

A Scoping Review of Real-World Evidence and Outcomes for Rituximab in Rheumatoid Arthritis

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Background

- Rheumatoid arthritis (RA) is an autoimmune disease affecting more than 1.28 million adults in the United States.¹
- A significant number of patients (25%-40%) are unresponsive to anti-TNF therapies.²
- Rituximab (RTX) is a monoclonal antibody which targets CD20+ B-cells that has changed the treatment landscape of RA with around 20% of RA patients not previously treated with anti-TNF agents using the drug.³

Objective

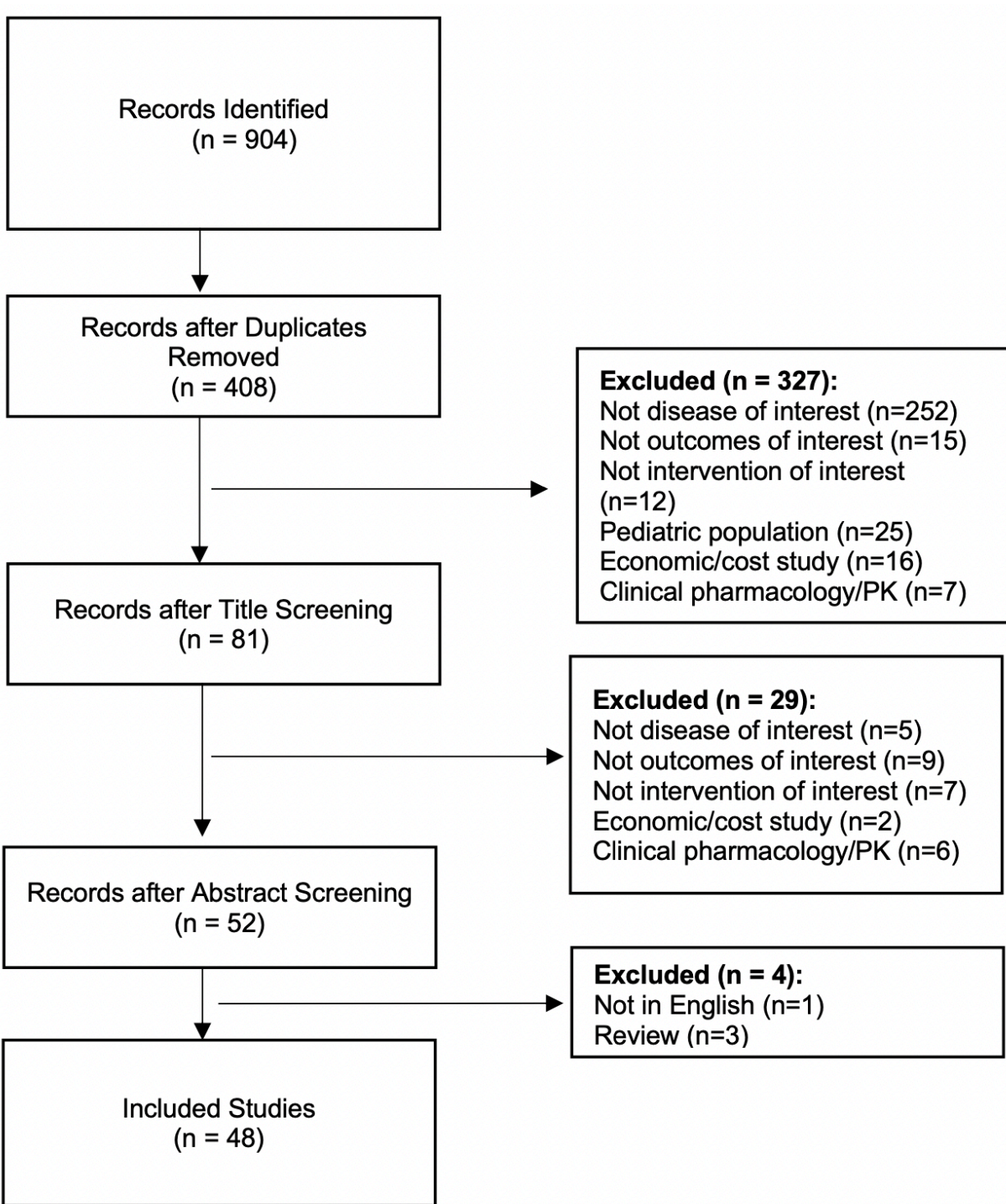
- To identify and describe current observational and comparative-effectiveness literature regarding real-world evidence and associated outcomes with rituximab use or its biosimilars in RA

Methods

- A scoping review was conducting according to the PRISMA-ScR framework.
- Peer-reviewed observational (retrospective or prospective) studies of adults (18 years of age or older) who received rituximab for RA, published in English between Jan 2010 and May 2021, that that used primary or secondary data to quantitatively analyze clinical and patient-reported outcomes were considered.

