

## Saturday, 29 November

### Session 1: Oral communications

#### OC 1: Clinicopathologic profile and therapeutic outcomes in breast conservative surgery

A. Dao, F. Safini, L. El Korachi, N. Benchakroun, Z. Bouchbika, A. Taleb, N. Tawfiq, H. Jouhadi, S. Sahraoui, A. Benider

*Department of Radiotherapy, Ibn Rochd (I Guess) University Hospital, Casablanca, Morocco*

**Introduction:** This study was to describe epidemiology, clinical profile and treatment outcome of patients who received conservative treatment in breast cancer. **Patients and Methods:** This is a retrospective study about 319 cases of conservative treatment of breast cancer who were treated from January 2008 to December 2010 and followed until November 2013. Analysis was performed using SPSS 20 and the calculation of survival by Kaplan–Meier method. **Results:** Median age was 48 years. In 92.8% of cases, the sign was a palpable nodule. According the TNM 2009, cancers were classified after surgery, pT1 in 40.4% of cases, pT2 in 56, 4%, pT3 in 2.5%. In 48.1% lymph node involvement (pN+) has been reported. According to the histological type, invasive ductal carcinoma was noted in 89.3% of cases. Grades II and III of SBR were predominant (78.8%). Hormonal receptors were positive in 72.7% of cases and the HER2 positive in 26%. Lumpectomy followed by quadrantectomy were the main types of surgery with 80% and 11% respectively. About 90, 5% of patients received chemotherapy. The most commonly used protocols were AC60 and AT50 respectively 47% and 12.5%. All patients received external beam radiotherapy (46 Gy) followed by boost (15–20 Gy) to the tumor bed or brachytherapy (79.5%), electrons (11.4%) or photon (9.1%). Aesthetic results were judged by 75% of cases. Hormone therapy with tamoxifen or aromatase-inhibitors was prescribed in 57.7% of patient. Average follow-up time was 54 months in our study. The overall survival was 92.5% and the disease-free survival was 82.8%. **Conclusion:** Conservative treatment remains the most desired in the treatment of breast cancer treatment option. Oncologic and aesthetic results are encouraging in our series.

#### OC 2: Hypofractionated radiation therapy in the management of breast cancer: Experience of Radiotherapy Department of the National Institute of Oncology of Rabat, Morocco

Mohammed Afif, Sanaa El Majjaoui, Hanane El Kacemi, Tayeb Kebdani, Noureddine Benjaafar

*Department of Radiotherapy, National Institute of Oncology, Rabat, Morocco.*

**Purpose:** Breast cancer is the most frequent cancer in Morocco with more than 5000 cases every year. Radiation therapy constitutes an important arm in its management, and the hypofractionated regimen represents a good alternative, it has demonstrated its effectiveness in local control, with a tolerable toxicity. The aim of our study is to relate our experience on hypofractionated radiotherapy in the management of breast cancer at the National

Institute of Oncology (NIO). **Materials and Methods:** This is a retrospective study including all women followed in radiotherapy department of NIO for invasive breast cancer (IBC) during 2010, and treated with hypofractionated regimen. We have excluded from the study, patients irradiated with conventional regimen, and non-irradiated patients. The statistical analysis was done by SPSS 10.0. **Results:** Between January and December 2010, 350 patients with IBC and treated with hypofractionated regimen were reviewed. The average age was 48.08 years ( $\pm 10.23$ ), 43.6% were postmenopausal tumors were located in the right breast in 51.1% of cases, 48.3% in the left breast, and 0.6% were bilateral. Ductal carcinoma was predominant (89.7%), followed by lobular carcinoma (4.8%). SBR grade 2 was predominantly (52.6%), hormone receptor positive (70.8%), and HER-2 over expression (19%). Regarding treatment, 67.7% received radical mastectomy, and 32.3% conservative surgery. 57.8% of patients were T2, and 65.1% had positive lymph nodes. 88.1% of patients received adjuvant chemotherapy. Adjuvant radiation therapy was performed in 15 fractions for a total dose of 42 Gy (2.8 Gy per fraction) in all patients, with a boost on the tumor bed in 31.7% of patients. The average length of treatment was 25.39 days ( $\pm 7.02$ ). Acute toxicity was acceptable, and late toxicity was dominated by lymphedema of upper limb (25.42%), and fibrosis (15.14%). With median follow-up time of 30.56 months, we had 13 local relapse, with a local recurrence-free survival of 96.6% at 3 years. **Conclusion:** Our results confirm that adjuvant hypofractionated radiotherapy in breast cancer allow a local control comparable to the standard pattern, with good clinical tolerance.

