

Evaluation of prognostic and predictive factors in second-line treatment with irinotecan based chemotherapy in gastric cancer

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Background

Results of treatment of gastric cancer remains poor. Hence the significant role of palliative treatment. Irinotecan is one of the drugs used after treatment failure with platinum and fluoropyrimidine. General condition, level of hemoglobin, ALP, sites of metastases have an impact on the prognosis of patients treated with first-line chemotherapy. Similar factors may be important in the second-line treatment.

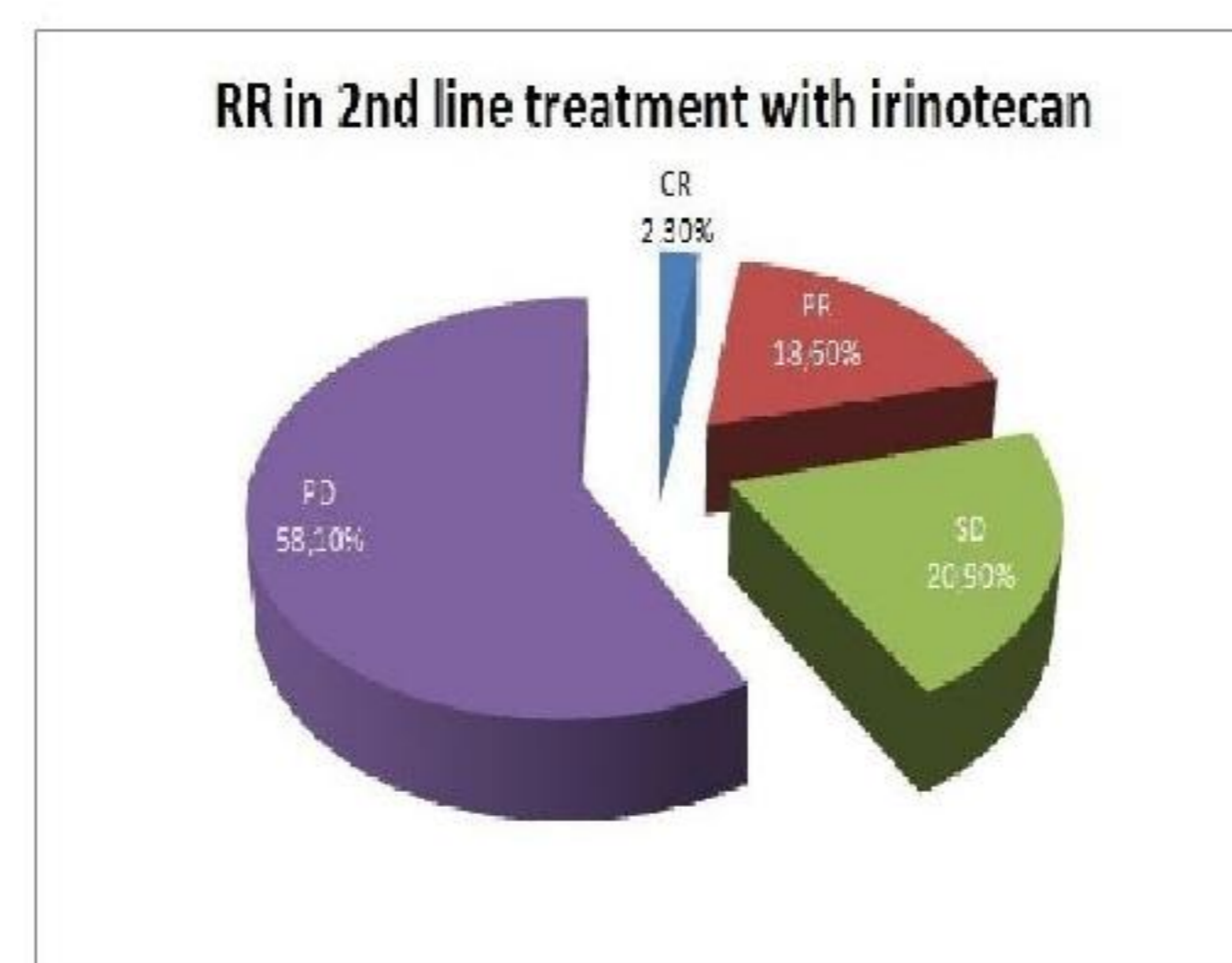
Aims

Evaluation of the effectiveness of second-line chemotherapy with irinotecan and establishing prognostic and predictive factors: histological type, surgical treatment, previous chemotherapy, location of metastases, BMI, hemoglobin, lymphocytes, and ALP in patients with gastric cancer and gastroesophageal junction cancer.

