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PROGNOSTIC FACTORS IN PATIENTS WITH METASTATIC BREAST CANCER ON CHEMOHORMONOTHERAPY

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The purpore of this study was to evaluate the influence of some clinical prognostic factors, including the effect of chemohormonotherapy, on the survival of patients with metastatic breast cancer. Between November 1987 and February 1990 128 women with chemohormonotherapy at the Division of Cancer Chemotherapy, Department of Propaedeutics of Internal Medicine were followed up by the Oncological Dispensary-Varna.

Table 1. Patients' characteristics and results of univariate survival analysis

Factor	Patients	Uncensored	Survival (months) median	Survival (months) mean
Age < 45 years	35	24	14	16,1 ± 2,2
> 45,5 years	93	46	21	23,8 ± 4,1*
Menopausal status				
- premenopause	46	22	14	17,3 ± 2,2
- postmenopause	82	48	20	26,7 ± 3,6
Histology - inf. ductal	64	31	15	15,8 ± 1,2
- non-differentiated	22	14	23	32,8 ± 5,2
- others	16			
- no histology	26			
Free period - 0-24 months	80	46	16	16,9 ± 1,1
> 24 months	48	24	23	30,2 ± 4,4
Dominant site of metastases				
- soft tissues	35	7	>60	24,2 ± 2,5
- bones	30	11	27	44,2 ± 5,5**
- visceral	63	52	10	11,6 ± 0,9**
Tumour burden				
- metastases in one site	68	20	29	34,6 ± 5,9
- metastases in two sites	37	30	14	13,2 ± 1,2**
- metastases in > 3 sites	23	20	10	10,5 ± 0,9**
Effect of treatment				
- remission	42	9	>60	41,1 ± 6,2
- no change	40	16	29	22,9 ± 2,3**
- progression	46	45	8	8,5 ± 0,8**

* - $p < 0,05$; ** - $p < 0,001$

Patient characteristics are shown on table 1. There are 85 patients treated with CMF (Cyclophosphamid, Methotrexat, 5 - Fluorouracil), 41 ones - with FEC (5 - Fluorouracil, Epirubicin, Cyclophosphamid), 82 ones - with antiestrogens, and 46 ones - with ovariectomy and Testosteron.The response to treatment was determined after the third chemotherapy course according to the criteria recommended by the WHO (6). The survival was calculated from the start of systemic therapy for metastatic disease. The prognostic factors were assessed by univariate analysis (Kaplan-Meier product limit estimation and Cox-Mantel test) and multivariate analysis (Cox's proportional hazard regression model) (2,3). Factors, significantly associated with poor survival in the univariate analysis were: age under 45 years, 2 and more sites of metastases, visceral metastases and resistance to chemohormonotherapy. We then studied these factors in aggregate using the Cox proportional hazard model. Disease-progression after chemohormonotherapy and visceral sites of metastases each had a significantly negative effect on survival; stable disease had a marginaly negative effect as presented in table 2.

Table 2. Proportional hazard regression model

Factor	Regression coefficient	Standard deviation	p	Relative risk	95% significance limits
progression	2,39	0,31	0,0001	10,9	5,06 - 23,39
visceral metastases	1,13	0,43	0,0076	3,1	1,35 - 7,09
no change	0,72	0,43	0,0946	2,1	0,88 - 4,74
bone metastases	0.20	0,49	0.6913	1,2	0,45 - 3,24

The independent prognostic significance of the localization of metastases is shown by many authors usually in combination with short free period, negative hormone receptors, poor histologic grade, but most of them do not assess the predictive role of the effectiveness of systemic therapy (1,4,5,7). Our results confirm the prognostic significance of the systemic therapy for metastatic breast cancer and in such way justify the search for new more aggressive and effective therapeutic regimens.

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