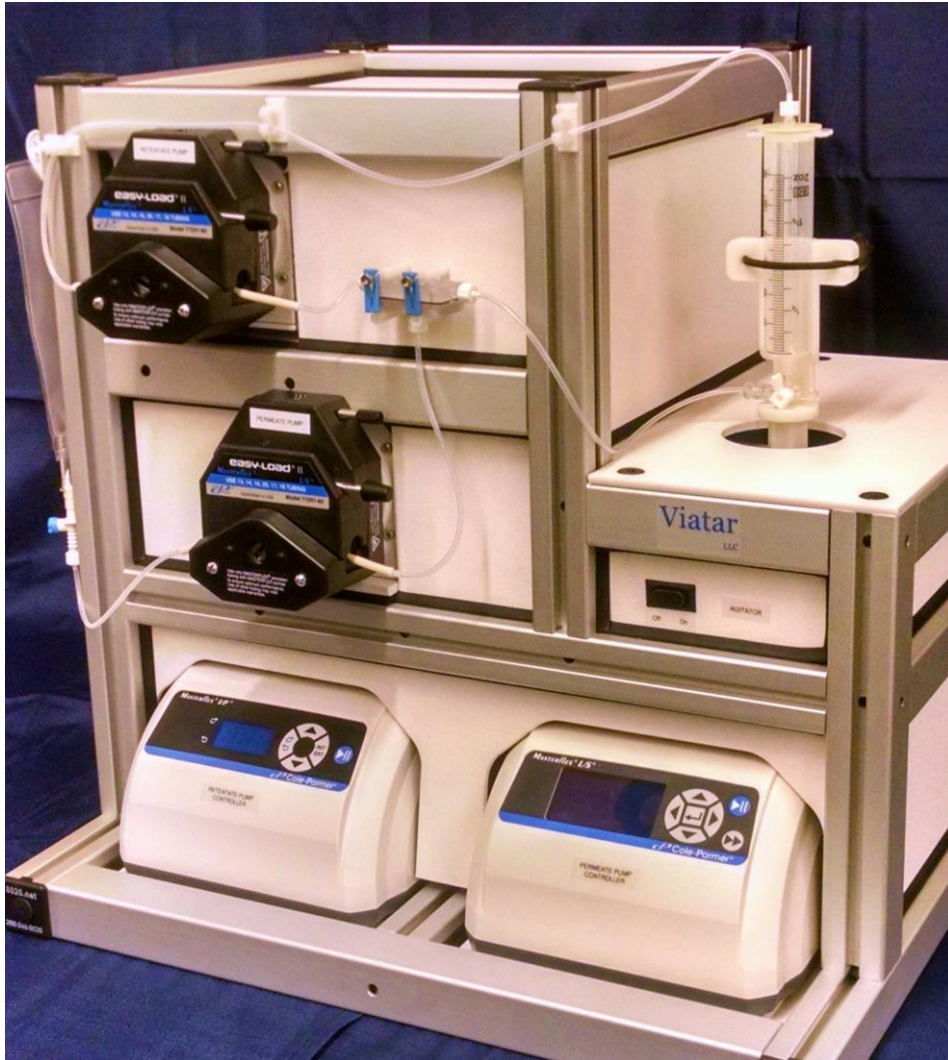
Number of CTCs is a powerful tool to predict overall survival

Key for a successful cancer therapy is to reduce the number of CTCs to the “safe zone”

A drop in the number of CTCs after treatment from 10 to 3 leads to significantly improved overall survival

Hayes DF, et al. Circulating Tumor Cells at Each Follow-up Time Point During Therapy of Metastatic Breast Cancer Patients Predict Progression-Free and Overall Survival *Clin Cancer Res* 2006;12(14): 4218-4224.

Liquid Biopsy Products



CTC collection system for use in downstream molecular analysis

Provides a significantly greater quantity and purity of CTCs for personalized medicine by genetic testing companies, researchers and medical oncologists

Ongoing collaborations with several CTC platform technology companies

Strategic partnership with ScreenCell: has generated \$50K of revenues

Projected Profitability Model

Goals: to make cancer a chronic disease and to reduce the cost of cancer care to healthcare systems

Revenues: 1% market share of metastatic cancer patients = \$1.5 billion

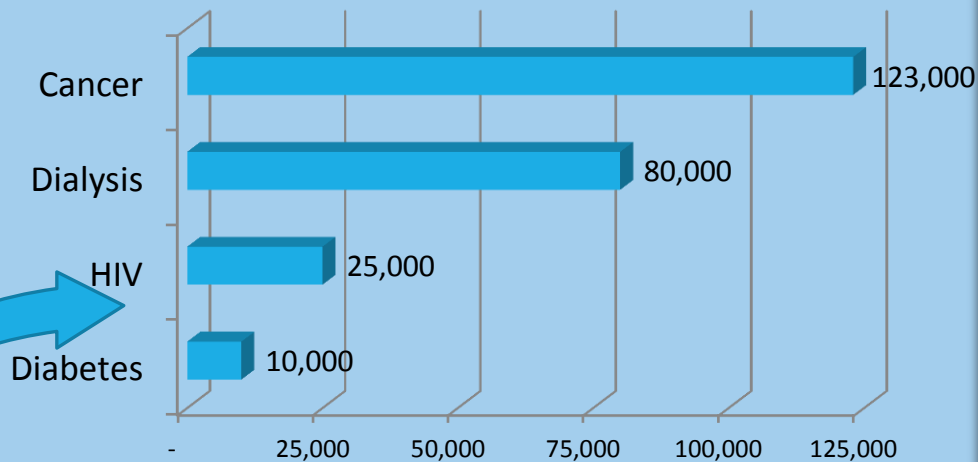
- Base unit (~\$4,000): five year life
- Filter fluid circuit (\$150 per treatment): printer cartridge model

Gross margin: 70%

- High volume, automated production of filters

Operating margin: 30%

Annual Cost of Chronic Care



Viatar: \$15,000

Cap Table & Balance Sheet Highlights as of June 30, 2015

	Shares (in millions)
Common Stock	17.3
Warrants	0.5
Fully-diluted Common	17.8
Series A Preferred Stock	4.0

The Common Stock and Series A Preferred Stock have an 80/20 split of any dividends and proceeds from the sale of the Company.

Cash and Equivalents	608,176
Total Assets	608,176

Accrued Income Tax Liability	732,550
Other Current Liabilities	217,590
Total Current Liabilities	950,140

Convertible Note, Net	98,374
Total Liabilities	1,048,514

Paid-in Capital	19,387,636
Shareholder's Deficit	(440,344)

Valuation Metrics

SeeThruEquity research report on Viatar: \$5 per share price target (equates to \$100 million market cap)

Medical device companies with CE Mark but no revenues are traditionally valued at \$150-250 million, either as public companies or in M&A transactions: equates to \$8 to \$14 per Viatar share

Numerous early stage immunotherapy companies are valued at over \$1 billion: equates to \$50 per share

Viatar Float

Viatar shares currently eligible for trading: ~12 million

Viatar shares deposited into brokerage accounts under street name: ~1 million

Key Takeaways

Therapeutic oncopheresis system addresses a large and under-served market

Compelling animal data shows that removing CTCs slows down metastasis

Liquid biopsy products address the hottest diagnostic market: personalized medicine

Near term commercialization opportunity for both product areas in Europe and Canada with CE Mark in 2016

Printer cartridge business model provides long-term, high margin revenue

Strong portfolio of owned pending patents

Seasoned management team with impressive record growing medical technology companies

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