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What are the main risk factors in patients with breast cancer younger than 35 years old?

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Background and Objective: Two per cent of the breast cancers appear in women of 35 years old or younger. The risk factors associated are multiple. The influence of the histological characteristics of the tumour and the axillary involvement on the prognosis of the disease is studied.

Methods: It is made a retrospective study of 71 women aged 35 or younger diagnosed of breast cancer in "12 de Octubre" Hospital during years 1983–2000. The statistical analysis was made with SPSS 13.00 program.

Results: The most important prognosis factor was the tumour like extension to the diagnosis. The 66.7% of the patients in initial stage IV had died within the 5 years of follow up. On the contrary, for initial stages (0 and I), 100% and 92.3% of the patients were alive without evidence of disease ($p = 0.029$). The diagnosed patients of carcinoma in situ and those with subtypes of good prognosis (medular and papilar), were alive without evidence of disease after 5 year studies. The tumour size influences in a significant way in the evolution of the disease ($p = 0.045$). The infiltrating ductal carcinoma was the most frequent histological type. Neither the type, nor the histological degree influenced the evolution. Considering the study inmunohistochemical, the patients with positive receivers fell again more frequently than those with negative receivers ($p = 0.029$) The axillary affectation was considered one of the most important prognoses factors. Relapse was observed in 71.4% of the patients with some ganglion affected, as opposed to 31.4% of those without ganglionary invasion ($p = 0.01$). There was more cases of remote metastases in those tumours that invaded the axillary ganglia ($p = 0.006$). The greater the number of invaded ganglia, the higher the risk of relapses ($p = 0.0179$). The alteration of P53 and Cerb-B2 are considered factors of bad prognosis. Although, the sample size was not extensive enough to have a statistical meaning.

Conclusions: The tumour like size and stages, the axillary involvement and the number of affected ganglia are considered factors of bad prognosis, being associated to greater risk of relapse and worse evolution in a 5 years period. The presence of positive receivers also was related to an unfavourable evolution.

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Breast cancer patients with estrogen receptor-negative/progesterone receptor-positive tumor: being younger and getting less benefit from adjuvant tamoxifen treatment

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Background: Most receptor-negative / progesterone receptor-positive (ER−/PgR+) patients are premenopausal cases, with few adjuvant endocrine therapeutic alternatives but tamoxifen (TAM). The efficacy of adjuvant TAM on patients with ER−/PgR+ tumor is still controversial. In this study, we evaluated the efficacy of adjuvant TAM on patients with ER−/PgR+ tumor.

Materials and Methods: Among all 1836 consecutive operable patients with primary breast cancer, 798 cases were with ER+/PgR+ tumor and 205 with ER−/PgR+ tumor. In order to investigate the differences of survivals between groups, we sub-grouped the patients according to ER/PR phenotypes and whether the patient had been treated with adjuvant TAM therapy.

Results: Patients with ER−/PgR+ tumor were younger than those with ER+/PgR+ tumor ($P = 0.021$), and were mainly premenopausal ($P = 0.013$). ER−/PgR+ patients were related to more involved lymph nodes and later stage. In the absence of TAM treatment, ER+/PgR+ group had a similar survival to ER−/PgR+ group in terms of 5-year DFS, as well as OS. After TAM treatment, both groups had increased survival rates comparing with the baseline of non-TAM-treated groups. In addition, significant survival differences were observed between the TAM-treated ER+/PgR+ group and ER−/PgR+ group either in DFS ($P = 0.016$) or OS ($P = 0.007$). Of the TAM-treated patients, by sub-dividing the chemotherapy-treated population into CMF group and CA(E)F group, we found that ER−/PgR+ group got more benefits from CMF regimen than from CA(E)F. STEPP analysis showed that the ER−/PgR+ group had an obvious worse survival in younger patients (younger than 55 ys) than ER+/PgR+ group. Axillary lymph nodes involvement was unique independent prognostic factor for ER−/PgR+ group.

