Long COVID and deficits in multiple health domains:
A deep phenotyping case-control study

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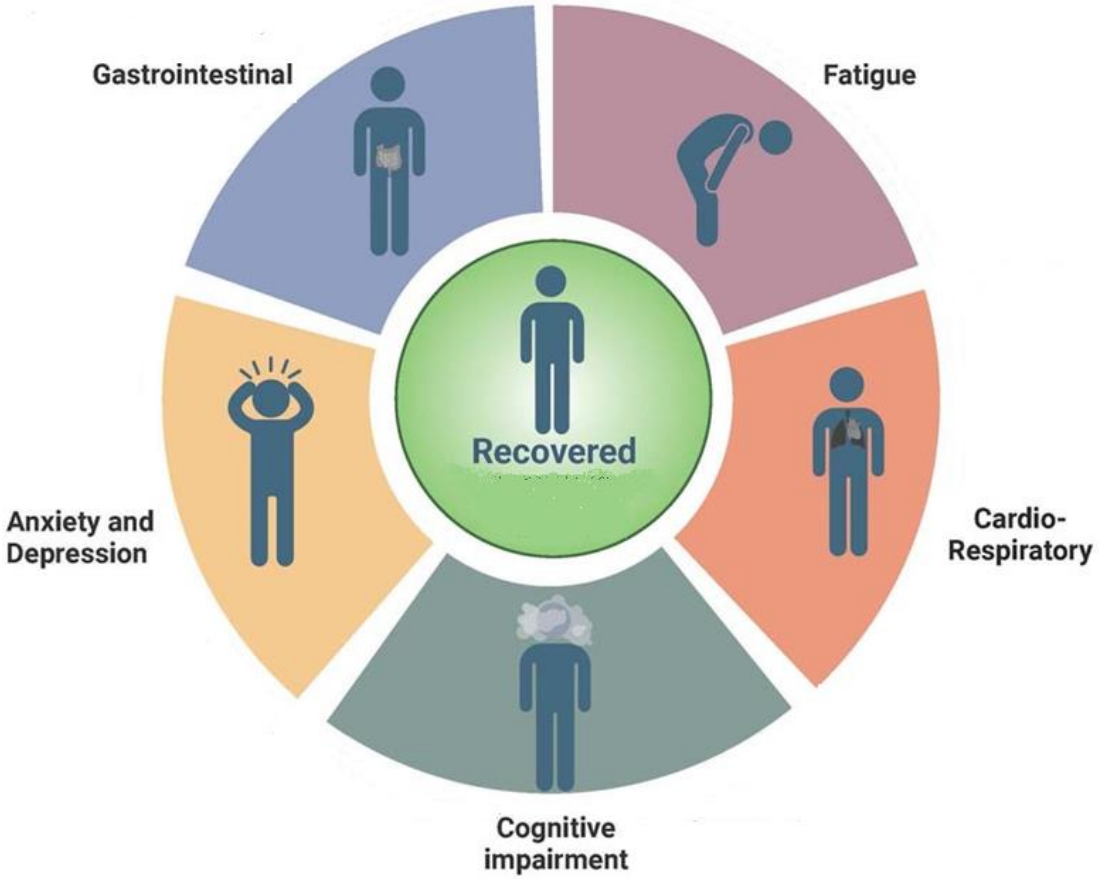
Long COVID

