DDW2025 Digestive Disease Week®

MAY 3–6, 2025 | SAN DIEGO, CA

PROGRESSION OF POTENTIAL CELIAC DISEASE TO CELIAC DISEASE: A SYSTEMATIC REVIEW AND META-ANALYSIS

Goyal, R.M., MBBS[1]; Aggarwal, N., MBBS[2]; Karkra, R., MBBS[1]; Bansal, B., MBBS[3]; Chopra, Y., MBBS[3]; Ahuja, V., MBBS, MD[3]; Makharia, G., MBBS, MD[3]

1. Department of Medicine, Rutgers New Jersey Medical School, Newark, NJ, USA
2. Department of Gastroenterology, Corewell Health/Wialliam Beaumont University Hospital, Royal Oak, MI, USA
3. Department of Gastroenterology, All India Institute of Medical Sciences, New Delhi, India

RUTGERS HEALTH New Jersey Medical School Department of Medicine

All India Institute of Medical Sciences — शरीरमाद्यं खलु धर्मसाधनम्

Background

- Potential Celiac Disease (PCD) refers to patients with positive celiac serology, such as tissue transglutaminase IgA (tTG-IgA) or endomysial antibodies (EmA), but with a minimal or no villous abnormality (modified Marsh grade 0-1).
- A proportion of these subjects with PCD are considered at risk for progression to overt celiac disease (CeD).
- However, the rate of progression, the time frame, and the risk factors responsible for conversion to overt CeD remain uncertain.
- **AIMS:** To determine the rate of conversion from PCD to overt CeD

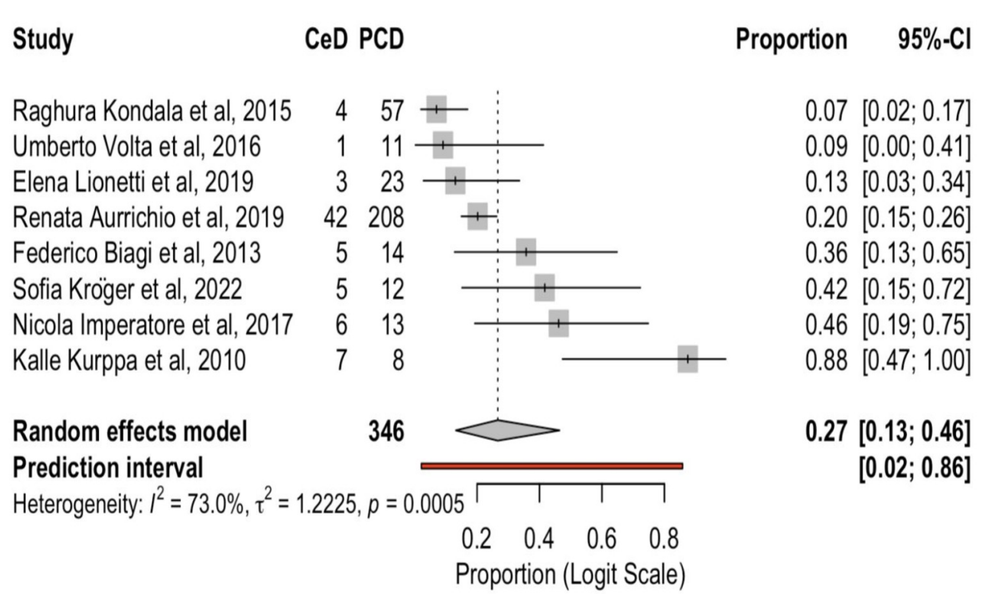
METHODS

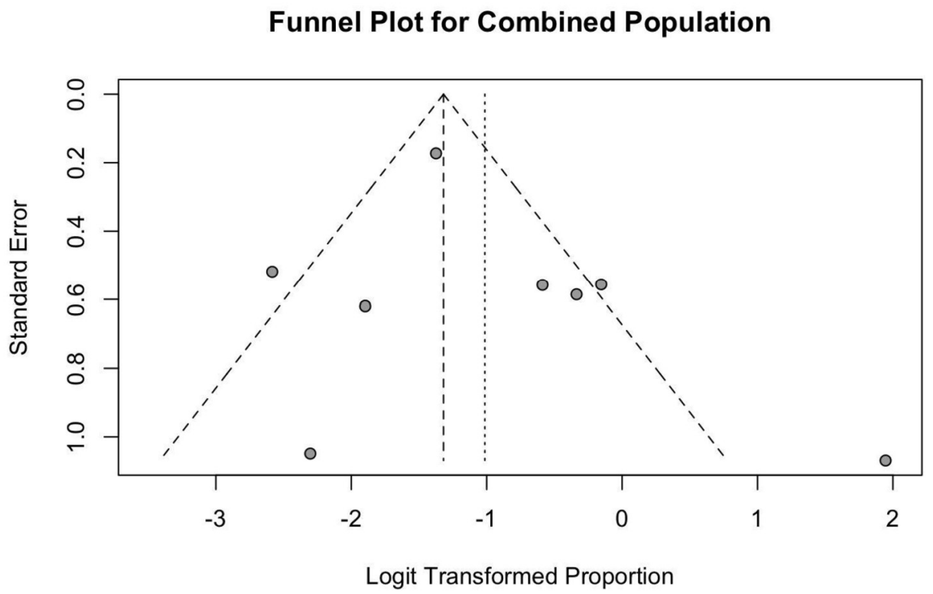
- **Study Design:** Systematic Review and Meta-analysis
- We systematically searched the PubMed, Scopus, Cochrane, and Embase databases for relevant articles using various combinations of the terms "potential celiac disease," "latent celiac disease," and "progression OR conversion OR transition OR development."
- **Period of Study**: Since Inception through November 15, 2024
- **Inclusion Criteria:**

- studies published in the English language,
- availability of full-text articles,
- studies involving inclusion and follow-up of patients with PCD,
- at least 1 repeat biopsy during the follow-up, and
- use of established criteria for diagnosis of PCD and CeD.

- Statistical analysis was done using Rstudio ver. 4.4.1.
- The quality of the included studies was assessed using the National Heart, Lung, and Blood Institute (NHLBI)Study Quality Assessment Tools.

RESULTS





- Of the total 494 search results, 8 studies found fit (n = 346) were included in the present systematic review and meta-analysis.
- Of 8 studies, 4 each included children (n = 251) and adults (n = 95).
- The pooled rate of progression from PCD to overt celiac disease was 27% (95% CI, 13%-46%, I = 73%).
- Adults: 20% (95% CI, 7%-42%; I = 76.8%)
- Children: 35% (95%CI, 13%-67%; I = 76.9%).
- Quality of studies: 2 Fair and 6 Good

CONCLUSION

- One in four individuals with PCD will eventually progress to CeD.
- The observed rate of progression to CeD underscores the importance of close monitoring in individuals with PCD to identify progression to CeD.
- If a diagnosis of CeD is established, early institution of gluten-free diet is pivotal to the prevention of long-term complications.