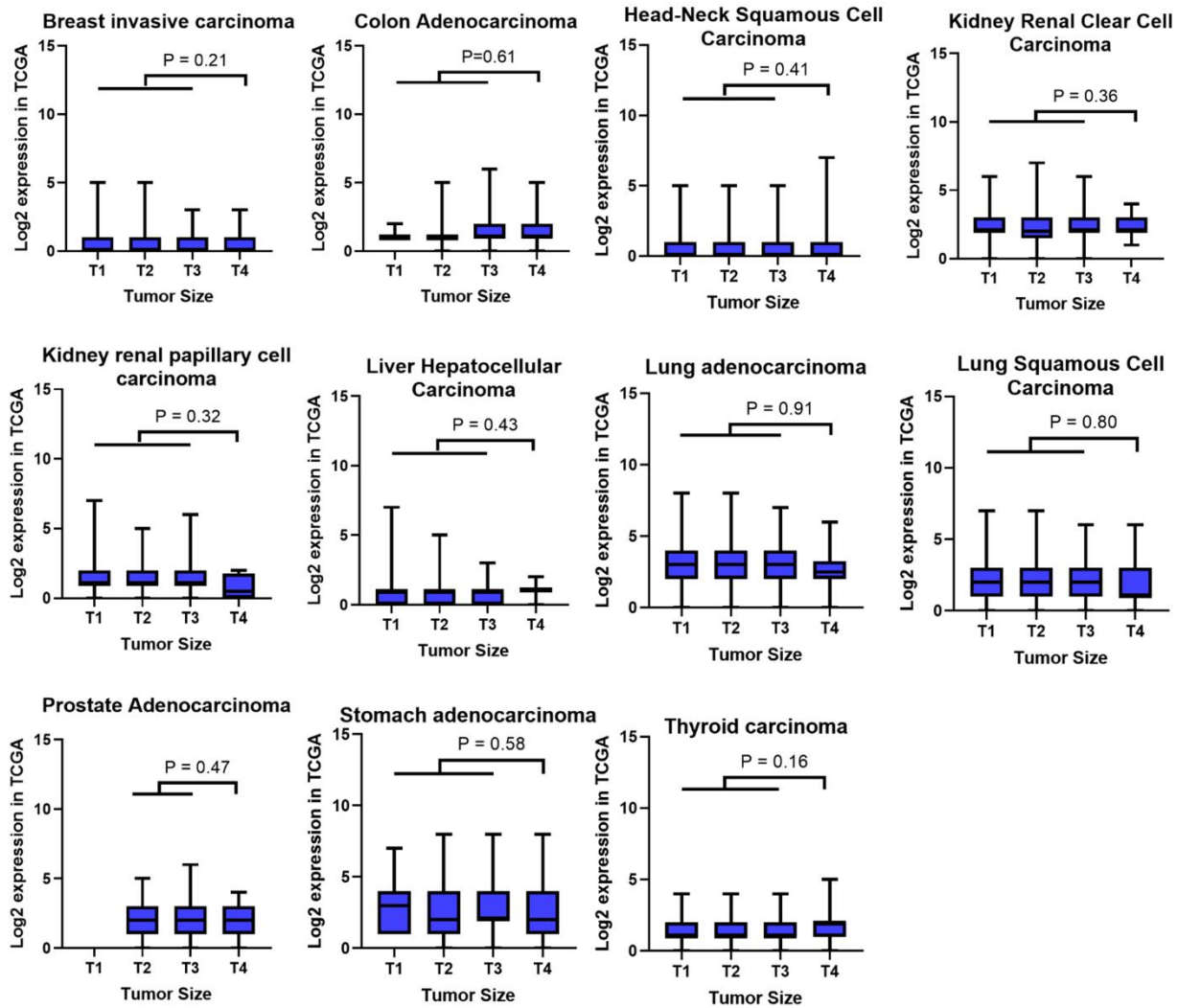


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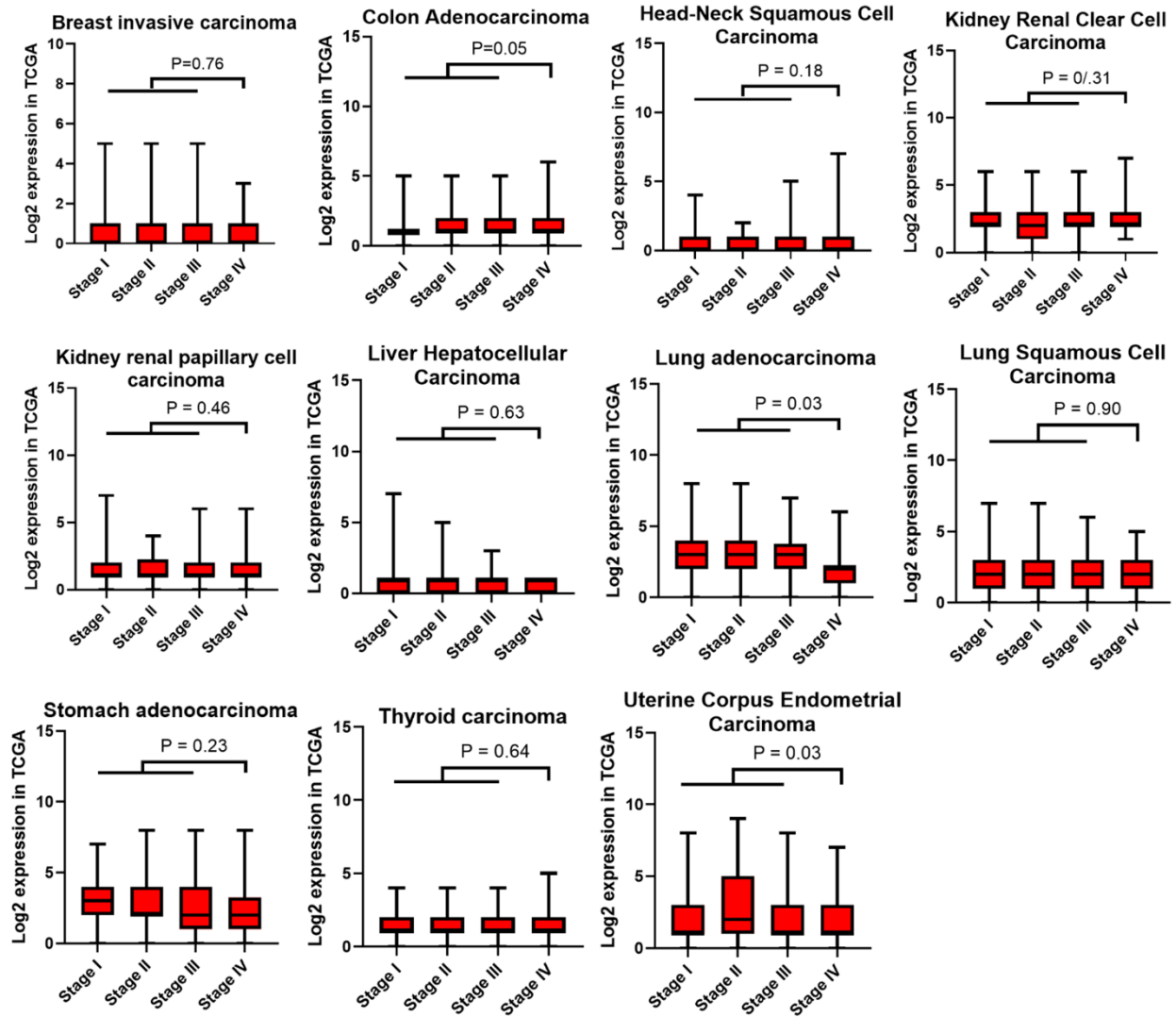
Supplementary Figures

Supplementary Figure 1. HIF3A expression level in