Population-Level Impact Of Polatuzumab And Glofitamab In Algeria: A 15-Year Projection

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INTRODUCTION

Diffuse large B-cell lymphoma (DLBCL) is the most common non-Hodgkin lymphoma in Algeria [1], representing **52.8%** of cases.[2] Despite standard first-line immunochemotherapy, **30–40%** of patients experience relapse or refractory disease with poor survival.[3] Novel therapies like polatuzumab vedotin and glofitamab offer new frontline and salvage options, addressing critical clinical gaps, disease burden, and major socio-economic costs.

OBJECTIVE

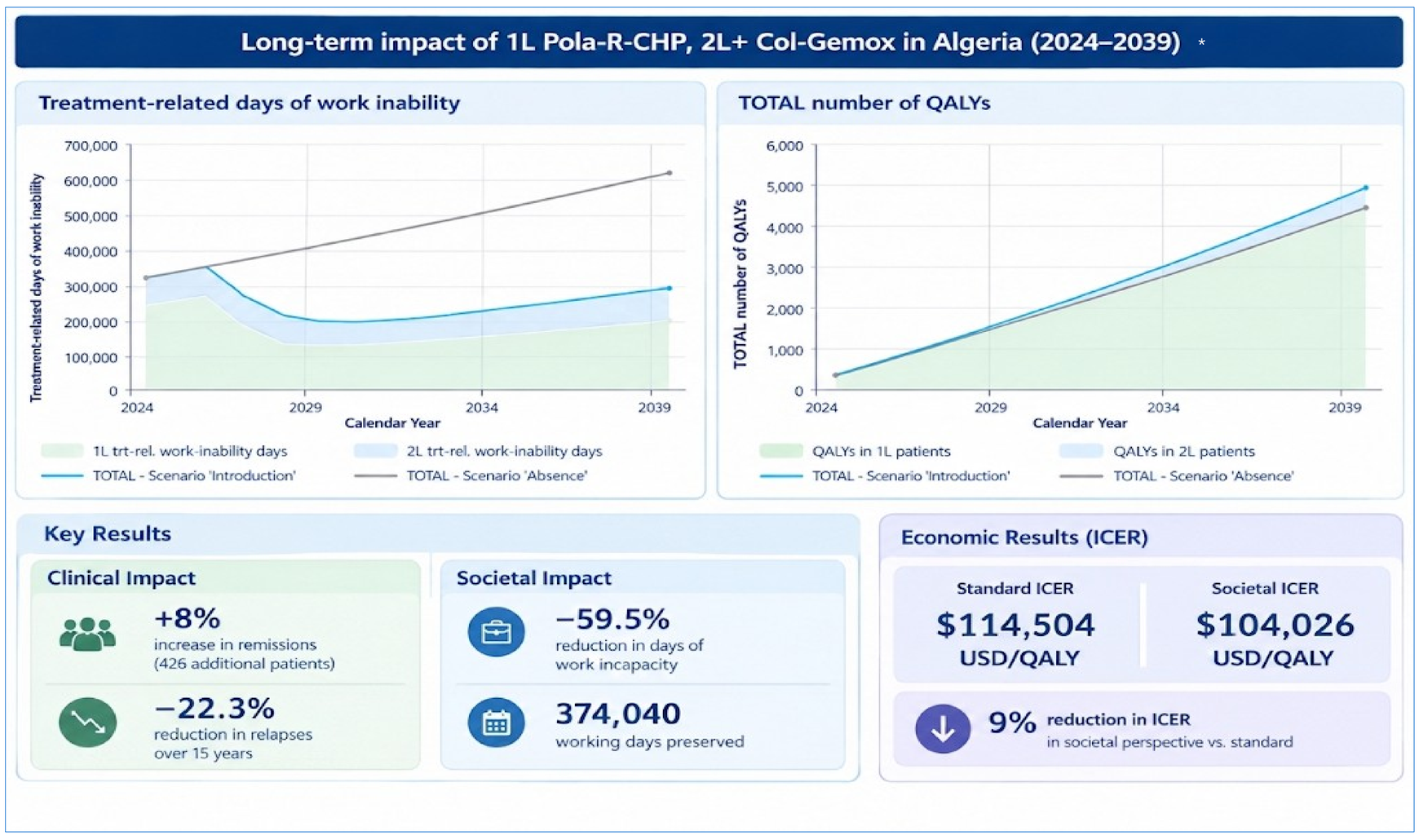
Diffuse large B-cell lymphoma is the most aggressive form of non-Hodgkin lymphoma (NHL). Its management in Algeria faces therapeutic impasses and substantial societal burdens. This study evaluates the **clinical, economic, and societal impact**, including a comparison between standard and societal incremental cost-effectiveness ratios (**ICERs**), of integrating polatuzumab vedotin (first-line) and glofitamab (second-line) into the Algerian health care system over a **15-year time horizon**.

METHOD

A treatment impact model (TIM) was utilized to project the overall outcomes: clinical endpoints (remission, relapse), quality-adjusted life-years (**QALYs**), indirect costs, and productivity losses by comparing the reference scenario (R-CHOP and salvage regimens) with a prospective scenario (innovative therapies). Both standard and societal ICERs were calculated to determine the value of the intervention by incorporating productivity gains and preserved human capital. Data were collected from **8 national hospital centers.**

RESULTS

Integration of these therapies improved clinical outcomes, with an **8% increase in remissions** (426 additional patients) and a **22.3% reduction in relapses** over 15 years. This therapeutic shift resulted in a cumulative gain of **366 QALYs**. Regarding societal impact, the study projected a **59.5% reduction** in days of work incapacity, preserving **374,040 working days** and generating a productivity gain of **493 million Algerian dinars** (DZD) (3.4 million €). Integrating these indirect societal benefits reduced the cost-utility ratio by **9%** compared to the standard ICER (13.9 million DZD/QALY vs 15.3million DZD/QALY), highlighting the strategic value of restoring patient productivity.



* Visual dashboard and charts generated using Claude (Anthropic) based exclusively on author-provided data; all values and visual representations were verified by the authors.
Exchange rate: 1 USD = 135,938

CONCLUSIONS

The adoption of polatuzumab and glofitamab represents a major clinical and societal advancement for DLBCL management in Algeria.The comparative ICER analysis confirms that these therapies act as a strategic investment, shifting policy focus from simple cost containment to holistic, value-based healthcare that optimizes national productivity and improves patient quality of life

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