

**Patients and Methods:** Data were collected from 83 patients  $\leq 40$  years diagnosed with BC and treated at our department from January to December 1998. Survival rates were estimated using the Kaplan-Meier method. Univariate and multivariate analyses were performed using the Cox proportional hazards regression models.

**Results:** The mean age was  $34.8 \pm 0.8$  years (Range 19–40). We have found: 12 T1 (14%), 29 T2 (35%), 17 T3 (21%), 16 T4 (19%), 8 Tx (10%) and 1 Tis (1%); 48 N0 (58%), 19 N1 (23%), 7 N2 (8%), 1 N3 (1%) and 8 Nx (10%). It was a CCI in 93% of the cases and a CLI in 5% of the cases. 3 cases (4%) were SBR grade I, 42 (52%) grade II and 30 (37%) grade III. 7 patients (8%) received a conservative surgery and 76 (92%) a radical surgery (Patey). The median histological tumour size was  $37.5 \pm 5.2$  mm (range 10–95). 23 patients (28%) were lymph node negative (pN0). 24 patients (29%) were classified: pN1, 27 (33%); pN2, 7 (8%); pN3 and 2 (2%); pNx. 27% were presented with RH+. 98% received chemotherapy (neoadjuvant and/or adjuvant) and 36% hormone therapy. All the patients received adjuvant radiotherapy, delivered by cobalt therapy. The median follow-up was 66 months (range 9 to 116). 48 patients (58%) developed recurrences (locoregional, distant and secondary breast cancer).

9-year locoregional relapse-free, disease-free (DFS) and overall survival (OS) were respectively: 86.2% ( $\pm 4.1\%$ ), 37.3% ( $\pm 6.6\%$ ) and 58.4% ( $\pm 11.6\%$ ). In univariate analysis,  $pN + > 3$  seems to have an influence for the locoregional recurrences ( $p = 0.127$ ; HR 5.2).  $pN1$  ( $p = 0.058$ ; HR 2.381) and extra capsular extension ( $p = 0.061$ ; HR 1.757) had an influence within the limit of the significance for the DFS. The factors influencing the occurrence of recurrences was: T3-T4 and  $pN + > 3$  in univariate ( $p = 0.01$ ; HR 2.181 –  $p = 0.002$ ; HR 3.935) and multivariate analysis ( $p = 0.019$ ; HR 2.065 –  $p = 0.012$ ; HR 3.037).

**Conclusion:** The breast cancer in young woman in the Algerian west is diagnosed at an advanced stage. On the therapeutic level, we observe the prevalence of the radical surgery. With a high rate of recurrences (loco-regional, distant and secondary breast cancer), the prognostic is unfavourable specially in cases classified tumours T3-T4 and  $N + > 3$ , where the necessity of an intensification therapeutic.

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Poster

#### Long Term Results and Prognostic Factors in Patients with Unicentric and Multicentric Breast Cancer

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**Background:** Among many oncologists the opinion exists, that multicentric breast cancer (MBC) shows greater metastatic dynamics and has worse prognosis comparing to unicentric breast cancer (UBC) in the same TNM. Some researchers think that proper evaluation of pT in MBC should be based on combined diameters not on the largest diameter of tumor.

The aim of the work is estimation of the treatment results with regard of multicentricity in breast cancer.

**Material and Methods:** The retrospective analysis included 954 consecutive women with breast cancer in stage IA-IIIC after radical mastectomy treated between 1995–1998 at the Cancer Center in Warsaw. Adjuvant chemo- or hormone therapy received 449–47% and 262–27% of patients respectively. Two hundred forty three (26%) of patients had not been given systemic treatment. Postsurgical irradiation was performed only in 135–14% of patients. (20/104–19% vs 115/850–13%,  $p = 0.08$ ), ale różnica nieistotna statystycznie. Cox's regression model was used to analyse the prognostic factors having influence on disease-free survival (DFS) and overall survival (OS). Median of follow-up was 134 months.

**Results:** MBC was diagnosed after mastectomy in 104–10.9% of patients. There were no significant differences in characteristics between UBC and MBC groups according to age, stage, pT, pN, type and grade of histology and methods of adjuvant treatment. The 10-year actuarial DFS and OS for patients with UBC and MBC were 51%, 62% and 58%, 72% respectively (Log Rank  $p > 0.05$ ). Locoregional recurrence rates were higher in UBC than in MBC: 78/850–9.2% vs 7/104–6.7% of patients  $p = 0.03$ . There were no statistical significant differences in frequencies of lymph nodes metastases among groups with UBC and MBC according to pT- measured as greatest diameter. In multivariate logistic regression analyses the following classical prognostic factors had independent influence on DFS and OS: pN, pT, G, and vascular invasion –  $p < 0.01$ . Multicentricity of breast cancer did not appeared significant prognostic factor neither for DFS and OS –  $p > 0.1$ .

