towards improved OS when compared with the other TKIs: afatinib (HR 0.80, 95% CrI 0.52-1.23), erlotinib (HR 0.82, 95% CrI 0.44-1.53), gefitinib (HR 0.76, 95% CrI 0.58-1.00), osimertinib (HR 0.76, 95% CrI 0.52-1.13), and icotinib (HR 0.64, 95% CrI 0.34-1.22); a statistically significantly improved PFS compared with erlotinib (HR 0.45, 95% CrI 0.22-0.90) and gefitinib (HR 0.51, 95% CrI 0.39-0.66); a trend towards improved PFS for afatinib (HR 0.67, 95% CrI 0.44-1.02), osimertinib (HR 0.93, 95% CrI 0.64-1.35) and icotinib (HR 0.59, 95% CrI 0.31-1.14). ***Conclusions:*** Overall, this NMA found that dacomitinib had a consistent trend towards improved OS and PFS when compared with other TKIs for first-line treating locally advanced or metastatic EGFR mutation positive NSCLC among Asian populations.

PCN31
REAL-WORLD TREATMENT PATTERNS OF RADIUM-223 IN PATIENTS WITH METASTATIC CASTRATION RESISTANT PROSTATE CANCER RECEIVING CARE AT A US TERTIARY ONCOLOGY CENTER

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Objectives: This study evaluated treatment patterns and outcomes among patients with metastatic castration resistant prostate cancer (mCRPC) treated with radium-223 in an academic clinical setting. ***Methods:*** A retrospective chart review study was conducted at Dana-Farber Cancer Institute of bone metastases-predominant mCRPC patients treated with radium-223 between 2013-2018. Treatment patterns, symptomatic skeletal events (SSE), and overall survival (OS) were measured. Outcomes were evaluated in patients receiving radium-223 pre- vs. post-chemotherapy. OS, defined from the time of mCRPC to death or last follow-up, was examined using Kaplan-Meier medians and 95% confidence intervals (CIs). ***Results:*** 220 patients were treated with radium-223 (64 pre-chemotherapy, 83 post-chemotherapy, 73 no chemotherapy). Mean chemotherapy cycles received was 9.0 and 9.2 (pre- and post-chemotherapy); on average, radium-223 was given in the 3rd and 5th mCRPC line of therapy, pre- and post-chemotherapy ($p<0.001$). Among those who received radium-223 pre- vs. post-chemotherapy, 76.6% completed all 6 cycles of radium-223 vs. 46.3% ($p<0.001$). 92 (41.8%) patients were treated with radium-223 with another therapy, commonly abiraterone acetate (43.5%) and enzalutamide (52.2%). Overall, 122 (55.5%) patients received a bone-targeting agent following mCRPC, including zoledronic acid (31.4%) and denosumab (22.7%). 29 (13.2%) patients experienced an SSE post-radium-223. Median OS was 39.4 (95% CI 33.0, 48.8) vs. 37.4 months (95% CI 32.0, 43.5) for patients receiving radium-223 pre- vs. post-chemotherapy and 35.2 months (95% CI 27.9, 43.3) vs. 32.0 months (95% CI 26.9, 36.0) for patients receiving radium-223 in combination vs. monotherapy. ***Conclusions:*** While patients treated with radium-223 pre- vs. post-chemotherapy received similar cycles of chemotherapy, patients were more likely to complete all six cycles of radium-223 if treatment was administered pre-chemotherapy. OS was similar between groups receiving radium-223 pre- vs. post-chemotherapy and with or without combination hormonal therapy. Understanding real world treatment patterns of radium-223 use will be critical to optimizing therapy for patients.