Figure 1. PRISMA Flow Diagram⁴

Identification of studies via databases and registers



Results

Figure 2: Study Locations

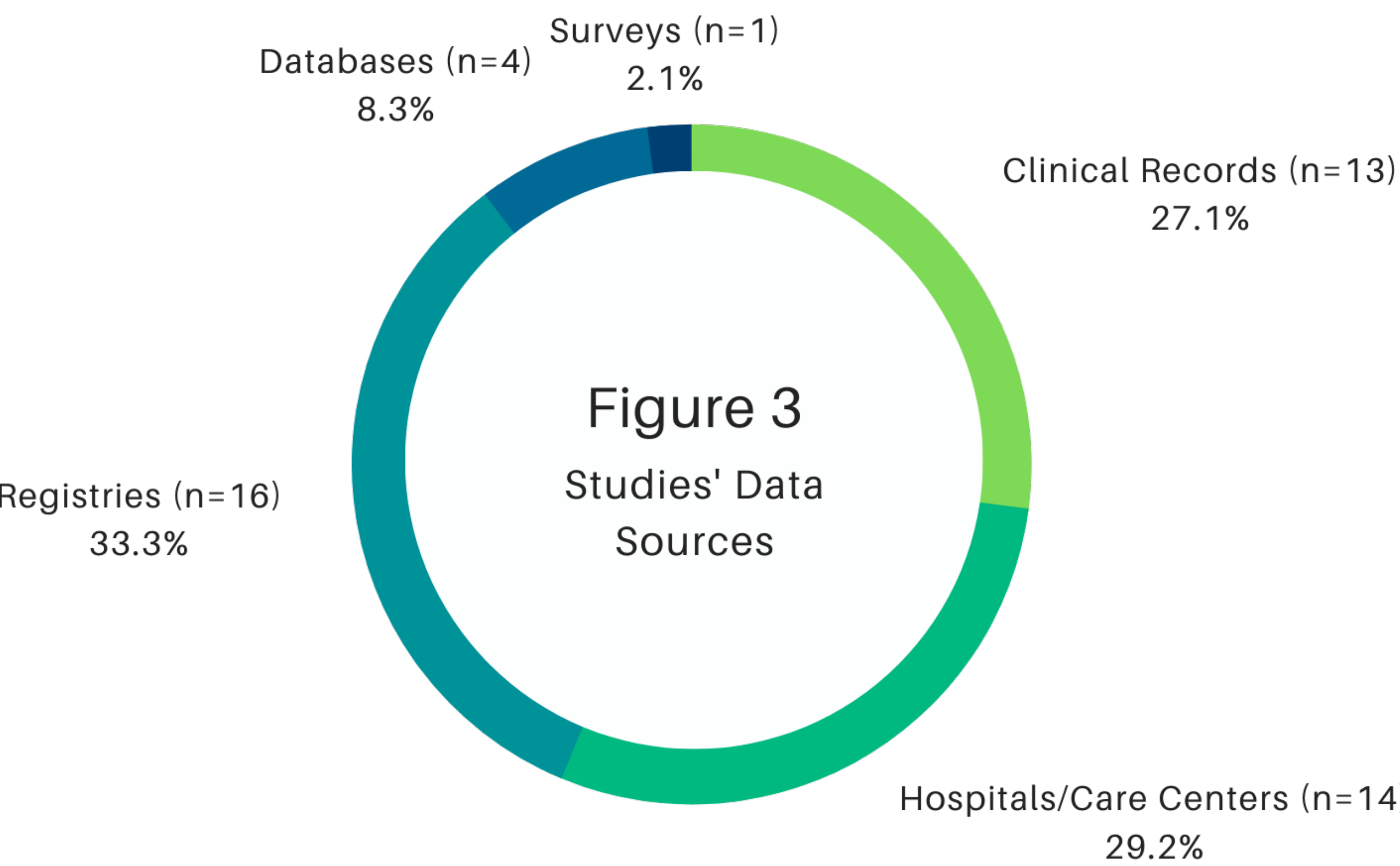
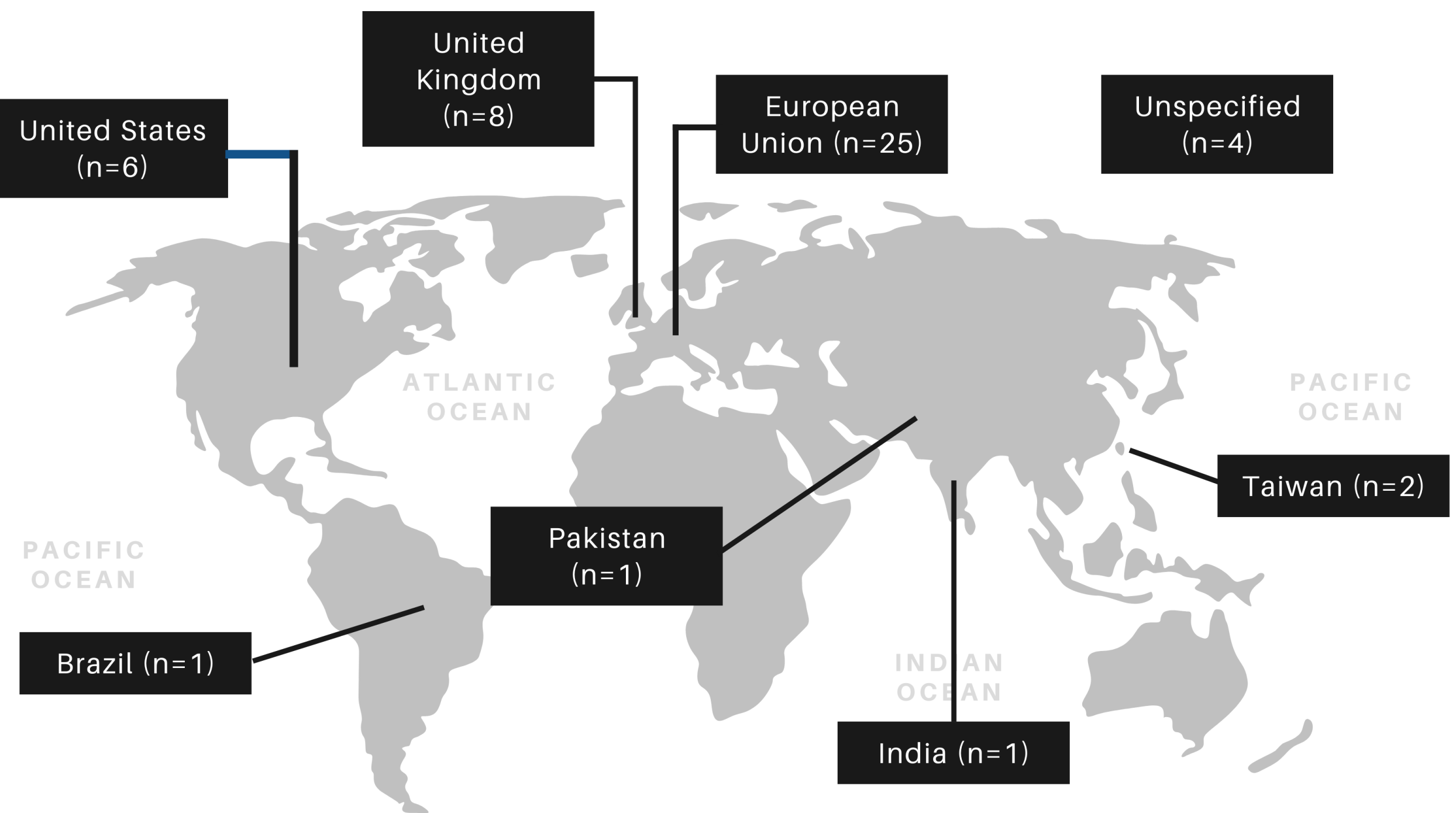


