RESEARCH POSTER PRESENTATIONS – SESSION II
DISEASE-SPECIFIC STUDIES
CANCER – CLINICAL OUTCOMES STUDIES
PCN1
A LITERATURE REVIEW ON THE HUMANISTIC AND ECONOMIC BURDEN OF MINERALOCORTICOID EXCESS SYNDROME
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OBJECTIVES: The impact of mineralocorticoid excess syndrome (MES) on humanistic and economic burden in patients receiving abiraterone in the metastatic castration-resistant prostate cancer (mCRPC) setting is not well understood. This literature review aims to assess the humanistic and economic burden of MES in this patient population.
METHODS: A systematic review was conducted using MEDLINE and EMBASE to identify all relevant studies published from January 1990 to May 2018. A total of 4,236 patients were included in the analysis. The economic burden of MES was assessed using costs, resource utilization, and productivity losses. The humanistic burden was assessed using the burden of disease and symptom burden.
RESULTS: The economic burden of MES was found to be significant, with increased healthcare costs and resource utilization. The humanistic burden was also found to be significant, with increased symptom burden and reduced quality of life.
CONCLUSIONS: MES has a significant impact on both the humanistic and economic burden in patients receiving abiraterone in the mCRPC setting. Future research is needed to further understand the burden of MES in this patient population.
PCN2
BISPHOSPHONATES-ASSOCIATED OSTEONECROSIS OF THE JAW (ONJ) IN CANCER PATIENTS: A META-ANALYSIS
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OBJECTIVES: To assess the incidence of osteonecrosis of the jaw (ONJ) associated with bisphosphonates in cancer patients. METHODS: A systematic review was conducted using MEDLINE and EMBASE. Studies were included if they reported ONJ incidence rates in cancer patients treated with bisphosphonates. RESULTS: A total of 28 studies were included in the analysis. The overall incidence rate of ONJ was 1.2% (95% CI: 0.8–1.8%). The incidence rate was higher in patients with advanced cancer (2.0% vs. 0.8%) and lower in patients treated with zoledronate (0.8% vs. 1.2%) and ibandronate (0.8% vs. 1.2%). CONCLUSIONS: The incidence of ONJ in cancer patients treated with bisphosphonates is low, but should be monitored closely.
PCN3
SKLELETAL-RELATED EVENTS HAVE A SIGNIFICANT IMPACT ON HEALTH-RELATED QUALITY OF LIFE IN MEN WITH METASTATIC CASTRATION RESISITANT PROSTATE CANCER (mCRPC) FOLLOWING DOCTETAXEL THERAPY FAILURE
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OBJECTIVES: Patients with mCRPC are at risk of experiencing skeletal-related events (SREs), defined as pathological fracture, spinal cord compression, and the need for radiotherapy. OBJECTIVES: To evaluate the impact of skeletal-related events on health-related quality of life (HRQoL) in patients with mCRPC.
METHODS: Data were obtained from the AFFIRM study, a phase 3 trial of abiraterone acetate in patients with mCRPC. The impact of SREs on HRQoL was assessed using the FACT-P and EORTC QLQ-C30 questionnaires. RESULTS: At 12 months, 98% of patients had experienced at least one SRE. The impact of SREs on HRQoL was significant, with decreases in the physical and functional domains of the FACT-P and EORTC QLQ-C30 questionnaires. CONCLUSIONS: SREs have a significant impact on HRQoL in patients with mCRPC.
PCN4
CAN ADMINISTRATIVE DATA PREDICT CHEMOTHERAPY ADVERSE EVENTS?
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OBJECTIVES: The rates of adverse events (AEs) are an important component of therapeutic decision-making. OBJECTIVES: To determine the impact of bilirubinemia on health outcomes and healthcare costs in a real-world setting.
METHODS: A retrospective cohort study was conducted using administrative data from a large Australian health plan. Patients with metastatic colorectal cancer (mCRC) treated with oxaliplatin were included. RESULTS: A total of 1,146 patients were included in the analysis. Bilirubinemia was associated with increased healthcare costs and resource utilization. CONCLUSIONS: Bilirubinemia is associated with increased healthcare costs and resource utilization in patients with mCRC.
the colorectal cancer and comparison groups, adjusted for baseline demographic and clinical characteristics. **RESULTS:** A total of 75,208 patients were identified for the colorectal cancer and comparison cohorts. After 1:1 PSM, 24,053 patients were matched from each group, and the baseline characteristics were proportionate. Patients diagnosed with colorectal cancer had more health care utilization including pharmacy ($8,667 vs. $7,955, p < 0.01), doctor visits ($1,015 vs. $981, p < 0.01), and hospital days ($329 vs. $295, p < 0.01). Health care utilization increased in the time periods between 2000-2002 and 2010-2012, respectively. **CONCLUSIONS:** Patient time and costs over a 1-year period compared to patients without colorectal cancer.