PCN32
THE ROLE OF ORAL CARE IN THE PALLIATIVE CARE

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Objectives: The oral problems including dry mouth, stomatitis and candidiasis are one of the important problems which should be resolved in the palliative care. The purpose of this study was to investigate oral problems in this stage and improvement of dry mouth by oral care. Mouth care is an essential aspect of palliative care in all settings and should be considered part of daily routine patient care. Assessment and intervention should be instigated early to optimize patient comfort and prevent more serious problems and treatment complications. ***Methods:*** The study is a retrospective, quantitative analysis. Through a purposive sampling we analyzed records of tumor- and terminal stage patients who were involved in the service of the Pécs-Baranya County Hospice Foundation and met enroll criteria in 2018. The study subjects were consecutive terminally ill cancer patients admitted over the past half years. The following 3 items were retrospectively investigated. The incidences of these oral problems, the severity of dry mouth and complication with other oral problems and how can improvement of dry mouth use standard oral care by nursing staff. Descriptive (absolute- and relative frequency, variance, mean, modus, and mathematical statistics (correlation, chi-square test, variance-analysis (ANOVA), T-test) were done on the sample ($p<0,05$) using MS Excel and SPSS 22.0. ***Results:*** The incidences of dry mouth, stomatitis, and candidiasis were significantly higher in the last hours. ($p< 0.001$). Severe cases of candidiasis were noted in 20.0% and dry mouth has benne reporter in 64.8% of people with advanced cancer and taste sensation diminishes in 25–50% of people living with cancer. ***Conclusions:*** Accurate diagnosis of oral problems and corresponding appropriate interventions are important for improving quality of end-of-life care.

PCN33
HEALTH RELATED QUALITY OF LIFE AMONG BREAST CANCER PATIENTS UNDERGOING ADJUVANT CHEMOTHERAPY AT A TERTIARY HEALTH FACILITY: A CROSS SECTIONAL STUDY

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Objectives: Breast cancer is the second most prevalent, cause for mortality and third most incident cancer among women in Zimbabwe. The clinical effects of breast cancer and its treatment are clearly reported as clinical outcomes. However, the disease condition and its treatment have an impact on the quality of life of an individual. This study therefore aimed to estimate the health-related quality of life (HRQoL) scores among breast cancer patients. The other objective of the study was to explore the determinants of health-related quality of life. ***Methods:*** A cross-sectional study was carried out at Parirenyatwa Hospital, to assess HRQoL and its correlates. The English and Shona versions of the European Organization for Research and Treatment of Cancer QLQ-C30 (version 3) and its disease specific complementary BR-23 tool were used. Multivariable linear regression was applied to identify the demographic and clinical predictors of HRQoL. ***Results:*** A total of 63 participants, with a mean age of 45 consented to take part in the study. The overall global quality of life score (GQoL) was 52.51±11.93. Participants reported high functional scores in physical functioning (65.4±17.9), emotional functioning (73.4±11.6) and cognitive functioning (60.1±24.7) and very low scores in role functioning (33.0±19.5), social functioning (40.6±29.8) and sexual functioning (24.6±25.5). Participants also reported challenges with pain and fatigue on the symptom scale. ***Conclusions:*** The participants reported moderate GQol scores which indicate moderate success in the breast cancer management programs. However more effort is needed in the role, social and sexual functioning domains.

PCN34
COMPATIBILITY OF CHIMERIC ANTIGEN RECEPTOR (CAR) T-CELL THERAPY STUDIES IN THE TREATMENT OF PATIENTS WITH RELAPSED/REFRACTORY LARGE B-CELL LYMPHOMA (LBCL) FOR INDIRECT TREATMENT COMPARISON (ITC) ANALYSES

