

# CorLog to monitor RVEF in cardio oncologic patients as biomarker

Whitepaper 03  
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Revision 00, June 2025

Right Ventricular Ejection Fraction (RVEF) can be used as a biomarker for early detection and prediction of chemotherapy-induced right ventricular cardiotoxicity. Studies have shown that RVEF, along with other echocardiographic measures and troponin levels, can help identify early changes in right ventricular function that precede a decline in RVEF.

## How RVEF is used:

- **Early detection:**  
Researchers have found that 3D echocardiography-derived measurements of RV strain and volume, including RVLFS (right ventricular longitudinal fractional strain) and RVESV (right ventricular end-systolic volume), can detect early changes in right ventricular function that may precede a decline in RVEF.
- **Prediction:**  
Studies have also shown that a decrease in RVLFS and an increase in RVESV can predict subsequent declines in RVEF in patients undergoing anthracycline-based chemotherapy.
- **Monitoring:**  
Regular monitoring of RVEF and other RV parameters, along with troponin levels, is recommended during and after chemotherapy to assess right ventricular function and identify potential cardiotoxicity.

## Limitations:

- Some studies have indicated that the definition of cardiotoxicity may need to be revised to include right ventricular dysfunction, as current definitions primarily focus on left ventricular ejection fraction.
- More research is needed to determine the optimal cut-off values for RVEF and other RV parameters that can accurately predict cardiotoxicity.

## In summary:

RVEF, along with other RV parameters and troponin levels, can be valuable biomarkers for early detection and prediction of right ventricular cardiotoxicity induced by chemotherapy. Routine monitoring of these markers can help clinicians identify patients at risk and implement appropriate interventions to mitigate the potential for cardiac damage

[1] Keramida, Kalliopi et al., 2024, July. The right heart in patients with cancer. A scientific statement of the Heart Failure Association (HFA) of the ESC and the ESC Council of Cardio-Oncology. In European Journal of Heart Failure (pp. 2077-2093), <https://doi.org/10.1002/ejhf.3412>

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