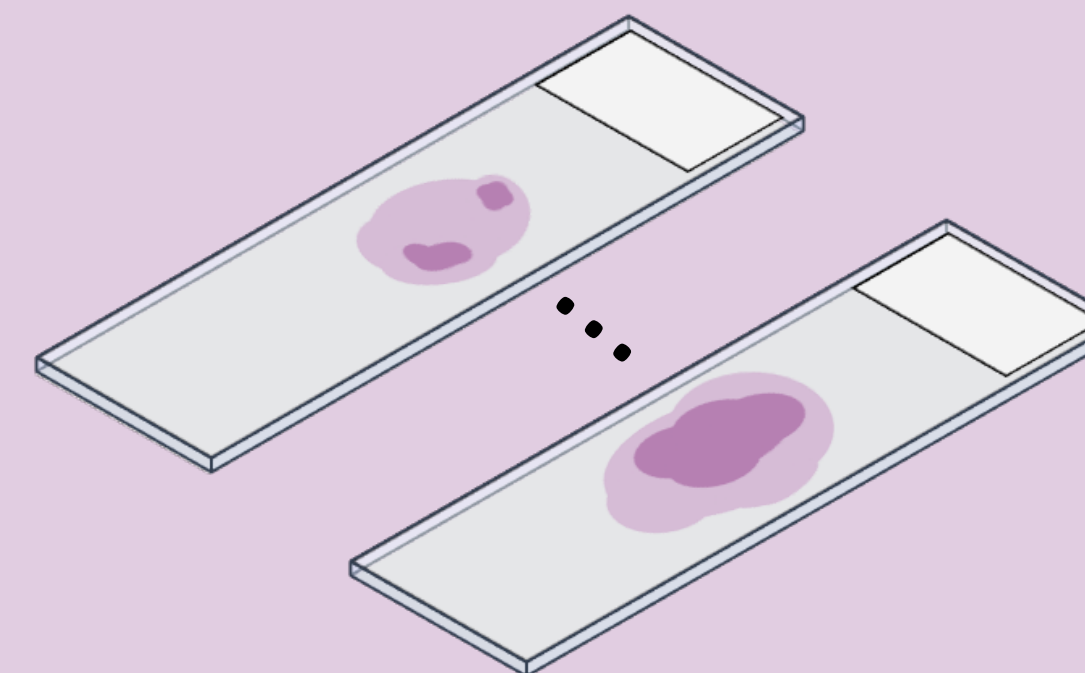


A Comprehensive Evaluation of Histopathology Foundation Models for Ovarian Cancer Subtype Classification

Largest Ovarian Cancer AI Subtyping Study to date:

Internal WSIs

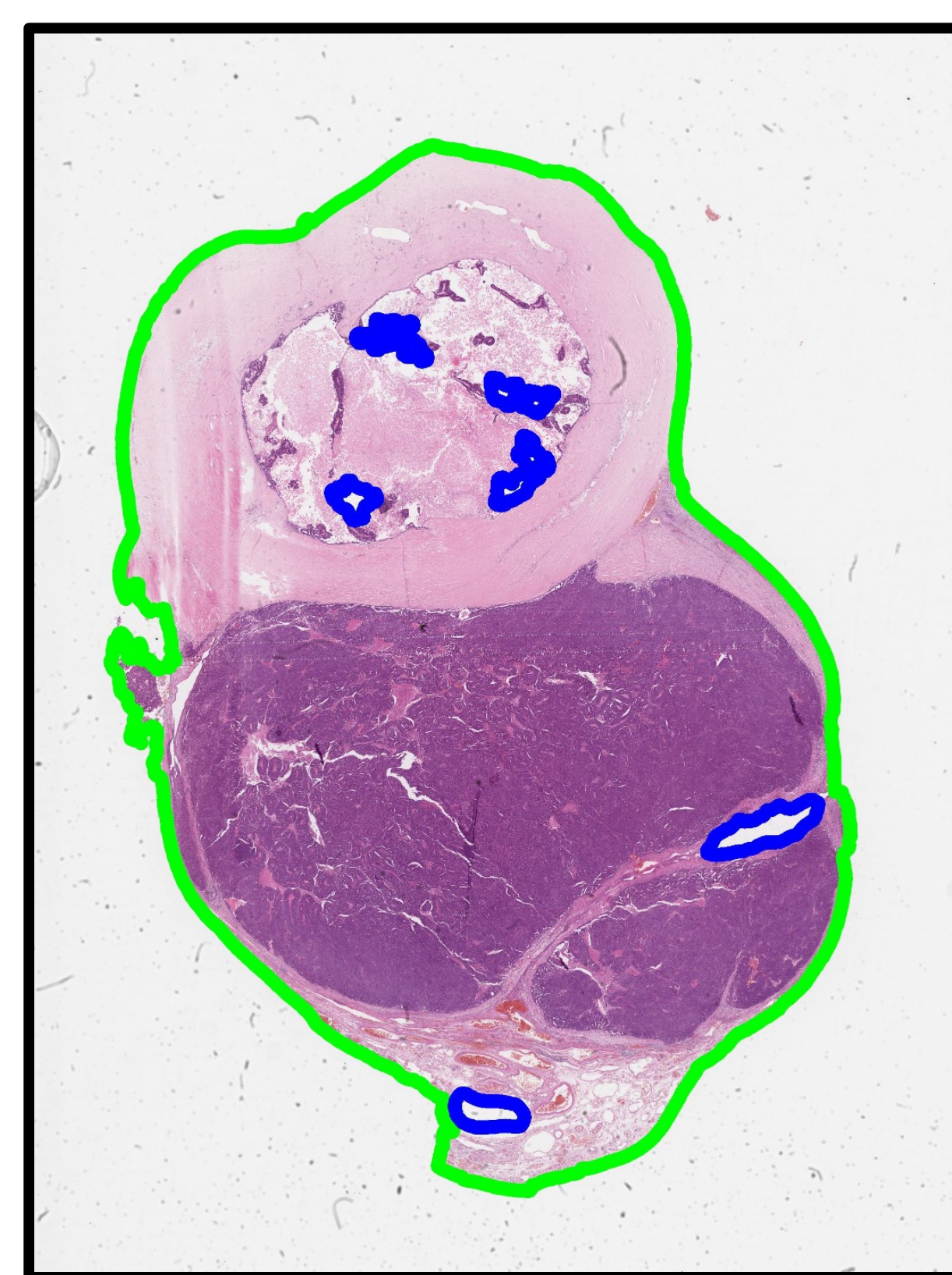
Training Set (n = 1864)
Hold-out Set (n = 100)



