

Section 1: Introductory Statements and Governance

1ISG-001 CAN RIVAROXABAN BECOME COST SAVING COMPARED WITH VITAMIN K ANTAGONISTS IN THE TREATMENT OF PATIENTS WITH NON-VALVULAR ATRIAL FIBRILLATION IN FRANCE?

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Background and importance Non-valvular atrial fibrillation (NVAf) affects 750 000 people in France and is associated with significant morbidity, use of healthcare resources and costs. The randomised controlled trial ROCKET-AF demonstrated that rivaroxaban is an efficacious alternative to warfarin in patients with NVAf. The new oral anticoagulants (NOAC) appear to have an acceptable cost effectiveness ratio in France. But is it possible that rivaroxaban could remain cost effective with the introduction of generic drugs?

Aim and objectives To determine the price threshold for rivaroxaban to become cost effective compared with vitamin K antagonists (VKAs) in the treatment of NVAf, using real world evidence and from a French payer perspective.

Material and methods The annual cost differences associated with rivaroxaban use compared with VKAs among NVAf patients were estimated. Clinical events reflecting the efficacy and safety of the drugs were converted into costs. Drugs costs and VKA monitoring were added to obtain a total cost. Cost differences were then calculated with a price of rivaroxaban reduced by: 20% (reduction in the price of the brand name drug when the first generic is marketed); 32.5% (total decrease in the price of the brand name drug 18–24 months after the first generic is marketed); 60% (price of a generic compared with the brand name drug). Event rates were obtained from the pragmatic study BROTHER. The annual costs for each clinical event and for VKA monitoring were obtained from the literature (studies in French setting). The cost of medicines in 2018 came from the French National Health Insurance database.

Results The total cost difference associated with the use of rivaroxaban instead of VKAs were estimated at +303€ per patient per year. The total cost differences were +124€, +12€ and –234€ with price decreases of 20%, 32.5% and 60%, respectively. The threshold for a cost saving with rivaroxaban was a 34% decrease in the price of the drug.

Conclusion and relevance Rivaroxaban can become cost saving with a 34% price reduction. The commercialisation of NOAC generics should allow them to play an even more important role in the treatment of NVAf.

REFERENCES AND/OR ACKNOWLEDGEMENTS

No conflict of interest.

1ISG-002 BIOLOGICAL DRUGS FOR THE TREATMENT OF MODERATE AND SEVERE PLAQUE PSORIASIS: A COST ANALYSIS AND AN APPLICATION OF A CORRELATION ANALYSIS TO INVESTIGATE COST EFFECTIVENESS

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Background and importance The introduction of the first biological drugs has led to a new era for patients. Moreover, the recent arrival of biosimilars has guaranteed effectiveness at a more sustainable cost. We compared the recently approved biological drugs with biosimilars and older biological molecules, using a new cost effectiveness analysis approach.

Aim and objectives To compare the long term therapy cost and cost effectiveness of biological systemic therapies for treating patients with moderate to severe plaque psoriasis.

Material and methods We collected therapy costs from our internal hospital database. We reported the purchase price, including any discounts. Efficacy data, measured with the PASI index, for 12/16 weeks, was obtained from a recent meta-analysis by Sawyer *et al.* We calculated the long term costs by multiplying the monthly cost for a single patient, including the induction phase. Our cost effectiveness analysis was performed by a correlation analysis between efficacy and the cost of therapy for the 12/16 weeks of treatment. We calculated, for each molecule at a different PASI, a correlation index (R) to investigate if a correlation between cost and efficacy could be established.

Results Cost analysis of the first year and the first 3 years of therapy showed how the introduction of biosimilar drugs greatly lowered global expenditure. The cost/PASI ratio showed that adalimumab and infliximab biosimilars were the most convenient drugs in relation to their cost and clinical effectiveness (57€/PASI90; 112€/PASI90, respectively).

In terms of efficacy alone, a greater therapeutic result was observed for the most recently approved molecules, especially for PASI90/100. The cost/PASI ratio of these newer therapies was convenient only for PASI90 and 100 (guselkumab 41€/PASI100). Therefore, there seems to be a positive, albeit weak, correlation between the effectiveness and cost of innovative drugs, especially for PASI90/100 where R increased with increasing PASI (PASI75, R=0.22; PASI100, R=0.32).

Conclusion and relevance The introduction of biosimilar drugs in the treatment of moderate to severe psoriasis has significantly lowered costs. From the correlation analysis, we observed some linearity between cost and efficacy; a higher cost correlated with greater efficacy, especially for PASI90/100. However, it should be noted that there is still a lack of longer term studies (over 16 weeks) comparing more consistently long term therapies with drugs of different classes.

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