different tumor sizes of various types of cancer.

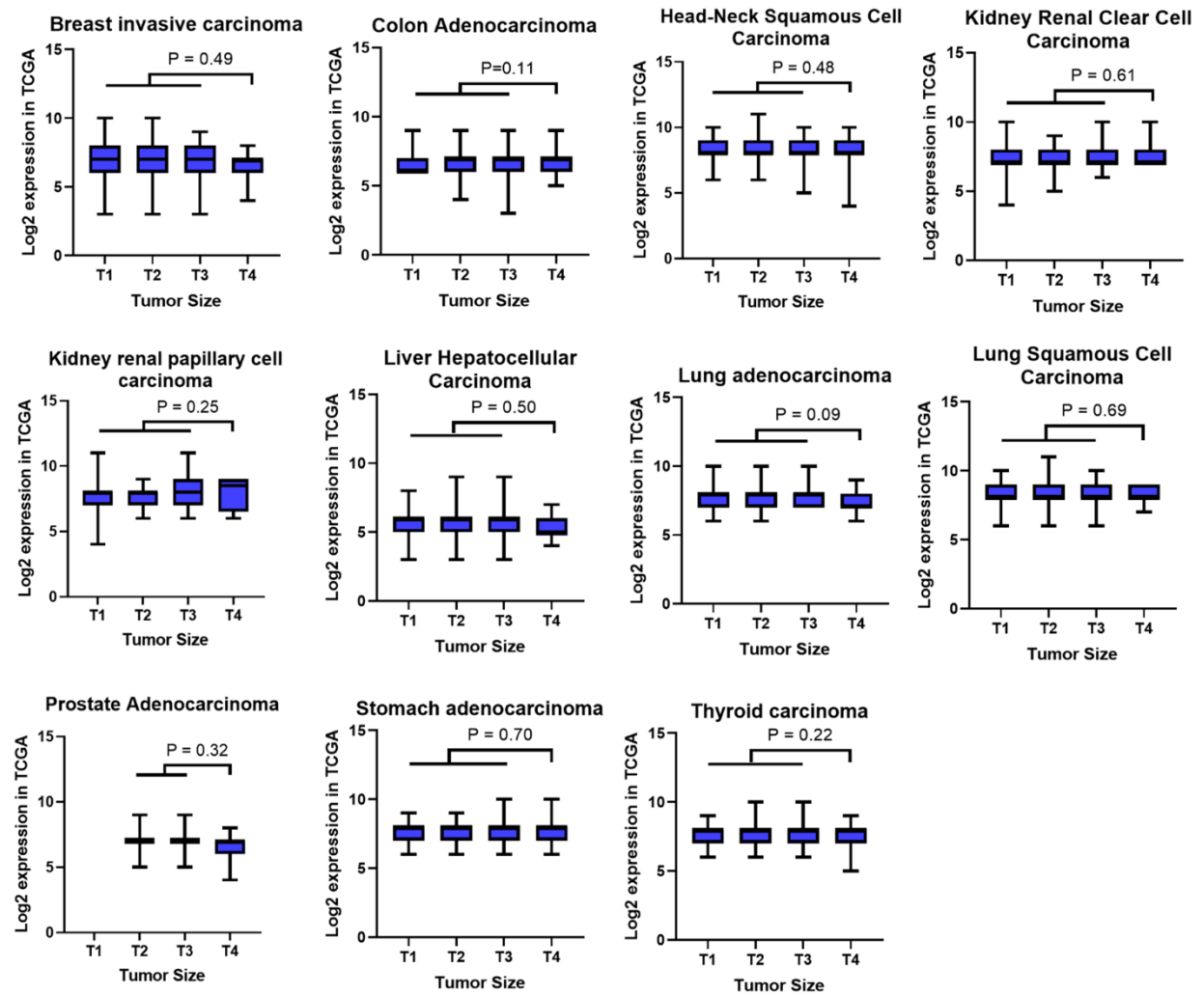
The expression level of HIF3A did not significantly differed in different sizes of cancer tissues. ($p < 0.05$ *)