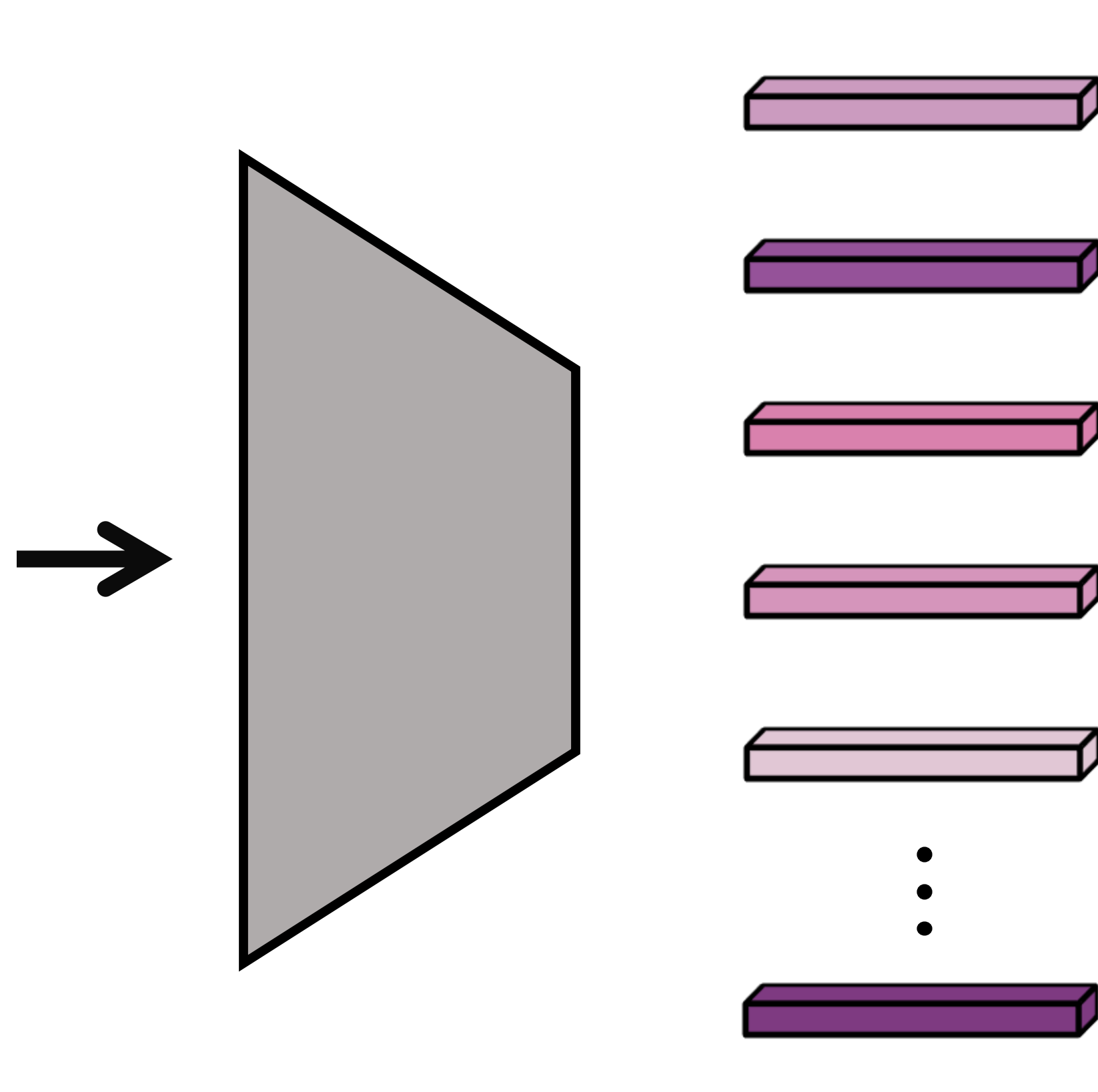
External WSIs

Transcanadian Study (n = 80)
UBC-OCEAN Challenge (n = 513)