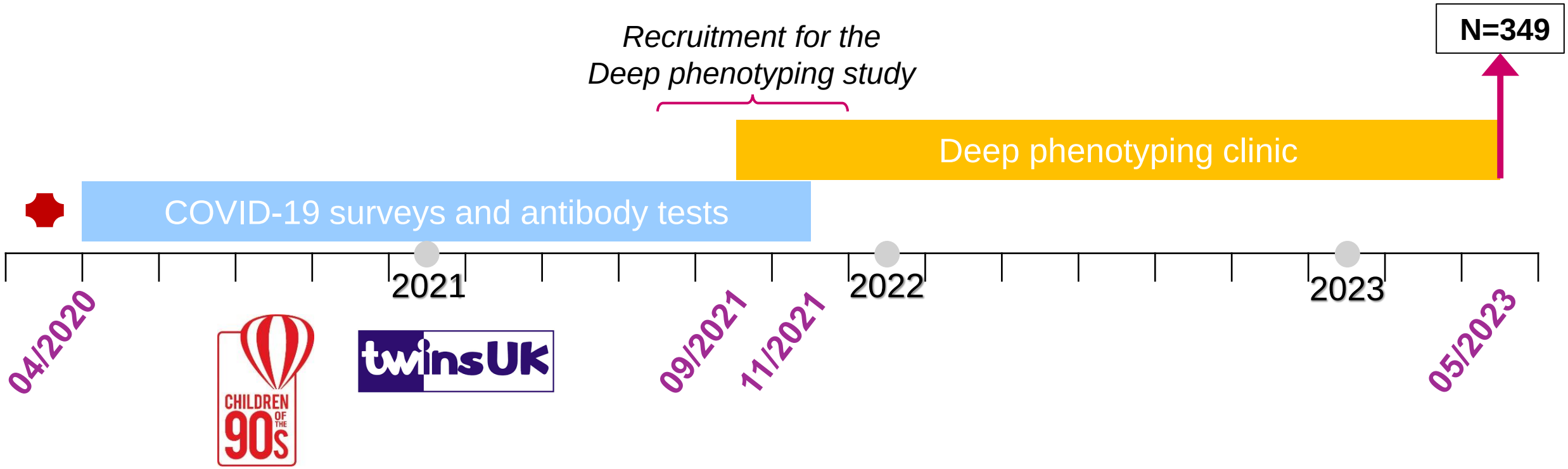


Modified from Liew et al. 8th April 2024. Nature Immunology.

- ~65 million people worldwide live with LC.
- It can affect anyone exposed to SARS-CoV-2 regardless of severity of original symptoms.
- LC symptoms are not necessarily severe but persistent or relapsing and can impact everyday functioning.

