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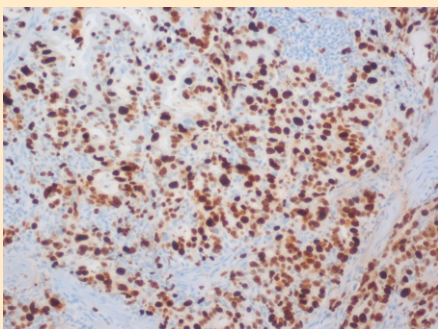
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## INTRODUCTION

- Ki-67 protein has been used as an indicator of proliferation activity in tumor cells
- In gastric cancer the prognostic value has not been fully understood
- This study was designed to assess the biologic significance of Ki-67 proliferation index (PI) in gastric cancer

## MATERIAL / METHODS

- Seventy-two patients with gastric cancer were evaluated and underwent gastric resection
- Tumor tissue was stained immunohistochemically
- Ki-67 PI was defined as the percentage of tumor cells positive for Ki-67
- Ki-67 PI was correlated with clinicopathological characteristics and patient survival



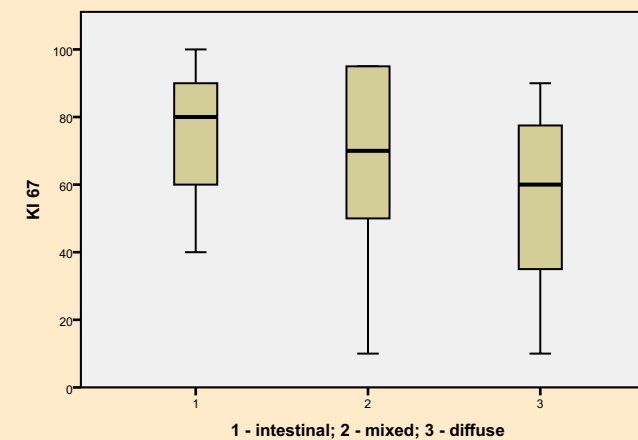
**Figure 1** - Gastric cancer tissue microarray with high Ki-67 PI. Ki-67 Immunostaining (x100).

**Table 1** Correlation Ki-67 PI and Clinicopathologic characteristics

Clinicopathologic parameters	Ki-67 PI ± SD	P
<b>Sex</b>		0.991
Male (n = 38)	67.76 ± 24.43	
Female (n = 25)	67.84 ± 25.84	
<b>Age</b>		0.022
≤ 65 years (n = 32)	60.78 ± 28.96	
> 65 years (n = 29)	75.38 ± 17.57	
<b>Histologic type (Lauren)</b>		0.009
Intestinal (n = 34)	76.06 ± 16.96	
Mixed (n = 10)	63.50 ± 32.06	
Diffuse (n = 19)	55.26 ± 27.76	
<b>Signet-ring cells</b>		0.004
Absent (n = 40)	74.52 ± 17.09	
Present (n = 23)	56.09 ± 31.44	
<b>Tumor invasion</b>		0.294
T1 (n = 13)	60.77 ± 28.71	
T2 (n = 9)	76.11 ± 25.95	
T3 (n = 20)	63.05 ± 24.81	
T4 (n = 21)	73.10 ± 21.01	
<b>Lymph node metastasis</b>		0.767
Absent (n = 25)	66.64 ± 27.20	
Present (n = 38)	68.55 ± 23.42	
<b>Distant metastasis</b>		0.485
Absent (n = 59)	67.22 ± 25.30	
Present (n = 4)	76.25 ± 14.93	

## RESULTS

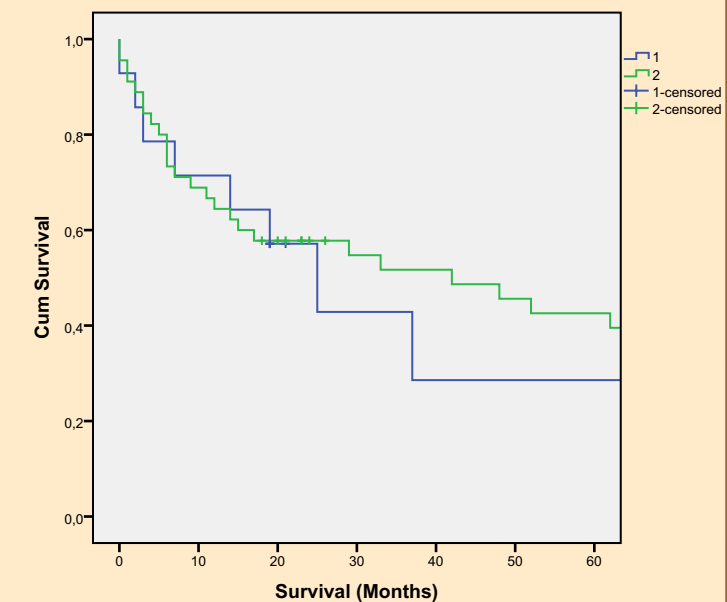
**Figure 2** Histologic type (Lauren) and Ki-67 PI



Kruskal-Wallis nonparametric test ( $p = 0.021$ ). Ki-67 PI distribution is not the same across the 3 groups.

Groups	Mean (months)
Low Ki-67 PI	41.79 ± 14.02
High Ki-67 PI	63.05 ± 10.19
Overall	59.94 ± 8.90

**Figure 3** Overall Survival for patients with low and high Ki-67 PI



Kaplan-Meier survival plot. **1** - Low Ki-67 PI group ( $\leq 50\%$ ); **2** - High Ki-67 PI group ( $> 50\%$ ). No statistical significant difference between groups (Mantel-Cox test -  $p = 0.623$ ).

## CONCLUSION

- **Inverse correlation** between Ki-67 PI and histological differentiation grade was found in this sample
- Patients in group with **low Ki-67 PI** are younger, with poorly differentiated histology and have a lower mean survival
- No significant prognostic value was achieved between high or low Ki-67 PI groups
- We may have two different tumors phenotypes – highly invasive with low proliferative capability, and less invasive potential with higher proliferative ability