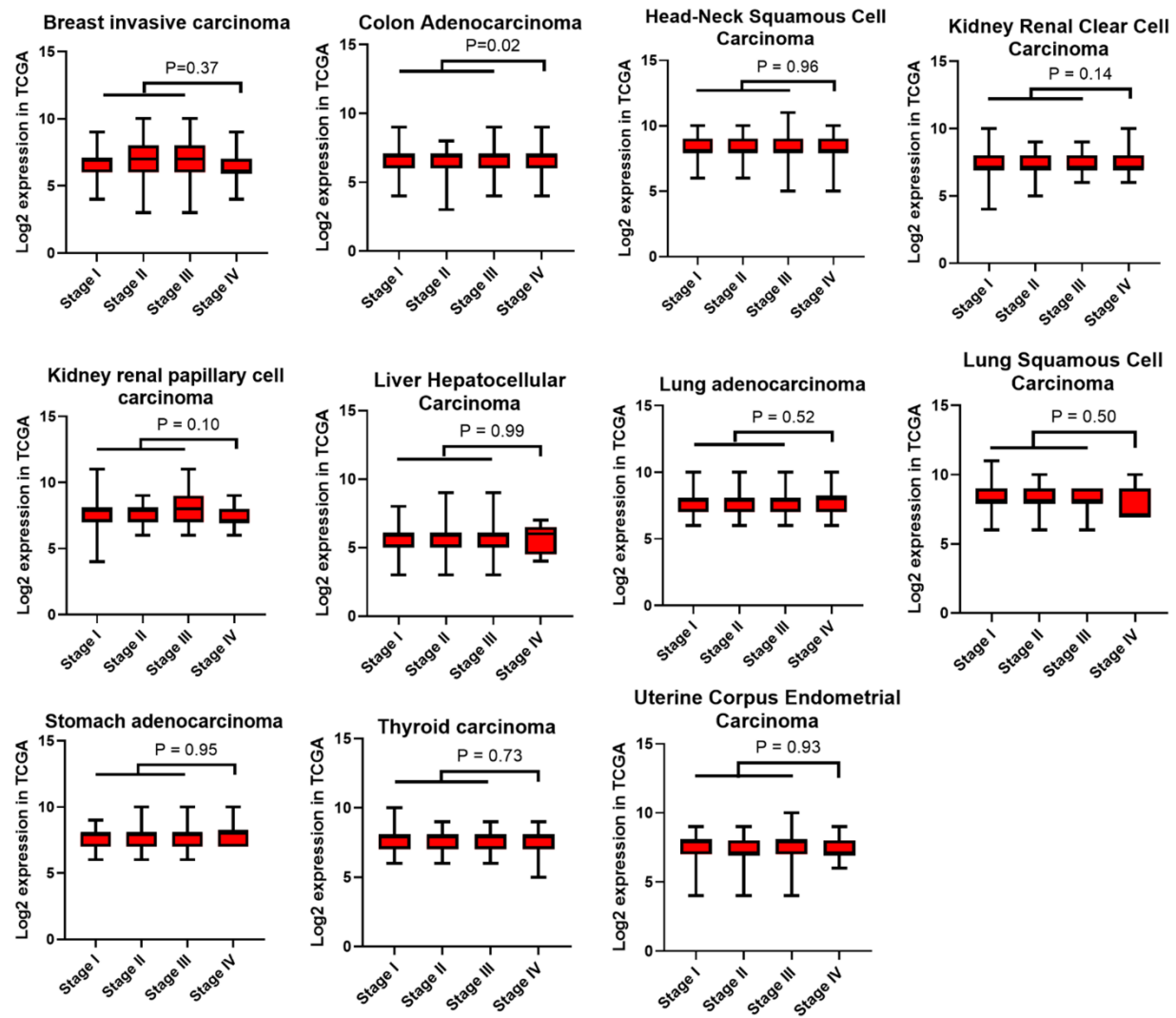
Supplementary Figure 2. Expression analysis of HIF3A in different stages of cancer. HIF3A expression level significantly correlated with different stages of colon adenocarcinoma, lung adenocarcinoma, and uterine endometrial carcinoma. But did not correlate with different stages of other types of cancer. ($p < 0.05$ *)



