

INTRODUCTION

- Psoriasis is a chronic, immune mediated, inflammatory disease of the skin and joints.
- The management of moderate to severe psoriasis has undergone significant advancements with the availability of biologic therapies. [1]
- Psoriasis is often accompanied by cardiometabolic type comorbid diseases that are similarly associated with chronic, systematic inflammation.
- Little research has been focused on how the presence of cardiometabolic comorbidities might associate with response to biologic therapies.
- The purpose of this study was to provide a qualitative evaluation of studies that have assessed PASI scores in patients with cardiometabolic comorbidities treated with biologic therapies.

METHODS

- All studies evaluating psoriasis treatment with respect to cardiometabolic factors published from inception to January 2023 were identified in the PubMed, Medline, and Web of Science databases.
- Two participants independently screened articles for inclusion criteria.
- Studies that met the inclusion criteria were evaluated for study quality using the MINORS scores for non-randomized studies, noncomparative studies, and comparative studies.
- Due to the heterogeneity of the data, only qualitative analysis of the studies could be performed.

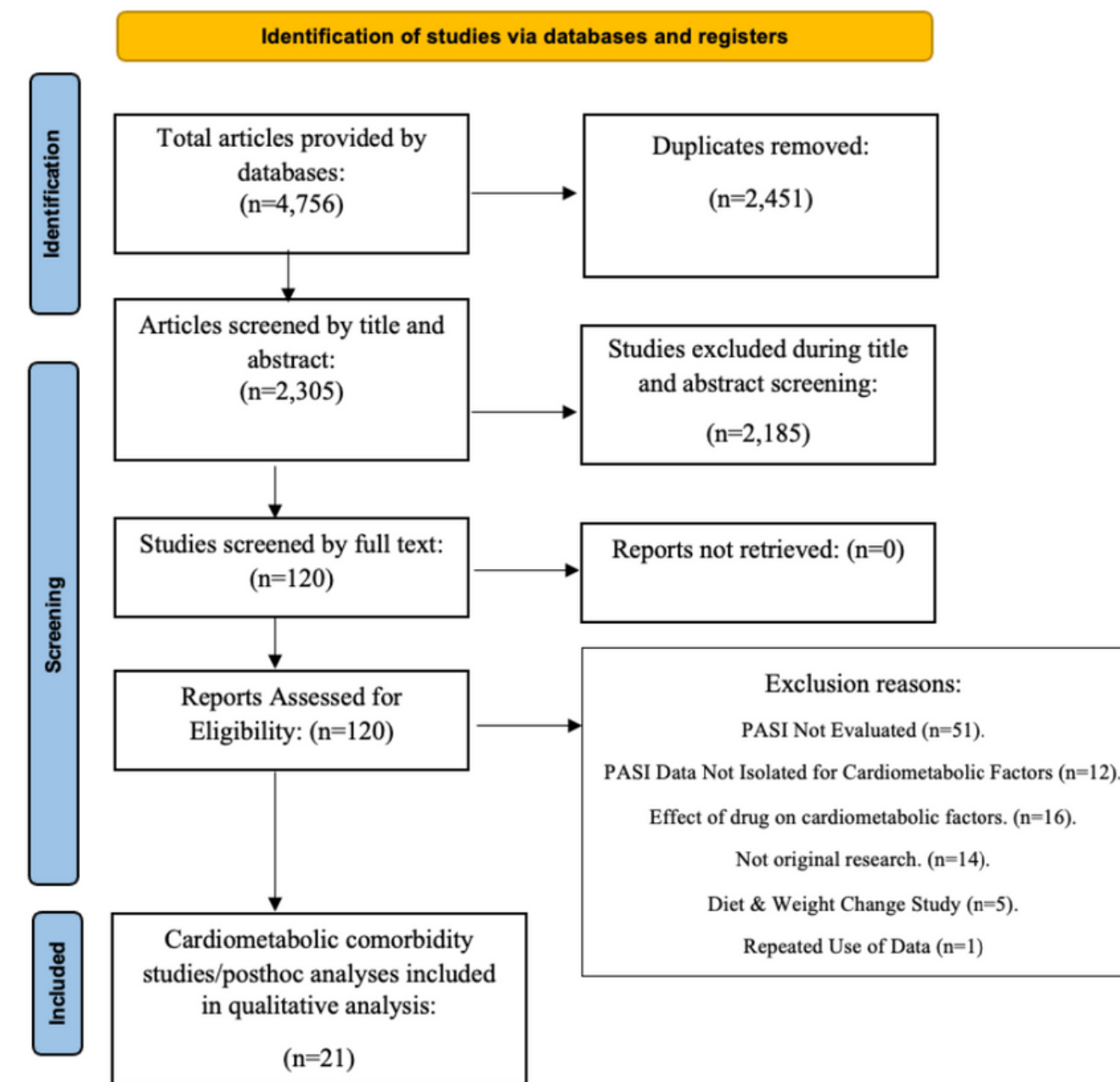


FIGURE 1: PRISMA FLOW CHART OF STUDIES

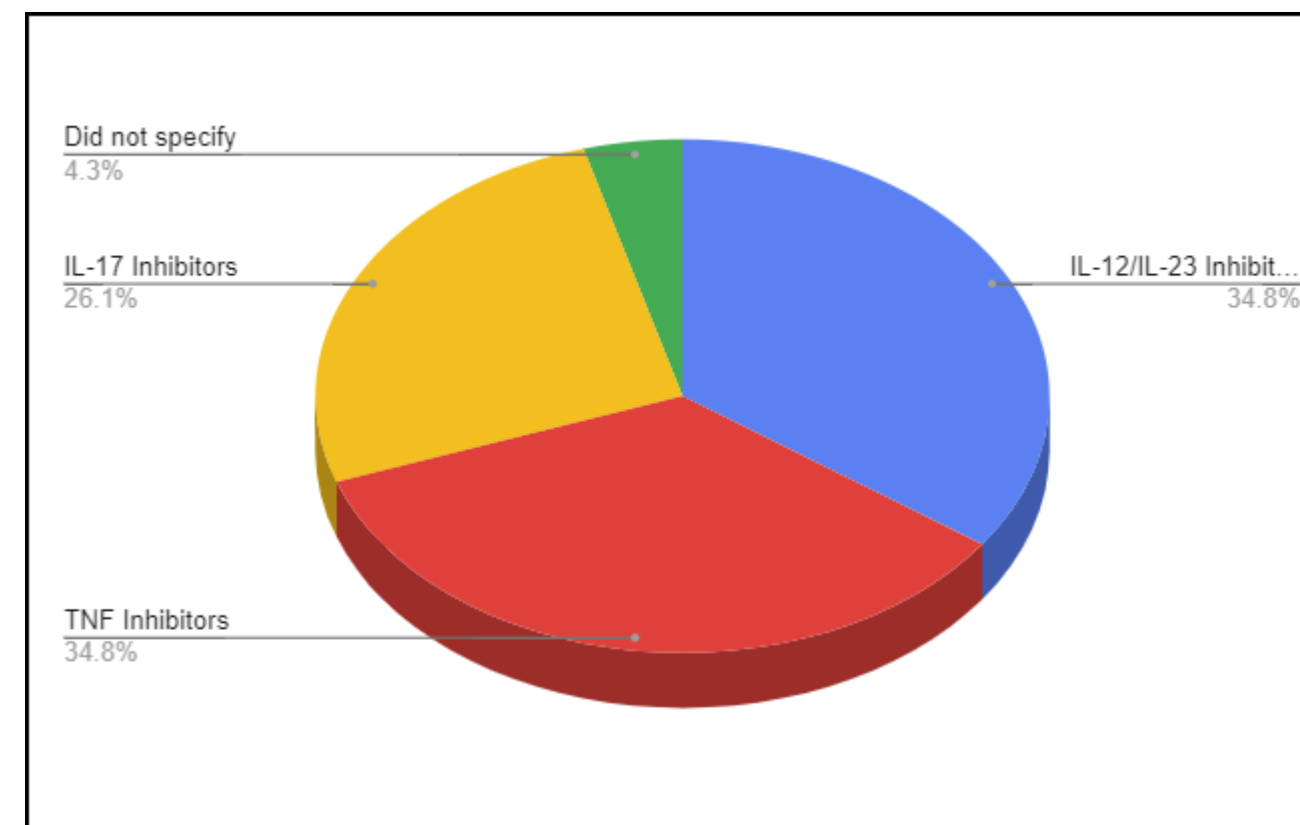


FIGURE 2: INCLUDED BIOLOGIC CLASSES

Cardiometabolic Comorbidity	Studies Showing Diminished Efficacy	Studies Showing Maintained Efficacy
Obesity/Metabolic Syndrome	N=16	N=0
Diabetes	N=3	N=2
Hypertension	N=2	N=3
Lipid Disorders	N=0	N=5

