

# 11 Deep Learning Model Integrating Positron Emission Tomography And Clinical Data For Prognosis Prediction In Non-Small Cell Lung Cancer Patients [11]

Model Architecture		
<div> <div> <math>x_1</math> </div> <div> <div> Step 1) Linear vs. Non-linear model </div> <div> <div> <div>CPH</div> <div>MLP</div> </div> <div> VS. </div> </div> </div> </div> <div> <div> Step 2) 3D vs. 2D PET image </div> <div> <div> <div>Whole-body</div> <div>MIP</div> </div> <div> VS. </div> </div> </div>	<div> <div> Step 3) Multimodal </div> <div> <div> <div> T stage N stage M stage Age Histology ... </div> <div> FC layer ReLU FC layer ReLU FC layer </div> </div> <div> <math>\mathcal{F}_1</math> </div> </div> <div> <div> Residual Block </div> <div> Conv3D layer ReLU Conv3D layer </div> </div> </div>	<div> <div> Output </div> <div> <div> 1. Survival curve </div> <div> 2. Residual life </div> <div> 3. N-year survival status </div> </div> <div> <div> Evaluation </div> <div> 1. C-index 2. MAE 3. Accuracy </div> </div> </div>
Fusion Formulas		
$\mathcal{F}_1 = \oplus(x_1^3, x_2^2) \rightarrow$		
Fusion Graph Representation	Fusion Analysis	
	How Many: Single or Multiple?	Single, 1
	Number of Fusion Flows	1
	Multiple Type Sudden, Gradual or Multi-Flow?	Sudden
	Sudden  Synchro?	No