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# Supplementary Material

## Bidirectional Translation Between ISH and H&E Glioblastoma Tissue Sections via Attention-Enhanced CycleGAN

Ayesha Shahzad[1] Konstantinos Koukoutegos[2,3] Dimitrios Makris[1] Spyridon Bakas[1,2,3,4,5,*]

[1]Department of Computer Science, Kingston University London, London, UK
[2]Division of Computational Pathology, Department of Pathology and Laboratory Medicine, Indiana University School of Medicine (IUSM), Indianapolis, IN 46202, USA
[3]Indiana University Melvin and Bren Simon Comprehensive Cancer Center, Indianapolis, IN 46202, USA
[4]Departments of Neurological Surgery; Biostatistics and Health Data Science; Radiology and Imaging Sciences, IUSM, Indianapolis, IN 46202, USA
[5]Department of Computer Science, Luddy School of Informatics, Computing, and Engineering, Indiana University, Indianapolis, IN 46202, USA

*Corresponding author: spbakas@iu.edu

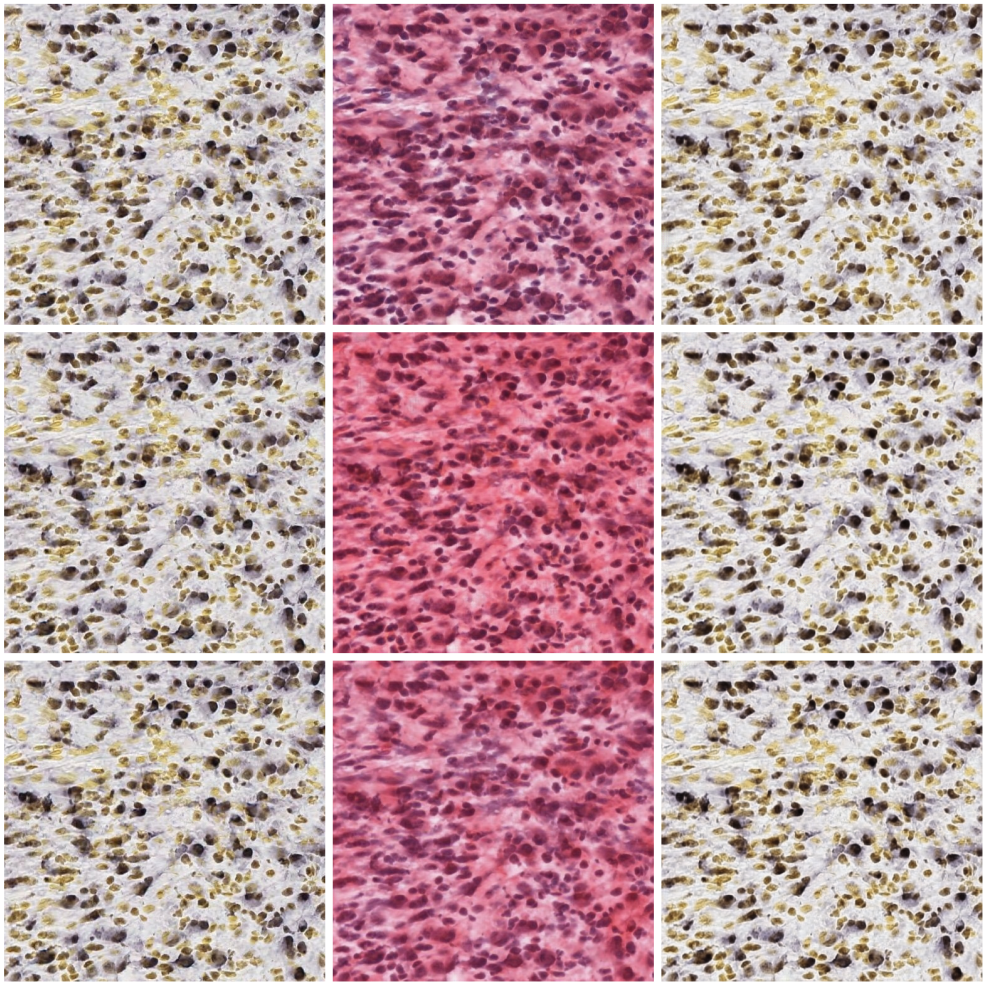
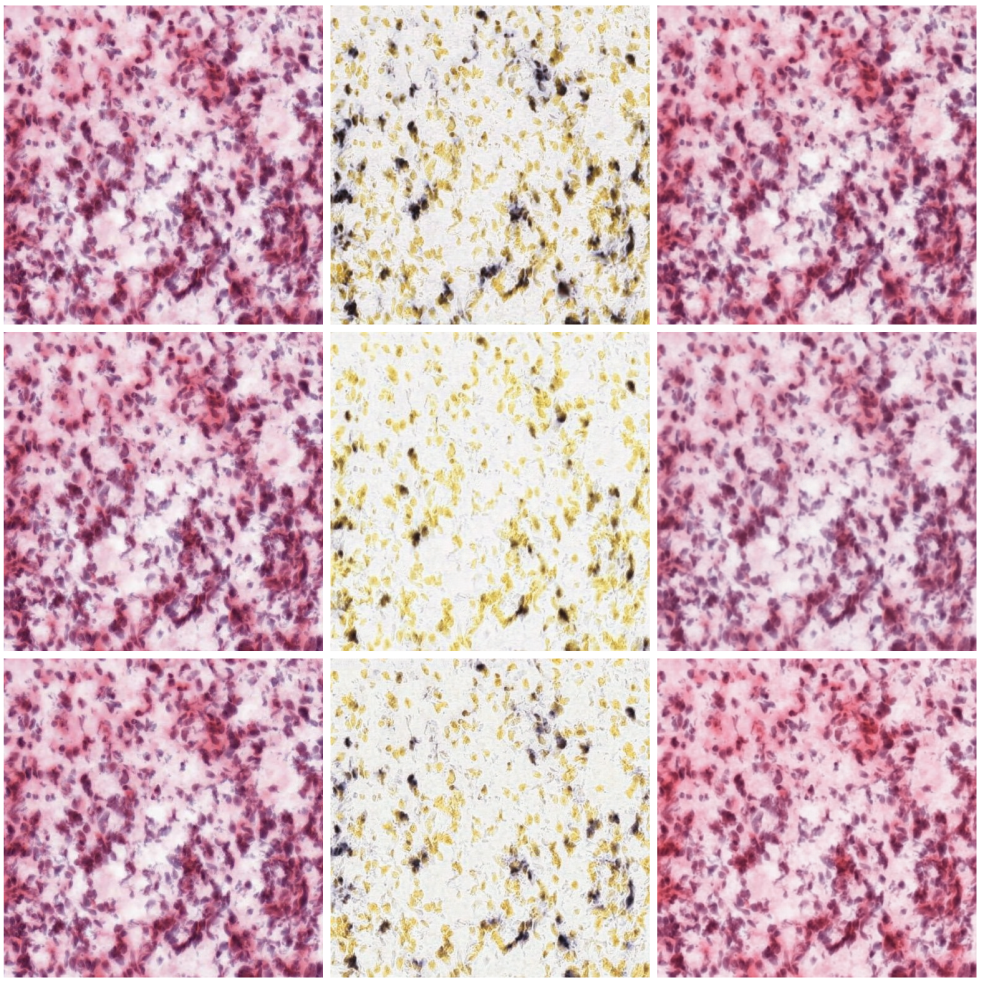


**Fig. 4: ISH→H&E Ablation Study.** Columns: real ISH (left), translated H&E (center), reconstructed ISH (right). Rows, top to bottom: V (standard CycleGAN, epoch 23), N (no-CBAM, epoch 10), F (**O**urs, epoch 20).



**F**ig. 5: **H&E→ISH Ablation Study.** Columns: real H&E (left), translated ISH (center), reconstructed H&E (right). Rows, top to bottom: V (standard CycleGAN, epoch 8), N (no-CBAM, epoch 20), F (**O**urs, epoch 42).