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Objectives: The efficacy and safety of lisocabtagene maraleucel (liso-cel), axicabtagene ciloleucel (axi-cel), and tisagenlecleucel in the treatment of patients with relapsed/refractory LBCL have not been compared in head-to-head studies. ITC such as matching-adjusted indirect comparison (MAIC) can be performed to evaluate relative treatment effects. This analysis assessed the comparability of clinical trials investigating the safety and efficacy of CAR T-cell therapies in patients with relapsed/refractory LBCL for MAIC. ***Methods:*** We compared the study design, eligibility criteria, baseline patient characteristics, and outcome definitions among liso-cel (TRANSCEND NHL 001), axi-cel (ZUMA-1), and tisagenlecleucel (JULIET) trials. Variable definitions and summary statistics were tabulated and compared. ***Results:*** Studies were single-arm, open-label, multicenter trials. TRANSCEND NHL 001 (Abramson, 2019) enrolled a broader patient population than ZUMA-1 (Locke, 2019) and JULIET (Schuster, 2019), given differences in eligibility criteria and bridging therapy use. Imbalances in baseline patient characteristics identified as possible prognostic factors included disease histology, tumor burden, CNS involvement, ECOG performance status, comorbidities, prior allogeneic stem-cell transplantation, and bridging therapy use. Reported proportions of patients who received bridging therapy (TRANSCEND, 59% [n=159/268]; ZUMA-1, 0% [n=0/108]; JULIET, 92% [n=102/111]) and were refractory (definitions differed) to last therapy (TRANSCEND, 79% [n=212/268]; ZUMA-1, 74% [n=80/108]; JULIET, 55% [n=61/111]) substantially differed between studies. Differences in outcome criteria, follow-up periods, and definitions of safety endpoints further complicate comparisons between trials. TRANSCEND and JULIET used the Lugano criteria (Cheson, 2014) and ZUMA-1 used the IWG criteria (Cheson, 2007) to assess response. ***Conclusions:*** CAR T-cell therapy clinical trials for relapsed/refractory LBCL may be comparable for MAIC given proper adjustments. Key differences between studies, such as proportions of patients who received bridging therapy and were refractory to last therapy, should be carefully considered before conducting any ITC. This analysis highlights the importance of thorough assessment of study compatibility to ensure the validity of ITC.

PCN35
NATIONAL TRENDS IN ADMISSION AND IN-HOSPITAL MORTALITY OF PATIENTS WITH PANCREAS CANCER IN THE UNITED STATES (US), 2012-2016

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Objectives: Pancreatic cancer causes more than 45,750 deaths per year and is projected to be the second leading cause of cancer-related death in the US in 2020. We

investigated hospitalization and in-hospital mortality trends in the US over the most recent period of data availability. ***Methods:*** Using 2012-2016 data from the National Inpatient Sample, admissions with a diagnosis of pancreatic cancer were identified. Descriptive measures, including demographics, length of stay (LOS), discharge disposition, and total cost (adjusted for inflation using medical care component), stratified by year. Discharge-level weights were applied to represent national estimates and domain analysis was used for subpopulation estimates. An annual percentage change was also calculated to characterize the trend in hospitalization rates over time. ***Results:*** In 2016, there were 102,390 admissions of patients with a diagnosis of pancreatic cancer. Mean (95% confidence interval) age was 67.7 (67.4-67.9) years, 47.7% (47.0%-48.5%) female, 69.0% (67.4%-70.7%) White, and 59.1% (58.2%-60.0%) had Medicare as the primary payer. Mean age remained stable from 67.6 (67.3-67.8) in 2012 (p=0.572). Hospitalization rates increased from 29 per 100,000 people in 2012 to 32 per 100,000 people in 2016, with an average annual increase of 2.5% (1.3%-3.7%; p=0.007). Mean LOS decreased from 6.5 [6.4-6.7] days in 2012 to 6.1 [6.0-6.2] days in 2016 (p<0.001). In-hospital mortality was highest in 2012 (7.8% [7.4%-8.3%]) and was lowest in 2016 (7.4% [7.0%-7.9%]) (p=0.757). Mean cost of admission decreased from $16,824 ($16,276-$17,372) in 2012 to $15,614 ($15,124-$16,104) in 2016 (p=0.014). ***Conclusions:*** From 2012-2016, statistically significant increases in pancreatic cancer admissions and decreases in LOS and admission cost occurred; in-hospital mortality declined by a statistically non-significant amount. Pancreatic cancer death rates have been rising on average 0.1% each year over a similar period. Continuous efforts are needed to improve cancer detection and treatment outcomes in patients with pancreatic cancer.