Material and methods

Analysis included 51 patients after failure of first-line palliative treatment (between 2007-2014) with platinum and fluoropyrimidine. In the second-line treatment FOLFIRI program and its modifications were used. Connection of the efficacy of second-line treatment with clinical and pathological data was evaluated.

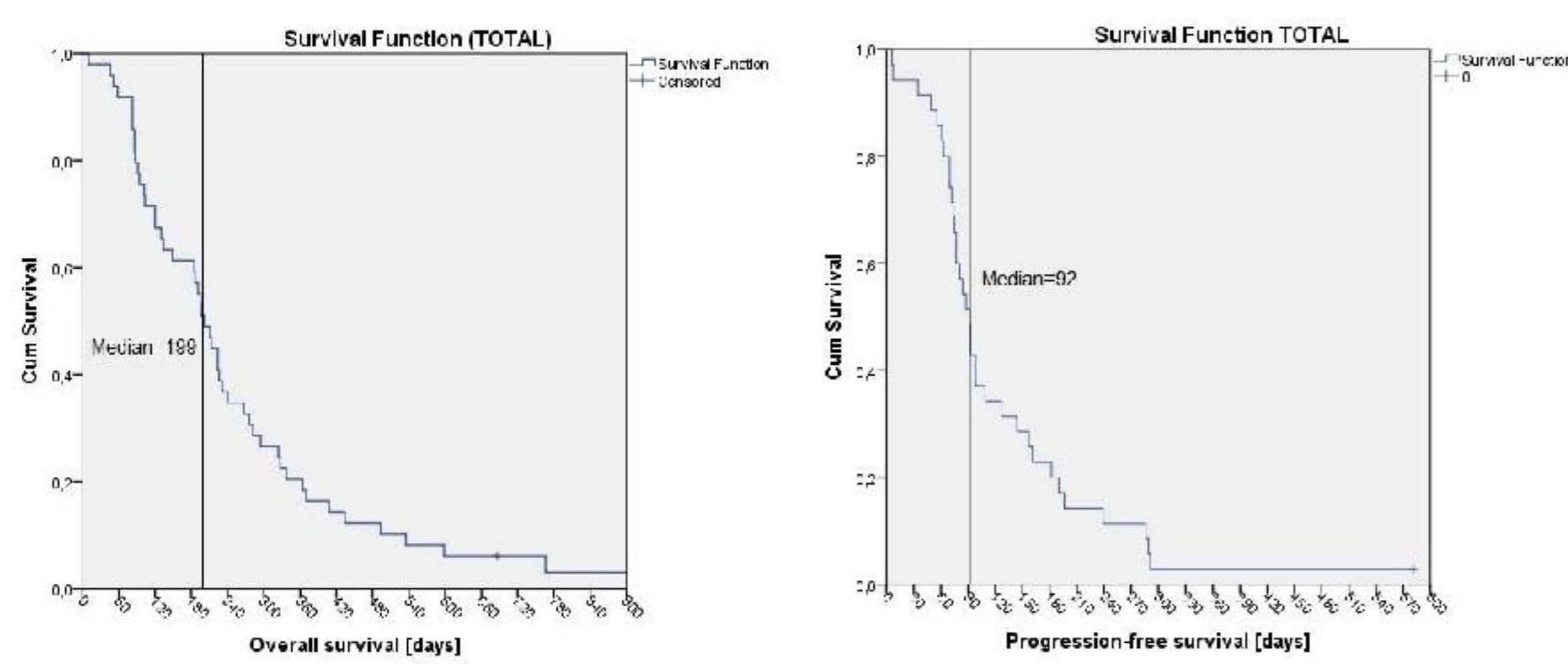
Patients Characteristic	
Age	29-80, median 60 years
Sex	Male 33 (65%) Female 18 (35%)
First-line chemotherapy	DCF 20 (39%) EOX 20 (39%) PF 8 (16%) PELF 2 (4%) XP+trast 1 (2%)
Metastases location	Locoregional 29 (57%) Liver 18 (35%) Lungs 7 (14%) Peritoneum 16 (31%) Other 30 (59%)
Time to progression in 2nd line treatment	6-581, median 92 days
Overall survival	10-1256, median 199 days



