

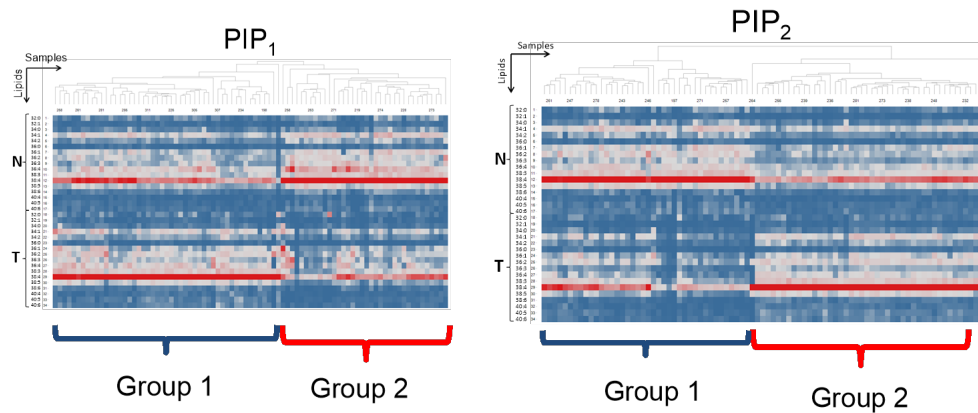
# MP57-17 Prognostic impact of phosphatidylinositol phosphate and its associated enzyme levels in patients with renal cell carcinoma treated surgically

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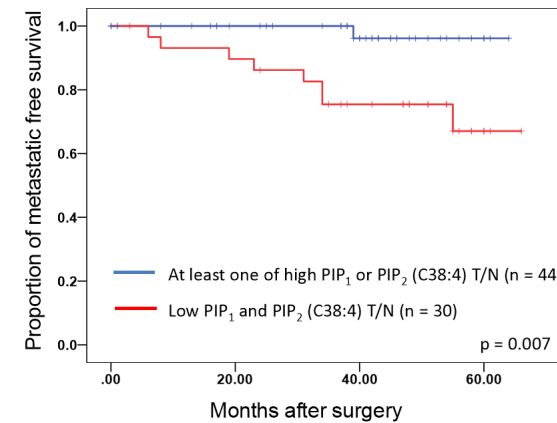
We investigated membrane lipid metabolites (phosphatidylinositol phosphates, PIPs) profile including their phosphorylated forms (PI, PIP1 and PIP2) in human RCC tissues with an original method using mass spectrometry.

## Hierarchical cluster analysis of PIPs levels in all samples

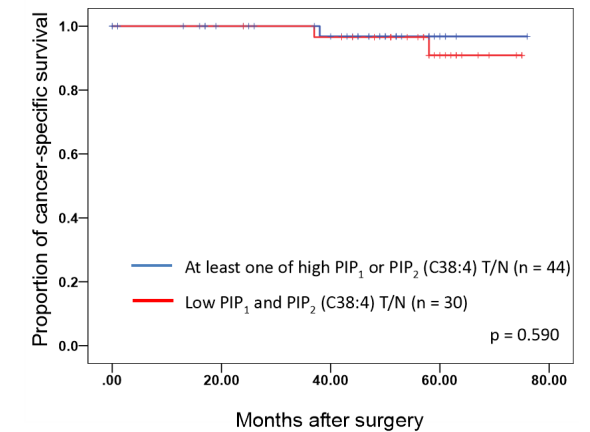


## Kaplan-Meier curves for survivals in patients with RCC who underwent surgery according to PIP<sub>1</sub> and PIP<sub>2</sub> (C38:4) T/N ratio