#### OC 3: Trastuzumab in neoadjuvant treatment of HER2-positive breast cancer

Hasnae Alaoui, Mohammed Fadli, Nabil Ismaili, Rhizlane Belbaraka  
*Department of Medical Oncology, Mohammed VI University Hospital, Marrakech, Morocco*

Trastuzumab show improved efficacy when given with chemotherapy to patients with early or locally advanced breast cancer that has HER2 overexpression or amplification. In Morocco, trastuzumab is approved in adjuvant and metastatic cases. To confirm the efficacy of trastuzumab in the neoadjuvant setting in the Moroccan population with HER2-positive locally advanced or inflammatory breast cancer, we conducted a retrospective study. 25 women with locally advanced or inflammatory breast cancer HER2- positive were enrolled. All patients received three cycles of AC60 (Adriamycine-cyclophosphamide) followed by three cycles of docetaxel-trastuzumab. All patients had a clinical response and radical surgery. Pathological complete response (pCR) was obtained in eight cases (21.6%). All patients had adjuvant trastuzumab. This study confirms that the addition of trastuzumab in locally advanced breast cancer overexpressing HER2 improves the clinical response, and provides rates of pathological complete response in encouraging these tumors with poor prognosis. Our study suggests the importance of conducting tests specifically for this type of tumors that are common in our region.

**OC 4: Evaluation of cardiotoxicity of trastuzumab in a Moroccan population: Experience of Medical Oncology Department, Hassan II University Hospital, FES, Morocco**  
Fatima Zahra Ziani, Rajae Kanab, Loubna Atrech, Samia Arifi, Nawfel Mellas

*Department of Medical Oncology, Hassan II University Hospital, FES, Morocco*

**Introduction:** Trastuzumab is approved in the treatment of the breast cancer in metastatic and adjuvant setting for human epithelial receptor 2 positif patients. The study of the tolerance of this therapy was nevertheless marked by a cardiotoxicity represented by a reduction of the left ventricular ejection fraction (LVEF) about 4% in the studies of the trastuzumab in adjuvant setting. The objective of this study is to estimate the incidence of cardiotoxicity of this treatment in a Moroccan population and to identify potential risk factors. **Materiels and Methods:** It is a retrospective study of 175 cases of breast cancer whom received the trastuzumab in the adjuvant 134 cases) and metastatic situation (41 cases) in the Department of Medical Oncology at the University Hospital of Hassan II, between January, 2009 and January, 2014. The evaluation was made in all patients by a transthoracique echography every three cycles and the cardiotoxicity was defined by a reduction in the LVEF of at least 10%. The statistical analysis is made by epi info logiciel. **Results:** The median age of the patients was 58 years (29–78 years). In all population of the study, the median LVEF before the beginning of the treatment was 60.4% and at the end of the treatment was 57.2% treatment. There was a statistically significant reduction of LVEF of 3.6% ( $P = 0.03$ ). In adjuvant situation, 97% of the patients were able to have the treatment for a duration of 1 year. A definitive withdrawal was made in three patients: one following an anaphylactic shock and two because of a not regressive reduction in the FEVG. No case of symptomatic cardiac insufficiency was observed. 33% of the patients presented an asymptomatic reduction in the LVEF, all were reversible with a recovery of a normal LVEF after a median of 1.7 months. In metastatic situation, ten patients presented hypertension before starting the trastuzumab and twenty one patients were exposed to anthracyclines before the institution of the trastuzumab. The average number of received cycles was 13 cures. Ten patients presented an asymptomatic reduction in the LVEF, reversible in all cases. No case of cardiac insufficiency was observed. The correlation analyses don't found a relation between cardiotoxicity and older age, hypertension, exposition to anthracyclines. **Conclusion:** The cardiac dysfunction secondary to the trastuzumab is not dependent of the dose and the majority of the patients will recover a normal cardiac function. According to our results, it seems that the Moroccan woman presents the same profile of tolerance regarding cardiac toxicity compared to the world population.