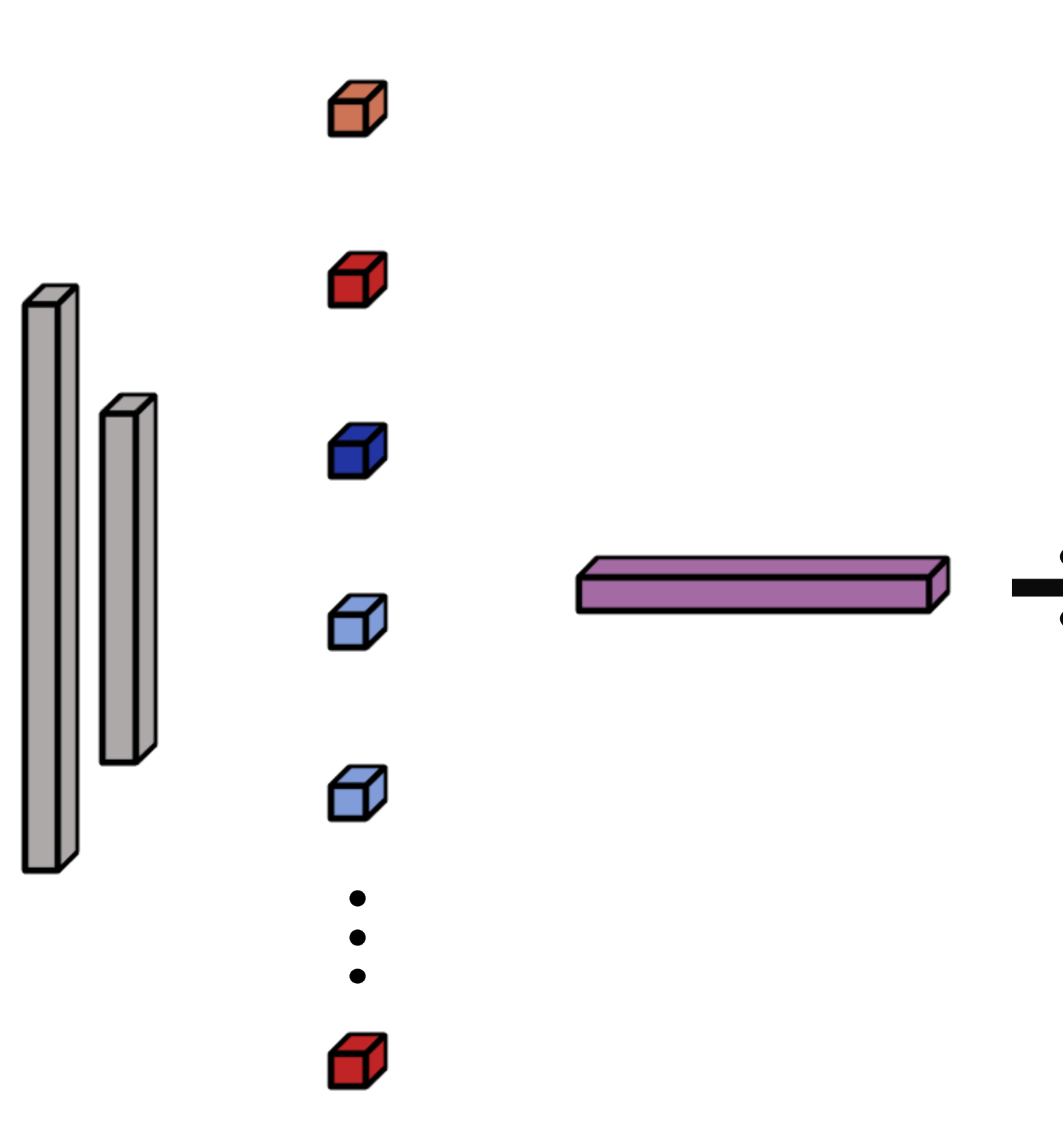
WSI Tissue Patch Extraction