? **Is long COVID associated with evidence of multi-domain deficits?**

Study design

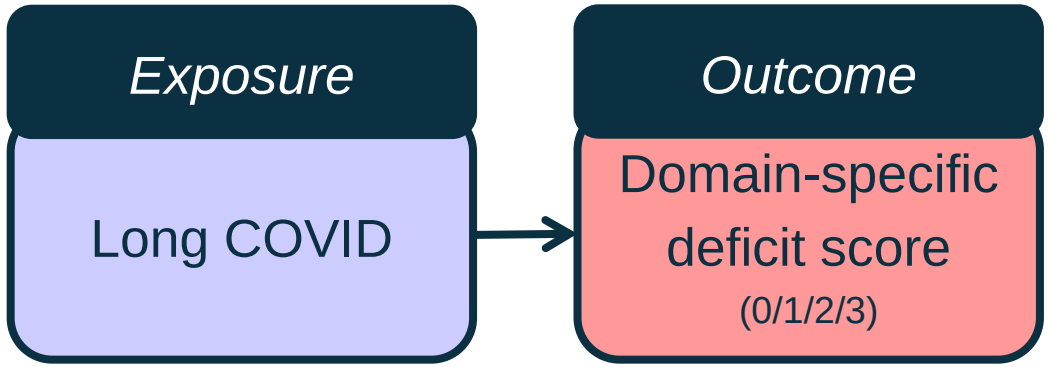


Long COVID cases: Symptoms >12 weeks + Antibody evidence for infection

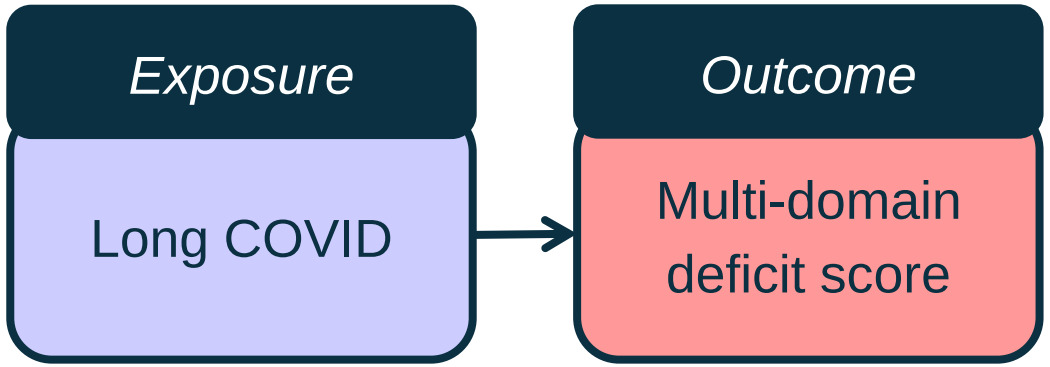
N_{cases}=141

Association between long COVID and deficit scores

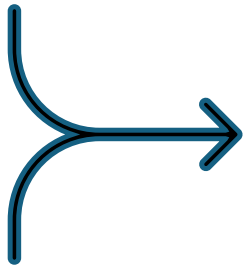
Per domain

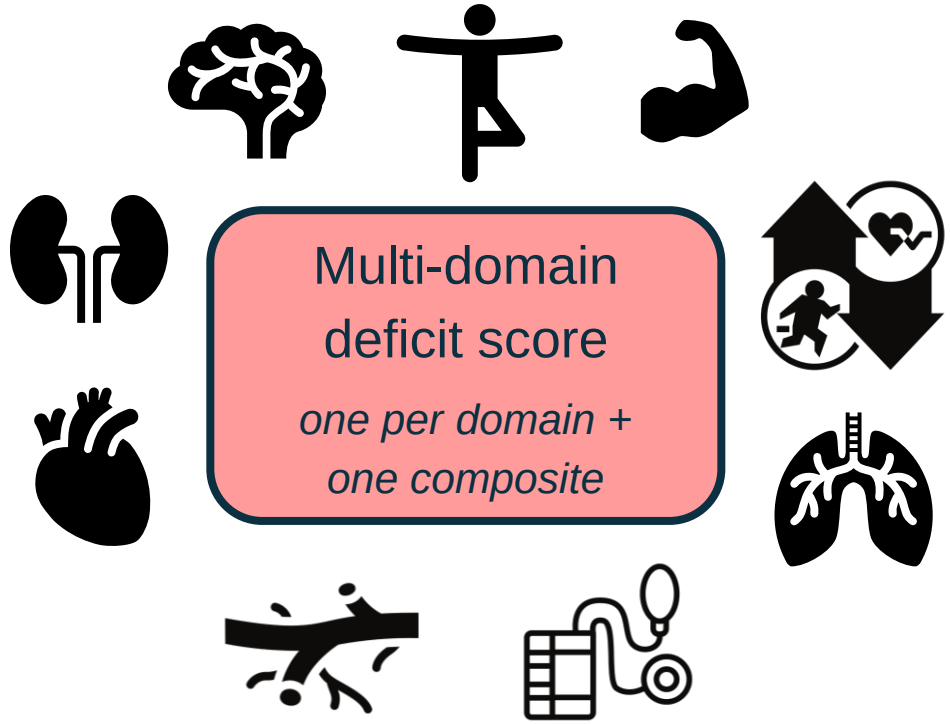


Overall score

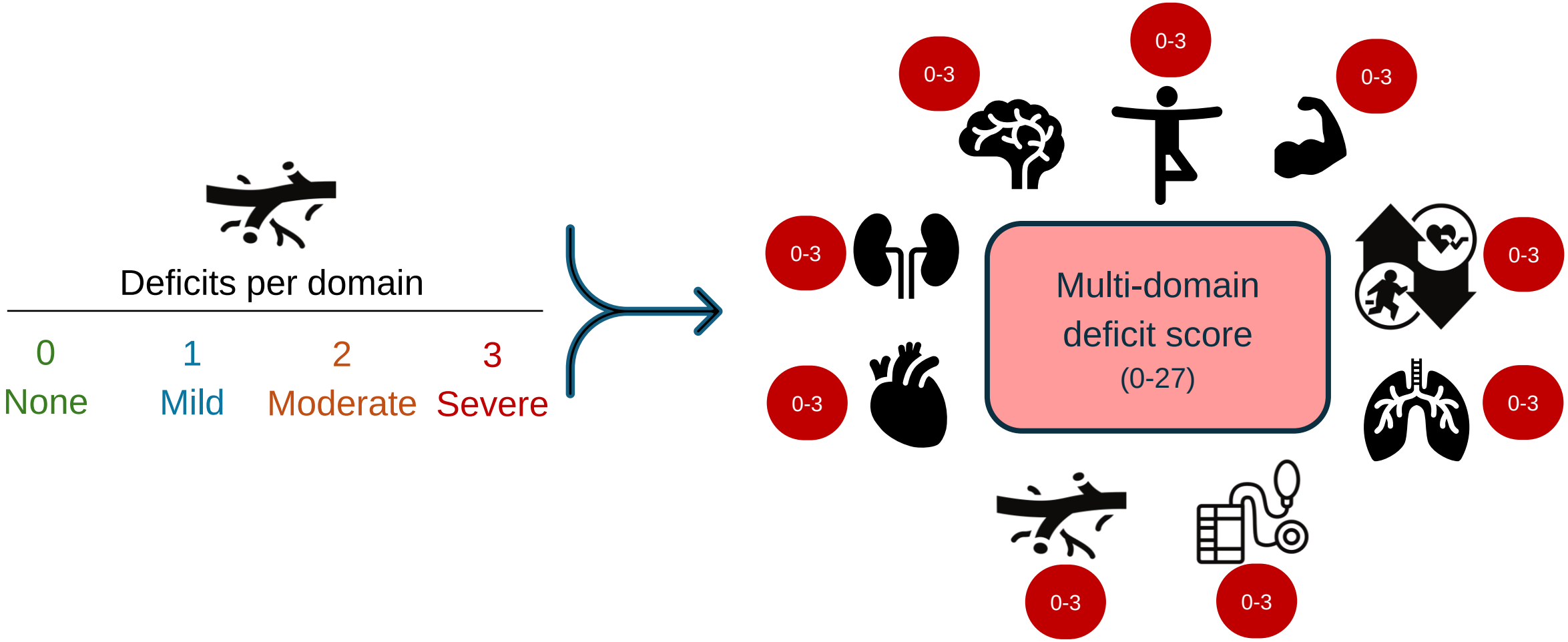


