## Knowledge-driven Subspace Fusion and Gradient Coordination for Multi-modal Learning

Yupei Zhang<sup>1\*</sup>, Xiaofei Wang<sup>2\*</sup>, Fangliangzi Meng<sup>3</sup>, Jin Tang<sup>4</sup>, Chao Li<sup>2,5,6</sup>

<sup>1</sup> Department of Pathology, The University of Hong Kong
<sup>2</sup> Department of Clinical Neurosciences, University of Cambridge, UK
<sup>3</sup> School of Life Sciences and Technology, Tongji University, China
<sup>4</sup> Zhejiang Lab, China
<sup>5</sup> School of Science and Engineering, University of Dundee, UK

<sup>6</sup> Department of Applied Mathematics and Theoretical Physics, University of

Cambridge, UK

cl647@cam.ac.uk

Table 1. Implementation details of our proposed method.

Number of tumor-related genes	59
Number of TME-related genes	361
Batch size	8
Learning rate policy	$\cos$
Optimizer	Adam
Weight decay	0.001
Diagnosis training epoch	20
Diagnosis learning rate	$2 \times 10^{-3}$
Grading training epoch	20
Grading learning rate	$2 \times 10^{-3}$
Survival analysis training epochs	10
Survival analysis learning rate	$2 \times 10^{-4}$

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Fig. S1. Top: ROCs of comparison and ablation study on glioma diagnosis task. Bottom: Hyper-parameter analysis of  $\alpha$  in diagnosis and grading tasks.