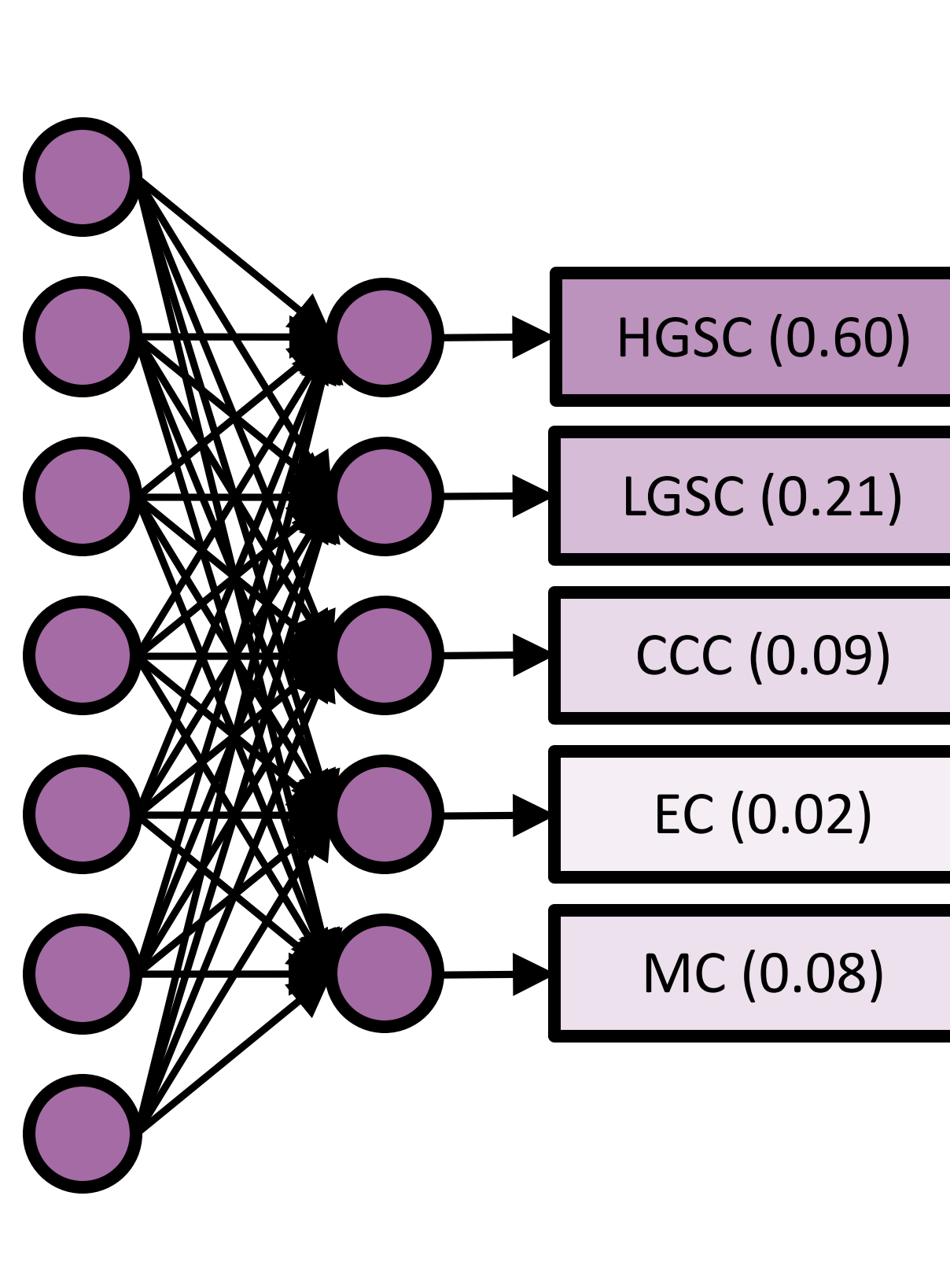
Patch Feature Extraction



Attention-based