in THIN from 2% to 13%. This work shows the potential for under-reporting of PSS in primary care data, and provides a method for improved identification of cases and control records for future studies.

PRM20
PANGAEA 2.0: STATE OF THE ART MULTIPLE SCLEROSIS PATIENT MANAGEMENT IN DAILY CLINICAL PRACTICE. A NEW 3-YEAR OBSERVATIONAL STUDY OF PATIENTS RECEIVING FINGOLIMOD
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**OBJECTIVES:** The therapeutic options for Multiple Sclerosis(MS) improved over the past years with the approval of new substances. Therapeutic optimization must take into account an individualized assessment of clinical and imaging disease activity, treatment response as well as identifying early risk factors for treatment failure. This study will address by assess this issue by 1. Assess the utility of a tool that helps to identify patients with ongoing disease activity 2. The systematic collection of a broader set of functional domains to explore their potential to be used as a predictive measure of future disease activity or treatment response. 3. Evaluate the clinical course of patients according to NEDA-4 parameter as measured by relapse activity, disability progression, MRI activity and change in brain volume. 4. Assess the therapeutic effectiveness of switching to fingolimod if the patients are assessed to be failing their current first line therapy. **METHODS:** 1500 patients are planned to be included in this observational study. All patients with active disease as defined by Lublin et al., 2014, undergo a first evaluation of the patient status. Patients switching to fingolimod are followed for 3 years. The study set up and documentation parameters are based on three bullets: 1. Optimal patient management in daily clinical practice using the patient management system MSDS3D 2. State of the art evaluation of the patient status using the MS-disease activity measurement tool 3. Multiple sclerosis optimized MRI-acquisition and analysis by central MRI-reading **RESULTS:** and **CONCLUSIONS:** PANGAEA 2.0 will give important insights on the predictive value of proposed treatment algorithms like the Lublin criteria and the modified Rio Score as well as the principle of NEDA (no evidence of disease activity) -4. It will also evaluate the benefit of a collection of a broad range of outcome parameter based on functional domains from a patient and physician perspective on therapy decisions.

PRM21
TIME RATIOS OR HAZARD RATIOS: ACCELERATING TOWARD A NEW APPROACH?
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**OBJECTIVES:** Syntheses of time-to-event data often rely on published hazard ratios (HR) therefore assuming proportional hazards (PH). Methods now exist to reconstruct individual patient data (IPD) from published Kaplan-Meier (KM) plots. This enables the PH assumption to be formally tested, and a time ratio (TR) to be estimated as an alternative measure of relative treatment effect. While TRs do not require the PH assumption, these are rarely used in evidence synthesis. We compared TRs with HRs to demonstrate their ease of interpretation and transparency. **METHODS:** Relative treatment effect measures HRs and TRs were compared in terms of: scale, underlying assumptions, interpretation, availability in published literature and derivation. **RESULTS:** HRs act on the log-hazard scale representing the ratio of hazards for treatment vs. control. TRs act on the log-failure time scale, representing the ratio of failure times for treatment vs. control. A HR<1 represents a decrease in the event hazard whilst a TR<1 represents an acceleration in time-to-event, with treatment. The inverse of the TR, referred to as the acceleration factor (AF), therefore represents the same direction of benefit as for HRs. For TR=2, AF=0.5, the time-to-event for treatment is two times that for control. HRs are commonly reported to summarise the average relative treatment effect. TRs are rarely reported and hence less familiar to clinicians, but can be validated against any ratio of published survival times. **CONCLUSIONS:** Relative treatment effects expressed as TRs are not commonly utilised in evidence synthesis due to unfamiliarity around interpretation and lack of availability in the published literature. When converted to AFs, TRs have a similar interpretation to HRs and can be estimated from IPD and published KM data. Therefore, evidence synthesis should no longer rely on published HRs as the measure of relative treatment effect when the PH assumption is violated.

PRM22
THE USE OF REAL WORLD EVIDENCE (RWE) TO INVESTIGATE THE OVERALL TREATMENT EFFECTS OF DIFFERENT LINES OF THERAPY IN RHEUMATOID ARTHRITIS
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**OBJECTIVES:** Due to high costs, randomised clinical trials (RCTs) typically do not include a wide variety of doses and treatments within a single trial. Real-world evidence (RWE) can be used to fill the gaps left by treatment arms or doses not studied in first or second line RCTs. This is illustrated in rheumatoid arthritis (RA). The combined evidence can allow for investigating the area of dosing that can only be studied when all evidence is included. This may impact future dosing strategies that could result in approval of treatment (combinations) that may not have been studied otherwise but could substantially benefit patients with RA. **METHODS:** RCT and RWE data was combined in a network meta-analysis (NMA) to investigate treatment effects in patients with RA. Response surface methods were used to investigate the three dimensional surface of the observed effects as a function of doses for each pair of treatments. Optimization methods were used to establish the optimal treatment/dose region in patients with RA. **RESULTS:** Results showed that including RWE has increased the totality of evidence with reduced uncertainty in first and second line treatment effects in patients with RA. The greatest evidence of effect was observed in a treatment/dose combination region not yet studied in RCTs **CONCLUSIONS:** The optimal treatment regimen for patients with RA can be investigated by pooling RCT and RWE data in a response surface analysis. The maximum effect may be established in a region of treatment/dose combination not yet studied in a randomised setting. This methodology can also be used to determine which combination of patient's characteristics will result in the most optimal effect for each (line) of therapy and as a result, provide targeted treatment for (groups of) patients based on their baseline characteristics. Further work could involve optimizing the response in higher dimensions.

