

The patients.in fact,
optimal
chemotherapy dosing
in obese



**ASSIGN
BUSTER**

The current standard for cardiac monitoring during cancer therapy is mainly based on LVEF assessment, but it can underestimate early potentially progressive cardiotoxicity, and preserved cardiac function is generally required for enrollment in clinical trials of high dose chemotherapy. This is commonly defined as LVEF > 50% and no other significant cardiac disease. Many studies reported a significant association between pretransplant LVEF and cardiotoxicity. However, measurement of LVEF before high dose chemotherapy is not the only determinant factor as 2/3 major cardiac events reported in patients with normal LVEF.

In the current study, we found that the mean ejection fraction of cases after transplant is significantly reduced compared to the negative control group with highly statistically significant difference (P-value <0.001). Also, there is a highly statistically significant difference between ejection fraction in the initial echocardiography before therapy in all patients and the follow up echocardiography after either chemotherapy only in group III or transplanted patients in group I (P-value <0.001). A wide variety of conditioning regimens have been used prior to stem cell transplantation. Including, TBI-based regimens and high-dose cyclophosphamide, and cardiac toxicity has been associated mostly with the use of these regimens with a wide spectrum of incidence, manifestation and severity.

HD cyclophosphamide-associated cardiac toxicity is thought to depend upon toxic endothelial damage followed by extravasation of toxic metabolites with resultant myocyte damage and interstitial hemorrhage and edema. HD cyclophosphamide-associated cardiotoxicity occurs during or soon after (within 3 weeks) administration. It is manifested clinically as acute or

<https://assignbuster.com/the-patientsin-fact-optimal-chemotherapy-dosing-in-obese/>

subacute onset of congestive heart failure (CHF) with pulmonary congestion, weight gain and oliguria. Pericardial effusion, in some cases with cardiac tamponade. Although HD cyclophosphamide-associated cardiac toxicity is potentially reversible, in patients who develop severe, progressive CHF, this complication may lead to death within few weeks. In our study, we found that ejection fraction decline is higher in patients with a body surface area ≥ 1.8 than those with a body surface area < 1.8 reflecting a higher dosage of chemotherapeutic agents used in those patients. In fact, optimal chemotherapy dosing in obese patients is one of the most controversial aspects of HD chemotherapy since obese patients have altered pharmacokinetics for many medications including chemotherapeutic agents when compared with the non-obese.