Aggregation



WSI Classification

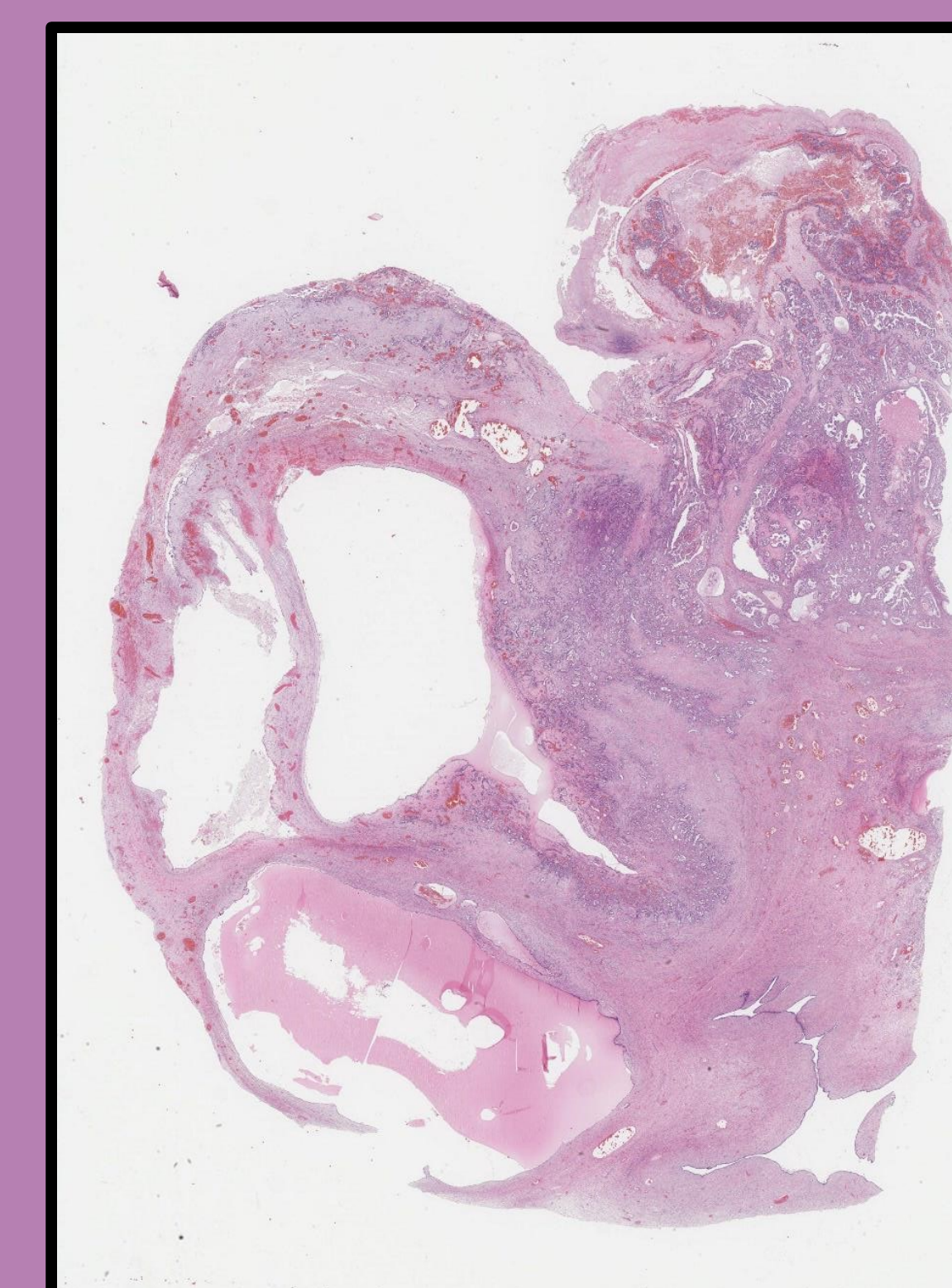
