

# Adjuvant chemotherapy and relapse-associated prognostic factors in operable Breast Cancer

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## 1. Background

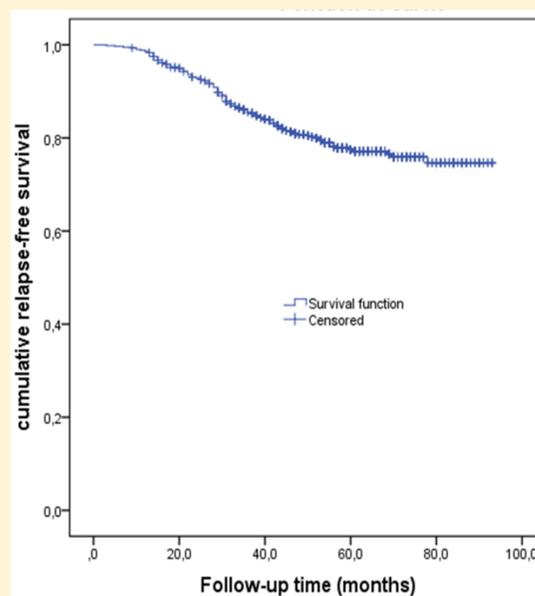
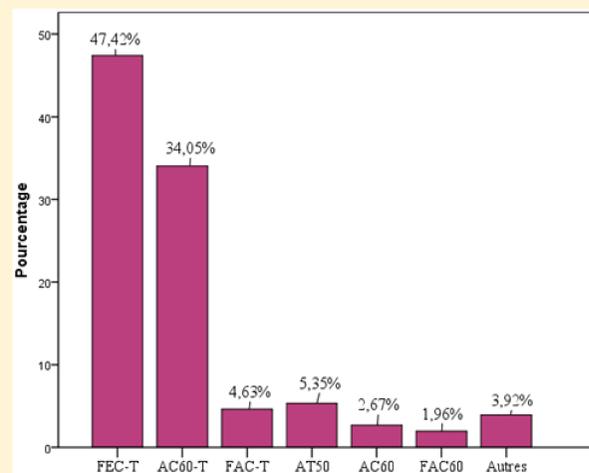
Breast cancer is characterized by its extreme frequency. Its management is now dependent on the prognostic factors according to the guidelines of the experts. The aim of our study was to analyze the adjuvant systemic management of operable breast cancer in Morocco, the relapse-free survival and the recurrence-associated prognostic factors.

## 2. Methods

This is a retrospective study of patients treated for breast cancer at the Mohammed VI Center for Cancer Treatment of Casablanca for 3 years, from 2010 to 2012. Data related to management strategies, relapse and prognostic factors were retrospectively collected from patients' records in 2018 and statistical analyses were performed using the SPSS 20.0 software. Relapse-free survival was calculated with the Kaplan-Meier method, and compared with the Log-rank test with an alpha risk of 5%. Univariate and multivariate logistic regression were used to identify recurrence-associated factors.

## 3. Results

Six hundred and one patients including 6 men were included in our study. The mean age at diagnosis was  $49.2 \pm 10.8$  years. The majority of tumors were ductal carcinomas of 2 to 5 centimeters and grade II, with luminal/HER2 negative phenotype, stage II and III.



	Prevalence report	95% CI	P value
<b>Age</b>			0.719
≤ 40 years	1		
from 41 to 70 years	1.039	[0.6 – 1.8]	0.891
Over 70 years	1.64	[0.48 – 5.54]	0.424
<b>Breast Cancer histology</b>			0.355
Ductal carcinoma	1		
Lobular carcinoma	0.995	[0.38 – 2.56]	0.992
Others	0.385	[0.1 – 1.41]	0.172
<b>SBR grades</b>			<b>0.010</b>
Grade I	1		
Grade II	3.680	[0.84 – 16.10]	0.084
Grade III	6.408	[1.43 – 28.62]	0.014
<b>Tumor size</b>			<b>0,001</b>
T1	1		
T2	0.789	[0.42 – 1.46]	0.452
T3	1.117	[0.52 – 2.64]	0.693
T4	2.995	[1.39 – 6.41]	0.005
<b>Adenopathy</b>			<b>0,000</b>
N0	1		
N1	2.760	[1.51 – 5.02]	0.001
N2	4.555	[2.48 – 8.34]	0.000
N3	8.019	[3.79 – 16.95]	0.000
<b>Vascular emboli</b>	2.001	[1.60 – 2.49]	<b>0.048</b>
<b>Hormone receptors</b>	0.63	[0.37 – 1.51]	0.077
<b>HER2 receptors</b>	1.269	[0.77 – 2.07]	0.341

Ninety-three percent (93%) of patients had an average of 6 cycles of chemotherapy, mainly the AC60-T and FEC100-T protocols. Tamoxifen was prescribed to 87% of patients with luminal tumors and the HER2-directed therapy was prescribed to 23% of patients.

The 5-year relapse-free survival was 77,5% and the hormonotherapy significantly improved it, while HER2 targeting therapy showed no significant effect on relapse-free survival.

The recurrence-associated factors were tumor size, grade SBR, presence of vascular emboli and involvement of Axillary lymph nodes.

## 4. Conclusion

Our results show that the systemic management and the relapse-free survival depend on tumor phenotype, and highlight prognostic factors known as associated with relapse.

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