method to data from randomised controlled trials (RCTs) in aCRC. Data were obtained from four systematic reviews of RCTs investigating a range of pharmacological treatments in aCRC, categorised into classes with respect to their mechanism of action. ***Results:*** Applying bvNMA to evaluate surrogate endpoints in aCRC resulted in varying correlations between treatment effects on surrogate and final outcome across treatment contrasts. For example overall, for all treatments, correlation between treatment effect on TR and PFS was -0.67 (95% CrI: -0.85, -0.41), whilst the correlation for trials of EGFRi with chemotherapy vs. chemotherapy alone was higher; 0.79 (-0.95, -0.5) and lower for anti-VEGF therapies with chemotherapy vs. chemotherapy alone; -0.43 (-0.84, 0.16). ***Conclusions:*** Network meta-analysis allowed us to disentangle information on a relatively strong study-level surrogate relationship between treatment effects on TR and PFS for EGFRi with chemotherapy vs. chemotherapy alone from a set of treatments with suboptimal overall surrogacy relationship. This novel methodology can be used to model surrogate relationships in greater detail compared to methods that do not differentiate between treatment classes.

PCN417
INFLUENCE 2.0: A TIME-DEPENDENT MODEL TO PREDICT LOCOREGIONAL RECURRENCE AND SECOND PRIMARIES IN EARLY BREAST CANCER PATIENTS

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Objectives: Breast cancer follow-up aims at the early detection of locoregional recurrences (LRR) and potential second primaries (SP). Predicting a patient's time-dependent risk for such an adverse event might contribute to improve the diagnostic process. ***Methods:*** Patient-, tumor-, and treatment characteristics of 11,129 patients from 2007, 2008 and 2012 were provided by the Netherland's cancer registry (NCR). Using the incidence dates of LRRs and SPs within the first five years after primary treatment, different prognostic models based on a) a Cox-regression, b) a flexible parametric Royston-Parmer model, c) a random survival forest (RSF) were developed based on a training- and a testing-set. Their quarterly risk-predictions for LRR and SP covering the corresponding, subsequent 24 months during the 5-year follow-up period were compared to the actually observed event-rates via Chi-square test. Discriminative ability was assessed using time-dependent c-statistics. ***Results:*** Of the observed patients, 6.7% developed an LRR or an SP within five years after primary therapy. The accuracy of the three proposed algorithms is comparable: Neither in the training-, nor in the testing-set, significant differences between the observed event-rates and the mean predicted risks per quintile can be observed. The average time-dependent discriminative ability varies only moderately between the three models, ranging between an AUC of 0.67 and 0.72 in the training-set and 0.65 - 0.66 in the testing-set. Patients belonging to the highest quintile according to their risk-prediction by the Cox-model are likely to have 7.4 times more LRRs or SPs than those belonging to the lowest ***Conclusions:*** The model performances vary only slightly between the three proposed methodologies. Being the most transparent , the Cox-regression model seems to be the most suitable option to build the prediction model on, enabling health professionals to further personalize follow-up strategies.

PCN418
ASSESSMENT OF STUDIES EVALUATING INCREMENTAL COSTS, EFFECTIVENESS OR COST-EFFECTIVENESS OF SYSTEMIC THERAPIES IN BREAST CANCER BASED ON CLAIMS DATA: A SYSTEMATIC REVIEW

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Objectives: Large secondary databases, such as claims data, are increasingly used to compare effects and costs of treatments in clinical practice. Although appealing, such large databases also impose challenges. This research aims to identify and assess the methodological quality of studies calculating incremental (costs-)effectiveness of systemic therapies for breast cancer based on claims data. ***Methods:*** Embase, Cochrane Library, Medline, Web of Science, and Google Scholar were searched for English-language publications based on patient level data. Methodological quality was assessed using the Good ReseArch for Comparative Effectiveness (GRACE) principles. ***Results:*** The search retrieved 1251 citations from which 106 met the inclusion criteria. Most studies were conducted in the US and Taiwan and were based on claims datasets or claims data linked to cancer registries. The sample sizes of the studies were generally large, many studies included elderly patients and various outcomes were studied. Methodological shortcomings included: insufficient information on treatment, confounders, and validity of the outcomes. Furthermore, some of the studies were at high risk of immortal time bias and few studies performed sensitivity analyses. ***Conclusions:*** These results demonstrate that, despite the availability of different guidelines and checklists for good research and reporting of comparative (cost)effectiveness studies, many methodological issues are not appropriately addressed or reported.

