

# Bioelectrical impedance analysis as a clinical marker of health status in adult patients with benign gastrointestinal disease: a systematic review

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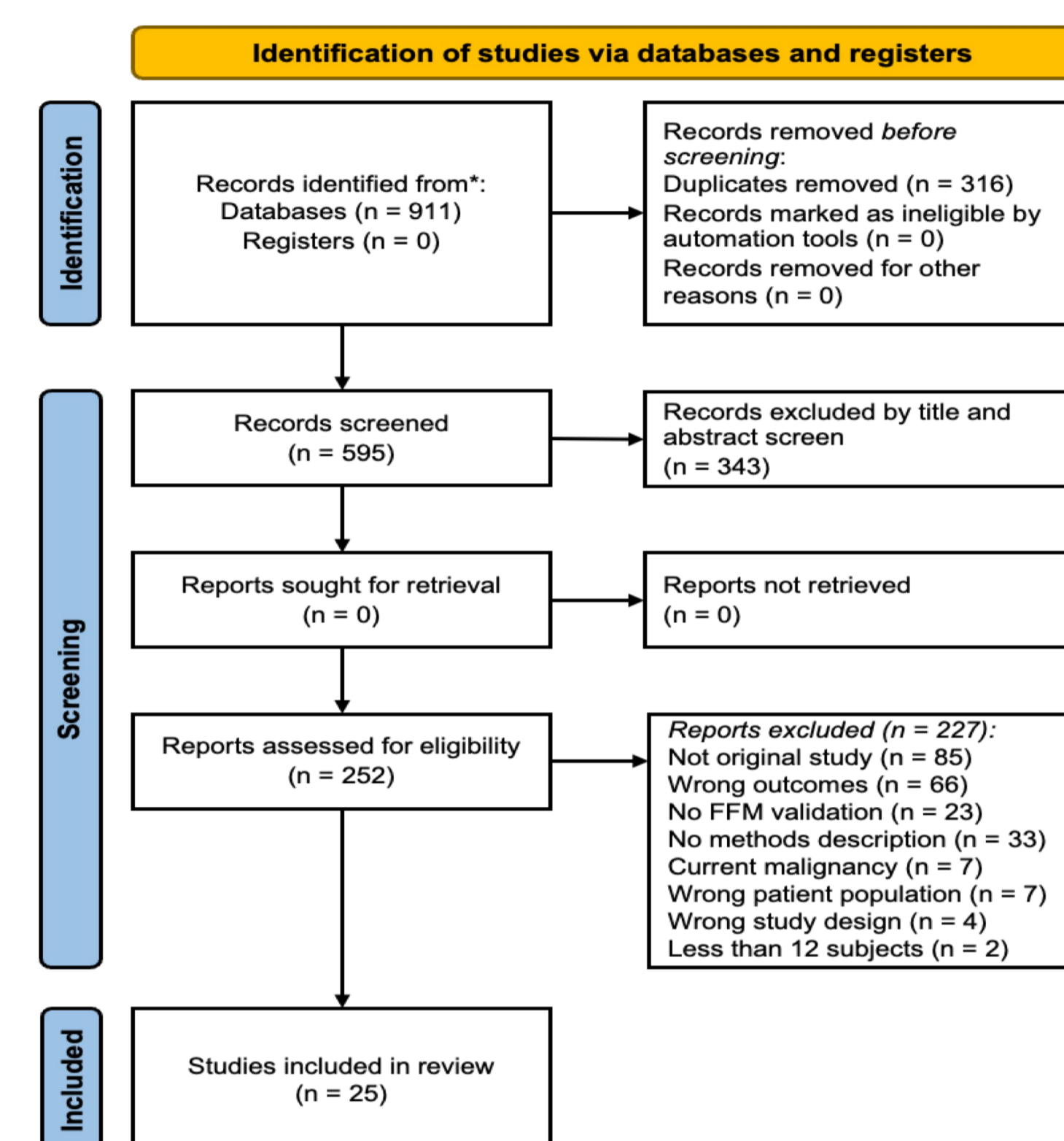
## Bioimpedance

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- Bioelectrical impedance analysis is a **non-invasive** tool to assess **body composition**.
- Body composition reflects nutritional status, disease status and progression, and treatment responses.
- We aimed to evaluate BIA as a **clinical body composition marker** for **benign GI diseases** and describe its association with physical health status.

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## Methods



## Results

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- 📄 25 studies
- 👤 2,374 adult patients
- 📐 17 studies or 1,963 patients reported phase angle
- 🍖 11 studies or 411 patients reported fat-free-mass
- 🏥 Clinical outcomes associated with BIA measurements: gut absorbing ability, muscle strength, energy expenditure, malnourishment, biomarkers, readmission, length of stay, and mortality

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## Limitations

Exclusion of papers with no available quantitative data, relatively small sample sizes of the included studies, a wide use of different weight scales, different BIA devices, different prediction equations when calculating secondary outcomes.

## Conclusion

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- BIA was used in a varied group of patients with GI diseases to evaluate body composition.
- BIA raw outcomes, FFM and FFMI was utilized to estimate abnormal body composition, association with a higher nutritional risk, detecting abnormal body composition, and worse prognosis of LOS and mortality in patients with GI diseases.
- Only two articles included information to judge the accuracy of BIA, which inhibits the evaluation for the clinic utility.

