Among biologic monotherapies, greater ACR20/50/70 responses were observed with TCZ than with TNF inhibitors. When comparing biologics + MTX with biologic monotherapies, AC20, AC25, and AC70 responses with TCZ + MTX were similar to TCZ as monotherapy (OR=1.04, 95% CI 0.93–2.80; OR=1.28, 95% CI 0.96–1.71; OR=0.83, 95% CI 0.78–0.90, respectively). Greater ACR20/50/70 responses were observed with TCZ versus LEF than with a TNF monotherapy (OR=2.22, 95% CI 1.46–3.51; OR=0.97, 95% CI 0.38–2.49, respectively). The study is to prove Chinese herb’s efficacy on treating MG patients.

CONCLUSIONS: Results suggest that most of the novel DMARDs, in combination with MTX, have similar levels of efficacy in DMARD-IR patients. As monotherapy, TCZ is likely to have a greater response than aTNFs and tocitakin. TCZ monotherapy also shows comparable results with aTNF monotherapy in combination with MTX. aTNFs in combination with MTX showed greater ACR responses compared with aTNF monotherapy at 24 weeks.

PM55
META-ANALYSIS OF EFFICACY OF ETANECETRAN FOR PSORIATIC ARTHRITIS
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OBJECTIVES: Psoriatic arthritis (PA) is an inflammatory disease affecting joints and connective tissues. The anti-tumor necrosis factor (TNF) biologics are increasingly being used in patients who have failed traditional disease-modifying antirheumatic drugs. Etanercept has shown efficacy in treatment of PA. METHODS: For this meta-analysis we included randomized controlled trials (RCTs) comparing TNF inhibitors with placebo in patients with active PA. A systematic literature search for Etanercept trials was undertaken for the databases PubMed, Embase, Biosis, Google Scholar, and Cochrane. Data was collected for the study population, baseline demographics, and outcomes for ACR20, ACR50, ACR70, and ACR90. RESULTS: Meta-analysis, random effects and fixed effects models were used to obtain cumulative statistics. RESULTS: Two RCTs with a total of 131 patients were identified. The pooled response rates for Etanercept for PsA were 75% (95% CI 60%-90%), for HAQ were 50% (95% CI 40%-62%) for MTX, and for PASI were 24% (95% CI 13%-36%). The pooled response rates for placebo for PsA were 30% (95% CI 26%-35%), for HAQ were 5% (95% CI 1%-9%), and for PASI were 3% (95% CI 0%-7%). For PASA the cumulative relative risk with Etanercept was 0.40 (95% CI 39%-41%) for HAQ, the cumulative relative risk with placebo versus Etanercept was 0.08 (95% CI 5%-12%). For PASI, the cumulative relative risk with placebo versus Etanercept was 0.14 (95% CI 8%-20%). CONCLUSIONS: Meta-analysis shows Etanercept offers patients with psoriatic arthritis an effective therapeutic option for control of their disease.

PM9
REAL-WORLD UTILIZATION OF CERTOLIZUMAB PEGOL (CZP) FOR THE TREATMENT OF RHEUMATOID ARTHRITIS (RA) IN THE UNITED KINGDOM
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OBJECTIVES: Certolizumab pegol (CZP) is an anti-TNF approved for rheumatoid arthritis (RA) in the UK on 12 week of therapy, NICE guidelines recommend CZP as first-line biologic therapy for RA treatment, in conjunction with a Patient and/or Physician Decision Support tool. The objective of this study was to simultaneously compare operated patients with active and progressive PA with an inadequate response to previous DMARDs, in combination with MTX, with active PA. METHODS: A retrospective analysis was undertaken to simultaneously compare operated patients with active and progressive PA with an inadequate response to previous DMARDs, in combination with MTX, with active PA. RESULTS: 123 in the control group and 120 finish the study. There is no significant difference in demographic and clinical characteristics between two groups (P>0.05), and no difference in CSRM (Chinese herb vs control groups). CONCLUSIONS: This study proves that Chinese herb can relieve MG patients’ muscle weakness, but it is not enough to improve patients’ QoL in four weeks.