**PCN7**

**EVOLUTION OF MOLECULAR DIAGNOSTIC TEST USAGE IN SOLID TUMOURS IN WESTERN EUROPE: AMBITION STUDY (ANALYSIS OF MOLECULAR BIOMARKER TESTS IN ONCOLOGY)**

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**OBJECTIVES:** The development of targeted therapies has changed the paradigm of cancer management necessitating the use of robust biomarkers to identify eligible patients. This study aims to evaluate trends in molecular diagnostic test (MDT) uptake across various solid tumors. **METHODS:** This study used IMS Oncology Analyzer™, a patient database collected through a quarterly physician panel survey. This database provides comprehensive insight into cancer patients who were diagnosed with solid metastatic stages and diagnosed with breast (BC), stomach (SC), non-small cell lung cancer (NSCLC) or colorectal cancer (CRC) and receiving chemotherapy. MDT usage was analyzed from time 0 (year of the European Medicines Agency –EMA– approval of the associated targeted therapy) until 2012. The analysis was done on 5 EU countries (France, Germany, Italy, Spain and UK). **RESULTS:** Trastuzumab was approved in 2000 and by 2004 60% (787/1,320) were receiving Trastuzumab. In 2007 26% (321/1,231) of patients were receiving Trastuzumab. Six trials contributed to a network for PFS/TTP and five to a network for OS. Because of data limitations, 54% of advanced NSCLC patients (280/546) were EGFTR tested. This proportion increased to 94% (2,092/2,708) in 2010. Panitumumab and Cetuximab obtained EMA approval for KRAS wild type CRC in 2007 and 2008 respectively. In 2009, 40% (1,383/3,443) of patients were receiving Panitumumab. The proportion of patients treated with bevacizumab is significantly increased in the last 10 years. More over, the time to pregnancy has become significantly shorter. This is indicative of the positive and hopeful developments for young women affected by breast cancer. Further studies on this important research topic are necessary.

**PCN10**

**EVALUATION OF VARIABLE RELEVANCE AND ACCESSIBILITY TO SUPPORT PERSONALIZED MEDICINE IN BREAST CANCER**

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**OBJECTIVES:** Over 50% of young women diagnosed with breast cancer and carcinomas are at risk of infertility. To indirectly compare the efficacy (progression free survival (PFS)/time to progression (TTP) and overall survival (OS)) of everolimus plus exemestane (EVE+EXE) with fulvestrant in patients with hormone receptor positive, HER2 negative advanced or metastatic breast cancer. **METHODS:** A study with a strict set of inclusion and exclusion criteria was used to review the current literature. A total of 222 published studies were incorporated into the analysis. Plasma VEGF-A, PIGF and soluble VEGFR-1/VEGFR-2 demonstrated value as pharmacodynamic biomarkers with limited prognostic value. CECA and CA19-9 showed prognostic and predictive value under restricted indications. Blood pressure demonstrated superiority in its ability to predict response to bevacizumab. **CONCLUSIONS:** The evidence suggests the incorporation of biomarkers in clinical trial design must be tailored to the drug and its indication. The addition of biomarker information to the selection of patients for clinical trials was shown to have a significant impact on cost. The development of a biomarker to predict survival for blood pressure as a biomarker of response to bevacizumab has been highlighted. Bevacizumab-induced hypertension should therefore be considered as a key candidate for future biomarker-driven trials, increasing the likelihood of test-treatment acceptance by key regulatory and HTA stakeholders.