**OC 5: Bevacizumab in Moroccan patients with metastatic colorectal cancer**

Fadli Mohammed, Hasnae Alaoui, Nabil Ismaili, Rhizlane Belbaraka  
*Department of Medical Oncology, Mohammed VI University Hospital, Marrakech, Morocco*

**Introduction:** Bevacizumab is a targeted therapy that has revolutionized the treatment of cancer over the last decade. It has an anti-angiogenic activity by blocking vascular endothelial growth factor (VEGF) the main mediator of tumor angiogenesis. The aim of our study that is evaluating the efficacy and

safety of this expensive treatment in pratique common in the Moroccan population. **Methods:** All patients with histologically proven metastatic colorectal cancer treated by bevacizumab in association with standard chemotherapy at Oncology Center in Mohamed VI University Hospital of Marrakech in Morocco between October 2011 and December 2013 were included in a retrospective investigation. Efficacy was based on the evaluation of overall response rate ( $ORR = CR$  [complete response] +  $PR$  [partial response]) by using the RECIST criteria and safety was evaluated according to the NCT-CTC classification. **Results:** Eighty patients with metastatic cancers were included in our study. We have 44 (55%) womens and 36 (45%) mens. The median age in our population was 54 year (25–80). 77% of our patients had a ECOG performans statue of 0 to 1. All patients have received a minimum six cycles of bevacizumab + chemotherapy (FOLFOX or FOLFIRI) with a median of nine cycles. The  $ORR$  ( $CR + PR$ ) was 60 %.  $CR$  was observed in two cases (2.5%) while  $PR$  was observed in 57.5% of the cases. Three serious adverse events (grade 3 or 4) (3.75%) were registered; two cases of gastro-intestinales perforations (2.5%) and one case of hemorragia (1.25%). Hypertension was the most frequent adverse event (20%), followed by proteinuria (12.5%). **Discussion:** Bevacizumab is a monoclonal anti-body, humanized (93%) chimeric (7%), against the pro-angiogenic VEGF peptide that recognizes all isoformes. This targeted therapy has shown efficacy in the treatment of metastatic CCR. In several phases three trials addition of bevacizumab to standard chemotherapy improved the  $ORR$ . The  $ORR$  (60 %) in our study joined those described in the literature. The use of this antiangiogenic agent prolong DFS and OS .in our study the results of DFS are premature due to the small number of patients who have completed 1rst line treatment. We will be communicated in a second analysis.

**OC 6: Thrombosis risk assessment by Khorana score in a cohort of 1365 cancer patients at University Hospital of Casablanca**

Dao Abou, A. Dao, K. El-Khadir, N. Benchakroun, Z. Bouchbika, A. Taleb, N. Tawfiq, H. Jouhadi, S. Sahraoui, A. Benider

*Department of Radiotherapy, Ibn Rochd University Hospital, Casablanca, Morocco*

**Introduction:** Thromboembolic events are important causes of morbidity and mortality in cancer patients. Purpose of this study was to evaluate incidence and risk factors in cancer patients. **Patients and Methods:** We conduct a prospective study currently in our center. A cohort of 1635 patients was established from January 1, 2013 to June 30, 2013 and followed up to December 31, 2013 in Radiotherapy Center of University Hospital of Casablanca/Morocco. All patients with histologically confirmed cancer were included. Thrombosis events were notified during the treatment management and following up. Patients with thrombosis were managed in collaboration with the Department of Cardiology. Database was analyzed with SPSS version 20. **Results:** Media age was 54 years and sex ratio was 0.5. For BMI, hemoglobin, leukocyte and platelets, the medians values were respectively 22.80 kg/m<sup>2</sup>, 12 g/dl, 7175/ml and 3.3000/ml. Tumor localization were breast (27.8%), gynecology (16%), head and neck (11.4%), lung (10.4%), stomach (4.7%), pancreatic (1.5%), others digestive cancers (13.4%), urogenital tractus (6%), hematology (1.5%), testicle (0.4%). regarding Khorana risk level, 7.1% of patients were classified high risk and 91.1% intermediaries' risk. Incidence of deep venous thrombosis was 3.2% for overall cohort. Rate of VTE regarding risk level of Khorana model at 11 months was 1.2% with a low risk,

2.5% with intermediary risk and 14.5% with high risk. Previously, multivariate analysis will determine the risk factors associated with VTE include age >65 years, female sex, use of chemotherapy or surgery, primary site of cancer, staging, adjuvant treatment and presence of comorbidities. **Conclusion:** Systematic assessment of thromboembolic risk with Khorana score could contribute to alleviate the burden of morbidities and mortality in cancer patients.