PRM23
OUTCOMES USED IN CLINICAL STUDIES IN ADULT HEMATONCOLOGY: TEN YEARS OF PUBLICATIONS IN PUBMED
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**OBJECTIVES:** To determine which clinical outcomes, both "soft" and "hard", are currently used in phase III treatment studies for hematoncologic diseases, and what proportion of them use overall survival (OS) as the primary outcome. **METHODS:** Through a search in PubMed, we identified and analyzed all randomized clinical trials published in the last 10 years, for de novo treatments in adults. **RESULTS:** The initial search yielded 310 references, from which 90 trials were selected. The most studied disease was multiple myeloma, with 29 studies, followed by non-Hodgkin lymphoma with 26. The others were acute myeloid leukemia 12, chronic lymphocytic leukemia 10, chronic myeloid leukemia 8, myelodysplastic syndromes 3 and Hodgkin lymphoma 2. The 90 studies had a total of 108 "primary" and 252 "secondary" outcomes; 20 studies (22%) had OS as primary endpoint (though only 3 of them reached statistical significance), in over 37 (41%) OS was grouped with other outcomes to form a composite endpoint. In 55 studies (61%) overall survival was a secondary outcome. Quality of life was a "secondary" outcome in 10 studies. **CONCLUSIONS:** Although OS is the gold standard in cancer therapy, grouped outcomes, or others intermediate outcomes, such as progression-free survival or paraclinical indicators of disease activity are more frequently used and may be good predictors. Intermediate outcomes require smaller sample sizes and less follow-up. Their capacity to predict OS (or, indeed, quality of life) should be carefully assessed. Only in the most aggressive forms of cancer is routine use of OS survival justified as the primary endpoint.

PRM24
PATIENT VERSUS GENERAL POPULATION HEALTH STATE VALUATIONS: A CASE STUDY OF LOW BACK PAIN
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**OBJECTIVES:** The objectives of this study were: 1) to compare low back pain (LBP) patient valuations with those of the general population, 2) to explore how various aspects of health-related quality of life as measured by the EQ-5D-3L impact LBP patient valuations, and 3) to explore the implications of the choice of valuation method for cost-utility analyses (CUAs). **METHODS:** Data of 483 LBP patients who participated in a 52-week Dutch randomized controlled trial were used. Outcome measures included the EQ-5D-3L, EQ-VAS, and societal costs. Patient valuations were derived from the EQ-VAS. Population valuations were derived using a Dutch VAS-based EQ-5D-3L value set. The difference and agreement between both valuations were assessed using t-tests and intraclass correlation coefficients (ICC), respectively. An ordinary least square linear regression model was constructed to explore how various aspects of health-related quality of life as measured by the ED-5D-3L impact LBP patient valuations. Moreover, two CUAs were performed; one using patient valuations and one using population valuations. **RESULTS:** Patients valued their health state 0.098 (95%CI: 0.082 to 0.115) points higher compared with the general population. The two valuations had an ICC of 0.544. The regression model indicated that 22.2% of the variance in patient valuations was explained by the LBP patients' EQ-5D-3L health state (R2=0.222), and that LBP patients gave the most weight to the anxiety/depression dimension. In the CUA, the maximum probability of cost-effectiveness was found to be lower when patient (i.e. 0.28) instead of population valuations (i.e. 0.38) were used. **CONCLUSIONS:** This study demonstrated that LBP patients value their health state higher than members of the general population and that the choice of valuation method could have important implications for CUAs. As consensus does currently not exist regarding the question of 'whose values count', researchers are encouraged to explore these implications using sensitivity analyses.

PRM25
STOCHASTIC MULTICRITERIA ACCEPTABILITY ANALYSIS IN A BAYESIAN FRAMEWORK
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**OBJECTIVES:** Stochastic multicriteria acceptability analysis (SMAA) is a powerful tool for health technology benefit-risk assessment when health outcomes are assessed according to multicriteria and both the outcomes and preference weights are subject to uncertainty, in particular with missing weight information. We propose using a Bayesian approach for SMAA to provide an alternative or supplement to the standard SMAA. It can estimate the posterior distributions of decision maker's preference weights on multicriteria, had he/she prefer treatment A over B. Given the preference on previous treatments and safety and efficacy profiles, it can also predict the decision maker's preference on a new treatment. **METHODS:** The SMAA method was adapted to fit into the Bayesian framework, assuming that the weights follow a Dirichlet prior distribution. A simple Monte-Carlo procedure was developed to calculate the posterior distribution for the weights, and Bayesian estimates of major measures in standard SMAA were derived. An algorithm was also developed to predict future rankings. The method allows using informative, non-informative or hierarchical priors, and can be extended to other SMAA methods such as that based the prospect theory (SMAA-P). This method is applied to the assessment of