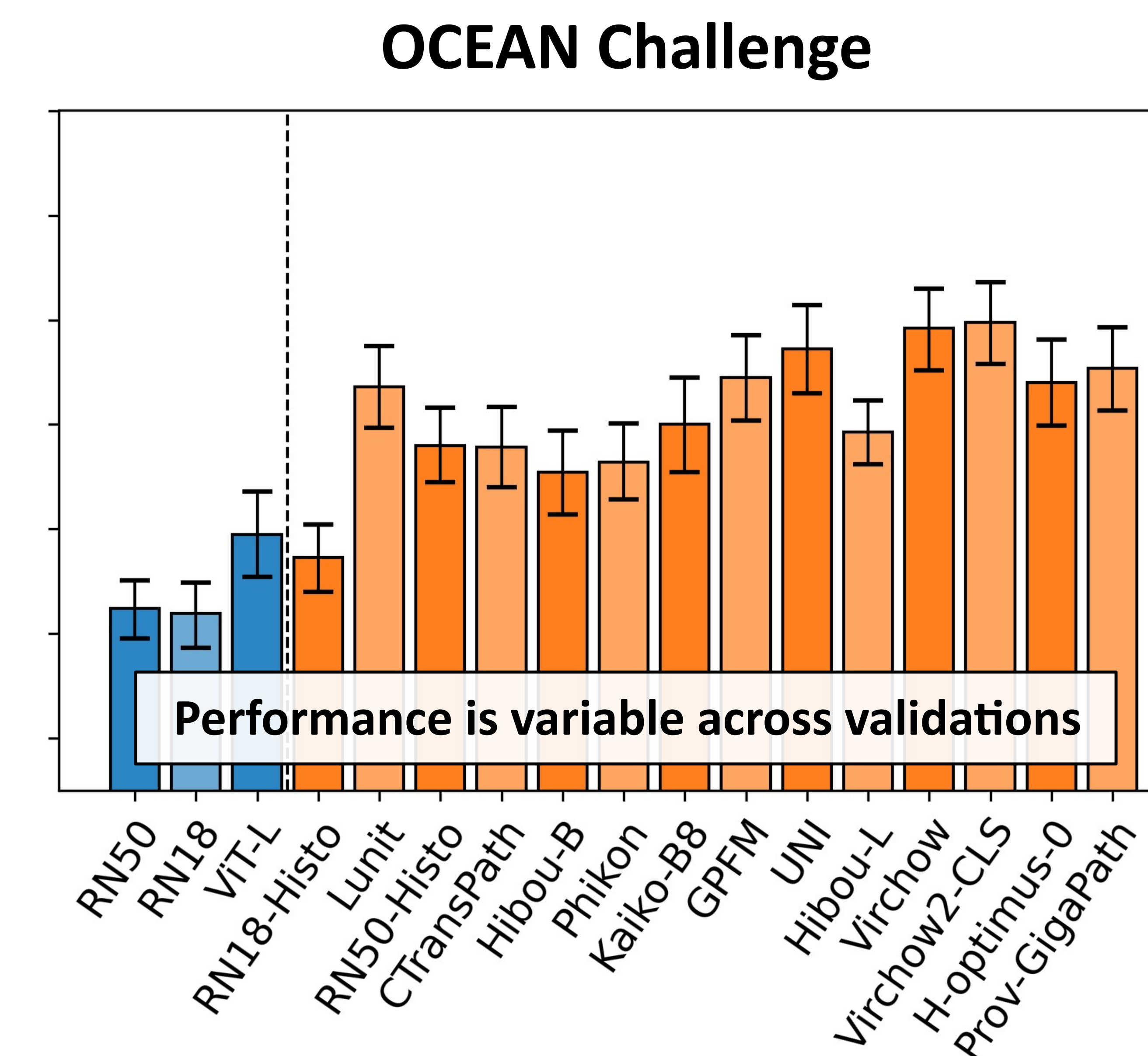
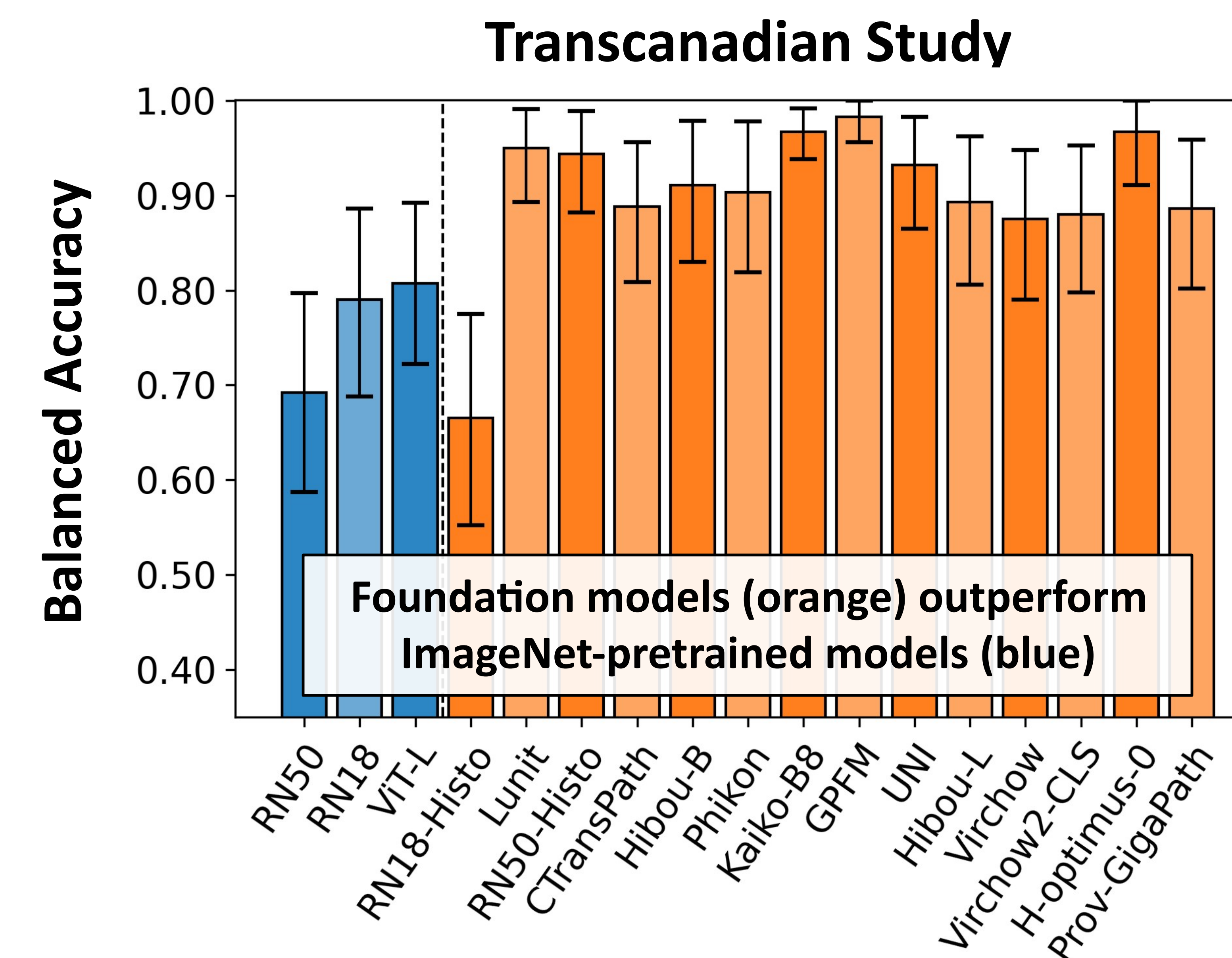