**PCN9**

**PREGNANCY AFTER BREAST CANCER IN 2000-2002 AND 2010-2012: A RETROSPECTIVE DATABASE ANALYSIS**

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**OBJECTIVES:** Women of childbearing age with a diagnosis of breast cancer often desire to have a child after treatment. Some reports have suggested that pregnancy does not increase the risk of cancer recurrence after successful treatment. These reports and positive changes in the survival rates of breast cancer patients can impact the decisions of patients and physicians. The goal of this study was to estimate the number of deaths from breast cancer and to evaluate the potential for treatment and to determine the time between the cancer diagnosis and pregnancy in the time periods between 2000-2002 and 2010-2012, respectively. **METHODS:** A retrospective study analyzing routine cancer data collated by gynecologists in Germany (IMSyS Disease Analyzer). Data from women aged 20-45 with a pregnancy within 10 years after the first breast cancer diagnosis from 10 gynaecological practices in Germany (Disease Analyzer database, 01/1992 to 12/2012) were analyzed. In the time period 2000-2002, 65% (projected to national level: 4615) women became pregnant after a breast cancer diagnosis; this number increased to 114 (projected to national level: 8904) between 2010-2012. The mean age at diagnosis was significantly changed from 2000-2002 (53.6 ± 10.0) and 34.2 years (SD: 6.1)]. The time between the first breast cancer diagnosis and pregnancy identification was 896 days (SD: 690) in 2000-2002 and 552 days (SD: 696) in 2010-2012 [p 0.01]. **CONCLUSIONS:** This retrospective analysis showed that the time of pregnancy following a breast cancer diagnosis has significantly increased in the last 10 years. More over, the time to pregnancy has become significantly shorter. This is indicative of the positive and hopeful developments for young women affected by breast cancer. Further studies on this important research topic are necessary.

**PCN11**

**AN INDIRECT TREATMENT COMPARISON OF THE EFFICACY OF EVEROLIMUS (AFINITOR®) AND FUVESTANTR for the treatment of hormone receptor positive (HR+) HER2 NEGATIVE (HER2-) ADVANCED OR METASTATIC BREAST CANCER**

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**OBJECTIVES:** To indirectly compare the efficacy (progression free survival (PFS)/time to progression (TTP) and overall survival (OS)) of everolimus plus exemestane (EVE+EXE) with fulvestrant in patients with hormone receptor positive, HER2 negative advanced or metastatic breast cancer. **METHODS:** A systematic search of the Cochrane Library and other resources was undertaken to identify reviews and clinical trials reporting interventions for metastatic breast cancer that would allow an indirect comparison of fulvestrant and EVE+EXE. A Bayesian fixed effect model was used with exemestane adopted as the base treatment for the model because it provided the most information in the network. The basic parameters of the model are the log hazard ratios with respect to exemestane for PFS/TTP and OS from the included studies. For EVE+EXE, the model was updated to assume an indirect comparison of fulvestrant and EVE+EXE. Six trials contributed to a network for PFS/TTP and five to a network for OS. Because the probability at the treatment was used as the base treatment, it was assumed that the comparator is less effective than everolimus. For EVE+EXE, EVE+EXE performed better than fulvestrant 250mg (HR 2.13 Credible interval (CI) 1.72 to 2.63) and 500mg (HR 1.69 CI: 1.30 to 2.22). This difference was statistically significant. For OS, EVE+EXE performed better than fulvestrant 250mg (HR 0.97 CI: 0.87 to 1.06) and 500mg (HR 1.15 CI: 0.76 to 1.75) but the difference was not statistically significant. A complete statistical assessment of heterogeneity for PFS/TTP and OS was not possible due to data limitations. **CONCLUSIONS:** EVE+EXE confers better PFS/TTP benefit in HR+ HER2-ve metastatic breast cancer when indirectly compared with fulvestrant 250mg