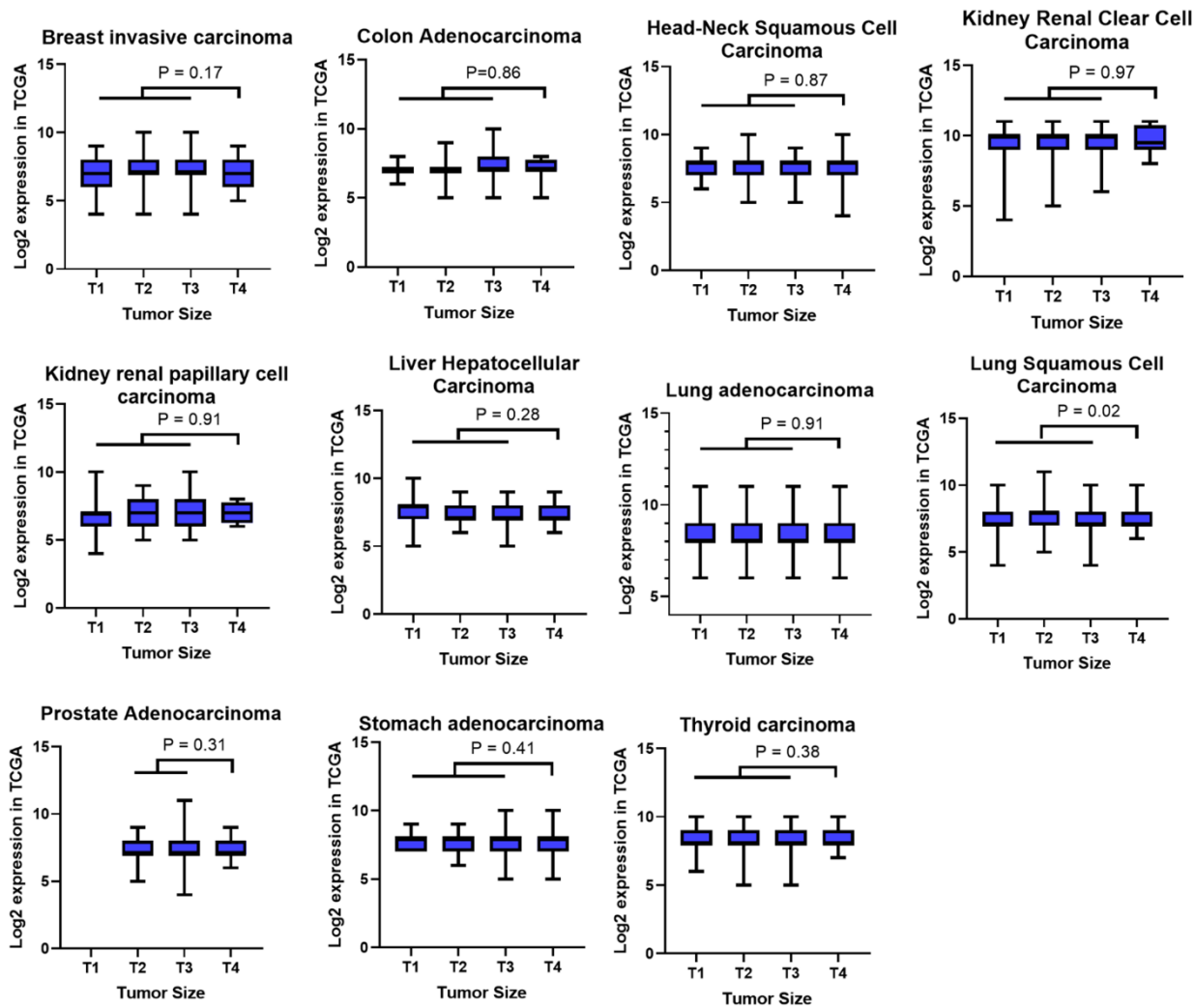
Supplementary Figure 3. Expression analysis of HIF1A in different tumor sizes of various types of cancer. The expression level of HIF1A did not significantly correlate with any types of selected TCGA cancer tissues. ($p < 0.05$ *).



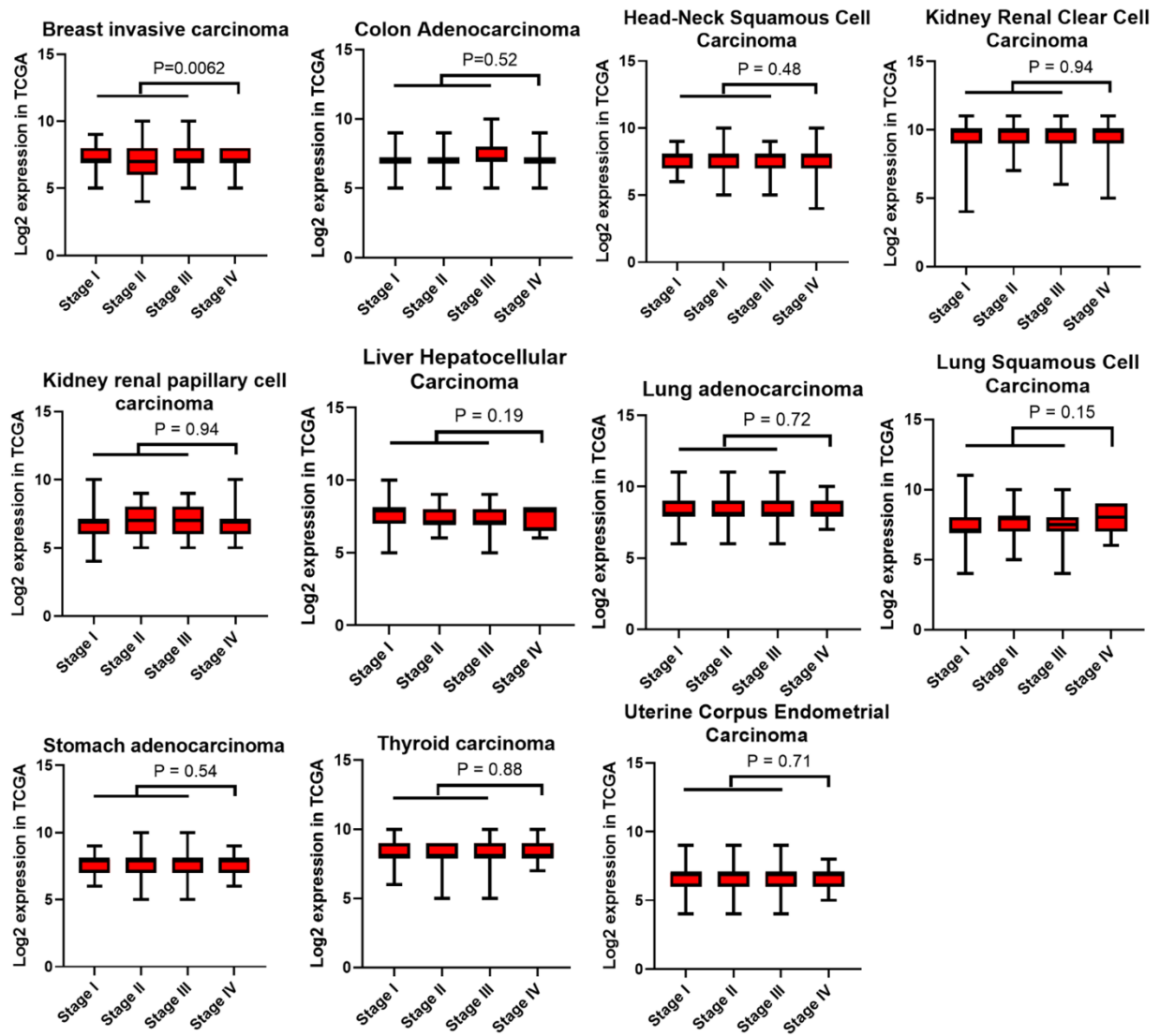
Supplementary Figure 4. Expression analysis of HIF1aA in different stages of cancer. HIF1A expression level significantly correlated with different stages of colon adenocarcinoma, but did not correlate with different stages of other types of cancers. ($p < 0.05$ *).



