

COST EFFECTIVENESS ANALYSIS OF OBINUTUZUMAB β VERSUS CYCLOSPORINE A IN THE TREATMENT OF PRIMARY MEMBRANOUS NEPHROPATHY

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OBJECTIVES

- To evaluate the cost-effectiveness of Obinutuzumab β , a novel CD20-targeted monoclonal antibody, compared to Cyclosporine A (CsA) in the treatment of primary membranous nephropathy (PMN) from a Chinese healthcare perspective.

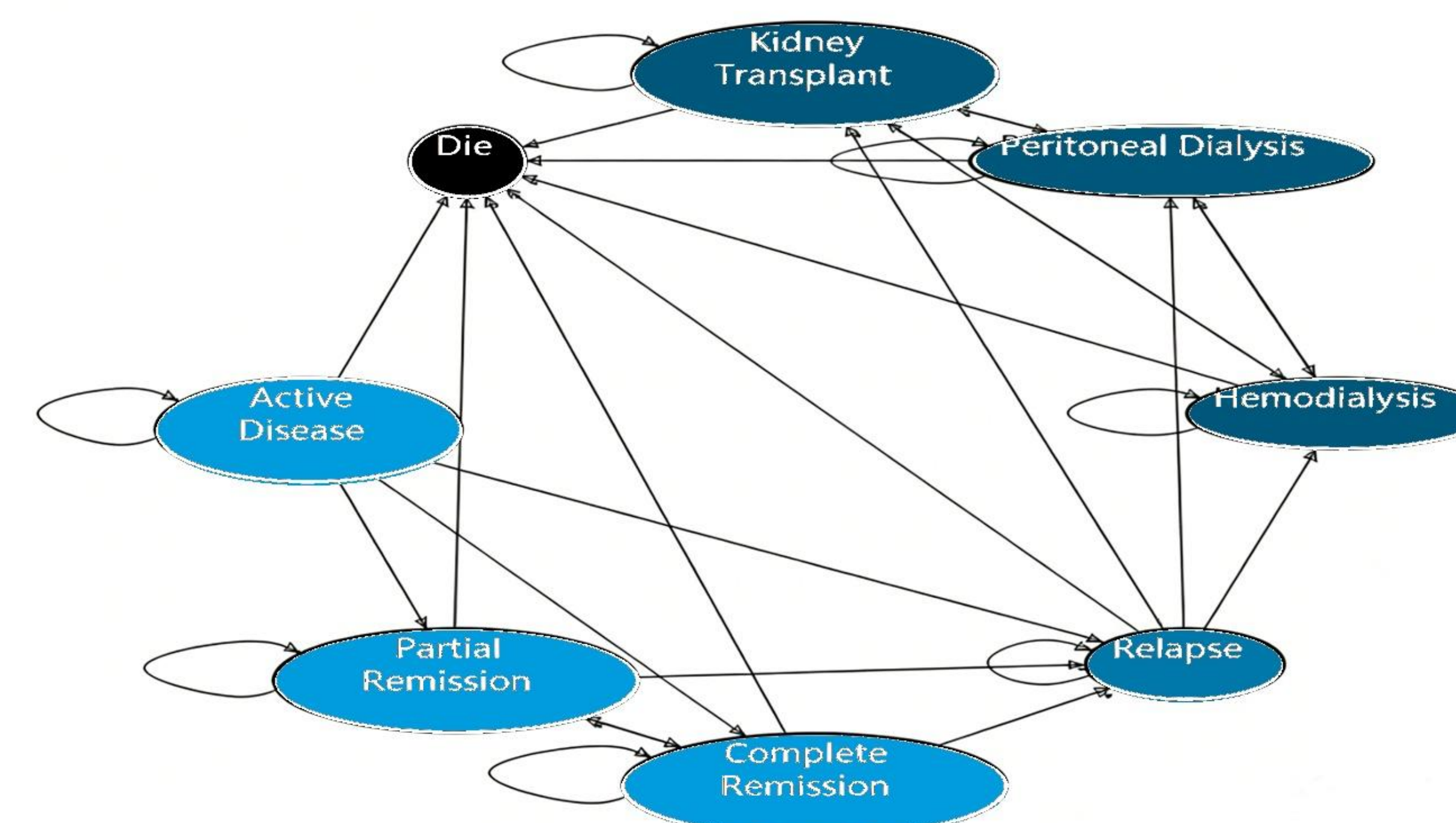
METHODS

- A Markov model was designed for a 51-year-old male patient with PMN treating by Obinutuzumab β and CsA, and projected outcomes over a lifetime horizon. Health states included in the model were complete remission (CR), partial remission (PR), active disease, relapse, end-stage renal disease (including haemo- or peritoneal dialysis and renal transplant), and death. Effectiveness data were obtained from Phase III clinical trials. Costs included drug acquisition, administration, management of adverse events and following treatments. The primary outcome was the incremental cost-effectiveness ratio (ICER), calculated as the incremental cost per quality-adjusted life year (QALY) gained. Deterministic and probabilistic sensitivity analyses were conducted.

