Case Report

CLINICAL INVESTIGATION

# Isolation and Enumeration of Circulating Tumor Cells (CTC) as prognostic and predictive biomarkers in Post-Operative m-CRC

Prathibha KS[1], Swaroop G[2]*

[1]Department of Biotechnology, KLE's S Nijalingappa College, Banglore
[2]Newcastle University, United Kingdom

*Author for correspondence: dr.swaroop23@gmail.com



To assess AIDS awareness among the educated community of Lahore and Gujranwala, Pakistan. Circulating tumor cells (CTCs) presents non-invasive, repeatable investigation of patient's disease. In metastatic Coloretal Cancer (m-CRC) patients, CTC enumerations have been comprehensively studied in evaluating metastatic disease.

CTC analysis has been shifting from enumeration to more sophisticated molecular depiction of tumor cells, which is used for liquid biopsy of the tumor, reflecting cytological and molecular changes in metastatic patients over time. In this study, CTC enumeration in advanced and localized metastatic colorectal cancer, highlights the vital gains as well as the challenges posed by various approaches, and their implications for advancing disease management.

Detection of circulating tumor cells (CTC's) or circulating free tumor DNA (ctDNA) to conduct chemotherapy and reporting prognosis is extremely important, In view of the detail CTC has the potential to offer multiple samples by way of sequential minimally-invasive liquid biopsies. In fastidious, there is escalating evidence for the efficacy of CTC's in the clinical management of metastatic colorectal cancer (CRC). With most studies confirming the association of elevated CTC counts with worse prognosis.

Investigations were carried out that circulating tumor cells (CTCs) could predict clinical prognosis in patients with mCRC. This pilot study, demonstrates that CTCs can serve as both prognostic and predictive factor for patients with mCRC. The presence of at least three CTCs at baseline and follow-up is a strong independent prognostic factor for inferior PFS and OS. When utilized in combination with imaging studies, CTCs provide additional prognostic information. There are several studies for which CTCs could have efficacy in metastatic colorectal cancer. The statistics suggests that CTCs may be used as a stratification feature in metastatic disease treatment trials. The current list of validated prognostic factors is short, with only routine status being universally recognized. Further study should prospectively deal with modification of regimens based on unfavorable CTCs early in the course of treatment will result in enhancement in PFS or OS. As treatment has become more effective for metastatic disease, decision making has become more complicated. Five classes of drugs are on hand for treatment. The most common initial chemotherapy is a fluoropyrimidine with oxaliplatin or irinotecan. CTC levels drawn at 3 to 5 weeks and 6 to 12 weeks, before PET imaging, may lead to prospective regimen choices and standby patients from unnecessary drug toxicity by suggesting that an early change in treatment is defensible.

**Keywords: Circulating tumor cells • metastic colorectal cancer • overall survival**

Submitted: 19 December 2020; Accepted: 29 December 2020; Published online: 18 January 2021