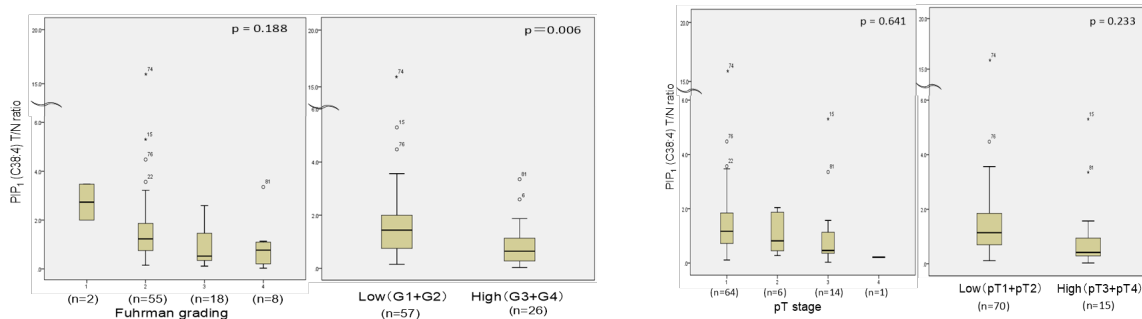
### Metastatic-free survival



### Cancer-specific survival



## The relationship between histological grade/pathological stage and PIPs levels



## Cox proportional hazards for MFS in patients with RCC who underwent surgery

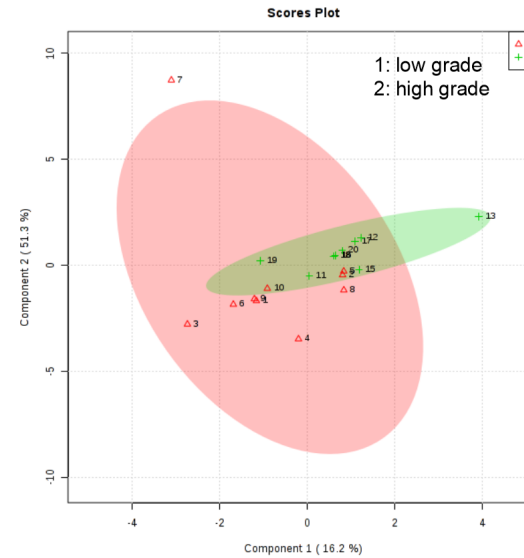
Variables		Univariate			Multivariate		
		HR	95% CI	P value	HR	95% CI	P value
Sex	Male vs femal	1.86	0.38-9.01	0.384			
Age	≥69 vs <69	1.86	0.46 - 7.48	0.382			
pT stage	≥pT3 vs <pT3	8.35	2.22-31.30	0.002	6.8	1.46-31.75	0.015
Fuhrman grade	≥G3 vs ≤G2	6.79	1.62-28.56	0.009	4.32	0.97-19.41	0.054
PIP (C38:4) T/N	Low PIP <sub>1</sub> and PIP <sub>2</sub> vs others	10.2	1.27-81.84	0.029	9.23	1.01-77.53	0.041

## Correlation between *MTM1* and *MTMR6* mRNA and PIPs T/N ratio in patients with RCC treated with surgery

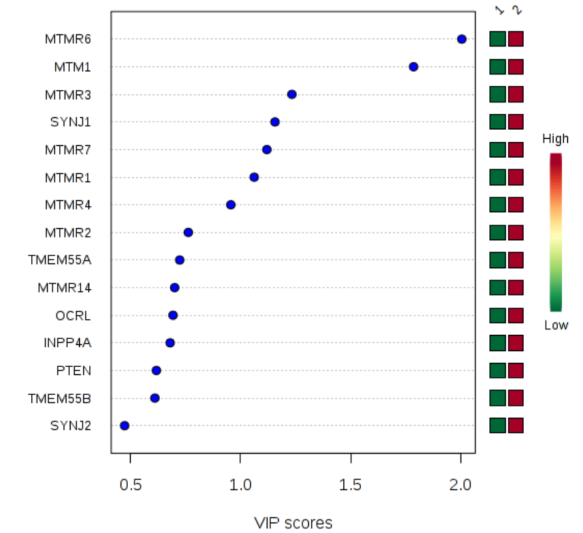
	MTM1 mRNA T/N		MTMR6 mRNA T/N	
	r <sup>2</sup>	p value	r <sup>2</sup>	p value
PIP <sub>1</sub> (C38:4)T/N	0.619	0.005	0.591	0.010
PIP <sub>2</sub> (C38:4)T/N	0.623	0.004	0.628	0.005
PI (C38:4)T/N	0.353	0.139	0.280	0.261

## PLS-DA analysis for the discrimination of low and high grade RCC according to 16 candidate phosphatases in patients with RCC treated with surgery

Scores plot



VIP score



## Conclusion

- The low PIP<sub>1</sub> T/N and PIP<sub>2</sub> (C38:4) T/N ratios were associated with cancer aggressiveness and poor metastatic-free survival in patients with RCC who underwent surgery.
- PIPs levels in surgical specimen have a potential to be a biomarker for oncological outcome in patients with RCC, and targeting related enzymes of PIPs may become a novel treatment strategy for RCC.