OBJECTIVES: To evaluate effects of dose escalation on clinical outcomes of RA patients initiating TNF-blocker treatments in community practice. METHODS: TNF-blocker-naïve adult RA patients initiating etanercept, adalimumab, or infliximab were identified using 3 different methods calculated using claims data. Participating physicians provided de-identified charts. Each chart was reviewed by 4-6 clinical rheumatologists to evaluate and agree on overall clinical change from baseline to the visit closest to 1 year post-index (12±3 months). Multivariate models compared changes in clinical outcomes and dose escalation rates, controlling for differences among etanercept, adalimumab, and infliximab patients at index. RESULTS: Overall, 715 etanercept, 501 adalimumab, and 393 infliximab patients were identified from claims; 141 etanercept, 115 adalimumab, and 104 infliximab patients had evaluable charts. Patient characteristics were similar among the claims and charts. Regardless of dose escalation method used, significantly fewer etanercept-treated patients had dose escalations (1.8%, 5.2%, 6.7%) than patients treated with adalimumab (9.8%, 8.6%, 10.4% respectively) or infliximab (50%, 31%, 34% respectively) (p<0.05 for all comparisons). After treatment initiation, 86% of etanercept-treated patients had “much better” or “better” clinical outcomes at 12±3 months, versus 82% of adalimumab patients and 78% of infliximab patients. Multivariate analyses showed significantly fewer dose escalations in etanercept patients (p<0.05), with no significant difference in clinical change score between etanercept patients and adalimumab patients (p=0.2) or infliximab patients (p<0.01) compared with etanercept. This study showed dose escalation in fewer etanercept than adalimumab or infliximab patients, but similar improvements in clinical outcomes for all 3 treatments, indicating that higher dose escalation rates may not be associated with better clinical outcomes.

C02
REAL-WORLD COST-EFFECTIVENESS ANALYSIS OF CANCER DRUGS: COMPARATIVE EFFECTIVENESS RESEARCH USING RETROSPECTIVE CANADIAN REGISTRY DATA BEFORE AND AFTER DRUG APPROVAL
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OBJECTIVES: To evaluate the real-world cost, effectiveness and cost-effectiveness of Rituximab in diffuse-large-B-cell lymphoma. METHODS: Patients were defined as those who had a diagnosis of diffuse-large-B-cell lymphoma according to ICD-O histology classification between January 1979 and December 2007 in Ontario, Toronto, ON, Canada, “Toronto Health Economics and Technology Assessment (THETA) Collaborative, Toronto, ON, Canada.” RESULTS: Using linked administrative databases from Ontario, our study examined the “real world” cost, effectiveness and cost-effectiveness of Rituximab in diffuse-large-B-cell lymphoma. Patients who were treated with Rituximab at baseline (index) had a 100% probability of dose escalation at the time of first relapse compared to 21% for the control group (p<0.001). Patients who were treated with Rituximab at the time of first relapse had a 36% probability of dose escalation at the time of second relapse compared to 32% for the control group (p=0.7). No significant differences were noted in the overall survival or the incidence of adverse events. CONCLUSION: Rituximab in diffuse-large-B-cell lymphoma is associated with higher dose escalation rates compared with the control group. However, no significant differences were noted in overall survival or the incidence of adverse events. Additional research is needed to further understand the impact of dose escalation on clinical outcomes in patients receiving Rituximab for diffuse-large-B-cell lymphoma.

C03
PROJECT LIBRA: A NEW ANALYTIC TOOL FOR COMPARATIVE EFFECTIVENESS ANALYSES OF MULTIPAYER CLAIMS DATABASES
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OBJECTIVES: The project aimed to develop a secure, interactive tool to enable researchers to perform comparative effectiveness studies and other types of research on a multipayer claims database with reduced need for complicated programming. METHODS: A common data model, through which multiple data sources are standardized and linked via common data structures and vocabularies, was established. It was then used to format over 6 databases: the Medicare Chronic Condition Warehouse, the Thomson Reuters MarketScan® Medicaid Multistate, Medicare Supplemental, and Commercial databases, and the Healthcare Cost and Utilization Project National Inpatient Sample database. A web-based Us-Interface was developed that captures the logic typically required by CHER meth-ods and capitalizes on the longitudinality of administrative data. Tools were developed to allow users to search taxonomies to select particular drugs, diagnoses, or procedures by typing in substrings of the numeric codes or textual descriptions. The tool allows researchers to apply enrollment and demographic constraints and creates matches for each combination of inputs in real-time using a secure, interactive interface. RESULTS: The tool allowed users to quickly define a sample study. Flow diagrams graphically illustrated the attrition of the sample size and visualization of treatment and outcomes. Embedded web procedures enabled reporting and analysis of comparison populations. The analyses revealed a higher rate of coronary artery disease and heart failure prior to drug initiation among the amiodarone versus the calcium channel blocker population and a higher rate of post-drug initiation acquired hypothyroidism, an important coronary disease risk factor in the calcium channel blocker population. CONCLUSIONS: New data designs and software analytic tools may allow claims databases to be more efficiently leveraged. The tool developed for this project has the following advantages: 1) allows for a substantial portion of the research exploration, hypothesis generation, and statistical analysis to be performed in real-time using a web-based interface; 2) improves the speed of research; and 3) allows access to a multipayer database.