

Atopic Dermatitis, Celiac Disease, and Dermatitis Herpetiformis: A systematic review and meta-analysis

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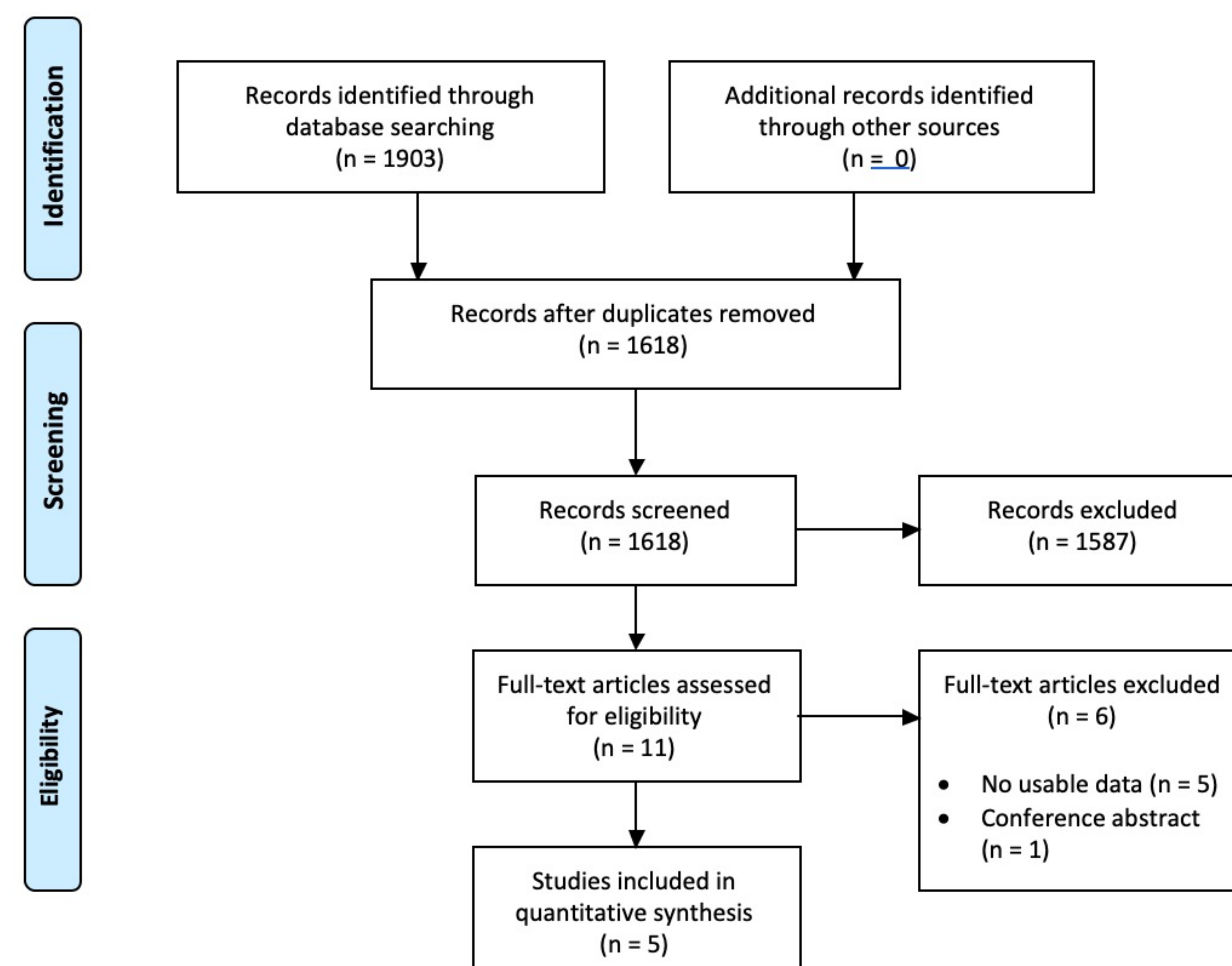


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INTRODUCTION

Atopic Dermatitis (AD) is one of the most prevalent complex chronic inflammatory skin diseases in the world that arises from the interplay between genetics and environmental factors and has been associated with many autoimmune disorders. Celiac disease (CD) is an immune-mediated gluten-enteropathy with a highly variable presentation and has been linked to extra intestinal signs of atopic allergy such as dermatitis herpetiformis (DH). However, no meta-analysis has been done looking at the association of CD in AD patients; AD in CD patients with regards to sex; and AD and DH, a CD manifestation.

METHODS



RESULTS

A total of 5 studies enrolling 1180418 patients were included in the meta-analysis. Three studies look at the association between CD and AD, two studies looked at the association of AD and CD by sex, and two studies looked at the association between AD and DH. All comparisons had a positive odds ratio indicating a present association between these topics.

