

Serum tumour markers as predictors of overall response rate and clinical benefit in patients with advanced esophagogastric adenocarcinoma (EGA) treated with chemotherapy

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BACKGROUND AND OBJETIVES

- The clinical usefulness of tumour markers (TM) in patients with advanced EGA as predictors of response and clinical benefit has been poorly defined.
- The limited literature suggests that higher ratio reduction correlates with higher effectiveness of chemotherapy.
- We evaluate the prognostic significance of serum carcinoembryonic antigen (CEA), carbohydrate antigen (CA19-9) and cancer antigen 125 (CA125) levels in these patients.

AIM AND METHODS

- Data of 67 patients diagnosed with metastatic EGA treated with first line chemotherapy from april 2011 through october 2014 were studied retrospectively.
- CEA, CA19-9 and CA125 blood levels were measured by standard routine methodology. Baseline and nadir TM levels were correlated with the main features of the tumor.
- Evaluation by computed tomography (CT).The staging was specified according to UICC 6.
- Chemotherapy efficacy was evaluated according to RECIST 1.1.

STATISTICAL CONSIDERATIONS

Correlation between TM ratio (basal / nadir) reduction, overall response rate (ORR) and clinical benefit rate (CBR) were determined by Fischer Test.

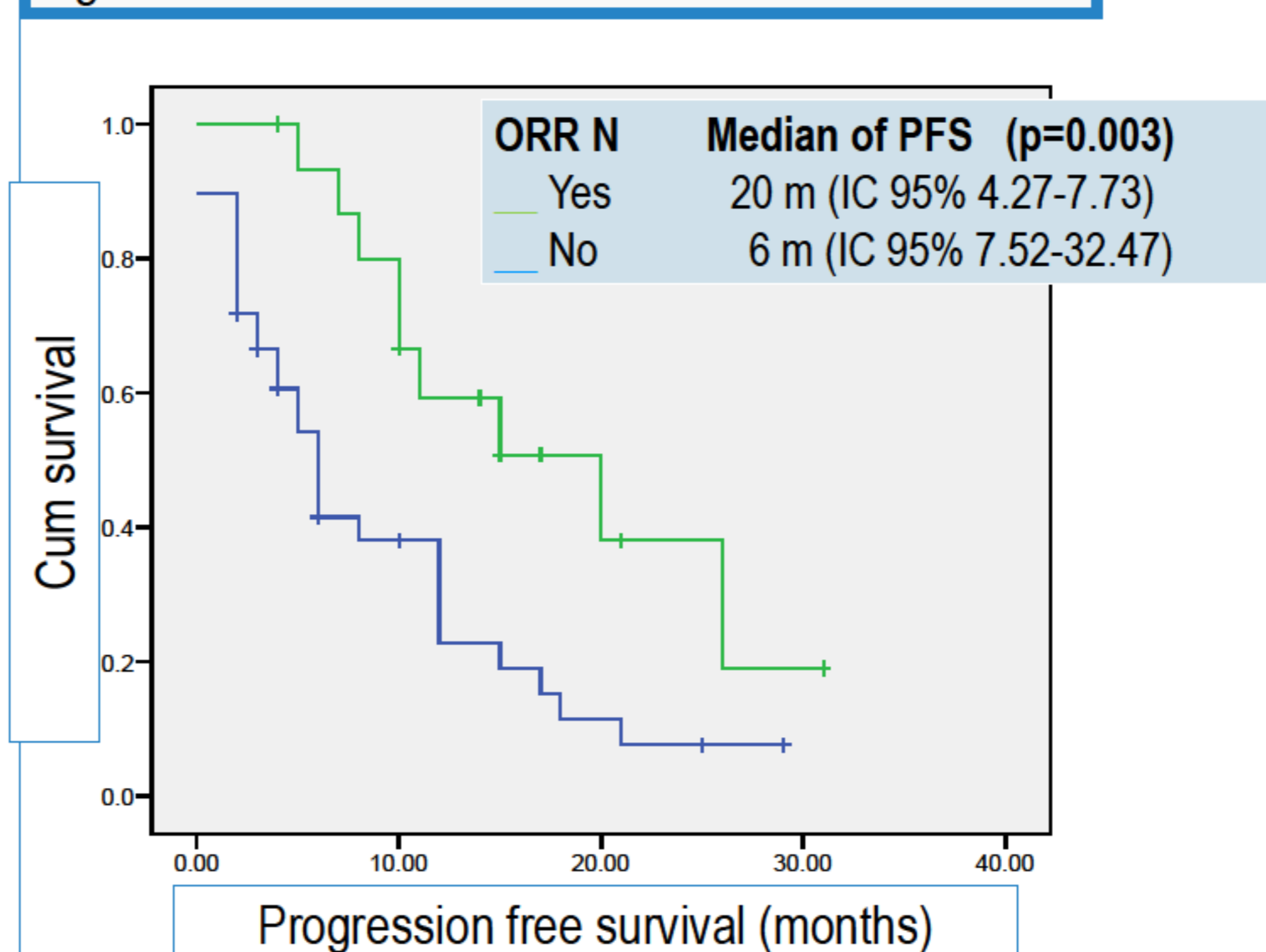
RESULTS

- Baseline patient characteristics are described in Table 1.
- Elevated serum CEA, CA19-9 and CA125 levels were determined in 42 (63%), 37 (55%) and 37 (55%), respectively; and all TM were elevated in 23 (34%).
- Radiological partial response was achieved in 25% and stable disease in 14%.
- There was a significantly higher ORR in patients who presented TM ratio reduction in CEA (p=0.008) and CA19-9 (p=0.021) but not for CA125 (p=0.88).