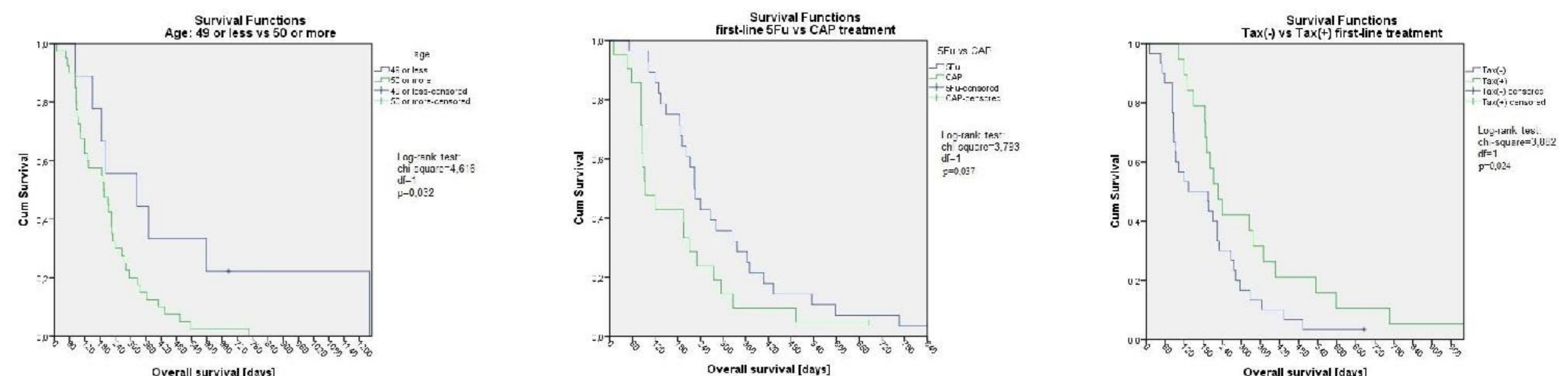
Results

Response rate was available for 43 patients. CR was observed in 2.3%, PR-18.6%, SD-20.9%, and PD -58.1%. Disease control was achieved in 41.9% of patients. Median TTP2-was 92 days. Median OS -199 days. Male gender ($p = 0.009$), age under 50 years-old ($p = 0.032$), previous treatment with DDP ($p = 0.003$) and 5-FU ($p = 0.004$) were associated with a higher probability of disease control.

factor	OR (95% CI)	progressors	non-progressors
sex (male vs female)	1.82 (0.31; 9.84)		
age (49 or less vs 50 or more)	2.02 (0.46; 8.92)		
first line 2-drug vs 3-drug treatment	9.23 (0.98; 87.69)		
first line DDP vs OXA	16.33 (2.20; 121.42)		
first line Fu vs CAP	7.40 (1.71; 32.80)		



There was no correlation with the grade of malignancy, Lauren type, gastrectomy, BMI, hemoglobin, lymphocytes, and ALP. There was a trend toward better DCR in patients treated in the first line with doublet regimen ($p = 0.067$). First line chemotherapy with 5-FU ($p = 0.037$) and docetaxel ($p = 0.024$) coexisted with longer OS. The presence of peritoneal metastases was associated with a tendency to shorter OS ($p = 0.085$).



Conclusions

Male gender, up to 50 years of age, first-line treatment with DDP and 5-FU, by doublet regimen rather than triple and absence of peritoneal metastases were associated with greater benefit from the use of second-line chemotherapy. The study of molecular prognostic and predictive factors in the future may indicate a more precise group of patients that may benefit from such treatment.

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