PCN419
THE USE OF INDIVIDUAL PATIENT-LEVEL DATA (IPD) TO CONDUCT INDIRECT TREATMENT COMPARISONS (ITCS) IN SUBMISSIONS TO THE NATIONAL INSTITUTE FOR HEALTH AND CARE EXCELLENCE (NICE)

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Objectives: In the absence of head-to-head comparison, non-randomized comparative data may be available separately as IPD for both the investigational and control cohorts. NICE guidelines have suggested several steps to select the appropriate ITC method(s). This review aims to assess the use of these methods in submissions to NICE. ***Methods:*** All NICE technology appraisals (TAs) published between 2015-2019 with an ITC using IPD on the investigational and control cohorts were included. Information on interventions, indication, pivotal study design, data sources, ITC methodologies, endpoints, criticism, and NICE recommendation were extracted. ***Results:*** Out of 159 reviewed TAs, eight TAs were included. The included submissions were for indications in blood cancers (n=4) and solid cancers (n=4). The pivotal study design was an RCT and non-RCT in four and five TAs, respectively. All included submissions received positive recommendation: three were recommended for routine commissioning and six were accepted within the cancer drug fund. Data sources for comparators came from retrospective studies (n=4), RCTs (n=2) and single-arm studies (n=2). Most of the submitted evidence was based on non-UK studies (n=7). Five TAs used more than one methodology. These methods included covariate adjustment (n=5), propensity score matching (n=4), naïve comparison (n=2), and inverse probability weighting (n=1). Key criticism included differences in baseline characteristics, study design, endpoints definition, treatment duration. Criticisms regarding high uncertainty due to immature data, small sample size and lack of adjustment for potential confounders were also mentioned. When the impacts of these factors were shown to be minimal, by means of sensitivity analyses, ITCs were accepted. ***Conclusions:*** Despite the availability of methods to adjust the comparison of non-randomized IPD, the use of these methodologies is still challenged given the limitations of real-world data.

PCN420
NEW METHODOLOGIES IN PARAMETRIC NETWORK META-ANALYSIS: ACCOUNTING FOR POPULATION AGE DIFFERENCES BETWEEN TRIALS

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Objectives: To compare the long-term survival benefit of treatments that have not been investigated head-to-head, a parametric network meta-analysis (PNMA) can be conducted. PNMAs may predict clinically implausible hazards over time that are lower than general population mortality (GPM) hazards. This can be corrected retrospectively. Alternatively, one can consider GPM in the likelihood function of the PNMA to warrant more clinically plausible survival predictions. This study investigated the impact of accounting for trial-specific age-adjusted GPM in a PNMA and the impact of varying ages across trials in the network. ***Methods:*** Five treatment regimens (VMP/MP/MPT/Rdcont/Rd18) investigated in four different multiple myeloma trials (median age varying from 71-79 years) were included in the analysis. Four Weibull PNMAs methods were applied to investigate the impact on predicted survival: 1) standard PNMA; 2) standard PNMA using GPM hazards when PNMA predicted hazards are below GPM hazards; 3) PNMA which considers a single GPM for all trials in the likelihood function (age 71 based on reference trial comparing VMP and MP 1); and 4) PNMA which considers a trial-specific age-adjusted GPM in the likelihood function. ***Results:*** All PNMAs fitted the data well. Predicted mean survival (years) by PNMA method were for VMP) 13.9/10.1/8.7/8.8; MP) 4.7/4.6/4.5/4.5; MPT) 8.4/7.7/6.9/7.5; Rdcont) 10.2/8.9/7.8/8.5; and Rd18) 10.4/9.0/7.9/8.5. The impact of considering trial-based ages (method 3 vs 4) resulted in longer survival predictions for MPT (6.9 vs 7.5), Rdcont (7.8 vs 8.5) and Rd18 (7.9 vs 8.5). The impact of method 3 vs 4 is more pronounced for these three treatments as these were investigated in other trials with older patients than the reference trial. ***Conclusions:*** Choice of PNMA method considering GPM has an impact on the predicted survival. Age differences between trials could be an important consideration when conducting a PNMA, especially when substantial heterogeneity in age is observed over trials in the network.

PCN421
STABILITY OF LIFETIME OVERALL SURVIVAL ESTIMATES OF NIVOLUMAB+IPILIMUMAB IN FIRST-LINE ADVANCED/METASTATIC INTERMEDIATE- OR POOR-RISK RENAL CELL CARCINOMA

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Objectives: Multiple database locks (DBLs) with different levels of data maturity have become available for CheckMate-214 (NCT02231749), a phase 3 trial comparing nivolumab+ipilimumab to sunitinib in first-line advanced/metastatic intermediate-