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Introduction:

Gastric cancer is the fifth most common malignancy and the third leading cause of cancer death worldwide. Adjuvant chemoradiotherapy contributes to improve survival outcomes after gastrectomy.

Objectives:

Our aim was to evaluate survival data in patients with gastric cancer after postoperative adjuvant chemoradiotherapy in relation to survival determinants emphasizing the metastatic lymph node ratio.

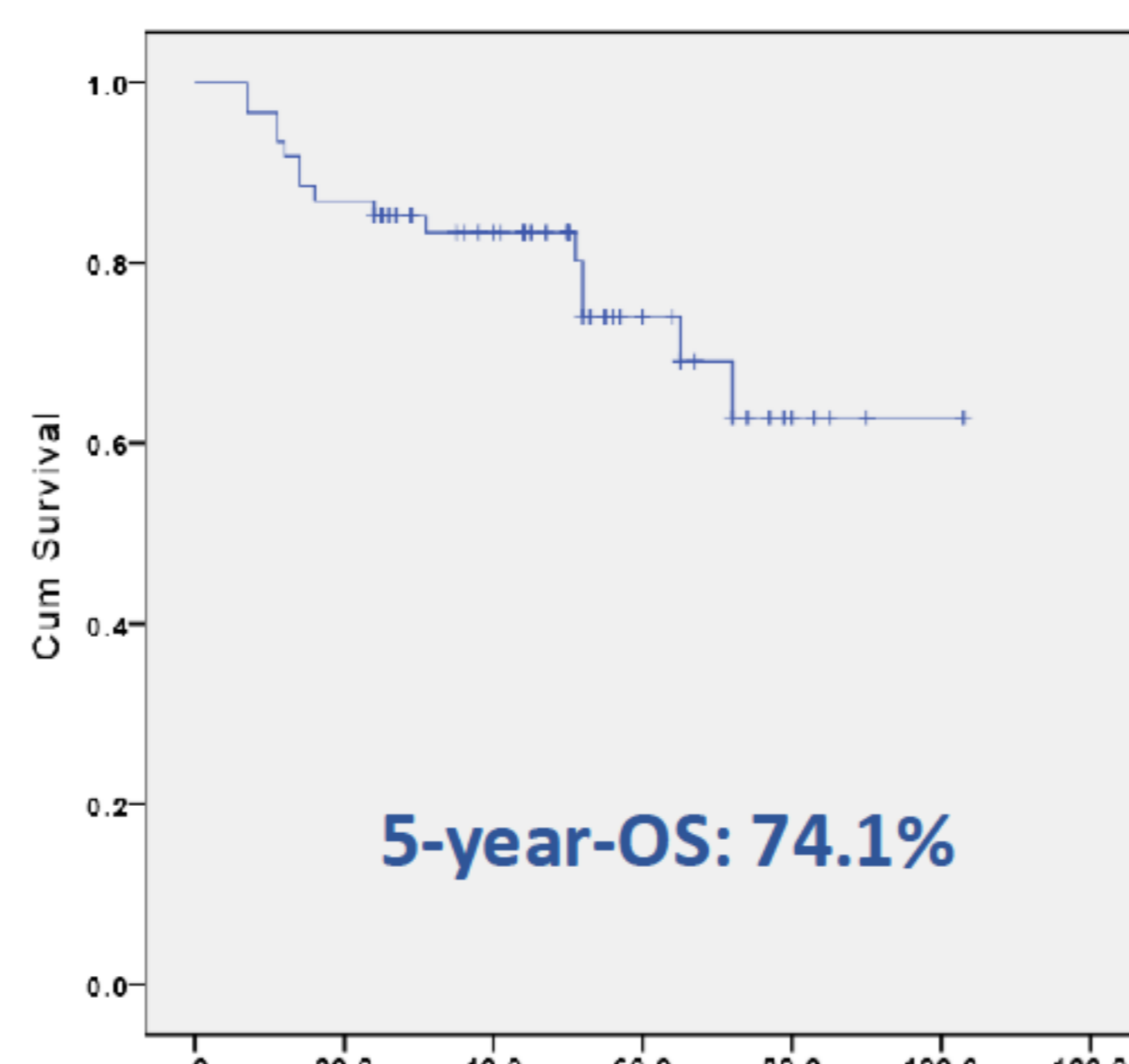
Methods:

We retrospectively reviewed data from 61 patients diagnosed with gastric cancer between 2006-2012 who underwent gastrectomy plus adjuvant chemoradiotherapy. Treatment consisted of two cycles of Lv5Fu2 before radiotherapy, continuous 5-Fu infusion during radiotherapy and 6 cycles after radiotherapy (45 Gy/25 fractions/5 weeks). As survival determinants we consider: metastatic lymph node ratio, establishing two distinct groups - **group 1** equal or inferior to 0.26 and **group 2** superior to 0.26, age at diagnosis, gender, tumor location, T and N stage, grade of differentiation, histologic subtype (diffuse, intestinal, others), surgical procedure (radical or subtotal gastrectomy) and completion of adjuvant therapy. Survival analysis was made by Kaplan-Meier method.

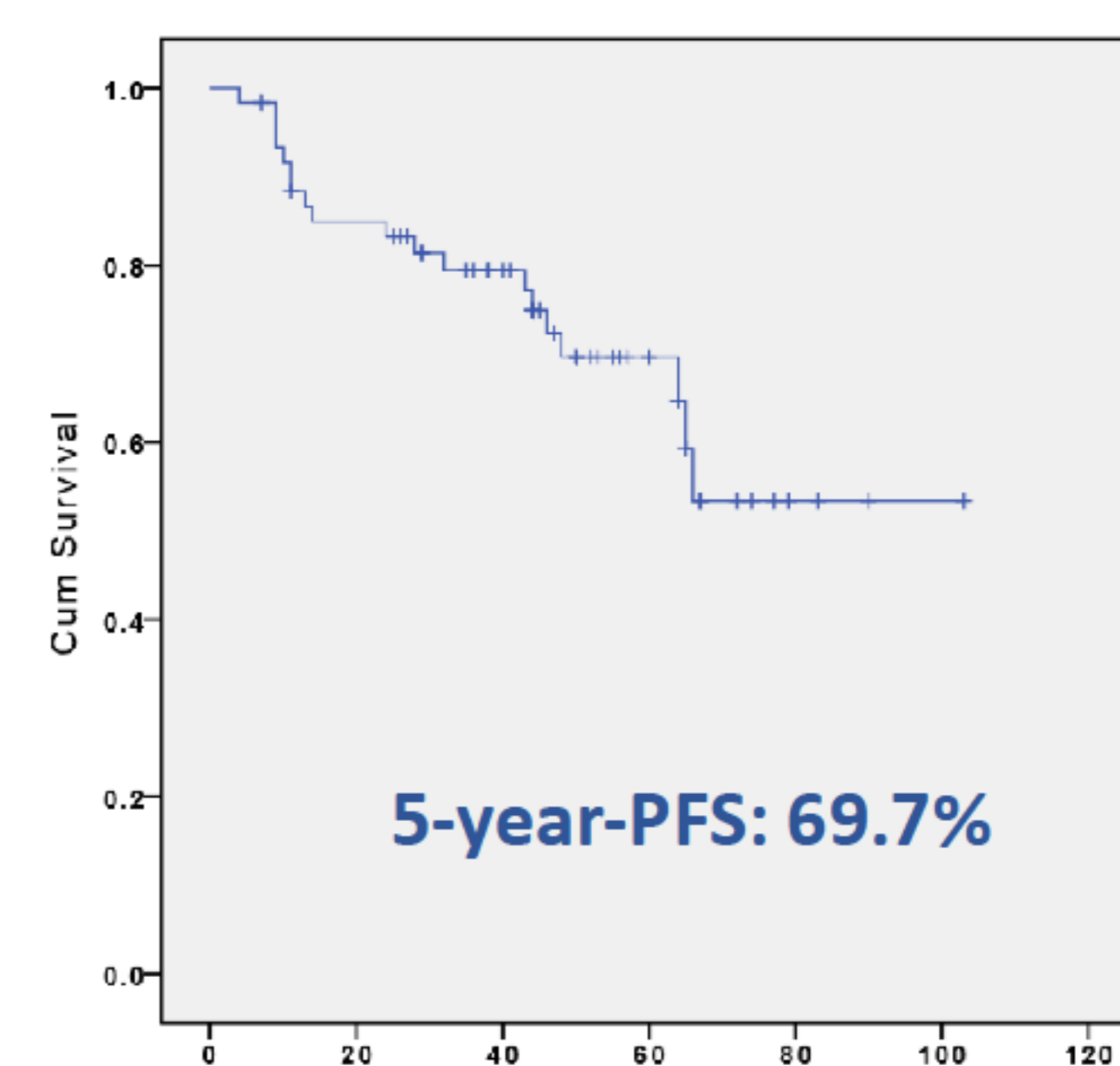
Results:

