with conventional DMARDs only. The sequence of treatments used after the failure of one model, which generated a substantial part of the cost-effectiveness modelling. We therefore built a model to match the treatment pathway for first-line biologics and beyond. METHODS: We researched the treatment pathway and existing cost-effectiveness models in order to create an appropriate model. We rebuilt the methods used in recent economic evaluations in TA195, including different second-line biologics and beyond. We adapted this model to reflect the current treatment pathway and consider first line biologics. RESULTS: We created a patient simulation model that included a cohort of virtual patients who tracked their costs and QALYs over the pathway. Patients began treatment with a biologic, and could discontinue at month 6 due to an adverse event (AE), in which case they switched to a different biologic, with first-line efficacy. Patients who did not have an AE discontinued at month 6 if their DAS 28 improvement was insufficient. After discontinuation at month 6, or later, patients next received rituximab, unless contraindicated. If rituximab was contraindicated, or the patient had an AE by month 6, then a different biologic treatment sequence was followed (including palliative care). Patients who had insufficient DAS28 response on rituximab at month 6 switched to tocilizumab (unless received previously), after which they received the DMARD sequence. Patients who had sufficient DAS28 improvement and who had received the DMARD treatment sequence. Patients could exit the model at any point if they died. CONCLUSIONS: We used robust methodology and clinical rationale to assess the cost-effectiveness of licensed treatments reflected across NICE’s recommended treatment pathway for RA.

PM24 MODELLING THE COST-EFFECTIVENESS OF FIRST LINE BIOLOGICS FOR RHUMATOID ARTHRITIS IN IRELAND
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OBJECTIVES: In 2013, NICE assessed the cost-effectiveness of subcutaneous (SC) abatacept as a first line biologic for the treatment of rheumatoid arthritis (RA), comparing it with existing therapies. It was the first time NICE considered the CE of RA beyond first line biologics. We therefore built a model to match the treatment pathway for first line biologics and beyond. METHODS: We used our individual patient sampling model for England and Wales as a starting point to create a model which was specific to Ireland. We considered biologic cycling, to match the treatment pathway in Ireland and differentiated between the efficacy of a biologic at first line, and at second line or later. RESULTS: We created a model which could be used to calculate the cost-effectiveness of biologics for the treatment of RA in Ireland. Patients first received treatment with SC abatacept, intravenous abatacept, adalimumab, etanercept, infliximab, certolizumab pegol or golimumab. If they experienced an adverse event (AE) on that treatment within 6 months, they switched to another biologic at first line efficacy. In response to treatment failure using the DAS28: If this improved by 1.2 or more, their time on treatment was sampled from a Weibull distribution, otherwise they discontinued at month 6. The patient then moved onto a randomly sampled second line biologic, which was either one of the first line biologics or rituximab. The time on second line biologic was sampled from a Weibull distribution, and then the patient moved onto a third line biologics (second line biologics and tocilizumab). The patient cycled through the biologics until they died, or had received all 8 treatments. After 8 biologics, remaining patients received leflunomide, cyclosporin, azathioprine and palliative care. CONCLUSIONS: We used robust methodology and clinical rationale to model the treatment pathway of biologics for RA in Ireland and facilitated cost-effectiveness comparison between first line biologics.

PM25 A SYSTEMATIC REVIEW OF ECONOMIC EVIDENCE IN HEPATITIS C: METHODS USED IN RECENT ECONOMIC EVALUATIONS
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OBJECTIVES: To perform a systematic literature review of economic evidence for genotype 1 hepatitis C virus (HCV) treatments and to summarise and assess the methods used in recent economic evaluations. METHODS: Multiple databases were searched to identify economic evaluations in patients with genotype 1 HCV. Detailed review methods are presented elsewhere. RESULTS: 53 economic analyses and 17 Health Technology Assessment (HTA) documents were identified. Most economic analyses were performed using lifetime horizon Markov models, all for interferon-containing regimens. Most were performed in the United Kingdom (UK) (n = 13), United States (n = 13), or Germany (n = 7). Two recent National Institute for Health and Care Excellence (NICE) submissions were included: telaprevir triple therapy (with peginterferon plus ribavirin) and boceprevir triple therapy, for previously treated and untreated patients. The models used were different; however their structures and some inputs were based on previous NICE appraisals for peginterferon plus ribavirin. There were a number of limitations found in the included economic evaluations, which may have affected the cost-effectiveness results. The most common inputs were: 1) The model inputs were derived from the literature and may have included some unmeasured benefits and costs in their quality-adjusted life-year calculations; 2) The models did not account for the possibility of benefits caused by reduced transmission of HCV to others; 3) They included patient factors that may influence disease progression; 4) Modelling of subgroups may have been insufficient, particularly as the understanding of patient and viral factors that predict treatment response grows; and 5) Some made generalisations for the compensated cirrhosis population and not for the ungradable population. Conclusions: Recent economic models have generally adhered to previous iterations of HCV models and have not evolved with our knowledge of the disease. In light of upcoming treatment alternatives, model refinement may be necessary to capture the increasingly complex treatment decisions that will be required.