IMPACT OF SERUM ALBUMIN CONCENTRATION AND NEUTROPHIL-LYMPHOCYTE RATIO SCORE ON GASTRIC CANCER PROGNOSIS

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BACKGROUND|

Preoperative immunological and nutritional status are significantly related to **overall survival** of cancer patients. **Serum albumin concentration (COA)** and **neutrophil-lymphocyte ratio (NLR)** are simple and widely available measures of these status, that could help on risk-stratification.

AIM|

Evaluate the **impact of COA-NLR score** on the **prognosis of gastric cancer (GC)** patients submitted to curative-intent resectional surgery**.**

METHODS|

FIGURE 1 – FLOW CHART OF THE STUDY DESIGN

INITIAL POPULATION (n=637)
January 2010 – December 2017
Patient treated in an Upper GI Surgery Unit

EXCLUSION CRITERIA (N=229)
55 - Non resectional Surgery
51 - Pathological stage IV
25 - Histologic type other than adenocarcinoma
23 - Completion gastrectomy
13 - Prophylactic gastrecyomy
8 - Atypical gastrectomy
4 - Post endoscopic resection
2 - R2 resection

LOST FOLLOW-UP (N=12)

CASES INCLUDED (n=396)

RESULTS|

TABLE 1 – CLINICOPATHOLOGICAL FEATURES OF PATIENTS WITH GASTRIC CANCER

Age at surgery [years, median (IQR)]	68 (59-76)
Gender	
Male	226 (57,1%)
Female	170 (42,9%)
Surgery approach	
Open	201 (50,8%)
Laparoscopic	195 (49,2%)
Pathological stage	
I	182 (46,0%)
II	95 (24,0%)
III	118 (29,8%)

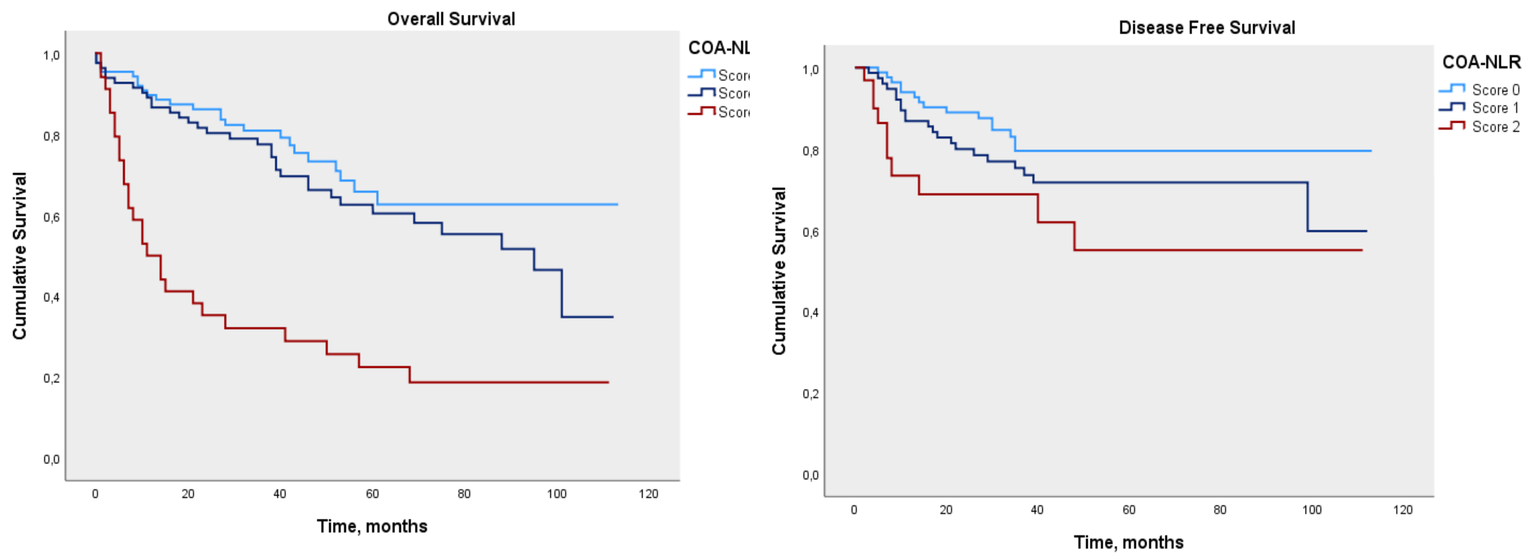
TABLE 2 – SURVIVAL ANALYSIS

	Hazard Ratio	95%CI	P values
OVERALL SURVIVAL (OS)			
COA	1,130	1,086-1,176	**<0,001**
NLR	1,061	1,004-1,222	**0,036**
COA-NLR	2,072	1,531-2,805	**<0,001**
COA-NLR adjusted to **pStage and age**	1,566	1,145-2,143	**0,005**
DISEASE FREE SURVIVAL (DFS)			
COA	1,076	1,016-1,142	**0,013**
COA-NLR	1,674	1,115-2,513	**0,013**

COA-NLR SCORE

Score 0 COA (≥35 g/L) + NLR<2,585	87
Score 1 COA (≥35 g/L) + NLR≥2,585 COA (<35 g/L) + NLR<2,585	82
Score 2 COA (<35 g/L) + NLR>2,585	34

FIGURE 2 – OVERALL SURVIVAL AND DISEASE FREE SURVIVAL, ACCORDING TO COA-NLR SCORE



CONCLUSION|

Higher COA-NLR score was **significantly associated** with **worse OS and DFS.**

COA-NLR was an **independent prognostic factor** when adjusted to pStage and age.

COA-NLR score is an **easily way to stratify patients with higher risk of poor prognosis after surgery.**