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Onkológia (Bratisl.), 2016; roč. 11(4): 250–251

### KARCINÓM PRSNÍKA

**Bystrický B, Kohutek F, Rosik A**

#### Male breast cancer – a single center experience

**Oncol Lett. 2016 Aug;12(2):1615-1619.**

Due to its rarity, male breast cancer remains a poorly characterized disease. The present study obtained retrospective clinicopathological data, treatment patterns and outcomes for all male patients diagnosed with breast cancer in the Oncology Department, Faculty Hospital Trenčín (Trenčín, Slovakia) over the last 20 years from January 1995 to December 2015. A total of 21 patients with male breast cancer were analyzed, with a median patient age of 65.6 years. Two patients were diagnosed with lobular invasive cancer; all others were diagnosed with cancer of a ductal origin. One patient presented with metastatic disease in the pleural cavity. The primary tumors in 8 patients were staged as pT1, whilst 6 patients were staged as pT2 and 7 as pT4. Axillary lymph node involvement was present in 11 patients (52%) and 15 patients were hormone receptor-positive (83%). All but 1 patient underwent mastectomy and surgical staging of the axilla. Adjuvant chemotherapy, radiotherapy and hormone treatment was administered in the same manner as breast cancer treatment in female patients. The median follow-up time was 4.5 years. The 5- and 10-year overall survival rates were 87 and 74%, respectively, and the estimated median disease-free survival for the same population was 9.5 years (95% confidence interval, 6.2-14.6). The survival rates reported in the present retrospective study are comparable with previously published studies. In addition, the current study reported predominant hormone-positive characteristics and rare expression of human epidermal growth factor receptor 2. However, further multi-institutional trials are required to allow for informed treatment decisions in this uncommon disease.

Meciarova I, **Sojakova M, Mego M, Mardiak J, Pohlodek K.**

#### High-grade neuroendocrine carcinoma of the breast with focal squamous differentiation

**Int J Surg Pathol. 2016 (In press)**

Primary neuroendocrine carcinoma of the breast is a rare tumor that comprises less than 1% of breast carcinomas, with most patients being in the sixth or seventh decade of their life. In this article, the authors present the case report of a 42-year-old woman with a rapidly growing tumor in her right breast. After clinical staging by physical examination, breast imaging, and thoracoabdominal computed tomography the patient underwent breast-conserving surgery. The histologic results showed a unique type of high-grade, predominantly large-cell neuroendocrine carcinoma with focal abrupt squamous differentiation. The authors also discuss the clinical and morphological characteristics of the tumor as well as treatment options.

### GU MALIGNITY

Kalavska K, Cierna Z, **Chovanec M, Takacova M, Svetlovska D, Miskovska V, Obertova J, Palacka P, Rajec J, Sycova-Mila Z, Machalekova M, Kajo K, Spanik S, Mardiak J, Babal P, Pastorekova S, Mego M.**

#### Prognostic value of intratumoral carbonic anhydrase IX expression in testicular germ cell tumors

**Oncology Lett, 2016 (In press)**

Testicular germ cell tumors (TGCTs) represent highly curable malignancy, however small proportion of patients fails to be cured with cisplatin-based chemotherapy. Carbonic anhydrase IX (CA IX) is up-regulated by hypoxia in several cancer types and correlates with poor prognosis. This translational study evaluated expression and prognostic value of CA IX in TGCTs. Surgical specimens from 228 patients with TGCTs were processed by the tissue microarray method and subjected to immunohistochemistry with the M75 monoclonal

antibody. CA IX expression was evaluated in tumors versus adjacent normal testicular tissues and correlated with clinicopathological characteristics and clinical outcome. CA IX expression was detected in 62 (30.2%) of TGCTs compared to 0 (0%) of normal tissue adjacent to testicular tumor ( $p < 0.001$ ). The highest frequency of the CA IX expression was detected in teratoma (39.0%), followed by seminoma (22.7%), yolk sac tumor (22.2%), embryonal carcinoma (11.9%) and choriocarcinoma (7.7%). None of germ cell neoplasias in situ (GCNIS) exhibited the CA IX expression. Patients without the CA IX tumor expression showed significantly better progression-free survival, but not overall survival, compared to patients with the CA IX expression (hazard ratio [HR] = 0.57, 95% CI 0.32 – 1.02,  $p = 0.037$  and HR = 0.58, 95% CI 0.29 – 1.16,  $p = 0.088$ , respectively). There was no significant correlation between the CA IX expression and clinicopathological variables. The intratumoral CA IX expression can serve as a prognostic marker in the TGCT patients. This finding suggests that activation of the hypoxia-induced pathways could play an important role in the treatment failure in TGCTs patients.

