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Does Including Biosimilars Earlier in the Treatment Pathways Lead to Cost Savings in Rheumatology?

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BACKGROUND

The management of rheumatologic conditions, characterized by the debilitating effects of chronic inflammation and autoimmune responses, represents a significant burden on healthcare systems worldwide. The current treatment pathway for patients with RA begins with conventional DMARDs (cDMARDs) such as methotrexate (MTX). However, most patients do not achieve the treatment target of remission or low disease activity due to inadequate response or intolerance to treatment (1) and require targeted synthetic (tsDMARD) or biological (bDMARD) disease modifying drugs. Biologic therapies have revolutionized the treatment landscape for patients suffering from rheumatoid arthritis (RA), ankylosing spondylitis (AS), and other related disorders, offering improved symptom control and enhanced quality of life. These biologics, often referred to as "originator biologics," have become pivotal in managing the disease. However, they been associated with substantial financial implications for both patients and healthcare providers. In recent years, the emergence of biosimilars, which are highly similar versions of approved biologics, shows promising potential to reduce the financial strain of biologic treatments while maintaining equivalent clinical efficacy and safety profiles.

This leads us to a fundamental question : Does the early inclusion of biosimilars in the treatment pathways of rheumatological conditions lead to substantial cost savings, without compromising the quality of patient care?

By addressing this pivotal question, we aim to inform clinicians, healthcare policymakers, and patients alike, about the potential advantages associated with and the implications of the timely integration of biosimilars in the management of rheumatology. Thus ultimately, contributing to more cost-effective, accessible, and sustainable healthcare solutions for those in need.

OBJECTIVES

To review whether the use of biosimilars earlier in the treatment pathway for Rheumatoid Arthritis would lead to an increase in cost savings for the system, by:

1 **Analysing Cost Savings:**
Looking at the potential cost savings for the healthcare system achievable by incorporating biosimilars earlier in rheumatology treatment pathways.

2 **Suggesting the most cost-effective treatment sequence:**
Taking into account all three modes of action: JAK inhibitors, Interleukins and Anti-TNF inhibitors.

3 **Contribute to Informed Decision-Making:**
Offer insights and knowledge that would empower healthcare stakeholders, including pharmaceutical companies, patients, clinicians, and policymakers, to make informed decisions regarding the integration of biosimilars earlier in the treatment pathways for rheumatologic conditions, with the ultimate goal of enhancing patient outcomes, along with healthcare sustainability.