Supplementary Figure 5. Expression analysis of HIF2A in different tumor sizes of various types of cancer. HIF2A expression level only significantly correlated with different tumor sizes of lung squamous cell carcinoma, but did not correlate with different sizes of other cancers. ($p < 0.05$ *).



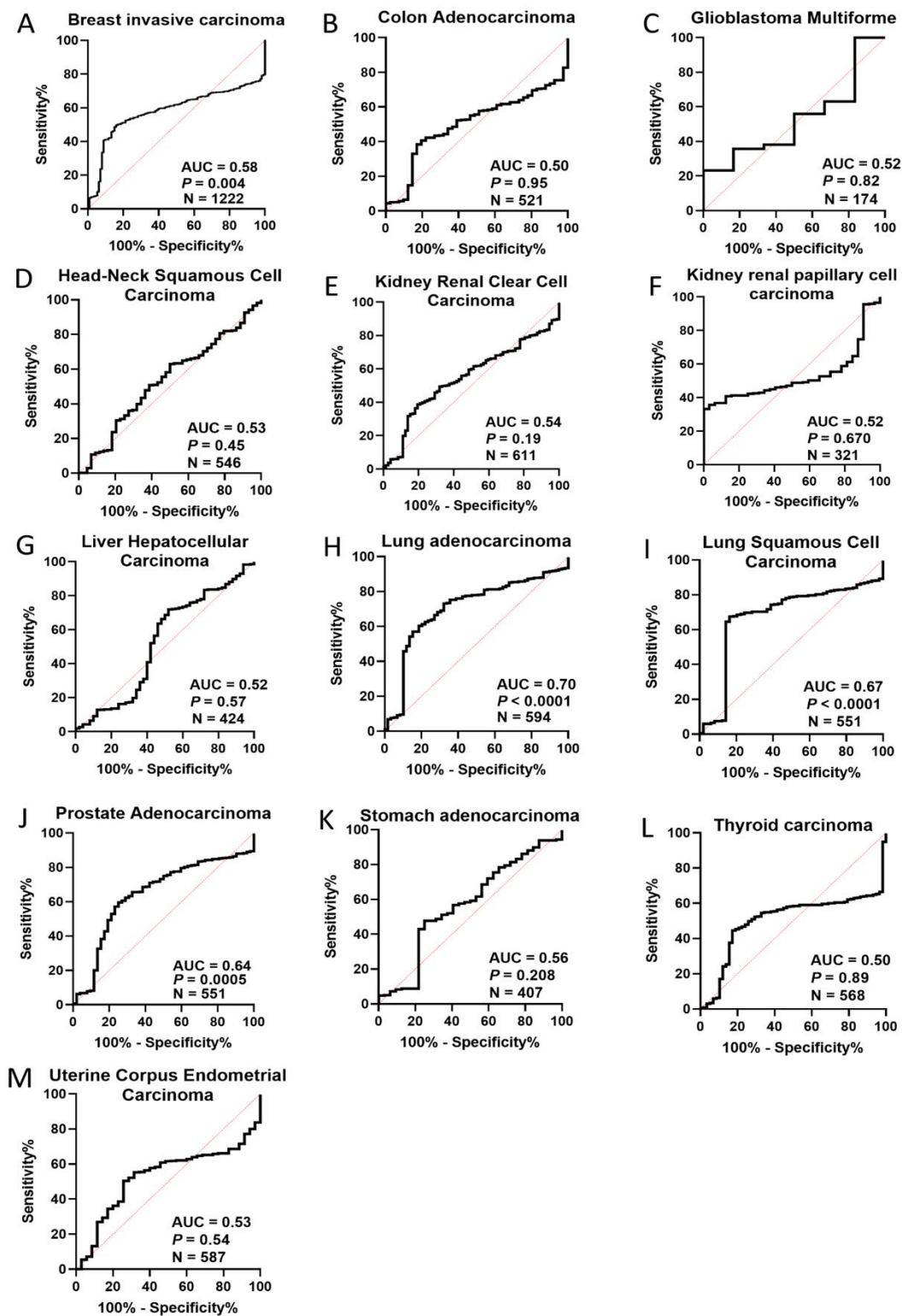
Supplementary Figure 6. Expression analysis of HIF2A in different stages of cancer. HIF2A expression level significantly correlated with different stages of breast invasive carcinoma, but did not correlate with different stages of other types of cancer. ($p < 0.05^*$).