Population Characteristics	n	%
Age		
Median age (years)	61	
Age range (years)	43 to 78	
Gender		
Male	37	60.7
Female	24	39.3
Tumor Location		
Pyloric antrum	32	52.5
Gastric body	22	36.4
Cardia	7	11.1
Surgery		
Subtotal gastrectomy	45	73.8
Total gastrectomy	16	26.2
Pathologic stage		
pT1	4	6.6
pT2	18	29.5
pT3	30	49.2
PT4	9	14.8
pN0	19	31.1
pN1	24	39.3
pN2	13	21.3
pN3	5	8.2
Histologic subtypes		
Intestinal type	21	34.4
Diffuse type	22	36
Others	18	29.6
Grade		
1	22	36
2	15	24
3	24	40
lymph nodes excised		
<15	19	31.1
> 14	42	68.9
Average of lymph nodes removed	19.2	
Average of metastatic lymph node	3.51 (0 to 19)	

Overall-Survival (OS)



Progression-Free-Survival (PFS)



n=61

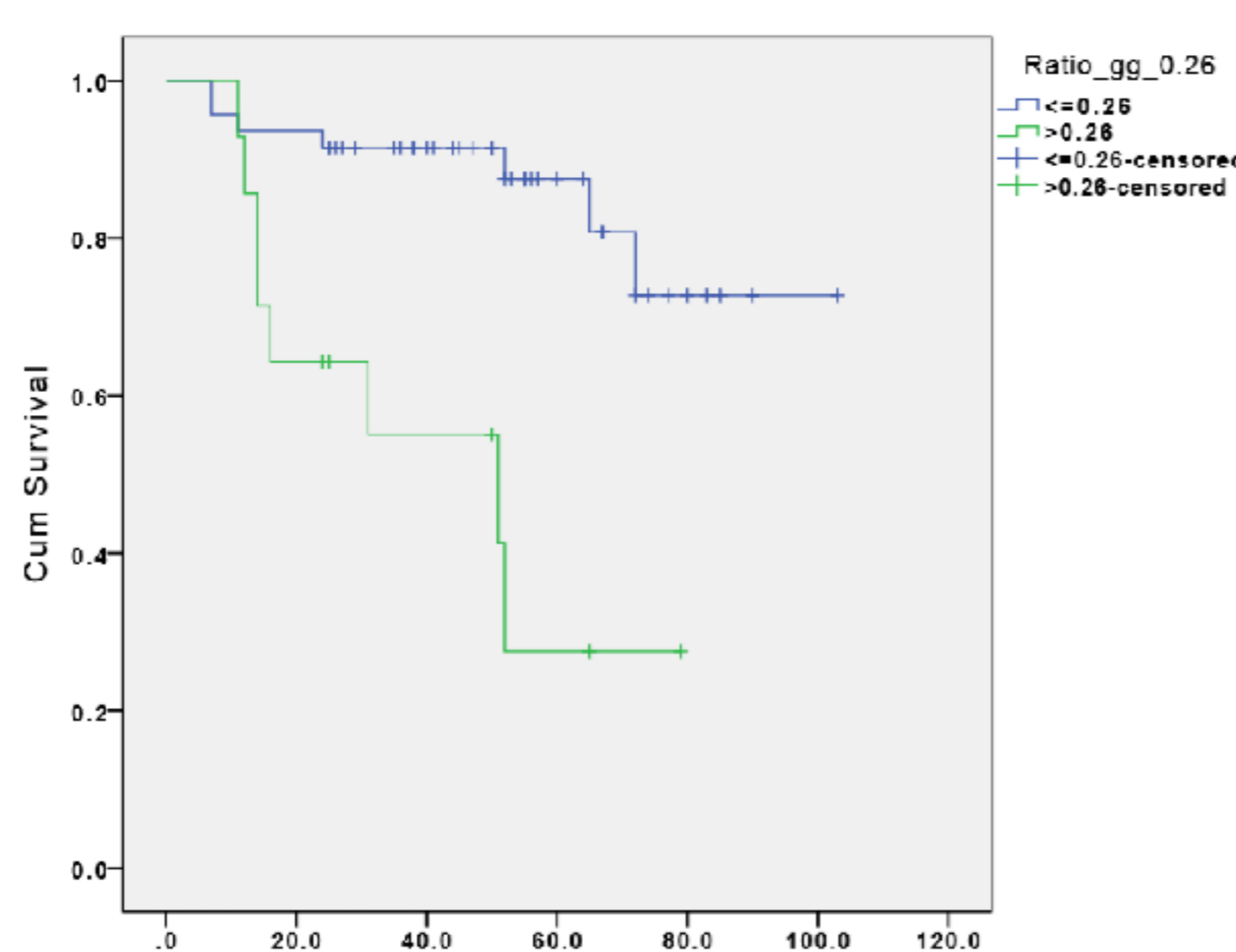
OS and PFS had no statistical significant difference when taking into consideration age, tumor location, surgical procedure, pT stage, histologic subtype, grade of differentiation or completion of adjuvant therapy.

Considering gender, we found a significant difference on OS between female and male (89% versus 63.8%, p=0.045), but not on five-year PFS (66.6% versus 75.8%, p=0.537).

