Supplementary Material

Reconstruction-assisted Feature Encoding Network for Histologic Subtype Classification of Non-small Cell Lung Cancer

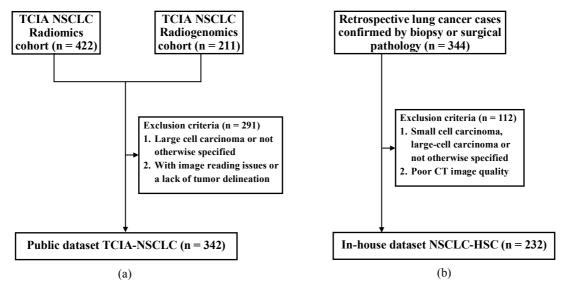


Fig. S1. Flowchart of patient exclusion criteria on (a) TCIA-NSCLC and (b) NSCLC-HSC datasets

TABLE SI

COMPARISON RESULTS OF RAFENET WITH DIFFERENT AGGREGATION METHODS ON TCIA-NSCLC AND NSCLC-HSC

DATASETS USING 5-FOLD CROSS VALIDATION.

| Datasets | | TCIA- | NSCLC | | NSCLC-HSC | | | |
|----------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Methods | AUC | Acc | Sen | Spe | AUC | Acc | Sen | Spe |
| RAFENet (Maj.) | 0.794±0.026 | 0.766±0.029 | 0.825±0.021 | 0.698±0.057 | 0.841±0.027 | 0.811±0.028 | 0.859±0.044 | 0.737±0.041 |
| RAFENet (Ave.) | 0.797±0.027 | 0.772±0.031 | 0.833±0.019 | 0.709±0.043 | 0.844±0.024 | 0.815±0.029 | 0.866±0.042 | 0.742±0.033 |

Note. Abbreviations: Maj. represents majority voting and Ave. represents averaging prediction scores.

TABLE SII

COMPARISON RESULTS OF RAFENET WITH DIFFERENT SETTINGS OF CROSS-LEVEL NON-LOCAL BLOCK ON TCIA-NSCLC

AND NSCLC-HSC DATASETS USING 5-FOLD CROSS VALIDATION.

| Datasets | TCIA-NSCLC | | | | NSCLC-HSC | | | |
|----------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Methods | AUC | Acc | Sen | Spe | AUC | Acc | Sen | Spe |
| RAFENet (Alt.) | 0.791±0.029 | 0.761±0.029 | 0.817±0.028 | 0.698±0.057 | 0.835±0.027 | 0.807±0.025 | 0.859±0.044 | 0.731±0.036 |
| RAFENet (Ours) | 0.797±0.027 | 0.772±0.031 | 0.833±0.019 | 0.709±0.043 | 0.844±0.024 | 0.815±0.029 | 0.866±0.042 | 0.742±0.033 |

Note. Abbreviations: Ours represents the adopted setting using F_{i-1}^t as query features and F_i^g as key and value features, and Alt. represents alternative setting using F_i^g as query features and F_{i-1}^t as key and value features