P031

Physician survey in the treatment of HR+/HER2 – metastatic breast cancer in Egypt

E. Aboelkheir[1]*, A. Ashour[1], S. Fadel[1], W. Arafat[1]. [1]*Clinical Oncology, Alexandria University, Alexandria, Egypt*

Goals: Study aimed to show physician experiences and preferences in the treatment of HR+/Her2- metastatic breast cancer.
Methods: 100 Egyptian oncologists were recruited from an online survey and scientific meetings.
Physician characteristics such as work place, years of practice experience, the preferred used guidlines and their estimates of median survival of these patients.
Prescribing patterns
Physicians' therapeutic preferences for the treatment of their HR +/HER2- mBC patients were collected by asking physicians about their preferred therapy by treatment class (ET vs. CT), treatment regimen (individual agents, monotherapy vs. combination therapy), line of therapy, and by early (first or second line) versus later lines.
Reasons of treatment choices
Information was collected on the reasons underlying physicians' treatment decisions.
Results: Based on physician recall, endocrine therapy was the most preferred first line therapy reported by 89.7% of physicians. The most preferred treatments reported by physicians for second-line therapy included a different endocrine combination therapy (58.8%). For subsequent line treatment, the most preferred treatments were CT monotherapy.
Among endocrine therapies, aromatase inhibitors were the most frequently used first line ET(52.1%). For second line treatment, 21% of surveyed physicians indicated a preference for fulvestrant+ CDK4/6inhibitor. For third-line treatment, 19% of physicians indicated a preference for exmestene + Mtor inhibitors.
Among CT treatments, paclitaxel was the most frequently used agent across third and fourth lines of therapy, followed by capecitabine.
Conclusion(s): The treatment patterns reported by the physicians were generally consistent with treatment guidlines recommendations. For patients with HR+/HER2-mBC, phydicians typically prescribed median of two lines of ET prior to CT initiation. After first line ET, monotherapy or combination ET was commonly used in the second line, and CT monotherapy in the third or later lines of treatment. For patients with visceral symptoms, physicians were more likely to prescribe CT as early lines of treatment. Aromatase inhibitors were the most preferred first line ET, fulvestrant based therapy in the second line treatment and everolimus based therapy in the third line of treatment. But, paclitaxel and capecitabine were the most commonly used CTs in the third or later lines of treatment.
Conflict of Interest: No significant relationships.

P032

MammaPrint risk score distribution in South African breast cancer patients with the pathogenic BRCA2 c.7934delG founder variant: towards application of genomic medicine at the point-of-care

I. Mampunye[1]*, K.A. Grant[1], A.V. Peeters[2], R. Torrorey-Sawe[3], D.J. French[4], K.E. Moremi[5], M. Kidd[6], P.C. van Eeden[7], F.M. Pienaar[8], N.C. van der Merwe[9], M.J. Kotze[5]. [1]*Department of Biomedical Sciences, Cape Peninsula University of Technology, Cape Town, South Africa;* [2]*Department of Pathology, Stellenbosch University, Cape Town, South Africa;* [3]*Immunology Department, Moi University, Kenya, Eldore, Kenya;* [4]*Teddington, LGC, Middlesex, United Kingdom;* [5]*Division of Chemical Pathology, Stellenbosch University, Cape Town, South Africa;* [6]*Centre for Statistical Consultation, Stellenbosch University, Cape Town, South Africa;* [7]*Oncology Practice, Durbanville Medi-Clinic, Cape Town, South Africa;* [8]*CancerCare, Panorama Medi-Clinic, Cape Town, South Africa;* [9]*9Division of Human Genetics, University of the Free State, Bloemfontein, South Africa*

Goals: A novel point-of-care (POC) test kit was used to determine whether BRCA2 c.7934delG, the most common pathogenic founder gene variant previously identified in South Africa, is predictive of the MammaPrint risk score. This RNA-based 70-gene assay is an effective tool for assessment of chemotherapy benefit in patients with sporadic early-stage breast cancer, but no data is available on the effect of germline DNA variants on tumour pathology and clinical outcome in patients referred for MammaPrint.
Methods: A database query identified 14 female BRCA2 c.7934delG carriers among 88 breast cancer patients who provided informed consent for both germline and tumour genetic studies. Rapid ParaDNA POC testing and DNA sequencing results were compared between patients with a high- versus low-risk MammaPrint score. A pathology-supported genetic testing (PSGT) strategy was used for data integration and clinical interpretation.
Results: All 14 BRCA2 c.7934delG carriers presented with oestrogen receptor (ER)-positive breast cancer. Two of these tumours were progesterone receptor (PR)-negative (14%) and three human epidermal growth factor receptor-2 (HER2)-positive/equivocal (21%). Five BRCA2 c.7934delG carriers had a low-risk MammaPrint profile (36%) correlating with ER/PR-positive and HER2-negative invasive carcinoma of no special type (ICNST), except for one case with invasive lobular carcinoma. Medullary carcinoma was reported in one of the nine cases with a high-risk MammaPrint profile (64%), which was associated with ICNST in the remaining eight cases. Sequencing performed in a non-smoking, anti-depressant- and tamoxifen-treated patient diagnosed with metachronous bladder cancer four years after receiving a low-risk MammaPrint result, revealed genetic variation affecting cytochrome P450 2D6 (CYP2D6) enzyme activity associated with reduced survival in BRCA2 variant carriers.
Conclusion(s): Familial and endocrine therapy-associated risk often remain unrecognized in patients undergoing tumour gene profiling. Our finding that BRCA2 c.7934delG is not confined to a specific MammaPrint profile supports integration of germline and tumour genetics for risk assessment of local and distant recurrence, respectively, prior to surgical and therapeutic decision-making. Incorporation of rapid first-tier POC testing combined with genetic counselling support, may in future facilitate the prevention of a second primary cancer associated with BRCA2, linking breast and bladder/other cancers due to a pleiotropic effect.
Conflict of Interest: No significant relationships.

P033

Clinicopathological and molecular subtypes of early breast cancer in young women in Sudan

S. Siddig[1]*. [1]*Clinical Oncology, Khartoum Oncology Hospital (RICK), Khartoum, Sudan*

Goals: To estate the clinical pathological and molecular subtypes of early stages breast cancer in young in Sudanese females.
Methods: Cross sectional, hospital based study, retrospective methods with simple random sampling used, at Khartoum Oncology hospital (RICK), diagnosed between 2016 to 2018.
Chi squared test performed to determine the difference between the study groups in a variety of factors.
Survival was estimated using Kaplan Meier curves and cox regression for hazard ratio of survival was measured, multiple factors were examined.
A Pearson's chi-squared (χ^2) test was performed to determine the differences in clinicopathological factors between the groups.
Results: A 132 patients were studied, with early stages according toTNM classification of breast tumours 8th edition, patients demographic information and pathological and molecular characteristics were analysed.