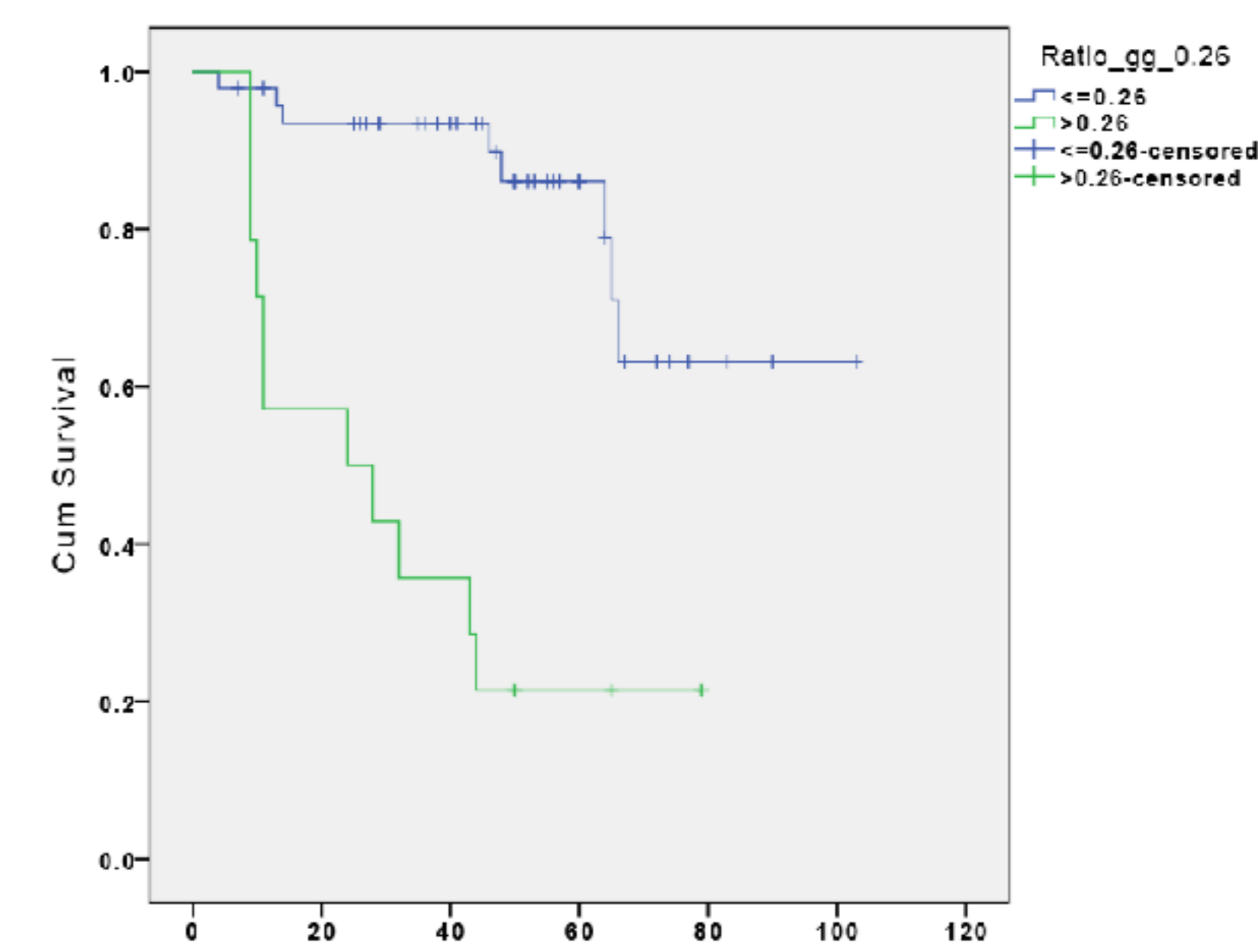
For pN stage a significant difference was confirmed for five-year – OS (p= 0.002) and PFS (p<0.0001).

We also found an impact on PFS but not on OS, for those with more than 14 lymph nodes versus less than 15 lymph nodes removed (84.4% versus 63.1%, p=0.045).

