

A SYSTEMATIC LITERATURE REVIEW OF PHARMACOECONOMIC EVALUATIONS FOR CHRONIC LYMPHOCYTIC LEUKEMIA IN EUROPE

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Objective: Chronic lymphocytic leukemia (CLL) is the most common form of leukemia in adults. This study aims to review pharmacoeconomic evaluations of CLL treatments in Europe.

Methods: A systematic literature review was conducted using MEDLINE and EMBASE to identify pharmacoeconomic models evaluating CLL treatments. Studies (including conference abstracts) published 2015-2020 in English were included. Data extracted included countries, interventions, data sources, outcomes, and results.

Results: A total of 721 publications were reviewed. There were 21 cost-effectiveness/cost-utility analysis studies (10 manuscripts, 11 abstracts) with 49 separate analyses evaluating cost per life-year (LY) (n=21) or quality-adjusted life-year (QALY) (n=47) involving chemotherapies and newer target therapies. The majority (76%) were industry-sponsored, 7 studies were in the United Kingdom, 2 studies in Portugal, 2 studies in Spain and the rest in 10 other European countries. Markov models were utilized in 12 studies, partition-survival models in 7 studies, and decision-analytic models in 3 studies. For model input, clinical data was from trials and network meta-analyses while utility data was sourced from time trade-off studies to clinical trial patient reported outcomes. Economic and resource utilization data was mostly from government sources. Study population focused on various CLL populations including first-line only (n=2), relapsed-refractory CLL (n=9), and CLL unsuitable/unable to tolerate fludarabine (n=9). ICERs ranged from €9,445 to €83,435 (€/LY) and €1,263 to €130,563 (€/QALY). There were 4 other studies evaluating budget impact (n=2) or cost comparison/minimization (n=2) in Russia, Portugal, and the Czech Republic. Budget impact ranged from €1.1m (year 1) to €7.2m (year 5) for ibrutinib in the Czech Republic and €22,200 (year 1) to €66,900 (year 5) for ibrutinib + Obinutuzumab in Russia.

Conclusion: Recently published pharmacoeconomic analyses in Europe evaluated various treatments for CLL patient populations across 14 different countries. Future economic analyses on recent CLL treatments in more European countries are warranted.