

costs from a hospital centered view and four studies included costs from a third party payer view. Overall, the mean total treatment cost of pancreatic cancer treatment ranged from €8,037 to €38,232 per patient. The cost of resectable disease ranged from €19,890 to €120,071 per patient. The cost of unresectable disease ranged from €14,899 to €58,208. The cost of metastatic disease ranged from €13,873 to €43,679. The cost of laparoscopic distal pancreatectomy ranged from €9,603 per patient to €15,433 per patient. The cost of open distal pancreatectomy ranged from €10,944 per patient to €22,790 per patient. 15 studies reported cost-effectiveness data. The incremental cost-effectiveness ratio (ICER) of folfoxin compared to gemcitabine ranged from €48,637 per quality adjusted life years (QALY) to €62,657 per QALY. The ICER of surgery followed by chemotherapy compared to surgery alone ranged from €34,636/QALY to €81,971/QALY. **CONCLUSIONS:** Surgery is an important cost-driving factor in pancreatic cancer treatment. Wide variations in cost are reported, probably reflecting the variation in health care systems.

PCN110

THE INCREASING COST BURDEN OF OBESITY RELATED CANCER TO NHS ENGLAND

Dasika G, Pennington B, Nielsen SK
BresMed, Panaji, India

OBJECTIVES: A 2014 study by Bhaskaran et al. found that an increase in BMI was associated with an increased risk of cancer in 10 sites. The National Health Service (NHS) England cancer related expenditure for the cancers in these 10 sites from Bhaskaran et al. accounted for £2.78 billion in 2012/13. This study estimated the increasing cost burden of these cancers to NHS England relative to increasing BMI. **METHODS:** The analysis used the primary care trust (PCT) expenditure for the financial year 2012/13 of NHS England. The 10 cancers found by Bhaskaran et al. whose incidences increase as BMI increases were linked to the 'cancers and tumours' category of the cancer expenditure. We calculated the cancer expenditure attributable to obesity for each of the 10 cancers using risks reported by Bhaskaran et al. Bhaskaran et al. also reported hazard ratios (HRs) for incidence of each cancer for a 5kg/m² increase in BMI - we used these HRs to estimate the increased cost of each of the 10 cancers for increase in population BMI. **RESULTS:** We calculated that the 2012/13 cost burden of the 10 cancers attributable to obesity was £0.32 billion. If the mean population-wide BMI increased by 5 kg/m² we estimated that the cost burden of 10 cancers attributable to obesity would have increased to £0.41 billion from £0.32 billion in 2012/13. The cost burden would increase most dramatically for uterus cancer, with a predicted increase of 62%. **CONCLUSIONS:** Cancers attributable to obesity have a high cost burden. A population-wide increase in BMI would result in higher incidence of 10 cancers. The cost to NHS England would increase dramatically, with the required budget increasing by more than 25% for an increase in BMI of 5kg/m².

PCN111

MEDICAL COST ASSOCIATED WITH TREATMENT AND FOLLOW-UP OF PATIENTS WITH HEAD AND NECK CANCER

De Paep A¹, Vandeneede N¹, Strens D², Specenier P³

¹Antwerp University, Antwerp, Belgium, ²Realidad, Grimbergen, Belgium, ³Antwerp University Hospital, Edegem, Belgium

