(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 Poster

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

*By ANOVA.

54 Poster

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 40 yo 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, <40 yo) represented 8% (68/926) and the elderly group (EG, $\geqslant$75 yo) was 6.37% (50/926). We studied variables such as: tumor size, hystologic type (HT), stage (ST), inmunohistochemistry (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 inmunohistochemical 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 30.6 mm (SD 19.1) and for EG 23.9 mm (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 inmunohistochemistry 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 Poster

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

breast cancers (log rank test, $P = 0.016$), but the Cox proportional hazard model failed to confirm that MGBA was an independent prognostic factor (hazard ratio 1.77, $P = 0.1755$).

Conclusion: Out results suggest that MGB A is a sensitive marker of breast carcinoma, is a useful method to detect breast cancer micro-metastases. It may characterize a subgroup of breast carcinoma patients with less aggressive forms of tumour and better prognosis, if assessed for a prolonged follow up duration in future studies.

56 Poster

Breast Cancer Among Young Women in Mures, Romania − a 5-year Retrospective Study Emphasizing the Role of New Therapeutical Strategies

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Background: to assess the frequency, the imaging features and prognostic factors in young female patients with breast carcinoma in order to establish new therapeutic strategies.

Materials and Methods: We retrospectively reviewed 112 cases of breast cancer in young women (⩽45 years) admitted to the Emergency Clinical District Hospital Mures between October 2006 and October 2011. The collected data were: age, clinical, imaging, surgical, histopathologic and immunohistochemical (hormone receptors status, ki 67 and HER2-neu) reports in order to evaluate important prognostic parameters and to assess the response to therapy.

Results: Among 1663 women with breast lesions 949 (57.06%) had breast cancer. Young women (⩽45 years) with breast cancer were 112 (11.80%), out of which those ⩽35 years were 21 (18.75%). Autopalpation/ clinical examination of women ⩽45 years revealed the presence of tumor in 95 (84.82%) cases, out of which 59 (53.20%) had axillary adenopathies. In the ⩽35 years age group, 15 (71.42%) had palpable tumor on presentation, 12 (57.14%) with axillary adenopathies. Out of the 86 (76.78%) mammographically examined patients, 55 (63.95%) with invasive carcinomas had spiculated/irregular opacities, 20 (23.25%) architectural distortion associated with a mass and 26 (30.23%) associated calcifications. On ultrasonography, a majority of 105 (93.75%) lesions displayed spiculated/irregular masses. 50.47% lesions had 2−4 cm in dimension at the time of diagnosis. In 77 (68.75%) cases tumoral type was invasive ductal NOS (IDC-NOS), mostly grade 2 and 3 (71 cases − 92.20%), especially in women ⩽35 years − 16 cases (76.19%). Most invasive carcinomas were unifocal − 67 (63.80%) versus multifocal 38 (36.19%). Ductal carcinoma in situ was foud in 7 cases − 6.25%, more frequently grade 3, mostly in the 36−40 years-old age group (5 cases − 71.42%). Histologically, 62 patients ⩽45 years (55.35%) had axillary lymph node metastases with a higher frequency in multifocal/multicentric (60.52%) carcinomas.

Conclusions: Our results indicated a higher frequency of breast cancer in young women ⩽45 years, especially in those ⩽35 years, than in previous decades, a result that overpasses data from literature (5−7%). Most young patients discovered the tumor by autopalpation, with measurements over 2 cm in diameter at the time of diagnosis and associated axillary lymph node metastases. Tumor type was most often grade 2 or 3 NOS. It seems that breast tumors in young patients have a different morphological and immunohistochemical aspect and are associated with a different prognostic, which is why therapeutic strategies must be adapted according to this. Acknowledgements: This paper is partially supported by the Sectoral Operational Programme Human Resources Development, financed from the European Social Fund and by the Romanian Government under the contract number POSDRU/89/1.5/S/60782.

57 Poster

Triple Negative Breast Cancer in Young Patients − Experience of the National Institute of Oncology in Morocco

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Background: Triple-negative breast cancer (TNBC) is defined as a group of breast carcinomas that are negative for expression of hormone receptors and HER2, They tend to have a higher grade, with a poorer outcome compared to non-TN breast cancers. TNBC are associated generally with a younger age at presentation. There is a dearth of data in a younger population of patients with TNBC regarding epidemiology, prognosis, and outcome.