- CBR was significantly higher (p=0.043) in patients with CA19-9 ratio reduction. (Table 2).
- Progression-free survival was significantly longer (p=0.003) for patients with radiological response (20 m, 95%CI 4.27-7.73) versus non-responders (6 m, 95%CI 7.52-32.47) (Fig. 1).

N (67)	Percentage (%)	
Median age	67 years old (42 – 88)	
Gender	Male 70.6%	Female 29.4%
Lauren subtype	Intestinal 28.3% Diffuse 31.3% Other 22.1% Unknown 11.8%	
Grade of differentiation	Well differentiated 5.9% Moderately differentiated 11.8% Poorly differentiated 20.9% Unknown 61.4%	
HER 2 status	Positive 22.4% Negative 64.7% Unknown 12.9%	
Primary tumour location	Esophagus or Gastroesophageal junction 20.9% Gastric subcardial 79.1%	
Stage at diagnosis	Stage I –II 7.7% Stage III 16.2% Stage IV 76.1%	

	ORR (No)	ORR (Yes)	CBR (No)	CBR (Yes)
No reduction CEA	21 (52.5%)	4 (17.39%)	13 (50%)	12 (32.43%)
Reduction CEA	19 (47.5%)	19 (82.61%)	13 (50%)	25 (67.57%)
TOTAL	40 (100%)	23 (100%)	26 (100%)	37 (100%)
No reduction CA 19-9	27 (65.85%)	8 (34.79%)	19 (70.37%)	16 (43.24%)
Reduction CA 19-9	14 (34.15%)	15 (65.21%)	8 (29.63%)	21 (56.76%)
TOTAL	41 (100%)	23 (100%)	27 (100%)	37 (100%)
No reduction CA 125	17 (43.59%)	10 (45.45%)	14 (56%)	13 (36.11%)
Reduction CA 125	22 (56.41%)	12 (54.55%)	11 (44%)	23 (63.89%)
TOTAL	39 (100%)	22 (100%)	25 (100%)	36 (100%)

Figure 1: PFS and ORR



CONCLUSIONS

- CEA and CA19-9 ratio reduction is correlated with a higher ORR in patients with advanced EGA.
- In addition, CA19-9 ratio reduction was associated with a higher CBR.
- Further data analyses would be helpful to develop a predictive model for tumor response.

References

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