Jerusalem G, Mariani G, Ciruelos EM, Martin M, Tjan-Heijnen VC, Neven P, Gavila JG, Michelotti A, Montemurro F, Generali D, Simoncini E, Lang I, **Mardiak J, Naume B, Camozzi M, Lorizzo K, Bianchetti S, Conte P.**

#### Safety of everolimus plus exemestane in patients with hormone-receptor-positive, HER2-negative locally advanced or metastatic breast cancer progressing on prior non-steroidal aromatase inhibitors: primary results of a phase IIIb, open-label, single-arm, expanded-access multicenter trial (BALLETT).

**Ann Oncol. 2016 Sep;27(9):1719-25.**

**Background:** This European phase IIIb, expanded-access multicenter trial evaluated the safety of EVE plus EXE in a patient population similar to BOLERO-2.

**Patients and methods:** Post-menopausal women aged  $\geq 18$  years with hormone receptor-positive, human epidermal growth factor-receptor-2-negative advanced breast cancer (ABC) recurring/progressing during/after prior non-steroidal aromatase inhibitors were enrolled. The primary objective was safety of EVE plus EXE based on frequency of adverse events (AEs), and serious AEs (SAEs). The secondary objective was to evaluate AEs of grade 3/4 severity.

**Results:** The median treatment duration was 5.1 months [95% confidence interval (CI) 4.8-5.6] for EVE and 5.3 months (95% CI 4.8-5.6) for EXE. Overall, 2131 patients were included in the analysis; 81.8% of patients experienced EVE- or EXE-related or EVE/EXE-related AEs (investigator assessed); 27.2% were of grade 3/4 severity. The most frequently reported non-hematologic AEs were (overall %, % EVE-related) stomatitis (52.8%; 50.8%) and asthenia (22.8%; 14.6%). The most frequently reported hematologic AEs were (overall %, % EVE-related) anemia (14.4%; 8.1%) and thrombocytopenia (5.9%; 4.6%). AE-related treatment discontinuations were higher in elderly ( $\geq 70$  years) versus non-elderly patients (23.8% versus 13.0%). The incidence of EVE-related AEs in both elderly and non-elderly patients appeared to be lower in first-line ABC versus later lines. The incidence of AEs (including stomatitis/pneumonitis) was independent of BMI status (post hoc analysis). Overall, 8.5% of patients experienced at least one EVE-related SAE. Of the 121 on-treatment deaths (5.7%), 66 (3.1%) deaths were due to disease progression and 46 (2.2%) due to AEs; 4 deaths were suspected to be EVE-related.

**Conclusions:** This is the largest ever reported safety dataset on a general patient population presenting ABC treated with EVE plus EXE and included a sizeable elderly subset. Although the patients were more heavily pretreated, the safety profile of EVE plus EXE in BALLETT was consistent with BOLERO-2.

**Clinical trial registration:** EudraCT Number: 2012-000073-23.

**Ondrusova M, Spanikova B, Sevcikova K, Ondrus D**

**Testosterone deficiency and bone metabolism damage in testicular cancer survivors**

**Am J Mens Health. 2016 (In press)**

The aim of the study was to investigate the influence of therapeutic modalities and sexual hormone levels on changes in bone mineral density (BMD) in testicular cancer (TC) survivors.