82 **Supplementary Figure 7. Receiver operating characteristic test of HIF3A in different types of cancer.**

83 HIF3A diagnostic potential was weak in most types of cancers, except in lung adenocarcinoma, which it had

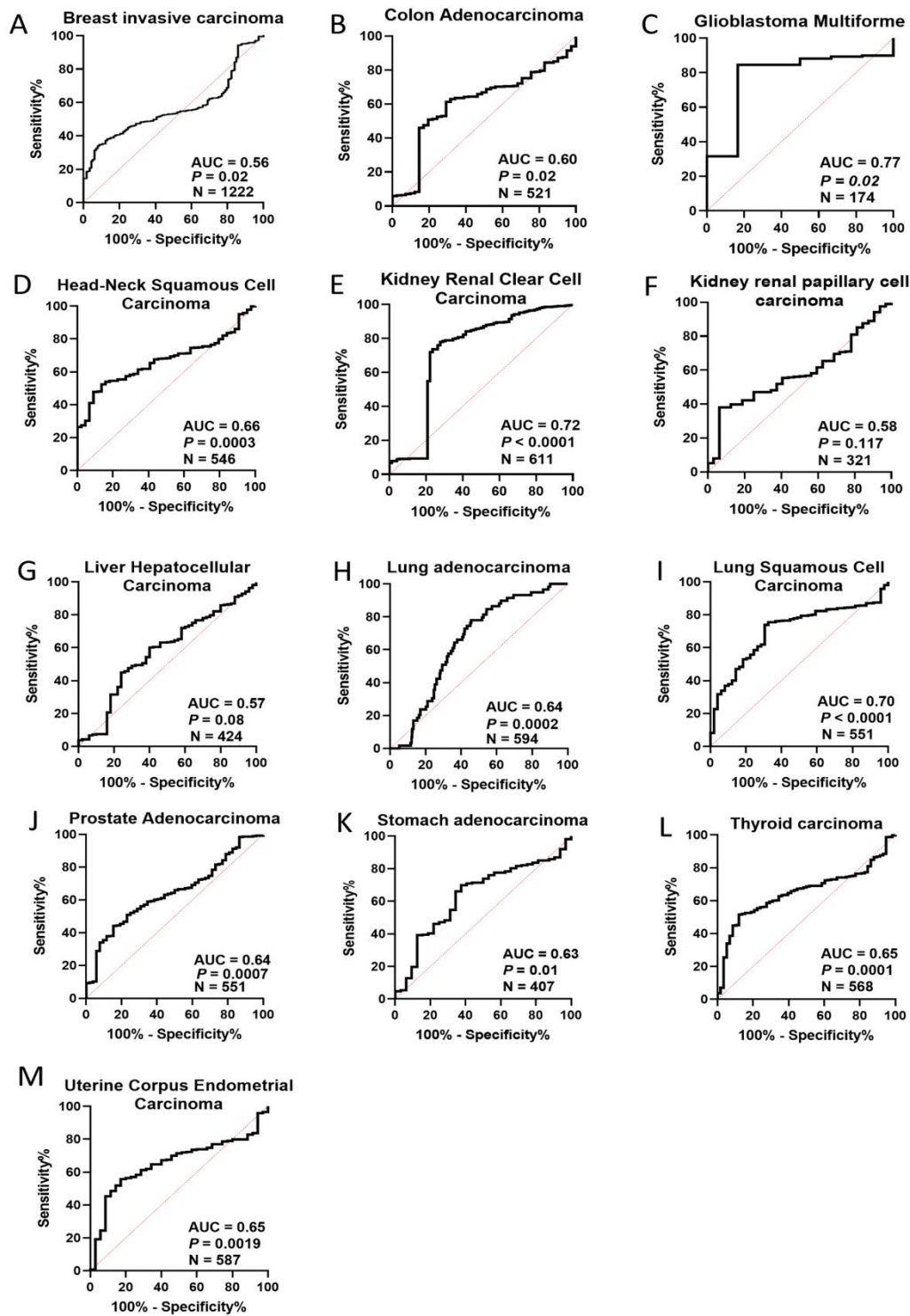
84 better diagnostic potential and higher AUC value compared to other types of cancer.



86 **Supplementary Figure 8. Receiver operating characteristic test of HIF1A in different types of cancer.**

