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### Non-invasive Assessment of Liver Quality in Transplantation based on Thermal Imaging Analysis

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### Highlights

- Principal component analysis (PCA) features were extracted from real-time infrared images to precisely evaluate liver quality in order to conduct transplantation.
- A multivariate logistic regression model was applied for single liver quality evaluation.
- A multi-task learning logistic regression model was constructed for cross-liver quality evaluation.
- There is a strong correlation between the viability of livers and the infrared image features.
- These analytical methods determine that the selected significant infrared image features indicate difference in liver viability.

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