### OC 7: Role of radio-iodinated meta-iodo benzyl guanidine in assessment of children with neuroblastoma

Khaled Elsaban, Hijji Alskhri<sup>1</sup>, Naglaa Kamal<sup>2</sup>

*Nuclear Medicine Unit, Alhada Armed Force Hospital, Taif, and Faculty of Medicine, Cairo University, <sup>1</sup>Nuclear Medicine Unit Alhada Armed Force Hospital, Taif, Saudi Arabia, <sup>2</sup>Department of Pediatric, Alhada Armed Force Hospital, and Faculty of Medicine, Cairo University, Cairo, Egypt*

**Background:** For more than 10 years. MIBG has been successfully used in diagnosis and staging of children with neuroblastoma. **Aim of the Study:** Identify the role of <sup>131</sup>I MIBG in the assessment of neuroblastoma and correlate its findings with other non-invasive tests. **Patients and Methods:** Twenty-eight patients with neuroblastoma attending the Pediatric Oncology Unit, over a period of 5 years (2009–2014) were assessed by MIBG scanning. The age of patients ranged from 40 days to 12 years with a mean of 4.7 years  $\pm$  1.1. They were 16 boys and 12 girls with a M:F ratio of 1:3, none was stage I and II, 7 patients (25%) were stage III and 21 patients (75%) were stage IV (Evan's staging system). Clinically, 24 patients (85.7%) presented with an abdominal mass, and three patients (10.7%) with a mediastinal mass. Metastases were present in the bone marrow in 11 children (39.3%), lymph nodes in 5 (17.9%), CNS in 4 (14.3%), liver in 2 (7.1%), soft tissues in 3 (10.7%), lungs and pleura in 1 (3.6%), brain in 1 (3.6%), and testis in 1 patient (3.8%). **Results:** <sup>131</sup>I MIBG could accurately diagnose local and distant neuroblastoma lesions in 23 patients with a sensitivity of 82.2%. High levels of VMA correlated with no cardiac uptake in the first 24 h in 7/8 patients with a sensitivity of 87.5%. On the other hand, low VMA levels were associated with cardiac uptake of <sup>131</sup>I MIBG in 3/4 patients with a specificity of 75%, a PPV of 88% and NPV of 86.7%. <sup>131</sup>I MIBG scintigraphy and bone marrow aspiration agreed on detecting neuroblastoma lesions in 24/28 patients (85.7%)  $P < 0.01$ , with a sensitivity of 59.5%, specificity of 96.6%, PPV of 89.3%, and NPV of 83.2%. **Conclusion:** <sup>131</sup>I MIBG scintigraphy, in a dose of 2 mCi can be used with 87.5% accuracy in the diagnosis and follow-up of children with neuroblastoma.

### OC 8: Nasopharyngeal carcinoma in children and young adults

Najoua Hanine, Loubna Belhajjam, Hanane Kabbaj, Aicha Mazouz<sup>1</sup>, Nawfel Mellas<sup>1</sup>, Abderahmane EL Mazghi, Touria Bouhafa, Khalid Hassouni

*Department of Radiotherapy and <sup>1</sup>Medical Oncology, Hassan II University Hospital, Fez, Morocco. E-mail: hanine.najoua@gmail.com*

**Introduction:** Nasopharyngeal carcinoma in children and young adults is common in Mediterranean countries, where it represents 5–10% of all pediatric tumors. The treatment follows, in the absence of randomized studies dedicated to children and adolescents, adults guidelines. It is essentially based on radiotherapy, the cornerstone of treatment and chemotherapy. However, treatment is complicated by late effects related to different therapeutic modalities that affect the quality of life