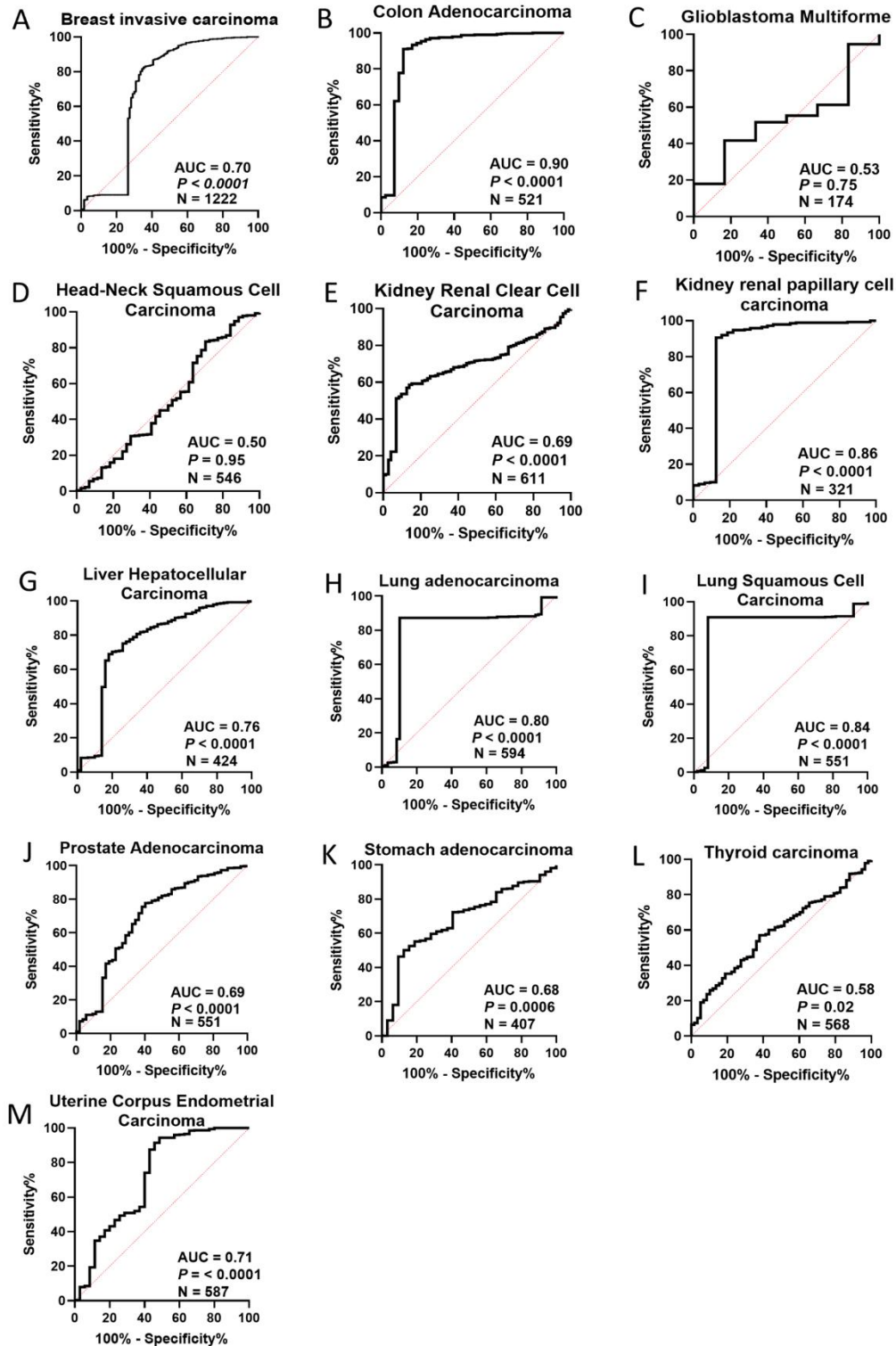
87 HIF1A had a weak diagnostic potential in most types of cancers, except in glioblastoma multiforme, kidney

88 renal clear cell carcinoma, and lung squamous cell carcinoma cancers.

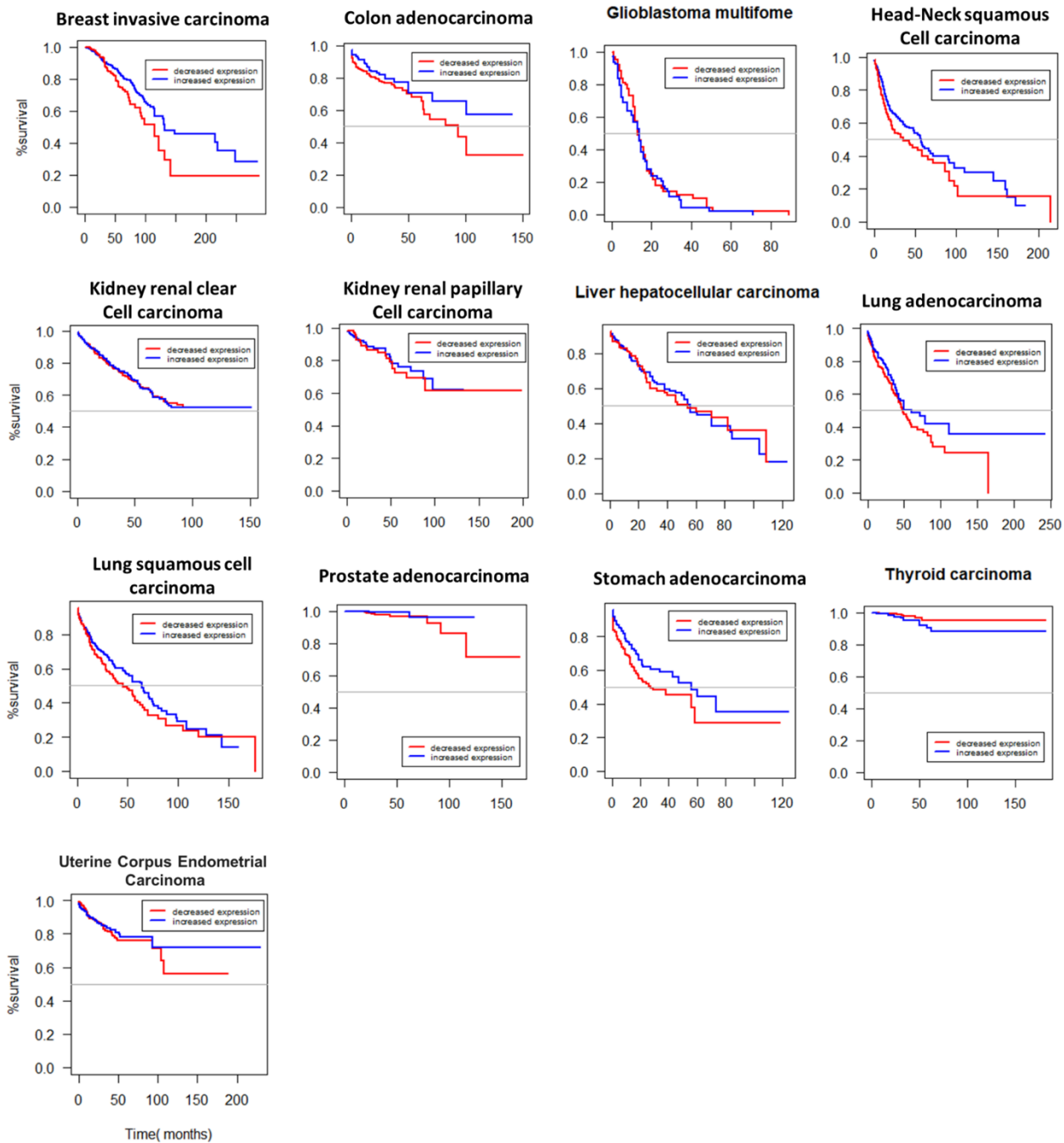


Supplementary Figure 9. Receiver operating characteristic test of HIF2A in different types of cancer.