17 Feature Encoders:

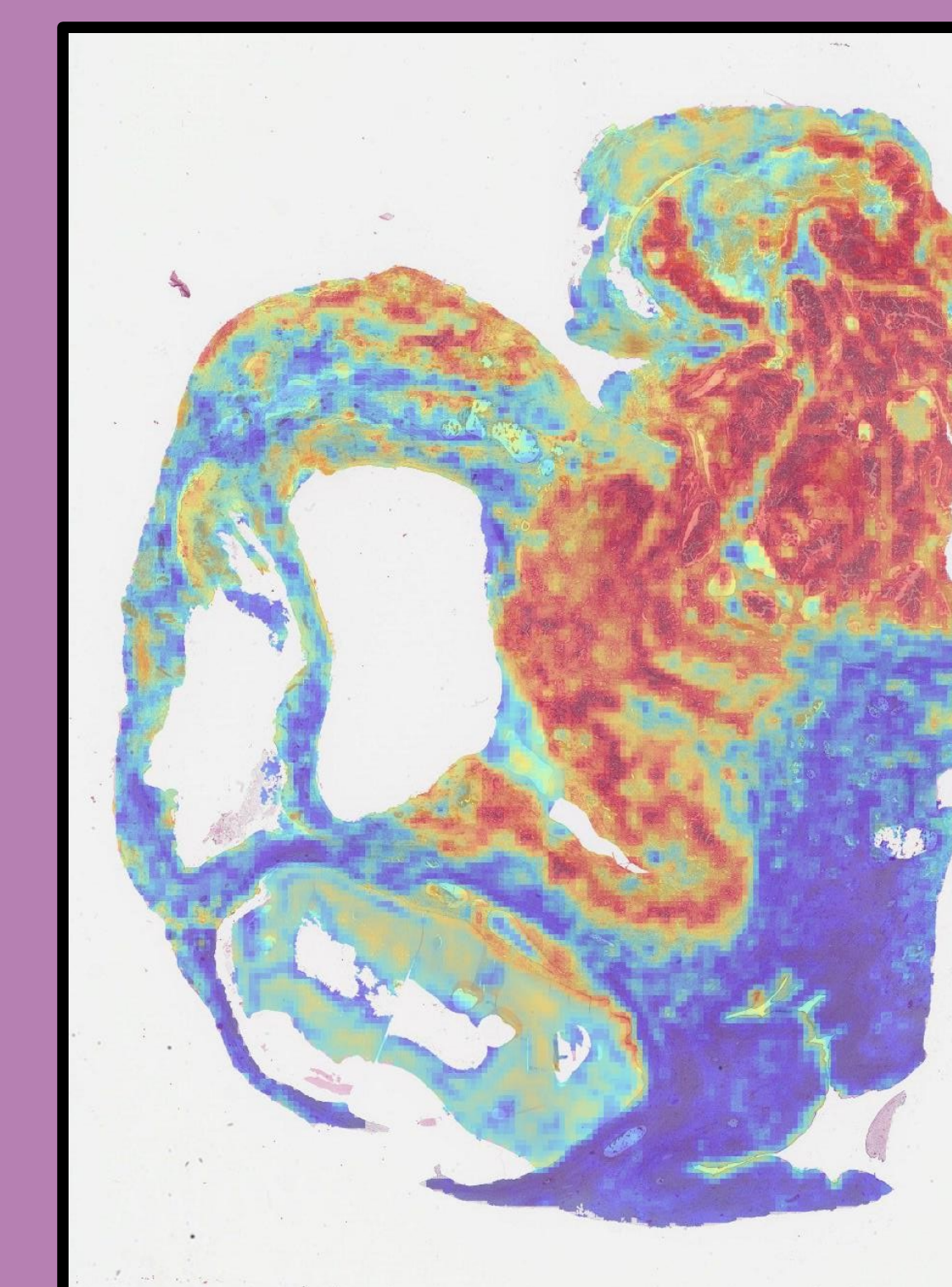
- 3 ImageNet-pretrained models & 14 Histopathology Foundation Models
- 8.5M – 1.1B parameters • 6k – 3.1M WSIs pretraining