**Conclusions:** From present retrospective analysis results that MBC does not deteriorate of prognosis compare to UBC and the largest rather than combined diameters of multicentric lesions should be used

to establish pT what is recommended and concordant with TNM system. However, multicentricity breast cancer should be considered at postsurgical radiotherapy planning because it can have influence on improvement of locoregional control.

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Poster

#### Very Young Women (<35 Years) with Primary Breast Cancer. a Single Institution Retrospective Analysis (2005–2009)

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**Background:** Breast cancer at a very young age has been reported to have a more aggressive biological behavior and to be associated with a relatively poor prognosis compared to older patients. The objective of this study was to evaluate the clinicopathological trends and therapeutic strategies in a very young breast cancer population.

**Materials and Methods:** During 2005–2009, 460 invasive breast cancer patients were referred to our department. 28 of them (6.1%) were <35 years of age, with the youngest patient aged 20 years old. The medical records and final pathological reports were reviewed retrospectively.

**Results:** The median age was  $31.82 \pm 3.2$  (range 20–35). The prevailing clinical symptom was a mass in all cases, while there were palpable axillary lymph nodes in 15 patients (53.5%). 16 patients (57.1%) had a right-sided breast cancer, there was a family history of breast cancer in 12 cases (42.9%), but only 4 patients had germ-line BRCA1 mutations (14.2%). 19 patients underwent breast-conserving surgery and axillary node dissection, 9 had modified radical mastectomy, while 3 patients followed neoadjuvant chemotherapy. The tumor size was  $< 2$  cm in 9 patients,  $> 2$  cm and  $< 5$  cm in 16 patients,  $> 5$  cm in 3 patients. All cancers in our series were invasive ductal carcinomas, most of them poorly differentiated. 10 patients expressed a triple-negative pattern on immunohistochemistry, whereas 19 were node negative. 25 patients received radiotherapy and 26 (92.8%) chemotherapy. The median observation time was  $42.4 \pm 18.43$  months at the follow-up cut-off date (range 18–76 months). 5 patients (17.8%) experienced early distant metastasis, whereas 2 (7.1%) patients died because of cancer-related reasons.

**Conclusions:** Breast cancer arising in young women, although uncommon, represents an aggressive phenotype and should be considered as a distinct form of breast cancer. Very young female patients have a greater tendency of having an endocrine unresponsive tumor, usually present with a higher tumor grade and there is an increased rate of local recurrence. Long life expectancy, fertility and risk of premature menopause resulting from chemotherapy should be specifically addressed in preoperative counseling of these women.

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Poster

#### Surgery Treatment Improves Breast Specific Survival in Elderly Patients with Early Stage of Breast Cancer

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**Introduction:** Increase in survival of the general population has been associated with an increase incidence of breast cancer in advanced ages. However, there is controversy regarding the management of breast cancer in elderly patients. The objective of this study was to assess different treatment strategies in elderly breast cancer patients ( $\geq 80$  years old) and the impact of surgery on survival.

**Patients and Methods:** All patients with breast cancer  $\geq 80$  years of age who were treated at our institution between 1995 and 2009 were reviewed. Data were collected from the patients' medical records, and patient characteristics and treatment modalities were analyzed. Patients were divided into those presenting with early stages (I, IIA, and IIB) and those presenting with locally advanced stages (IIIA, IIIB, and IIIC). Breast cancer-specific survival (BCSS) was assessed in both groups according to whether or not patients have undergone surgical treatment.

**Results:** A total of 306 patients were included in the study, of this 196 (64%) underwent surgery as part of their treatment (surgical group) and 108 (36%) did not undergo surgery (non-surgical group). The median follow-up was 49 months (95% CI 45–53). Mean ages of these groups were 83.8 and 85.2 years, respectively. Both groups were homogeneous regarding type and histological grade of tumor, hormone receptor status, and lymphovascular invasion. There were no statistically significant differences in oncological treatment received (hormone therapy, chemotherapy and radiation therapy). In 189 patients with Stage I, IIA and IIB, 150 (79.4%) had surgery and 39 (20%) did not. In 71 patients with locally advanced tumors, 46 (64.8%) patients underwent surgery and 25 (35%) did not. Among patients with early stage breast cancer, BCSS was 109 months

(95% CI 101–117) for the surgical group and 59 months (95% CI 45–72) for the non-surgical group ( $P < 0.002$ ). In patients with locally advanced breast cancer, BCSS was 59 months in the surgery group (95% CI 48–70) and 51 months in the non-surgical group (95% CI 36–65) ( $P < 0.180$ ).