Figure 4: Summarization of Key Variables

	Prospective Studies	Retrospective Studies
Sample Size	0-99 Patients: 6 100-499 Patients: 9 500-2499 Patients: 6 >2500 Patients: 5	0-99 Patients: 6 100-499 Patients: 6 500-2499 Patients: 4 >2500 Patients: 6
Outcomes (Primary)	EULAR Response/DAS28: 16 Measurement of Inflammatory Progress: 6 PROs: 1 CDAI: 1 AE/Death: 3	DAS28: 8 Antibodies: 2 Infection Rate: 3 Drug Retention: 1 Reduced Cancer Risk: 1 AE/SAE: 7
Drug Comparators	Anti-TNF-alpha agents: 12 DMARDs: 6 Non-TNF bDMARDs: 6 CTLA4-Ig/abatacept: 3	Anti-TNF-alpha agents: 7 DMARDs: 3 Non-TNF bDMARDs: 7 CTLA4-Ig/abatacept: 5
Key Findings	<ul style="list-style-type: none">Switching to RTX may be associated with improved clinical effectiveness and better safety profile compared with switching to a second TNFiUse of initial RTX dosing may have important cost implications in the treatment of patients with RA	
	<ul style="list-style-type: none">RTX use in RA pts is generally safe and effectiveNo evidence of increased risk of malignancy found following RTX treatment	

Discussion

- A total of 48 studies were included in the final analysis; of which 26 were prospective and 22 were retrospective
- DAS-28 and EULAR response were the most common outcomes studied
- Aside from RTX, most common drug comparator(s) were anti-TNF-alpha agents such as adalimumab
- A key strength stated by a large proportion of studies (56.3%) was the real-world nature of data, translating to practical application of studies’ findings
- Majority of studies analyzed were conducted in the European Union, as a result, this scoping review may not be fully representative of the entire RA patient population.

Conclusion

- This study showcased outcomes and adverse effects typically observed with rituximab in the clinical setting.
- These findings will help identify potential gaps in literature which can inform future studies.

References



Acknowledgements

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