Supplementary Material: EchoMEN: Combating Data Imbalance in Ejection Fraction Regression via Multi-Expert Network

1 Evaluation Metrics

– **MAE**: the mean absolute error

$$MAE = \frac{1}{N}\sum_{i=1}^{N}|y_i - \hat{y}_i| \tag{1}$$

– **MSE**: the mean squared error

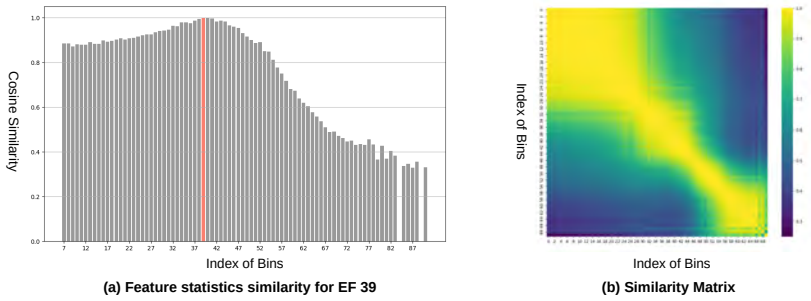
$$MSE = \frac{1}{N}\sum_{i=1}^{N}(y_i - \hat{y}_i)^2 \tag{2}$$

– **GM**: the geometric mean

$$GM = \left(\prod_{i=1}^{N}|y_i - \hat{y}_i|\right)^{\frac{1}{N}} \tag{3}$$

For i-th sample, y_i is the ground truth label, $\hat{y}_i$ is the prediction, and N is the number of samples. For all metrics, lower is better.

2 Additional Analysis



(a) Feature statistics similarity for EF 39 (b) Similarity Matrix

Fig. S1. We calculate the average features extracted by video encoder for each bin. (a) shows the feature statistics similarity distribution for a specific bin. (b) is the heatmap plot of cosine similarity between average features of different bins. The feature exhibits strong continuity, validating the inductive bias of $\mathcal{L}_{\text{LDW-SupCon}}$.