

Results: Percentage mammographic density (PD) was positively associated with tumor size ($p=0.004$) and grade ($p=0.033$), but the relationship with grade was attenuated after adjustment for, among other variables, mode of detection ($p=0.069$). Furthermore, PD was associated with both breast and locoregional recurrence even after adjustment for treatment; women with $PD \geq 25\%$ had a hazards ratio (HR) of 1.96 for breast recurrence and a HR of 1.78 for locoregional recurrence compared to women with $PD < 25\%$ ($p=0.032$ and $p=0.017$, respectively). No other associations between PD and the tumor characteristics studied (hormone receptor status, lymph node metastasis, proliferation rate, and histopathological classification) were observed, nor was PD associated with distant metastasis and survival.

Conclusion: Density may be viewed as fertile soil; increasing both risk of primary breast cancer, independent of subtype, and risk of recurrence. Thus, density should not only be taken into consideration in the screening setting, but also when making decisions on adjuvant therapy and follow-up regimes.

132

Poster

Recent Trends in Breast Cancer Incidence and Mortality Rates in South-Eastern European Countries

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Background: Breast cancer is the most frequent cancer in women across Europe, as well as worldwide. Incidence is increasing as a result from a variety of secular and exogenous influences. Studying the trends in incidence and mortality can serve the planning of breast cancer prevention policies at individual and collective level. The focus of this study is on South-Eastern European countries which have been underreporting, but may also show rapid changes. The EU FP7 EUROCOURSE project (www.eurocourse.org) aims to tackle problems of cancer registries in this part of Europe.

Materials and Methods: Within a broader project we analysed data from cancer registries in eight South-Eastern European countries, from Slovenia to Cyprus and Malta, also including Turkey. Age standardized (world standard – ASRW) incidence and mortality rates for 2008 were calculated for these countries based on the corresponding regional or national cancer registries. Average annual percent change (AAPC) with 95% confidence intervals of rates observed during 1999–2008 was calculated using joinpoint regression.

Results: Incident breast cancers comprised between 23% and 39% of all incident female cancers. Incidence rates (ASRW) varied from 35 to 82 per 100,000 women and were increasing with 1 to 4% in most of them, annually. Deaths due to breast cancer comprised between 13% and 25% of all female cancer deaths. Mortality rates (ASRW) varied between 7 and 20 per 100,000 women. In contrast to incidence, mortality was decreasing in most of the countries with 1 to 5% annually.

Conclusion: This geographical area, sharing common socioeconomic and demographic changes i.e. increased longevity, age at childbirth and decreased fertility rates, showed clear variation in breast cancer incidence and mortality. There were also effects of earlier detection through mass screening in a few countries, and as elsewhere improvements in adjuvant therapy.

133

Poster

Improved Survival of Bulgarian Breast Cancer Patients, Diagnosed in 2006–2009 Compared to Patients From an Earlier Period

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Background: Two important events, aiming improved quality of care for Bulgarian breast cancer patients took place in 2006 – an updated National standard for complex treatment of breast cancer was introduced and the National Health Insurance Fund (NHIF) requested establishment of specialized oncology committees in each hospital dealing with cancer patients. The function of those committees was to take decision about the best available individual treatment plan for all cancer patients.

The purpose is to study the impact on survival in relation to application of the National standard and requirements of NHIF.

Materials and Methods: We examined the data from the Bulgarian National Cancer Registry for female breast cancers, diagnosed in 2001–2009 and followed up to death or to the end of 2010. Characteristics of the patients – age, stage, grade, morphology and place of surgical treatment were compared between two periods – 2001–2005 and 2006–2009. Chi-square test, Kaplan–Meier method, Log-rank test and Cox regression method were used.

Results: There were 32546 female breast cancer cases, diagnosed in 2001–2009. We found statistically significant dependency ($P < 0.0001$) between period of diagnosis and each one of the examined factors. For the period 2006–2009, the proportions of patients younger than 40 years and older than 60 and of those, diagnosed in the first stage of the disease, were higher than the earlier period. There were improvements in morphological verification of the tumors – fewer patients with unknown grade and morphology were observed for the period 2006–2009. The proportion of patients, surgically treated in the National Hospital of Oncology was higher in 2006–2009. Five years survival was 63.7% and 70.0% for the periods 2001–2005 and 2006–2009, respectively ($p < 0.0001$). The risk of death was with 12% lower (Hazard ratio = 0.88, $p < 0.0001$) for the patients, diagnosed in 2006–2009, compared to the earlier period, after adjusting for age, stage, grade and place of surgical treatment.

Conclusions: The observed improvement of prognosis for breast cancer patients is possible to be explained with the strict application, required by NHIF, of the National standard for complex treatment in all hospitals where cancer patients were diagnosed and treated. Probably the increasing qualification of oncologists, introduction of more sensitive diagnostic techniques and improving health awareness of the women also attributed to better prognosis in recent years in a situation of preparation of population breast cancer screening program.

134

Poster

Clinical and Histological Features of Breast Cancer After in Vitro Fertilization

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Background: The role of in vitro fertilization (IVF) in the induction of breast cancer remains unclear. It is very interesting to examine if this type of breast cancer has some distinctive features regarding pathology or clinical characteristics.

Materials and Methods: A research of distinctive histological, clinical and epidemiological features in cases of invasive breast cancer following in vitro fertilization in our department. Thirty four (34) cases of invasive breast cancer were analyzed. Patient characteristics were extracted from their medical records and the breast cancer data bank of our department. The registered data concerned age, initial presentation, medical and family history, the histological features of the neoplasms and the TNM staging.

Results: The main findings are the following: 7(21%) patients were under 40 years old and the other 27(79%) were older, 27(79%) women were pre-menopausal and 12(35%) had positive family history. The great majority of patients 27(79%) were diagnosed with infiltrating ductal carcinoma and the grade was I in 10(29%), II in 14(42%) and III in 10(29%). Regarding the status of lymphnodes in 17(50%) was N₀, in 4(11%) N_x, in 3(9%) N₁, in 5(15%) N₂ and in 5(15%) N₃, as far as the stage of disease is concerned in 11(32%) was I, in 9(26%) II, in 10(30%) III and in 4(12%) IV. Finally regarding the status of ER, PgR and HER2 in 20(59%) was ER(+), in 17(50%) was PgR(+) and in 12(35%) was HER2(+).

Conclusions: Even though the sample was small, a large percentage of patients had a positive family history. It's worth mentioning that many cases presented in pre-menopausal women, relatively soon after in vitro fertilization. More data are needed in order to evaluate the role of IVF in the induction of breast cancer as well as to define the high-risk sub-groups. Patients with positive family history for breast cancer are considered to be a high-risk sub-group.

135

Poster

Preliminary Results of a Medical Unit for Prevention-consultation of Familial and Hereditary Breast Cancer

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Background: Most breast cancers are sporadic and not associated with any clear familial genetic predisposition. However, approximately 10% of