for these young patients. **Materials and Methods:** This is a retrospective study of 60 patients aged 20 years or younger and diagnosed with nasopharyngeal carcinoma treated between 2012 and 2014 at the Radiotherapy Department of the Hassan II University Hospital of Fez. **Results:** Nasopharyngeal carcinoma of the Child and Adolescent represents less than 12% of all cancers of the nasopharynx treated in our department. The average age of patients was 13.8 years (9–18 years), the sex ratio of 1.4 (35 men/25 women). The average follow-up was 13 months (2–24 months), the undifferentiated predominated (96% of cases), 71.42% of cancers were classified T3–T4 against only 28.58%, and 60% N2-3 (as classified by the International Union against cancer 1997). Among all patients, 40 were identified after the staging as suffering from locally advanced nasopharyngeal carcinoma treated with non-metastatic three cycles of neoadjuvant chemotherapy using different protocols (AP [adriamycin, cisplatin] BAC [bleomycin, adriamycin, cisplatin] BFP [bleomycin, 5-fluorouracil, cisplatin], FP [5-fluorouracil, cisplatin] at a rate of one cycle every 21 days. At the end of chemotherapy, it has been observed an objective response rate of 95.5% (44.6% complete response) and tumor progression in 4.5% of cases. This was followed by chemotherapy 4 to 6 weeks after radiotherapy (conventional fractionation) to a total dose of 70 Gy in with a linear accelerator. After radiation, it was observed 84% complete response, partial response of 12.1% and 3.1% of tumor progression. The acute toxicity in all patients was mucositis grade II or III. Lately, all patients had xerostomia, trismus was observed in 15 patients. **Conclusion:** Nasopharyngeal cancer in children and adolescents is often diagnosed at locally advanced stage. Multimodal therapy provides better local control rates with acceptable early toxicity comparable to that of the adult but more late toxicity. The introduction of new chemotherapy drugs and the use of new techniques for conformal radiotherapy certainly will improve outcomes and reduce complications.

### OC 9: Evaluation of the cost of care for cervical cancer in National Institute of Oncology at Rabat and the study of the possibility of establishing a flat-rate (forfait) for the management of this disease

A. Cheikh<sup>1,2</sup>, S. EL-Meijaoui<sup>3</sup>, N. Ismaili<sup>4</sup>, C. Nejjar<sup>5</sup>, Y. Cherrah<sup>1</sup>, N. Benjaafar<sup>3</sup>

*<sup>1</sup>Faculty of Medicine and Pharmacy, University Mohammed V, Rabat, Morocco, <sup>2</sup>Cheikh Zaid Hospital, <sup>3</sup>National Institute of Oncology, Rabat, <sup>4</sup>Regional Cancer Center, Marrakech, <sup>5</sup>Department of Epidemiology, Hassan II University, Faculty of Medicine and Pharmacy, Fes, Morocco*

**Introduction:** The CCU is the seventh leading cause of cancer deaths in both sexes and the fourth most common cancer in women. The medical, social and economic consequences of CCU are very serious for households and for society. The study that we done is an economic evaluation (global cost) of the CCU in the National Institute of Oncology (NIO) in Rabat. It also aims to explore the possibility of establishment of flat-rate (forfait) of management of this disease depending on the stage in order to facilitate the management of patient records for the hospital, for patients and for the health insurance plan. **Patients and Methods:** 550 patients were followed and treated at NIO at Rabat for 1 year. Data of all medical and surgical services offered to patients were collected from the NIO registry. The unit costs and the overall cost of the care were calculated from the data on medical prestations lavished and recorded in patient records. The total direct cost of care was assessed using micro-costing method. The overall cost has been calculated on the basis of rates of health insurance and

the real cost of each medical service. **Results:** The global cost for managing 550 patients, including all medical and surgical services, was about 12,867,053 MAD with an average estimated at  $23,394.6 \pm 7,549.8$  MAD. Radiotherapy accounts for 55% of total costs, followed by curietherapy (27%) and surgery (7%). The overall cost of the treatment depends on the stage of the disease, this cost decreased significantly with the changing stages of CCU ( $r = -0.341$ ,  $P < 0.001$ ). Moreover, the four most important services, namely surgery, radiotherapy, curietherapy and chemotherapy, significantly influence the overall cost of care ( $P < 0.001$ ). **Discussion:** The cost of care for patients with CCU within the NIO depends of stages of cancer. Referring to the results of our study, the standard deviations from the average costs are lower for stage IVA and IVB. In the early stages, that is, IB1, IIA, IIB and III, standard deviations are significant and important work to standardize medical practices should be undertaken within the NIO. This result should be taken into account in fixing the package of management CCU within the NIO.