TABLE 1: EVALUATED CARDIOMETABOLIC COMORBIDITIES

RESULTS

- 2,305 articles were considered for inclusion, with 23 studies meeting inclusion criteria.
- 16 studies evaluated obesity/BMI as a cardiometabolic factor, 5 evaluated diabetes, 5 evaluated hypertension, and 5 evaluated lipid disorders.
- Across all studies, obesity overwhelmingly highlights lower rates of achieving both PASI75, PASI90, and PASI100 based on BMI.
- Nearly every study found the same results with patients struggling with Type II Diabetes/Metabolic Syndrome.
- Of the studies evaluating hypertension, two found an association between diminished drug responses and hypertension.
- Only two studies analyzed hyperlipidemia as a cardiometabolic factor, with neither finding an association between hyperlipidemia and a biologic response.

CONCLUSION

- Multiple studies evaluating cardiometabolic comorbidities point to a diminished rate of achieving PASI scores.
- Similarly, studies show a benefit to weight-based dosing for ustekinumab and infliximab in the presence of obesity [2].
- Future clinical trials should focus on designing trials with biologic dose adjustments when comorbidities are present.
- It is recommended that clinicians assess the comorbid disease status when developing a care plan.

REFERENCES

1. Menter A. Psoriasis and psoriatic arthritis treatment. Am J Manag Care. 2016;22(8 Suppl):s225-237.
 2. Lebowitz M, Yeilding N, Szapary P, et al. Impact of weight on the efficacy and safety of ustekinumab in patients with moderate to severe psoriasis: rationale for dosing recommendations. J Am Acad Dermatol. 2010;63(4):571-579. doi:10.1016/j.jaad.2009.11.012