**Conclusions:** Advanced age should not be considered a contraindication for surgery. This study shows that BCSS is significantly better in elderly patients with early breast cancer who undergo surgery.

### 53 **Medical Utilization and Cost of Elderly Breast Cancer Patients Under National Health Insurance in Taiwan: a Population-based Cross-sectional Study**

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**Background:** There is a trend of increasing elderly population worldwide. Few studies have examined the medical cost of elderly breast cancer patients. Taiwan implemented a comprehensive and universal National Health Insurance (NHI) program which covers over 99% inhabitants. This study aimed to assess the medical utilization and cost of elderly ( $\geq 70$  years) breast cancer patients under NHI in Taiwan.

**Materials and Methods:** This retrospective cross-sectional study used a sampled NHI research database containing one million beneficiaries. A total of 3146 breast cancer patients who used medical services in 2009 were identified. Their claims in 2009 were obtained for analysis.

**Results:** There were 399 (12.7%) elderly breast cancer patients in this cohort. The medical cost of elderly breast cancer patients accounted for 13.0% of the total cost of all breast cancer patients. The elderly patients had a higher mean frequency of outpatient visits than non-elderly patients (42.8 vs. 31.9;  $p < 0.0001$ ). There were no statistical significance between elderly and non-elderly patients in mean frequency of inpatient admission (1.0 vs. 0.9 time/year;  $p = 0.2117$ ), mean annual outpatient cost (US\$2558.3 vs. US\$2485.5;  $p = 0.7733$ ), mean annual inpatient cost (US\$1609.7 vs. US\$1388.2;  $p = 0.2861$ ) and mean annual total cost (US\$4168.0 vs. US\$3873.7;  $p = 0.4193$ ).

**Conclusions:** Elderly breast cancer patients visited outpatient services more frequently. There was no difference in the mean medical cost between elderly and non-elderly breast cancer patients.

Table 1. Medical utilization and cost of elderly and non-elderly breast cancer patients

Characteristics		Mean	Standard Deviation	95% Confidence Interval for Mean		P value*
				Lower Bound	Upper Bound	
Outpatient visit (time/year/patient)	Non-elderly	31.9	20.5	31.2	32.7	<0.001
	Elderly	42.8	24.5	40.4	45.2	
	Total	33.3	21.4	32.6	34.1	
Inpatient admission (time/year/patient)	Non-elderly	1.0	2.4	0.9	1.1	0.2117
	Elderly	0.9	1.7	0.7	1.0	
	Total	1.0	2.3	0.9	1.1	
Outpatient cost (US\$/year/patient)	Non-elderly	2485.5	4786.4	2306.4	2664.5	0.7733
	Elderly	2558.3	4230.6	2141.9	2974.7	
	Total	2494.7	4718.9	2329.7	2659.7	
Inpatient cost (US\$/year/patient)	Non-elderly	1388.2	3794.4	1246.2	1530.1	0.2861
	Elderly	1609.7	4396.1	1177.0	2042.4	
	Total	1416.3	3875.8	1280.8	1551.8	
Total cost (US\$/year/patient)	Non-elderly	3873.7	6861.3	3617.0	4130.3	0.4193
	Elderly	4168.0	6380.6	3540.0	4796.0	
	Total	3911.0	6802.0	3673.2	4148.8	

\*By ANOVA.

### 54 **Breast Cancer in Young and Elderly Women. Experience in the Estereotaxic Clinic Center (CECLINES), Caracas-Venezuela**

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**Background:** More than 80% of breast cancer occurs in women older than 50yo and more than 35% will be in patients older than 70yo. In the other hand there are few cases of breast cancer in women less than 40yo even though there is a trend of increasing incidence in this group of women. There is evidence that breast cancer in younger and elderly patients behaves in a different way.

**Methods:** Retrospectively we study 926 patients in the data base of CECLINES from 1996–2010, in which we found that the younger group (YG, <40yo) represented 8% (68/926) and the elderly group (EG,  $\geq 75$ yo) was 6.37% (50/926). We studied variables such as: tumor size, histologic type (HT), stage (ST), immunohistochemistry (IHC), type of surgery, axillary status, adjuvant and neoadjuvant treatment, overall survival (OS) and

disease free survival (DFS). We excluded all patients with insufficient information or who were receiving neoadjuvant treatment by the time of the analysis.

