

# Method of isolating circulating tumor cells

## Value Proposition

Increasing evidence suggests that circulating tumor cells are the primary drivers of the disease progression. Accordingly, circulating tumor cells offer a very promising biomarker to identify cases with a high risk of metastatic progression. However, the current technologies rely on epithelial cell surface markers for capturing the circulating cells. Since epithelial to mesenchymal transition facilitates entry into circulation and dissemination to distance sites, identifying tumor circulating cells that express mesenchymal markers can aid in identifying aggressive cases of solid tumors.

## Technology

Researchers at Duke have developed a method for capturing circulating tumor cells based on a mesenchymal phenotype. The performance of the mesenchymal-based capture was evaluated in patients with castration-resistant prostate cancer.

## Other Applications

The technology can be used as a potential biomarker predictive of distant metastasis in breast cancer and other solid types of tumors

## Advantages

- Improved detection method of circulating tumor cells using epithelial-mesenchymal transition marker
- Detection rate was higher as compared with epithelial marker enrichment assays

## Publications

- [Circulating tumor DNA alterations in patients with metastatic castration-resistant prostate cancer \(Cancer, 2019\)](#)

### Duke File (IDF) #

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### Links

- [From the lab of Dr. Andrew Armstrong](#)
- [Medical Oncologist: Andrew Armstrong, MD, MSc](#)

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## Patents

Patent Number: 10,161,939

Title: METHODS OF ISOLATING CIRCULATING TUMOR CELLS

Country: United States of America

Patent Number: ZL201380075303.3

Title: METHODS OF ISOLATING CIRCULATING TUMOR CELLS

Country: China

Patent Number: GB2531881B

Title: METHODS OF ISOLATING CIRCULATING TUMOR CELLS

Country: United Kingdom

Patent Number: GB 2546213

Title: METHODS OF ISOLATING CIRCULATING TUMOR CELLS

Country: United Kingdom