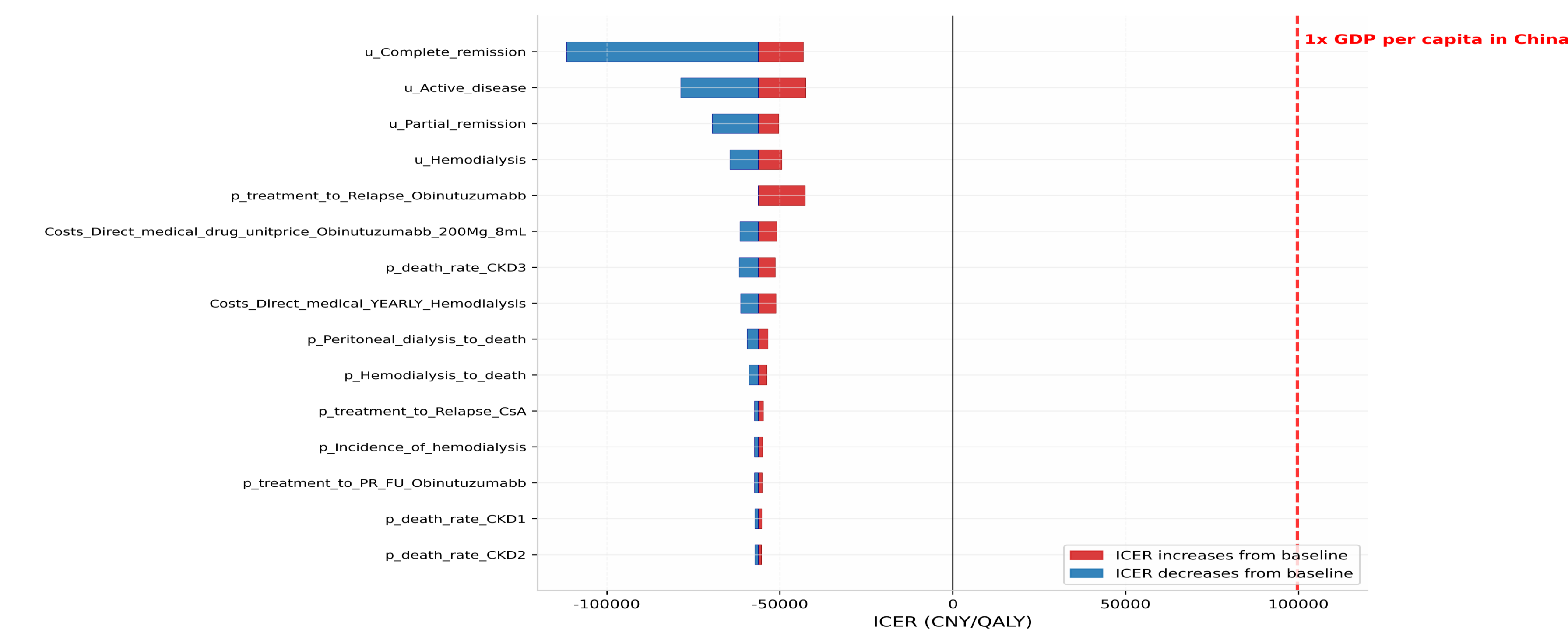
RESULTS

- At 12 months, Obinutuzumab β demonstrated a higher probability of achieving CR (37.7%) and PR (41.5%) compared to CsA (CR: 6.6%, PR: 10.5%).
- Over 18 months, Obinutuzumab β maintained superior efficacy with CR rates of 49.4% and PR rates of 35.0%, while CsA showed CR rates of 3.9% and PR rates of 11.9%.
- From a lifetime perspective, the treatment group receiving Obinutuzumab β incurred costs that were ¥132,100.23 lower than those of the Cyclosporine A treatment group. Additionally, the health outcomes were significantly improved, with an increase of 2.59 QALYs in the Obinutuzumab β group. .

MODEL STRUCTURE



SENSITIVITY ANALYSIS



CONCLUSIONS

- Obinutuzumab β offers improved efficacy and cost savings for PMN compared to CsA. Given the high unmet need in PMN management and the economic burden of current therapies, Obinutuzumab β represents a valuable addition to the treatment landscape.

MAIN REFERENCES:

Model design: Hamilton, P., Kanigicherla, D., Venning, M., et al. (2018). Rituximab versus the modified Ponticelli regimen in the treatment of primary membranous nephropathy: a Health Economic Model. *Nephrology, dialysis, transplantation : official publication of the European Dialysis and Transplant Association - European Renal Association*, 33(12), 2145–2155. <https://doi.org/10.1093/ndt/gfy049>

Clinical data: Zhao C, Yimiao Z, Li H, et al. Type II Glycoengineered Anti-CD20 Antibody MIL62 or Cyclosporine in Chinese Primary Membranous Nephropathy: A Multicenter, Randomized, Open-Label Phase 1b/2 Trial: TH-PO601. *Journal of the American Society of Nephrology* 35(10S):10.1681/ASN.2024yaqz098x, October 2024. | DOI: 10.1681/ASN.2024yaqz098x