**Results:** the median follow up was 33 months. The median age at presentation was 35.13yo (SD 3.5) for YG and 80.04yo (SD 3.8) for the EG. The most common HT for both the YG and EG was infiltrating ductal carcinoma with 66.2% and 56.0% ( $p = 0.345$ ), respectively. Even though there was not statistical difference regarding the immunohistochemical staining the EG had a more favorable profile than the YG: ER+ 87% vs 70.7% ( $p = 0.057$ ), PR+ 69.9% vs 70.2% ( $p = 0.946$ ), C-erbB-2 3+ 32.6% vs 51.9% ( $p = 0.053$ ), Ki67 high 26.5% vs 40.5% ( $p = 0.374$ ), Triple Negative 2% vs 10.3% ( $p = 0.077$ ). The median tumor size was for YG 30.6mm (SD 19.1) and for EG 23.9mm (SD 12.8) ( $p = 0.032$ ). We performed breast conservative treatment in 44.1% of YG and 52.0% in EG ( $p = 0.397$ ). The ST at presentation more common was for YG IIA 39.3% and for EG IA 51.1% ( $p = 0.104$ ). As expected there are substantial differences between the administration of neoadjuvant chemotherapy with 44.1% for the YG and 0% for the EG ( $p = 0.001$ ) and the neoadjuvant hormonotherapy with 18% for the EG and 0% for the YG ( $p = 0.001$ ). The axilla was positive by sentinel lymph node in the YG in 39.4% and in the EG in 27.1% ( $p = 0.171$ ). The overall recurrence for the YG was 20.6% and for the EG 12% ( $p = 0.219$ ), being local recurrence for the YG 1.47% (1/68) and for the EG 4% (2/50), locoregional recurrence for the YG 1.47% (1/68) and for the EG 0% (0/50). The 5y DFS rate was for the YG 63.3% and for the EG 58.4% ( $p = 0.009$ ). Of the EG 30% died from another cause. The 5y OS for YG was 73.0% and for EG 68.3% ( $p = 0.001$ ).

**Conclusions:** The prognosis for the YG is better than the EG. An explanation for our results could be that because traditionally tumors of elderly patients behaves in a more indolent way, maybe we are 'under treating' some of this patients as well as treating more aggressively the young patients creating a shift in the outcome we are use to see in other publications. Nevertheless even though the immunohistochemistry reactions tends to show a more favorable profile for the EG than the YG, is important to outline that the outcome for these groups seems to be influenced more by the biology of the tumor, stage at presentation and its according treatment than by the age group itself.

### 55 **Clinicopathological Pattern and Mammaglobin Immunohistochemistry as a Prognostic Marker in Breast Carcinomas Presenting in Young Pakistani Women**

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**Introduction:** Breast cancer among young women is scarcely reported in the literature even when it has long been observed that these patients are more likely to suffer from recurrence and death after diagnosis. In most studies published so far within our country, this patients group is not being analyzed separately. Apart from the conventional markers, mammaglobin (MGB A) protein is coming out as a specific and important marker impacting the disease prognosis along the age of the patient.

**Objectives:** To compare the expression of prognostically meaningful immunohistochemical markers such as estrogen receptor (ER), progesterone receptor (PR), HER-2 and p53 in tumor cells of the female patients with breast cancer aged less than 36 years with or without the positive MGB A immunohistochemistry. Breast cancers expressing MGB A were also analyzed clinicopathologically to determine whether these cancers constitute a characteristic subset in young women.

**Methods:** About one hundred seventy-five patients (mean age:  $25 \pm 2$ ) presenting with breast cancer during January 2006–2008 were assessed both clinically as well as expression of ER, PR, HER-2, p53 and MGB A was determined by indirect immunohistochemical method. The patients were followed up clinically from the hospital record for 3 years till January 2011.

**Results:** Positive immunostaining for MGB A was seen in 87.6% of breast carcinomas, 12.06% of cases with lymph node micro-metastases not diagnosed on conventional microscopy, 72.2% cases of premalignant, 78.6% of benign and 98.4% of normal breast tissues present adjacent to the tumour area. A significant correlation was found between the positive expression of MGB A in the malignant breast tissue and ER positivity but not with the histological and nuclear grades of the tumors, HER2 or p53 immunoreactivity. Yet it varied according to the histological type of the tumor with ductal carcinomas showing stronger and diffuse staining than other varieties. More aggressive clinical course of the disease with recurrence in 2% and advanced stage in 7.01% was seen in patients expressing weaker to none staining with MGB A as compared to those with a stronger and diffuse pattern of immunostaining. Kaplan–Meier analysis revealed prolonged disease-free survival in patients with MGBA-positive