Figure 1. Forest Plot of the Association of Celiac Disease (CD) and Atopic Dermatitis (AD)

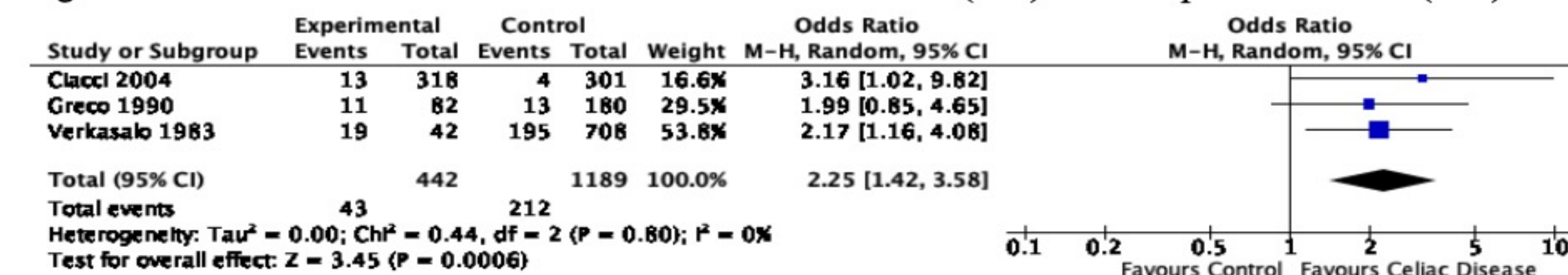


Figure 2. Forest Plot of the Association of Atopic Dermatitis (AD) and Celiac Disease (CD) in Men.

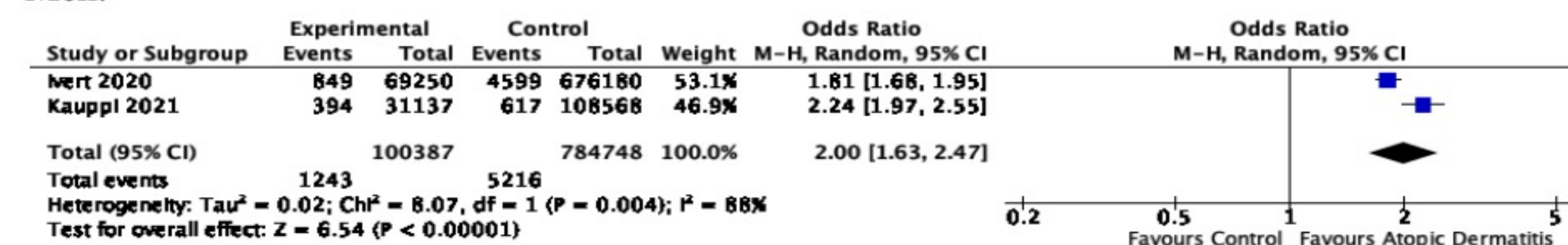


Figure 3. Forest Plot of the Association of Atopic Dermatitis (AD) and Celiac Disease (CD) in Women

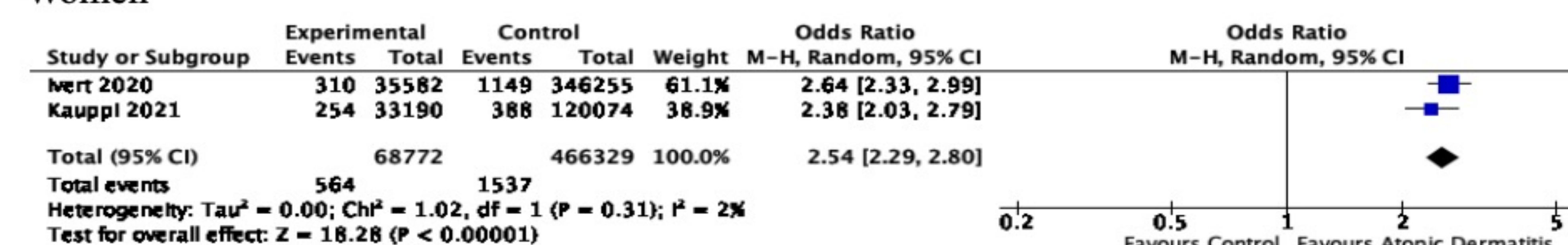
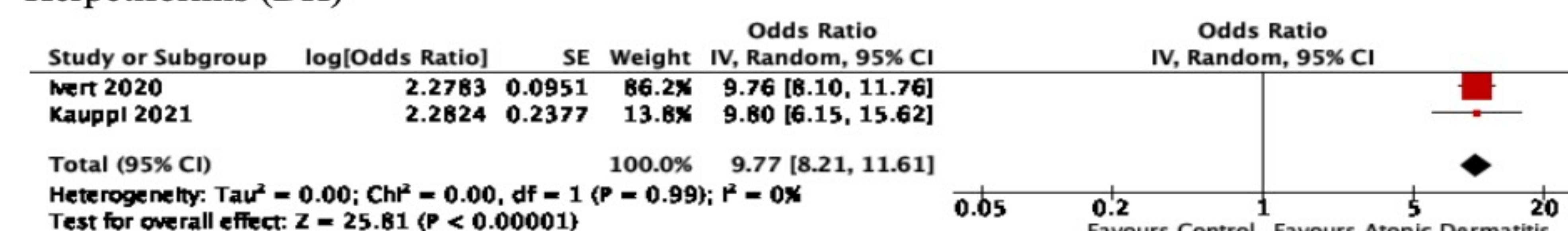


Figure 4. Forest Plot of the Association of Atopic Dermatitis (AD) and Dermatitis Herpetiformis (DH)



CONCLUSION & FUTURE DIRECTIONS

This is the first meta-analysis that shows a strong association of AD in CD patients, CD in AD patients by sex, and DH in AD patients. The positive relationship supports the existing hypotheses that propose a link between atopy and mucosal damage. This suggests that there is likely a molecular basis to the presented disease processes that should be the focus of future investigations. Dermatologists and physicians should be vigilant of the possible autoimmune relationship between these conditions.

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