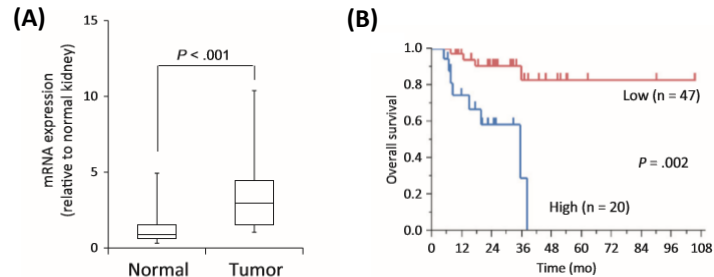
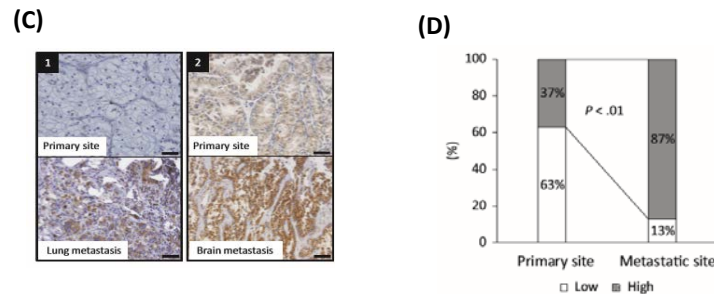


Phospholipase D2 promotes disease progression of renal cell carcinoma through the induction of angiogenesis.

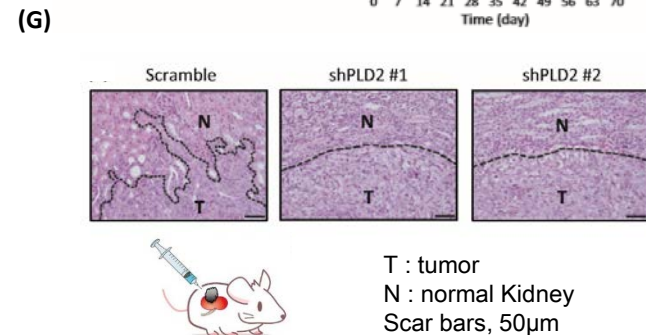
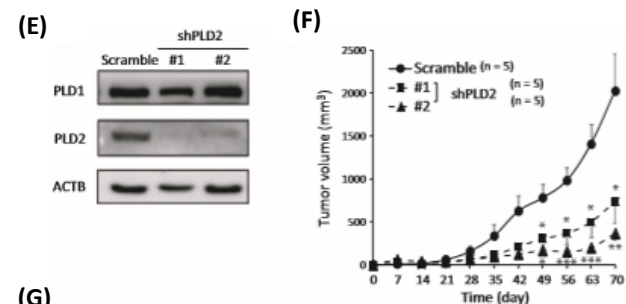
➤ Expression levels of PLD2 are associated with tumor progression of clear cell renal cell carcinoma (A, B).



➤ PLD2 protein levels are elevated in the sites of metastasis in patients with clear cell renal cell carcinoma (C, D).



➤ Knockdown of PLD2 in clear cell renal cell carcinoma cells suppresses tumor growth and invasion in vivo (E-G).



- ✓ Approximately one-quarter of patients with RCC present with locally advanced or metastatic disease at diagnosis, and about 20%-40% of those with confined primary tumors will develop metastatic disease. Although new target therapies and immunotherapies have emerged in recent years, their efficacy is not sufficient to overcome advanced RCC.
- ✓ The present study shows that elevated expression of phospholipase D2 (PLD2) was associated with poor prognosis, and that PLD2 ablation and PLD2 small-molecule inhibitors suppress cell proliferation and invasion of renal cancer cells in vitro, thereby providing the first evidence that targeting PLD2 is a good candidate for future therapeutic and clinical applications against metastatic RCC.

Reference: Kandori et al. Cancer Sci. 2018; 109: 1865-1875

Contact: Prof. Hiroyuki Nishiyama