OBJECTIVES: To summarize the existing literature regarding the medical cost associated with treatment and follow-up of head and neck cancer. **METHODS:** PubMed was used as search engine to retrieve publications in Medline using the search term "(head and neck cancer) AND (cost)" with a publication date filter (from January 1st 2000 up to September 1st 2014) and language filter (English). This search yielded 2,635 publications of which 97 were relevant for this review. Cost were recalculated in Euros (€) using the June 5 2015 currency rate of \$1 = €0.8914. **RESULTS:** In six studies total treatment cost from diagnosis to discharge ranged from €15,214 per patient to €21,665 per patient. In four studies total medical cost including treatment and follow-up ranged from €29,434 per patient to €76,277 per patient. The reconstruction cost ranged from €8,797 per patient to €48,115 per patient. In three studies the cost of surgery performed by a high-volume surgeon ranged from €7,869 per patient to €24,233 per patient and by a low-volume surgeon ranged from €9,146 per patient to €22,067 per patient. In two studies the median cost for stage I disease ranged from €3,264 per patient to €11,205 per patient, for stage II disease ranged from €5,230 per patient to €20,473 per patient, for stage III disease ranged from €9,196 per patient to €28,429 per patient and for stage IV disease ranged from €10,222 per patient to €45,373 per patient. In three studies the Incremental Cost effectiveness Ratio (ICER) of cetuximab plus radiotherapy compared to radiotherapy alone ranged from €7,530 per QALY to €14,624 per QALY. **CONCLUSIONS:** The literature on the costs associated with the treatment of head and neck cancer is extensive. Wide variations in cost are reported, probably reflecting the variation in health care systems.

PCN112

CLINICAL AND ECONOMIC BURDEN OF PROSTATE CANCER

Saunders R¹, Plun -Favreau J², Takizawa C², Valentine WJ³

¹Ossian Health Economics and Communications GmbH, Basel, Switzerland, ²Genomic Health International, Geneva, Switzerland, ³Ossian Health Economics and Communications, Basel, Switzerland

OBJECTIVES: Screening programs have resulted in prostate cancer (PC) diagnoses increasing and being made both earlier in the disease state and the patient's life. Understanding the clinical and cost burden of PC and its associated treatment options is imperative for optimization of healthcare resources. **METHODS:** A structured literature review of three publication databases (PubMed, EMBASE, and the Cochrane Library) was undertaken. Literature review was focused on publications with a major focus on "Prostatic Neoplasms" or containing the term "Prostate Cancer". Secondary search criteria restricted results to contain information on epidemiology, cost of illness, adverse events, or treatment protocols. To ensure that recent estimates and practice guidelines were evaluated, literature was restricted to those published on or after January 1, 2009. Abstract screening selected publications reporting data from European countries and other nations with developed healthcare systems. **RESULTS:**

Age-standardized incidence rates for PC ranged from 4.5 to 170.2 cases per 100,000 males per year, and was 110.8 per 100,000 males per year in the EU. The annual percentage increase in PC ranged from 2.8% in Australia to 8.6% in China. The cost of PC management in Europe was highest in France (EUR 722 million). Key cost drivers were identified as the initial year of care, radical prostatectomy, and terminal care. Compared with other EU countries, higher use of radical prostatectomy and lower use of active surveillance in France result in a higher cost burden. **CONCLUSIONS:** The incidence of PC is increasing in the majority of countries with data available. The cost of illness is rising accordingly, and the cost differential between active surveillance and intervention is substantial. Selecting the optimal treatment per patient is likely to be an important aspect in limiting the increase in the PC burden.

PCN113

EPIDEMIOLOGY AND BURDEN OF MULTIPLE MYELOMA IN JAPAN: A SYSTEMATIC REVIEW

Yamabe K¹, Inoue S², Hiroshima C²

¹Takeda Pharmaceutical Company Ltd., Tokyo, Japan, ²CRECON Medical Assessment Inc., Tokyo, Japan

OBJECTIVES: Bortezomib (BOR), lenalidomide (LEN), thalidomide (THAL) are available to patients with multiple myeloma (MM) in Japan, and new drugs are also to be launched. Introduction of Health Technology Assessment in FY2016 is aimed in Japan. The severity and its expensive treatment cost of MM disease may become important subjects to be discussed although a lack of resources for assessing cost-effectiveness of treatment has been pointed out in Japan. The objective of this study was to sort epidemiological data and information on currently available treatments for MM through a systematic review and to estimate an expected total medical cost for relapsed/refractory MM (RRMM) patients. **METHODS:** The literature search was conducted in MEDLINE and Ichushi-Web. Eligible studies were those of Japanese patients and published in the past 10 years. Studies were assessed for the followings: incidence and prevalence rate, number of patients, mortality rate, development rate of acute myelogenous leukemia (AML), and clinical effectiveness of current therapies. Expected total medical cost per RRMM patient was calculated from a model with overall survival and progression-free survival of RRMM patients based on literature review, assuming salvage therapies were comprised of BOR, LEN, and THAL. **RESULTS:** Annual incidence and 5-year prevalence rates of MM were reported as 1.3 to 5.4 and 9.7 per 100,000 persons, respectively. Although mortality rates were reported, data on AML development of MM patients tended to lack. Clinical trials of BOR and THAL-based treatments were found, while there was only one for LEN-based treatment. An expected total medical cost for RRMM patient was estimated to be over €100,000 (1,383,000 yen). **CONCLUSIONS:** While the study indicated large medical resources usage of MM and the necessity of cost-effective evaluation for MM treatments, few studies have revealed its burden. Further studies on current situation surrounding MM treatments are expected.