Objective: The primary aim of this analysis of young TNBC patients was to characterize the clinical features of this distinct young population of patients. We selected the age of 35 years and under as the cut-off point in defining our patient population of interest.

Materials and Methods: A retrospective analysis of patients referred to the national institute of oncology with TNBC, identified from the institutional tumor registry, who were ⩽ 35 years on the date of the diagnostic biopsy, between January 2007 and February 2009, was performed. Epidemiological, clinical and pathological staging, therapeutic and follow-up data were extracted.

Results: Twenty seven cases of TNBC, with age ⩽35 years at diagnosis, were collected. This represented 17.7 % of the entire population (N = 152) of TNBC seen at the national institute of oncology over that time period. The mean age was 31.3 years (25−35 years). Four patients (14.8%) had a family history of breast cancer. Nineteen patients (70.3%) had nursing antecedents and six patients (22%) reported use of oral contraceptives. Twenty two (81.4%)had infiltrating ductal carcinoma and five had medullar carcinoma (18.5%). Twenty three cases (85%) were grade III Scarff-Bloom-Richardson (SBR) and 4 patients (14.8%) were grade II.

Two patients (7%) had metastatic disease (stage IV) at first diagnosis, one patient (8%) had stage I, 17 patients (63%) had stage II and the remaining patients 7(25%) had stage III.

For treatment modalities 25 patients underwent surgery (radical mastectomy in 70% of cases and 30% had conservative surgery).

Neoadjuvant chemotherapy was administered to 8 patients and adjuvant chemotherapy to 86. All patients received anthracycline based regimen and only 29.6% received taxanes. Radiotherapy was administered to 85% of patients. Metastatic patients at diagnosis progressed after first line chemotherapy and then died.

Six (22.2%) patients had a distant failure after adjuvant treatment and one local recurrence. The median follow-up time was 36,3 months (range 2–84.8 months). At the end of the study period, 7 patients (26%) died.

Conclusion: This is the first reported study, in our context, of young patients with TNBC ⩽ 35 years of age. TNBC in young patient were associated with high grade tumors, advanced stage at diagnosis (92% ⩾stage II), and short time to relapse. These data suggested that patients with younger age seem to have a severe prognosis. No risk factors have been identified. However this study is retrospective and more studies are needed in this young population.

58 Poster

Presentation and Outcomes of Breast Cancer in Asian Women Under 40: Misdiagnosis or Misfortune?

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Background: There are few studies examining breast cancer in women under 40, particularly in Asian women. While it has been reported that only 5.5−7% of all breast cancers are detected in women under 40 in the West, this group of women accounts for at least 12−15% in Asian populations. It has been reported that the poorer prognosis seen in this group of women is contributed by delays at diagnosis and aggressive tumour biology. This study seeks to understand clinicopathologic factors that correlate with treatment outcomes in this unscreened group of women.

Methods: A retrospective institutional board-approved review of our center's breast cancer database identified women diagnosed with breast cancer from January 2006 to February 2011. Patient demographics, clinical presentation patterns, imaging findings, pathological findings and treatment received were determined. Outcome end-points include disease recurrence and death.

Results: Of a total of 1160 women diagnosed with breast cancer during the study period, 150(12.9%) were under 40.The median age was 36 years (range 18−39 years). The majority (81%) presented with a self-detected lump and did not have a family history (84.2%). The median duration of symptoms before presentation was 4 weeks (range 1−96 weeks). Four women had metastatic disease at presentation (2.7%) and 6 (4%) defaulted treatment and follow-up after biopsy. These 10 women were excluded from further analysis. Five women (3.5%) had pregnancy-associated breast cancer with 4 being pregnant at the time of diagnosis. 2 women had synchronous bilateral breast cancer.

Mammography was less sensitive than ultrasound (77.1% Vs 94.5%) and MRI was helpful in demonstrating 60% of lesions not seen on mammography or ultrasound. 42/140 (30%) underwent breast conserving surgery (BCS) of which 5 (12%) proceeded to mastectomy due to involved margins. 98/140 (70%) underwent mastectomy of which 25/98 (25%) had immediate reconstruction. The median tumour size was 22 m (range 1.1-100 mm). 10% (14/140) received neoadjuvant chemotherapy. Of a total of 126 primary resections, 84 % were invasive carcinoma while 16 %