Scoring deficits across multiple domains

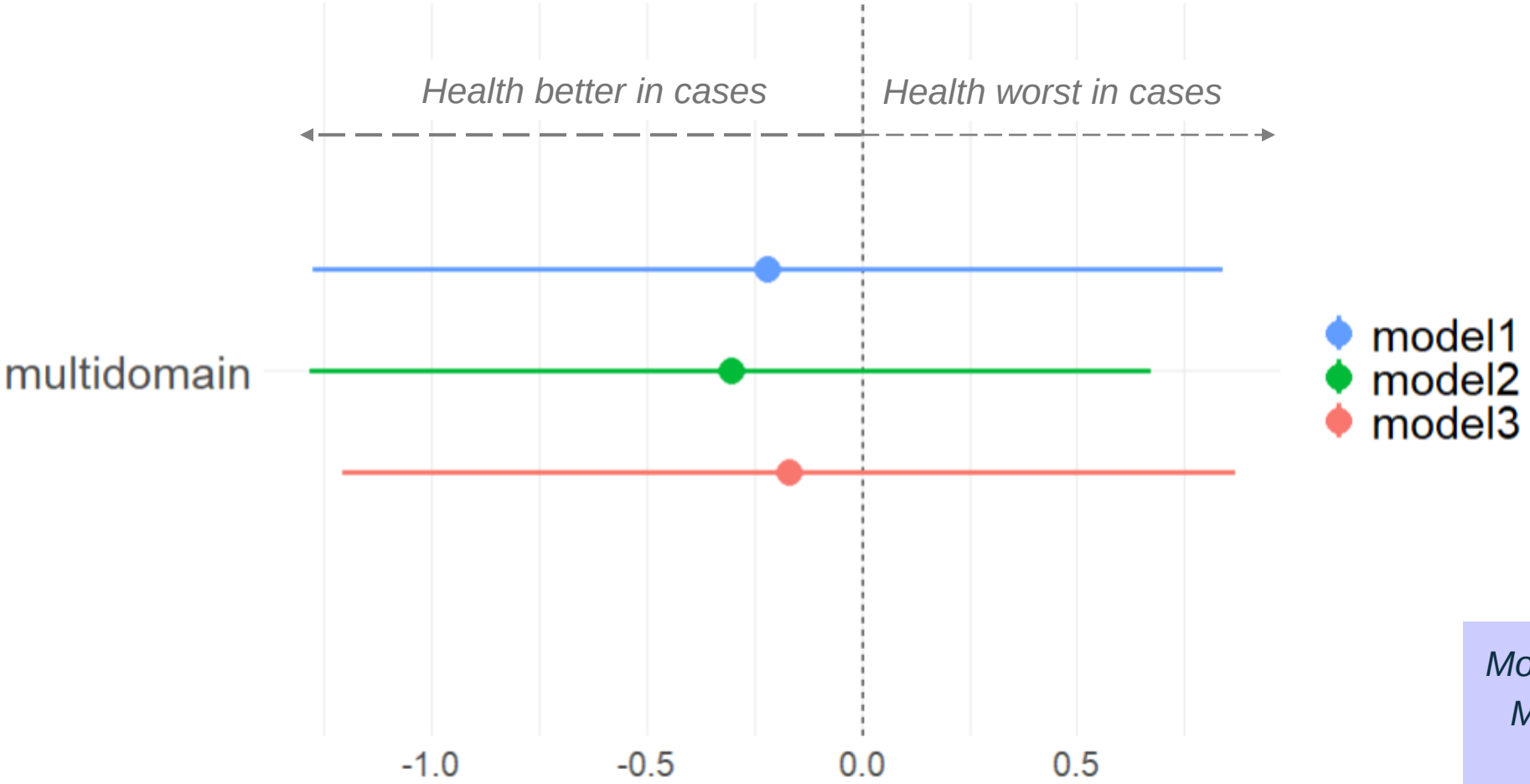




Scoring deficits across multiple domains

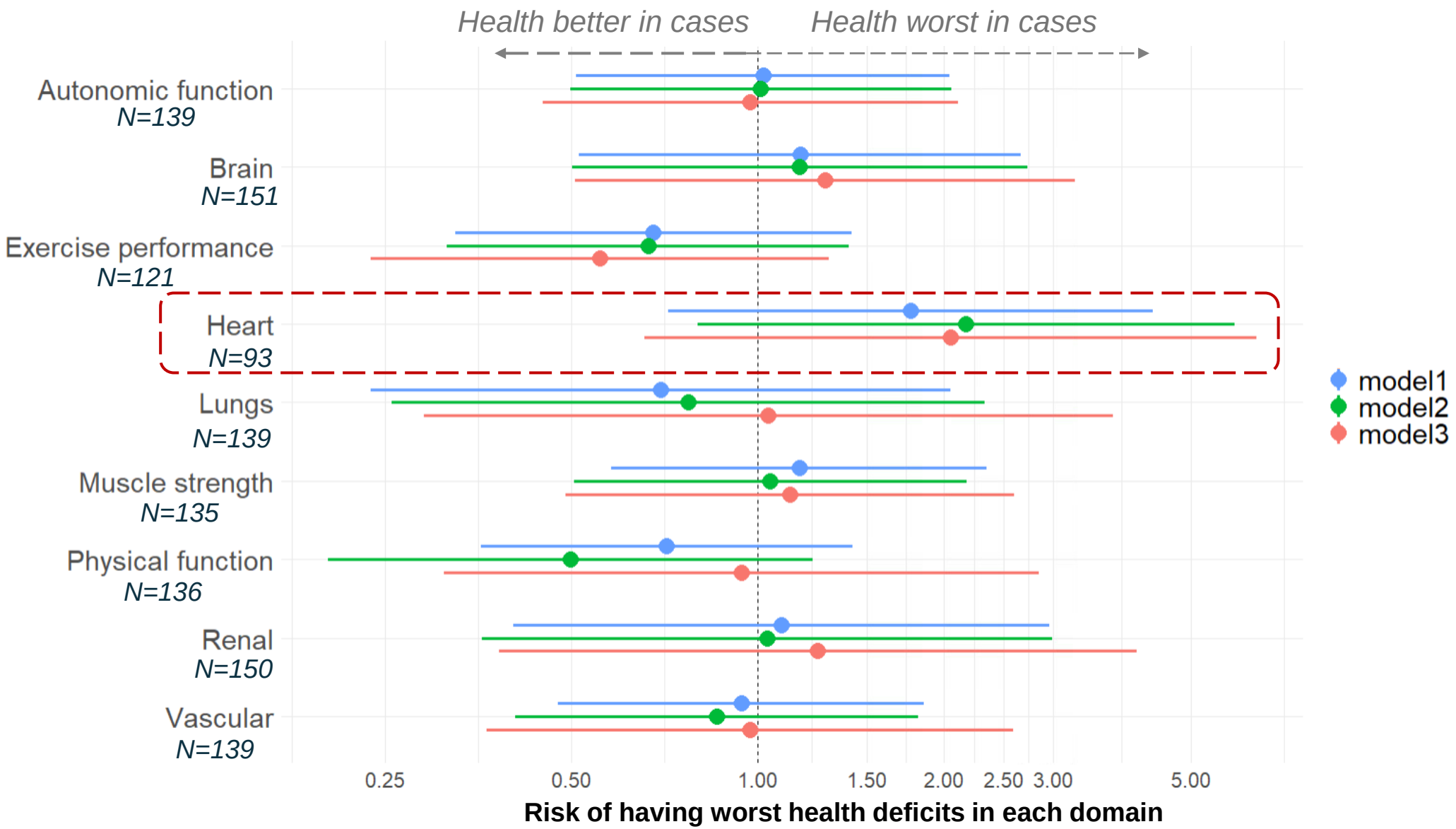


Association between long COVID and deficit scores



Model 2: adjusted for age and sex
Model 3: adjusted for age, sex, comorbidities + smoking + physical activity + education + IMD + No. infections + vaccine + time first infection/deep pheno clinics

Association between long COVID and deficit scores



Key messages

- Long COVID cases (non-hospitalised, recruited from longitudinal studies) did not show more deficits in organs or systems than those without long COVID.
- Long COVID cases reporting fatigue were more likely to show deficits mainly in the autonomic domain.
- We need to study deficits associated with long COVID in the long-term.
- We have not study cognition, physical activity or blood/urea biomarkers.

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