

**Quantitative evaluation of lesion response heterogeneity for superior prognostication of clinical outcome**

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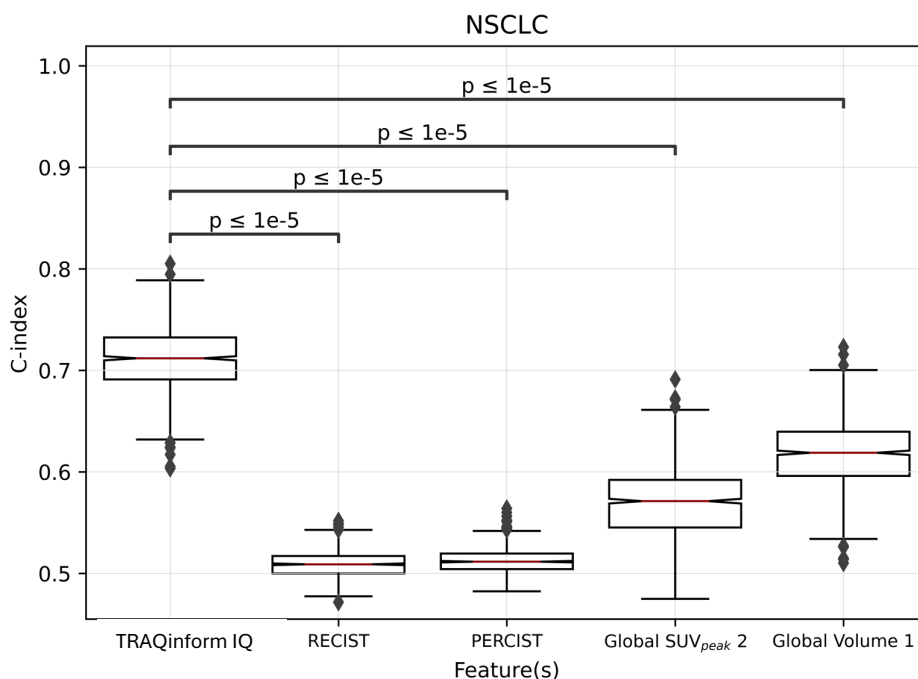
**Key Takeaway:** “The results suggest that when treating patients with multiple lesions, physicians would have a better understanding of the prognosis of patients if quantitative information of response of all lesions was available to them. This could allow clinicians to make better decisions on how to treat patients with metastatic cancer.”

**Study Aim:** Evaluate the effectiveness of overall survival prognosis between TRAQinform IQ technology and established standard of care approaches.

**Population:** 241 patients with diffuse large B-cell lymphoma (DLBCL, n=127) and non-small cell lung cancer (NSCLC, n=114) with [18F]FDG PET/CT scans at baseline and either during chemotherapy or after chemoradiotherapy.

**Methods:** TRAQinform IQ software (AIQ Solutions) was used for automated quantification and analysis of all lesion-ROI on each scan. Utilizing features extracted from the TRAQinform IQ software, multivariable Cox proportional hazards (CoxPH) regression models were used to predict overall survival (OS). The best-fit model was compared to automated versions of previously established methods (e.g., RECIST, PERCIST and Deauville score).

“...models trained with all lesion-ROI included had significantly superior performance than those trained with features extracted from only a few lesion-ROI, establishing that all information from all ROI is necessary for superior prognostication of outcomes.”



**Conclusions:** Quantitative evaluation of response heterogeneity of all individual lesions, as provided by TRAQinform IQ technology, is necessary for the superior prognostication of clinical outcome.

Link to article: <https://link.springer.com/article/10.1007/s00259-024-06764-0>