Survival evaluation and comparison of Survival between ER+/PgR+ group and ER−/PgR+ group with or without adjuvant TAM treatment

	Without TAM				With TAM			
	Case (n)	Events	5-y survival	P value	Case (n)	Events	5-y survival	P value
DFS				0.131			0.016	
ER+/PgR+	405	55	0.687		382	38	0.790	
ER−/PgR+	151	23	0.566		54	11	0.709	
OS				0.767				0.007
ER+/PgR+	405	25	0.851			382	17	0.914
ER−/PgR+	151	8	0.790			54	7	0.818

Conclusions: Patients with ER−/PgR+ tumor are mainly premenopausal and young. Although patients with ER−/PgR+ tumor are generally considered as candidates for endocrine therapy clinically, they gain less benefit from adjuvant TAM treatment than ER+/PgR+ group.

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Serum tumor markers CEA and CA 15-3, hormone receptor rate and MIB-1 score and their relationship in elderly women with breast cancer

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Background: Breast cancer (BC) is common in elderly (>64 years) women, but the relationship between serum tumor markers, proliferation markers, and estrogen- (ER) and progesterone (PgR) rate is unclear. The aim of this study was to analyze whether preoperative serum levels of CEA and CA 15-3 correlate with well-established prognostic variables (i.e. MIB-1, ER, PgR) in patients with BC, according to age.

Materials and Methods: We evaluated a consecutive series of 349 women (median age 61 years, range 26−89 years) with pT1−2 BC who underwent curative surgery. Entry criteria for this retrospective study included no history of previous cancer, no evidence of multicentric BC or distant metastases, and no multifocal BC at final pathology. Patients were divided into two groups: Group A, 237 (60.2%) women <65 years (median age 51.7 ± 8.7 years), and Group B, 157 (39.8%) women >64 years (median age 74.6 ± 6.1 years; $p < 0.001$). Overall, the following data were recorded: 1) greatest diameter (size) of the tumor = 21.0 ± 13.8 mm, 2) CEA = 3.6 ± 9.8 ng/mL, 3) CA 15-3 = 21.4 ± 20.7 U/mL, 4) ER = 58.5 ± 34.4%, 5) PgR = 51.0 ± 34.9%, and 5) MIB-1 = 18.5 ± 9.8%.

Results: Size of the tumor (19.9 ± 13.5 vs. 22.7 ± 14.1 mm; $p = 0.048$), ER (54.3 ± 36.0 vs. 64.7 ± 31.0%; $p = 0.003$), PgR (47.2 ± 34.9 vs. 57.0 ± 34.1%; $p = 0.006$), CEA (2.7 ± 8.5 vs. 4.8 ± 11.5 ng/mL; $p = 0.037$), and CA 15-3 (19.0 ± 14.3 vs. 24.9 ± 27.4 U/mL; $p = 0.006$) were higher in older patients, while the MIB-1 rate (20.3 ± 19.4 vs. 15.8 ± 16.3%; $p = 0.017$) was higher in younger patients (Group A vs. B). As expected, a significant ($p < 0.05$) relationship was found between size of the tumor and CA 15-3 ($R = 0.21$ and 0.25), ER and PgR ($R = 0.74$ and 0.70), and ER and MIB-1 ($R = 0.38$ and 0.41) in Groups A and B, respectively. Moreover, there was a correlation ($p < 0.05$) between MIB-1 and both PgR ($R = 35$) and CA 15-3 ($R = 21$) only in younger patients. No other correlations ($p = NS$) were found in each group.

Conclusions: These data suggest that preoperative serum CEA and CA 15-3 measurement are not useful in the therapeutic decision-making in patients with BC. However, MIB-1 index, showing a significant inverse relationship with ER independent from age, should be considered an affective parameter for assessing tumor proliferation, especially in younger patients.

References

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