PM59
FACTORS ASSOCIATED WITH THE INITIATION OF BIOLOGIC DISEASE MODIFYING ANTIRHEUMATIC DRUGS IN TEXAS MEDICARE PATIENTS WITH RHEUMATOID ARTHRITIS
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OBJECTIVE: To examine if (1) time to initiation (TTI) of biologic DMARD therapy (B-DMARD) of patients with RA not meeting B-DMARD criteria (NSB-DMARD) is assessed using all methods, in favour of either vertebral augmentation procedures versus usual care, (2) likelihood of initiation of B-DMARD differs by NSB-DMARD type and therapy while controlling for covariates. METHODS: Texas Medicaid medical and prescription claims from 7/1/03-12/31/10 were extracted for adults (18-63 years) who were diagnosed with rheumatoid arthritis (ICD-9 CM 714.0x) with no use of B-DMARDs in the preindex period. The index date was the first date of B-DMARD use. Three cohorts were compared: A) Patients taking B-DMARD type (methotrexate (MTX), sulfasalazine (SSZ), hydroxychloroquine (HCQ), leflunomide (LEF)) and B-DMARD therapy (mono vs. dual), while controlling for demographic factors (age, gender, race), NSB-DMARD adherence (proportion of days covered), HTN and diabetes mellitus history, and Charlson Comorbidity Index score (CCI). Descriptive statistics, Kaplan-Meier, Log-rank test, and logistic regression were utilized. RESULTS: The subjects (n=2,714) were 48 1±10 years old, primarily female (89.1%), and Hispanic (55.3%). The majority were on pain medications (92.4%), glucocorticoid users (64.9%), and NSB-DMARD mono users (84.6%); while, 24.3% initiated on B-DMARDs and 46.7% had a CCI score of 1. Compared to TTI (days) of B-DMARDs for MTX (208.3±180.1) vs. TTI of B-DMARD use for LEF was longer for SSZ (284.5±186.4) and HCQ (256±184) users and shorter (188.0±205.5) p<0.001. There were no differences between mono and dual therapy users. After controlling for covariates, regression results showed that compared to MTX, SSZ users were 66.8% less likely (OR=0.32; 95%CI=0.23-0.46;p<0.001) and HCQ users were 79.0% less likely (OR=0.21; 95%CI=0.16-0.27;p<0.001) to initiate B-DMARD therapy; B-DMARD mono therapy users were 47.5% more likely (OR=1.47; 95%CI= 1.21-1.94;p<0.001) to initiate B-DMARD therapy compared to dual therapy users. CONCLUSIONS: Time to initiation (TTI) ranged from 6.3 (LEF) to 9.5 months (SSZ). Patients who used NB-DMARD MTX and those on monotherapy may be more likely to initiate on B-DMARD therapy.

PM510
COMPARING METHODS OF BIAS ADJUSTMENT FOR META-ANALYSIS: A SIMULATION STUDY TO EVALUATE VERTEXAL AUGMENTATION PROCEDURES FOR TREATING OSTEOPOROTIC VERTEBRAL COMPRESSION FRACTURES
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In April 2013, percutaneous vertebroplasty (PVP) and balloon kyphoplasty (BKP) without stenting—two vertebral augmentation procedures—were recommended by NICE to treat vertebral compression fractures (VCFs) due to osteoporosis (TA1279). Although all-cause mortality was assessed as a secondary outcome, evidence from included RCTs did not achieve statistical significance, even when pooled, comparing operated patients (PVP or BKP) to patients receiving only optimal pain management (OPM). The Evidence Review Group stated that the effect of vertebroplasty on mortality was an important, yet inadequately understood issue, despite evidence of improved survival from recently published large-scale registry studies from Germany and the United States. OBJECTIVES: To estimate the mortality differences between treatments for osteoporotic VCFs by pooling randomised and observational data using Cox regression, propensity score matching, as well as, Thompson et al’s (2010) and Welton et al’s (2009) bias adjustment methods. METHODS: We extended the random effects meta-analysis from NICE’s TA279 to include observational data extracted from German and US (Medicare) insurance claims databases to estimate the mortality effect of PVP versus OPM and BKP versus OPM. All adjustment methods were compared. Results: The final observed coexistence model. PRELIMINARY RESULTS: Survival hazard ratios were statistically significant, using all methods, in favour of either vertebral augmentation procedures versus OPM. Conclusion: Mortality uncertainty in resulting estimates was artificially inflated to assess the level of uncertainty required to reach ≤50% probability of cost-effectiveness at common threshold values. Mortality benefit was shown to be a key driver of cost-effectiveness, particularly for BKP. CONCLUSIONS: Cox regression and propensity score matching methods are reliable. However, these methods do not capture all sources of bias; other proposed adjustment methods may play a pivotal role in assessing real-world evidence. An application of these methods to network meta-analysis is currently being undertaken to simultaneously compare operated patients with receiving OPM.