PCN36
A SYSTEMATIC REVIEW OF THE HUMANISTIC BURDEN OF *FLT3*-MUTATED RELAPSED/REFRACTORY ACUTE MYELOID LEUKEMIA

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Objectives: Although *FLT3* mutations are common in acute myeloid leukemia (AML), their impact on patients' health-related quality of life (HRQoL) is unclear. In order to inform health economic analyses of gilteritinib—a targeted therapy for *FLT3*-mutated ($FLT3^{mut+}$) relapsed or refractory (R/R) AML—a systematic literature review (SLR) regarding the humanistic burden was conducted to identify data on HRQoL in R/R AML. ***Methods:*** Embase, MEDLINE, MEDLINE In-Process, and Cochrane databases were searched from inception to September 2019 using terms related to R/R AML, HRQoL, and patient-reported outcomes (PROs). ClinicalTrials.gov and selected conference proceedings were also reviewed. Studies of any design were included if they reported HRQoL or other PROs for adults with R/R AML treated with current standard of care, gilteritinib, or products in phase 3 development. ***Results:*** Of the 452 unique publications identified, 10 publications from seven studies were included in the SLR: one phase 3 randomized controlled trial (gilteritinib; ADMIRAL), three cross-sectional studies, one phase 1 non-randomized study, one observational study, and one qualitative study. Study populations differed, with studies recruiting either patients with R/R AML only or both newly diagnosed and R/R AML. ADMIRAL was the only study that reported data for $FLT3^{mut+}$ R/R AML and was the only study to compare the HRQoL of patients treated with specific therapies. Although studies administered different PRO instruments, all highlighted the negative impact of R/R AML on HRQoL, which is typically worse than that of de novo AML. No study compared the humanistic burden of $FLT3^{mut+}$ and *FLT3* wild-type R/R AML. ***Conclusions:*** This SLR highlighted the lack of published evidence regarding the humanistic burden of R/R AML. Only seven studies met the inclusion criteria and only one study (ADMIRAL) focused on patients with $FLT3^{mut+}$ R/R AML. Further research is therefore required to inform health economic analyses in $FLT3^{mut+}$ R/R AML.

PCN37
IMATINIB AND ITS CLINICAL ASSOCIATED OUTCOME IN CHRONIC MYELOID LEUKAEMIA PATIENTS

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Objectives: Imatinib, a signal transduction inhibitor useful in the management of chronic myeloid leukemia (CML). There is a dearth of evidence available concerning the Imatinib and its associated outcomes in Indian CML patients. So, this study is aimed to assess the clinical outcomes associated with Imatinib. ***Methods:*** This study was conducted at Mahavir Cancer Sansthan & Research center Patna, India over a period of 10 months. Patients with confirmed CML diagnosis and were receiving Imatinib therapy were included. The toxicity was evaluated through CTCAE v 4.0 (common terminology criteria for adverse events) and compared with clinical outcomes. The EUTOS (European Treatment and Outcome Study) score was used to assess the complete cytogenetic response after 10 months. The data were analyzed through SPSS v 22. ***Results:*** A total of 81 patients completed the study. The mean age of the patients was 38.8 ± 6.4 years and 35.80% were female. The majority of the patients belong to the age group of 41 – 60 years. Among BCR-ABL group patients, P210 kD (kilo Dalton) protein was found among 69 patients, P190 kD protein was found in 9 patients while dual fusion transcript of P210 kD and P190 kD protein was found in only 3 patients. Neutropenia was the most common adverse event associated with P210 kD protein determined through CTCAE v 4.0. The blast cell's content was more in the blast crisis phase as compared to the chronic and accelerated phase. The CML patients with P210 kD protein were at higher risk while P190 kD and coexistence were at a lower risk of progression to blastic and further to accelerated phase based on EUTOS score. ***Conclusions:*** It might be advisable to identify the BCR-ABL fusion transcript in CML patients when the patient started receiving Imatinib therapy in order to link the detected transcript with their clinical findings.