Downstream Classification:

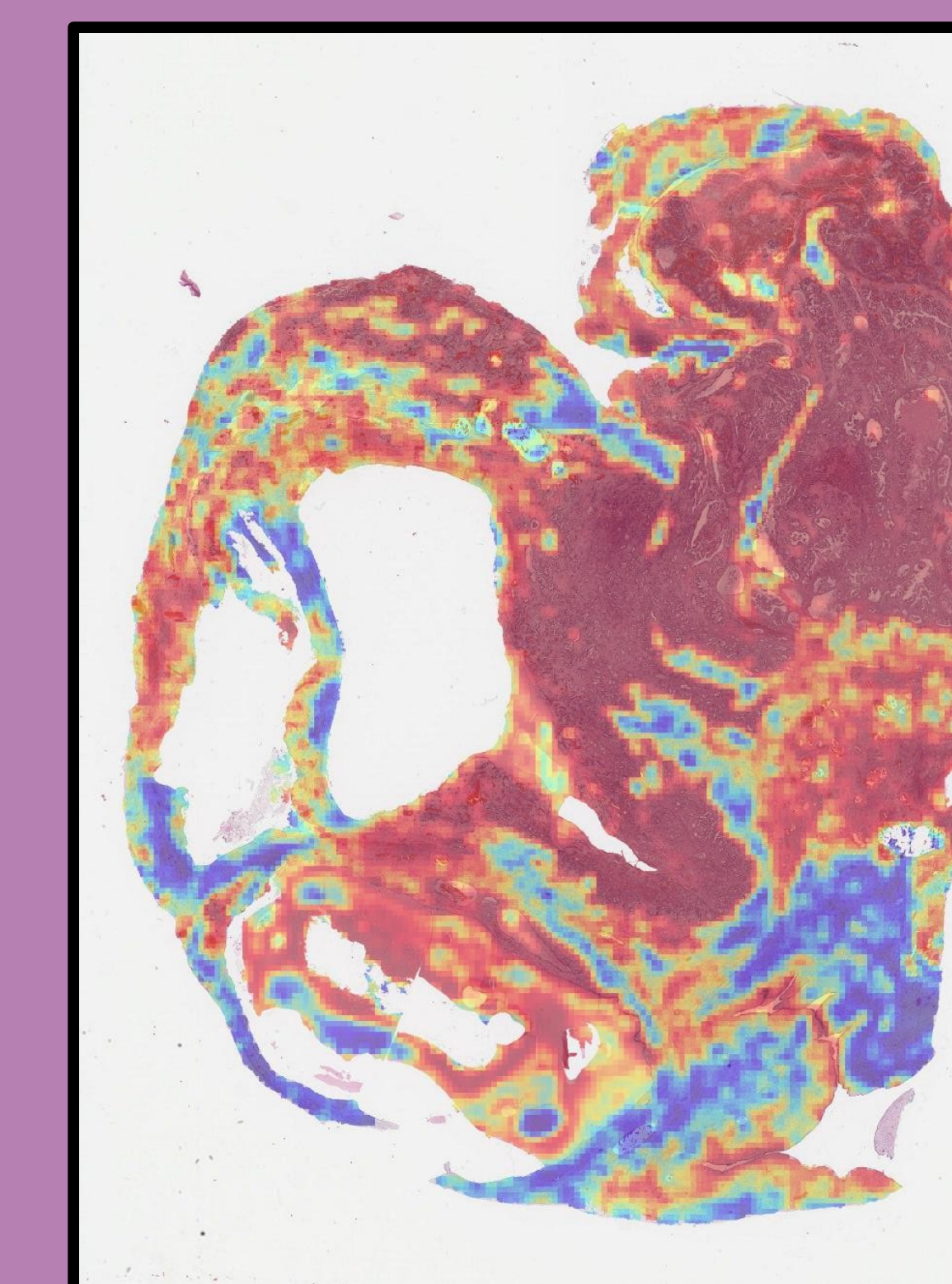
- 5 Class Ovarian Cancer Subtyping
- 10 Hyperparameters Tuned Iteratively
- Balanced Accuracy, AUROC, F1 Score



Whole Slide Image



UNI Heatmap



ResNet50 Heatmap

Additional Results

- Hyperparameter tuning ABMIL adds 1.9% balanced accuracy
- Normalisations/augmentations are insufficient to bridge the gap to foundation models

Conclusion: Ovarian cancer subtyping performance is drastically improved by histopathology foundation models