In a cross-sectional descriptive, long-term follow-up study, a total of 1,249 long-term TC survivors were evaluated according to treatment modality: orchiectomy (OE) only, OE + chemotherapy (CT), or OE + radiotherapy (RT). Luteinizing hormone (LH), total testosterone (TST), marker of bone resorption ( $\beta$ -carboxyl-terminal cross-linking telopeptide of type I collagen-CTX), and BMD were evaluated. Standard statistical techniques were used to test the differences between groups of patients. TST decrease was observed in 46/313 TC survivors after OE alone, in 103/665 after OE + CT, and in 66/271 after OE + RT. LH increase was observed in 23/313 TC survivors after OE alone, in 154/665 after OE + CT, and in 43/271 after OE + RT. CTx increase was observed in 116/313 TC survivors after OE alone, in 324/665 after OE + CT, and in 82/271 after OE + RT. Osteopenia/osteoporosis occurred in 136/313 TC survivors after OE alone, in 298/665 after OE + CT, and in 139/271 after OE + RT. TC survivors after RT have statistically significant decreased TST levels, increased LH and nonsignificant worse BMD (osteopenia/osteoporosis) in comparison with TC survivors after OE alone or CT. TST decrease and LH increase were statistically significant, more frequently observed in patients with osteopenia/osteoporosis. Examination of TST is an important part of follow-up in TC survivors with bilateral as well as unilateral disease. The important part of standard examination algorithm should be also the osteological examination of TC survivors mainly in patients with androgen deficiency.

## INÉ

Vrdoljak E, Bodoky G, Jassem J, Popescu RA, **Mardiak J**, Pirker R, Cufer T, Beslija S, Eniu A, Todorovic V, Kubackova K, Kurteva G, Tomasevic Z, Sallaku A, Smichkoska S, Bajic Z, Sicik BI

**Cancer control in Central and Eastern Europe: current situation and recommendations for improvement**

**Oncologist. 2016 (In press)**

The incidence of many cancers is higher in Western European (WE) countries, but mortality is frequently higher in Central and Eastern European (CEE) countries. A panel of oncology leaders from CEE countries participating in the South Eastern European Research Oncology Group (SEEROG) was formed in 2015, aiming to analyze the current status and trends of oncology care in CEE and to propose recommendations leading to improved care and outcomes. The SEEROG panel, meeting during the 11th Central European Oncology Congress, proposed

the following: (a) national cancer control plans (NCCPs) required in all CEE countries, defining priorities in cancer care, including finance allocation considering limited health care budgets; (b) national cancer registries, describing in detail epidemiological trends; (c) efforts to strengthen comprehensive cancer centers; (d) that multidisciplinary care should be mandated by the NCCPs; (e) that smaller hospitals should be connected to multidisciplinary tumor boards via the Internet, providing access to specialized expertise; (f) nationwide primary prevention programs targeting smoking, obesity, and alcohol consumption and centrally evaluated secondary prevention programs for cervical, colorectal, and breast cancers; (g) prioritize education for all involved in cancer care, including oncology nurses, general practitioners, and palliative care providers; (h) establish outpatient care in day hospitals to reduce costs associated with the current inpatient model of care in CEE countries and to improve patients' quality of life; (i) long-term pharmacoeconomic evaluations of new therapies in CEE countries; (j) increase national oncology budgets in view of the higher mortality rates in CEE compared with WE countries; and (k) CEE countries urgently need help from the European Union to increase and monitor overall investment in cancer care. **IMPLICATIONS FOR PRACTICE:** Significant differences in cancer incidence and mortality have been observed between European countries. While the incidence of many cancer types is higher in Western European (WE) countries, the mortality is generally higher in Central and Eastern Europe (CEE). The primary purpose of this review was to describe the current status and trends of oncology care in the CEE region, to raise awareness among physicians, regulators, and payers, and to propose the most needed changes in order to make the oncology care in CEE closer to the WE standards.

## PREDNÁŠKY A POSTERY ZO ZAHRANIČNÝCH KONFERENCIÍ

### KARCINÓM PRSNÍKA

**P. Griflikova, A. Masarykova, B. Bucakova, D. Scepánovic**

**Supinačná a pronačná poloha pri liečbe rádioterapiou u pacientok s karcinómom prsníka**

Najnovější trendy radioterapie, stereotaktické radioterapie, radiochirurgie a brachyterapie XI. 1. – 2. června 2016, Nemocnice na Homolce, Praha, ČR