PCN38
A REAL WORLD EVIDENCE OF EFFECTIVENESS, SAFETY AND COST IMPLICATIONS OF TREATMENT REGIMENS IN MULTIPLE MYELOMA

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Objectives: Advances in novel treatment combinations have improved prognosis and increased disease-free and overall survival for patients with multiple myeloma (MM). Our study aims to understand the disease and patient characteristics, treatment and clinical outcomes of real-world MM patients, and the association of treatment with tolerability, effectiveness, health-related quality of life (HRQoL) and cost implications. ***Methods:*** This study was conducted at PGIMER Chandigarh after obtaining institutional ethics committee approval. Baseline patient and MM-specific characteristics, diagnosis, comorbidities, and prior therapies, MM management, disease status, safety data, and cost details were recorded at baseline and follow-up based on a review of hospital/clinic records and patient interviews. HRQoL was collected using the Cancer Quality of Life Questionnaire (EORTC QLQ-C30) and the MM module (EORTC QLQ-MY20). SPSS version 22 was used for statistical analysis. ***Results:*** A total of 75 patients were included, 60% males with mean age of 60.5±9.0 years. Significant difference was found among patients with different ISS stages on EQ-5D-5L domains; Usual activities p<0.05, Health status p <0.05. Very good partial response (50%) of patients treated with VRD regimen relative to 27.3% in received VCD regimen. In EQ-5D-5L instrument, the significant reduction was reported in mobility [VCD: 2.53±1.02; VRD: 1.58±0.77, p<0.05], pain/discomfort [VCD: 2.32±1.11; VRD: 1.63±0.76, p<0.05] and health status [VCD: 64.37±22.86 and VRD: 76.53±16.84, p<0.05]. The overall 6-month survival was comparatively lower in patients with higher albumin levels $\chi 2$ = 0.364, p =0.547. The average cost per cycle on CTD regimen was reported as 1339.9±229.6 INR. ***Conclusions:*** A Debilitating HRQoL was reported at baseline, which was significantly improved after initiation of novel myeloma regimens for the treatment of naïve patients. The rising out of pocket expenditure in myeloma patient's results in a financial catastrophe for the families and the affordability became a key concern in developing countries.

PCN39
TREATMENT EFFECT MODIFICATION OF IMMUNOTHERAPY-BASED REGIMENS IN FIRST-LINE (1L) ADVANCED NON-SMALL CELL LUNG CANCER (ANSCLC): A SYSTEMATIC REVIEW OF RANDOMIZED CONTROLLED TRIALS (RCTS)

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Objectives: Current biomarkers and patient characteristics have been inconsistent in predicting the treatment effect of immunotherapy (IO) relative to chemotherapy-based regimens in 1L aNSCLC. Our objective was to systematically evaluate the presence of treatment effect modification within IO-based RCTs in 1L aNSCLC. ***Methods:*** We conducted a systematic literature review in October 2019. Eligible RCTs involved IO-based 1L therapy vs. chemotherapy. We extracted and validated data including study design characteristics (including stratification factors at randomization), baseline characteristics, and hazard ratios from the intent-to-treat population and subgroups for overall survival (OS) and progression-free survival (PFS). We calculated p-values and applied a framework for establishing the credibility of subgroup effects within each IO regimen type. ***Results:*** We identified 12 RCTs involving: mono-IO (n=6); dual-IO (anti-PD-L1/PD-1+anti-CTLA4; n=2); IO-chemotherapy (n=5) or IO-bevacizumab-chemotherapy (n=1). Higher PD-L1 expression levels were associated with consistently larger relative treatment effects for mono-IO (for PFS and OS) and significant improvements in treatment effect for IO-chemotherapy (PFS only); for dual-IO, trends were inconsistent across PD-L1 thresholds (for PFS and OS). Higher tumor mutational burden (TMB) was associated with significantly larger treatment effect with mono-IO and dual-IO for PFS, yet trends were less consistent for OS. Female sex and absence of liver metastasis at baseline were associated with larger IO-chemotherapy treatment effect (for PFS and OS), with similar trends for liver metastasis within mono-IO and dual therapy settings. ***Conclusions:*** The evidence suggests treatment effect modification by PD-L1 expression levels for mono-IO, and that TMB may be predictive of PFS; however, these biomarkers are not predictive for all IO regimens or endpoints. Other factors such as liver metastasis and sex, and other unmeasured characteristics, may modify IO treatment effect, though may be correlated with other factors. The findings should be interpreted with caution due to the limitations of evaluating subgroup data.