METHOD

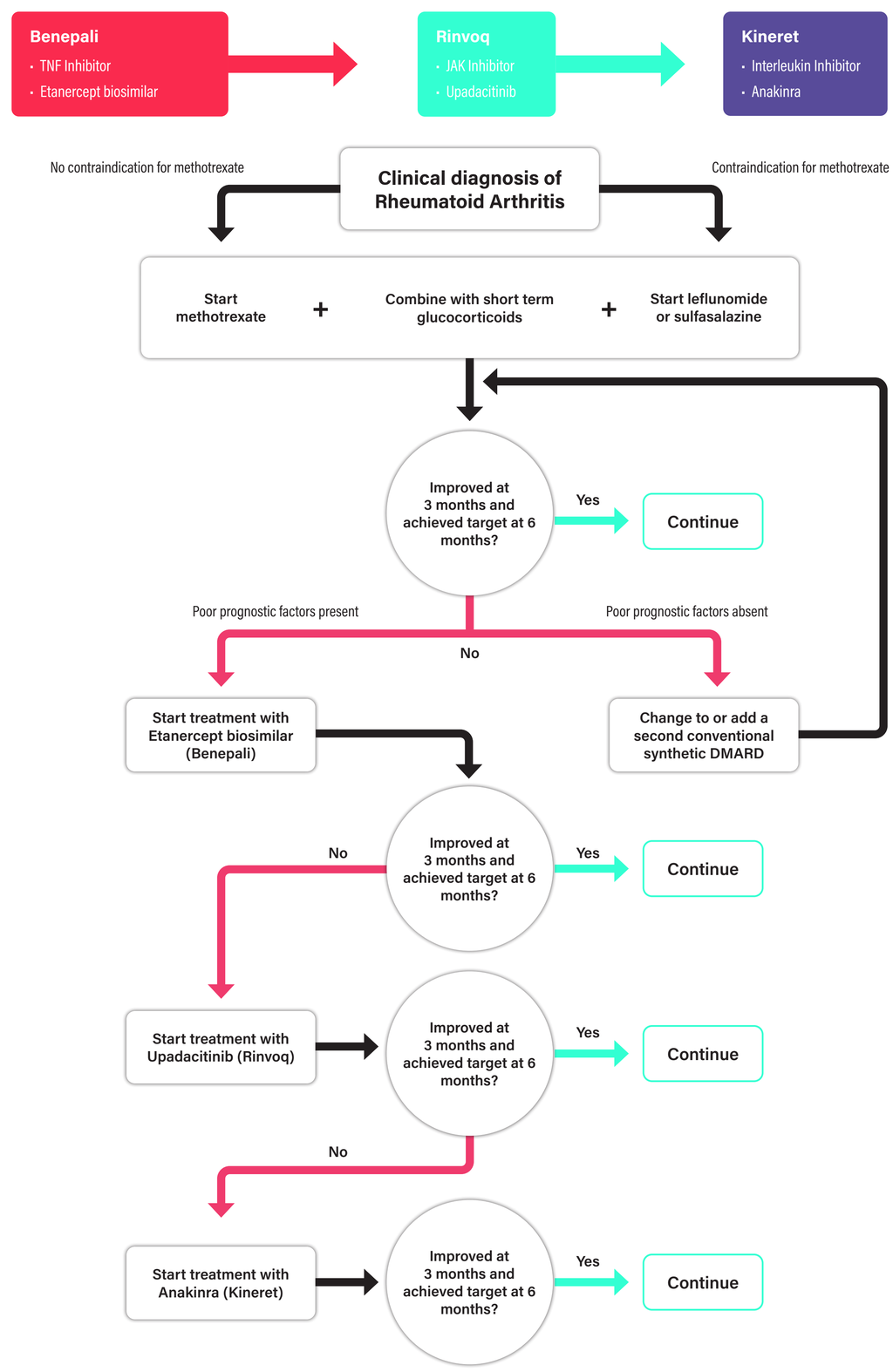
Originator and biosimilar drugs approved for Rheumatoid Arthritis (RA) were sourced from the EMA and NICE database. Three drugs, each representing a different mode of action (MOA), were selected: Rinvoq (JAK Inhibitor), Kineret (Interleukin), and Benepali (etanercept biosimilar). Cost-effectiveness analyses and current guidelines for RA patient pathways were obtained from the NICE and EULAR websites.

A targeted literature review was conducted, which focused on the availability of data regarding the cost-effectiveness of including biosimilars earlier in RA treatment pathways, specifically after methotrexate failure or intolerance. The search strategy combined disease-specific keywords (e.g., 'rheumatoid arthritis' and 'early arthritis'), mode of action keywords (e.g., 'Disease Modifying Anti-Rheumatic Drugs,' 'JAK inhibitor,' 'interleukin,' and 'biosimilars'), drug-specific keywords (' Benepali', 'Rinvoq' and 'Kineret'), and economic keywords (e.g., 'cost,' 'healthcare cost,' and 'cost of illness'). Only English language studies were considered.

RESULTS

Six studies were included in the TLR and the findings indicate that biosimilars and their originator molecules exhibit a minimal quality of life difference,(3)(6)(7) despite significant cost variations in treatment sequences. In the absence of significant differentiated price decreases of originator drugs, it seems that using the biosimilar of etanercept as a first-line drug is the most efficient. (4)(5)(6)

Starting with a non-TNF in first-line seems to not be an efficient choice. Based on the findings from the review, following methotrexate failure, the sequences beginning with etanercept biosimilar, Benepali yielded the most QALYs.(7) Benepali is associated with the lowest costs and the most cost-effective treatment sequence including all three modes of action (TNF inhibitor, JAK inhibitor and interleukins),(8)(9) is:



Recommended Treatment Pathway with Biosimilars
Adapted from: The EULAR recommendations for the management of rheumatoid arthritis with synthetic and biological disease - modifying antirheumatic drugs: 2022 update – Josef S Smolen et al. Ann Rheum Dis 2023;82:3-18 (2)

CONCLUSIONS

The TLR findings indicate that initiating the treatment sequence with a biosimilar drug (after methotrexate failure) is the most cost-efficient approach compared to starting with originator biologics, unless there is a substantial price decrease for biologic drugs. All analyses found that, early inclusion of biosimilars in the RA treatment pathway can result in significant cost savings for the healthcare system. These savings can then be redirected towards reimbursing innovative medicines or financing subsequent treatments if earlier lines fail.

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