PCN114

THE COST-OF-DISEASE OF METASTATIC/INOPERABLE GASTROINTESTINAL STROMAL TUMORS IN TURKEY: AN EXPERT PANEL APPROACH FOR ESTIMATION OF COSTS

Deger C¹, Telli F², Gunalid M³, Keskin S⁴, Saglam S⁵, Ozdemir O⁶, Sar C¹, Parali E¹, Erdal E¹, Sumer F¹, Ozel O¹, Asan S¹

¹Bayer Turk Kimya San. Ltd. Sti., Istanbul, Turkey, ²Haydarpaşa Numune Training and Research Hospital, Istanbul, Turkey, ³Bakirkoy Dr. Sadi Konuk Training and Research Hospital, Istanbul, Turkey, ⁴Memorial Sisli Hospital, Istanbul, Turkey, ⁵Istanbul Bilim University, Istanbul, Turkey, ⁶Yorum Consulting Ltd., Istanbul, Turkey

OBJECTIVES: Gastrointestinal stromal tumors (GIST) are rare but costly tumors with an estimated incidence of 1.5/100 000/year in Europe. Granting reimbursement requires locally adapted cost effectiveness data in Turkey. This study was conducted to estimate the costs-of disease and direct cost components of metastatic/inoperable GISTs that did not respond to prior imatinib mesylate and sunitinib malate. **METHODS:** Bayer Turkey Market Access team organized an "expert panel" composed of oncologists to discuss the local treatments, routine monitoring and adverse event management algorithms in metastatic/inoperable GIST patients. The panel reviewed the global and local literature and guidelines and also discussed the spectrum of frequently performed local clinical practices. All cost components, including medications, hospitalization, out-patient follow-up procedures and rehabilitation services were reviewed. End of 2014 local prices for medications and procedures were used as sources. Based on the answers of the physicians, the cost of healthcare resources regarding the conditions described were calculated from the perspective of the Turkish payer (SSI - Social Security Institution). **RESULTS:** In metastatic/inoperable GIST patients, treatment should be continued indefinitely, since treatment interruption is generally followed by relatively rapid tumor progression in almost all cases, even when lesions have been previously surgically excised. The cost of routine monitoring in the follow-up of metastatic/inoperable GIST patients was estimated to be 62.40 TL/month during progression-free and post-progression periods, while it was 490.00 TL/month during the terminal phase. The greatest cost is estimated for hospitalization in the intensive care unit ranging from 200.00 to 800.55 TL per incident. The most common adverse reactions were listed as hand and foot skin reaction (4%) and diarrhea (6.7%). **CONCLUSIONS:** The costs of the disease, which therefore are quite high, estimated here will provide the most reliable data reflecting current figures to Public Stakeholders. Despite these high expenditures, those treatments' efficacy is not clinically proven.

PCN115

THE ANALYSIS OF INPATIENTS COST OF BREAST CANCER IN CHINA, 2011

Song S, Wang Z, Zhang M

IMS consulting group, Shanghai, China

OBJECTIVES: To analyze the inpatients direct medical costs and reimbursement rate of breast cancer based on national claimed database for urban employees and compare on the cost of different types of treatment. **METHODS:** Mechanical sam-