

## Section 1: Hardware Specifications

### CPU Information:

CPU Model: Intel(R) Xeon(R) Platinum 8280 CPU @ 2.70GHz

Number of CPU cores used: 112

### GPU Information:

GPU Type(s): Tesla V100-SXM2-32GB

Number of GPUs: 15

GPU memory per unit (GB):32

### Memory and Storage:

System RAM (GB): 1.5T

Storage type: SSD and HDD

## Section 2: Task and Compute Reporting

### Task Category:

Task Category: Medical Imaging Survival analysis

### Task Evaluation:

Performance Comparison:

- Performance metric name: Cindex

- Your method - metric value: 0.756

- Baseline method name: ABMIL+SNN (M. Ilse et al.2018)

- Baseline - metric value: 0.692

- Performance metric Percentage Improvement: 9.24 (e.g.,  $58.55 = |2.01 - 4.85|/4.85 * 100$ )

### Dataset Context:

Primary dataset: TCGA-BRCA

### Model Information:

Model size (number of parameters): 6.90 (e.g., 350M for 350 million parameters)

### **Compute Cost:**

-Total compute (hours or FLOPs): 3.983e14 (e.g., 1000 hours or 1.5e15 FLOPs)

-Training set size (number of samples): 667

-Training compute (hours or FLOPs): 3.98e14

-Number of epochs: 100

-Batch size: 1

-FLOPs per forward pass: 1.99e9

-Test set size (number of samples): 173

-Inference compute per 1000 instances (hours or FLOPs): 1.99e12

-Total inference compute (hours or FLOPs): 3.44e11

-FLOPs calculation tool used: thop

### **Efficiency Calculation:**

Compute per Performance Metric Percentage Improvement: 7.11e13

Efficiency calculation method/reasoning: Computed as (3.98e14 FLOPs total compute) ÷ (5.6 C-index improvement) = 7.11e13 FLOPs per percent

### **Code Efficiency:**

Framework used: PyTorch

Mixed precision training: No

Distributed training: No

## **Section 3: Weights & Biases Log**

W&B logs: <https://wandb.ai/neu2110686/BezierSurv?nw=nwuserneu2110686>