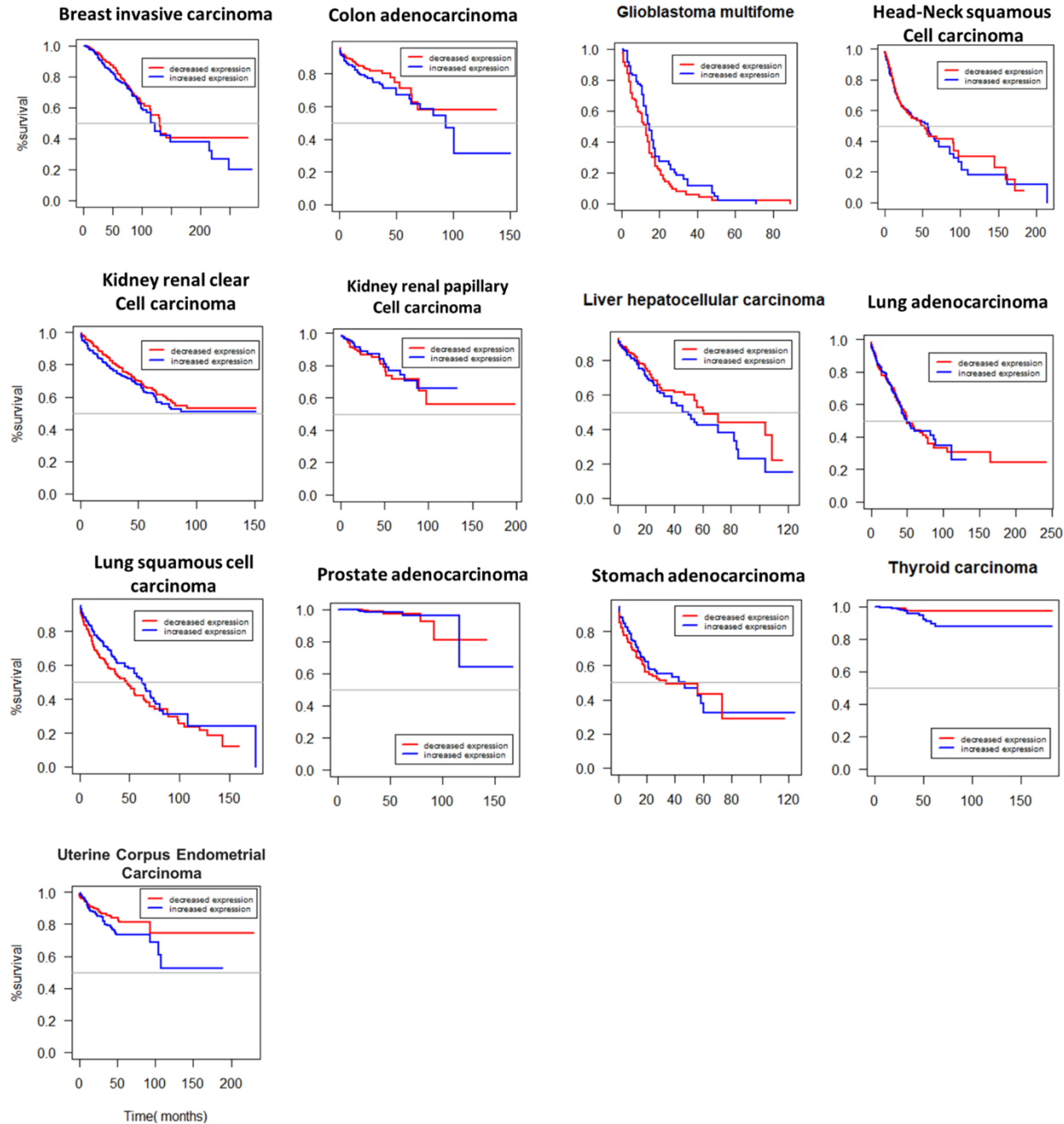
HIF2A diagnostic potential was significant in most types of cancers, especially in breast invasive carcinoma, colon adenocarcinoma, kidney renal carcinoma, colon adenocarcinoma, liver hepatocellular carcinoma, lung adenocarcinoma, lung squamous cell carcinoma, and uterine corpus endometrial carcinoma cancers.



Supplementary Figure 10. Survival analysis of HIF3A in different types of cancer. Higher expression level of HIF3A correlated with better survival of patients with different types of cancers. Such as breast invasive carcinoma, colon adenocarcinoma, head-neck squamous cell carcinoma, kidney renal papillary cell carcinoma, lung adenocarcinoma, lung squamous cell carcinoma, prostate adenocarcinoma, stomach adenocarcinoma, and uterine corpus endometrial carcinoma cancers.



Supplementary Figure 11. Survival analysis of HIF1A in different types of cancer. High expression level of HIF1A correlated with better survival in patients with glioblastoma multiforme, kidney papillary cell carcinoma, lung squamous cell carcinoma, and stomach adenocarcinoma cancers. In other types of cancer, lower expression level of HIF1A was associated with better survival.



Supplementary Figure 12. Survival analysis of HIF2A in different types of cancer. Higher expression level of HIF2A correlated with better survival in patients with kidney renal cell clear carcinoma and kidney renal papillary cell carcinoma, but in most other types of cancer, lower expression level of HIF2A was associated with better survival.