OS by Metastatic lymph node ratio



PFS by Metastatic lymph node ratio



Group 1
n=47 patients
OS: 87.5%

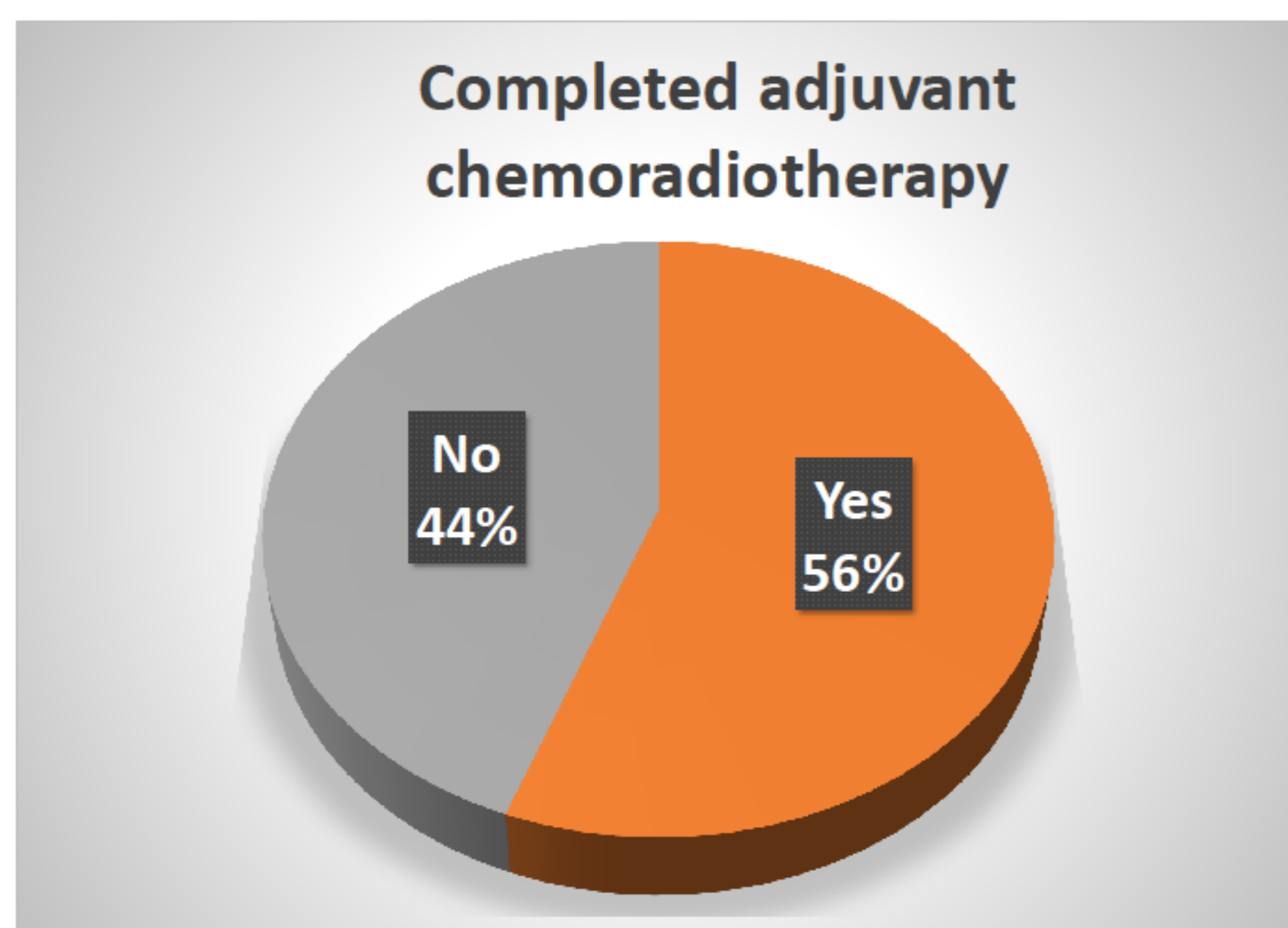
Group 2
n=14 patients
OS: 27.6%

p<0.0001

Group 1
n=47 patients
PFS: 86.1%

Group 2
n=14 patients
PFS: 21.4%

p<0.0001



Conclusion:

Our findings emphasize the prognostic value of metastatic lymph node ratio, leading us to consider that it might be time to think about improving current prognostic staging systems.

Bibliography:

- TB Trane et al. Outcomes of Gastric Cancer Resection in Octogenarians: A Multi-institutional Study of the U.S. Gastric Cancer Collaborative. Ann Surg Oncol. 2015 Mar 31.
- J. Kawada, Chemotherapy for gastric cancer patients over 75 years of age. Gan To Kagaku Ryoho. 2014 Nov.
- L. Balducci. Systemic treatment of gastric and esophageal adenocarcinoma in elderly patients. J Gastrointest Oncol. 2015 Feb.

