

Horizon scanning for the identification of interventions for prevention, delay and treatment of sarcopenia

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Background:

- Sarcopenia is the age-related loss of muscle mass and strength.
- Sarcopenia is common, affecting between 5-10% of those aged 65 and over in the UK.
- It is associated with an increased risk of adverse outcomes, including death, hospital admission and increased length of stay, disability, dependency and the need for care, as well as falls and fractures.
- Direct costs to the NHS are over £2bn per year.
- The current evidence for the prevention and treatment of sarcopenia supports resistance exercise training. However, not everyone with sarcopenia can engage with or sustain exercise
- Finding alternatives for people with sarcopenia is critical if we are to alleviate the huge burden of adverse outcomes that are associated with sarcopenia.

Aims:

- To identify pharmaceutical, nutraceutical and technology-based interventions to prevent, delay the onset of, and/or treat sarcopenia that are in early-stage development.

Methods:

- Sources: five sources were searched
 - PubMed,
 - MedRxiv,
 - BioRxiv,
 - ClinicalTrials.gov,
 - UK Research funding sources.
- Scan Criteria are shown in Figure 1.
- Screening:
 - Single researchers extracted all records.
 - Ten were second-checked for quality and accuracy.
 - Consensus was reached through team discussion.

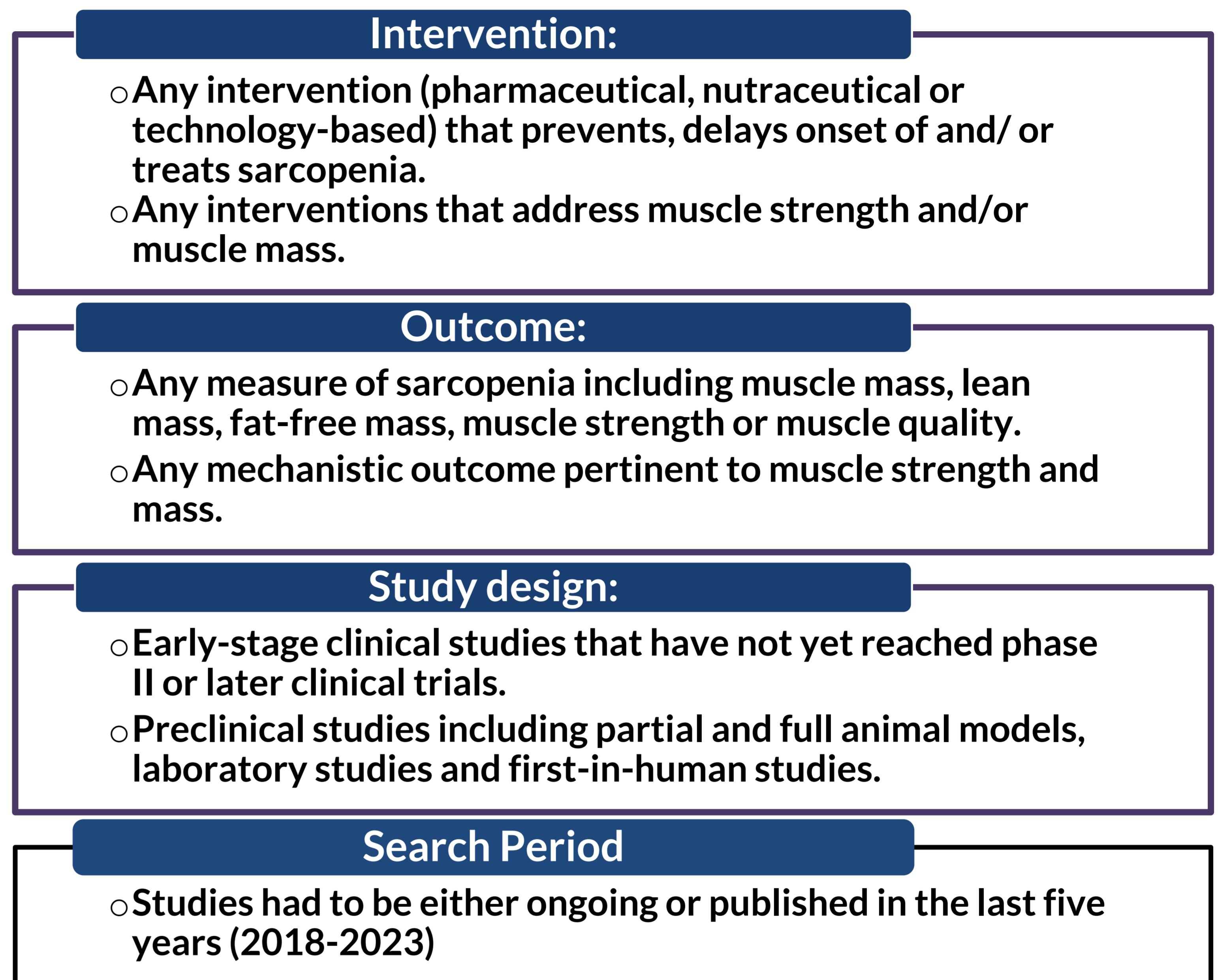


Fig 1 Search Criteria

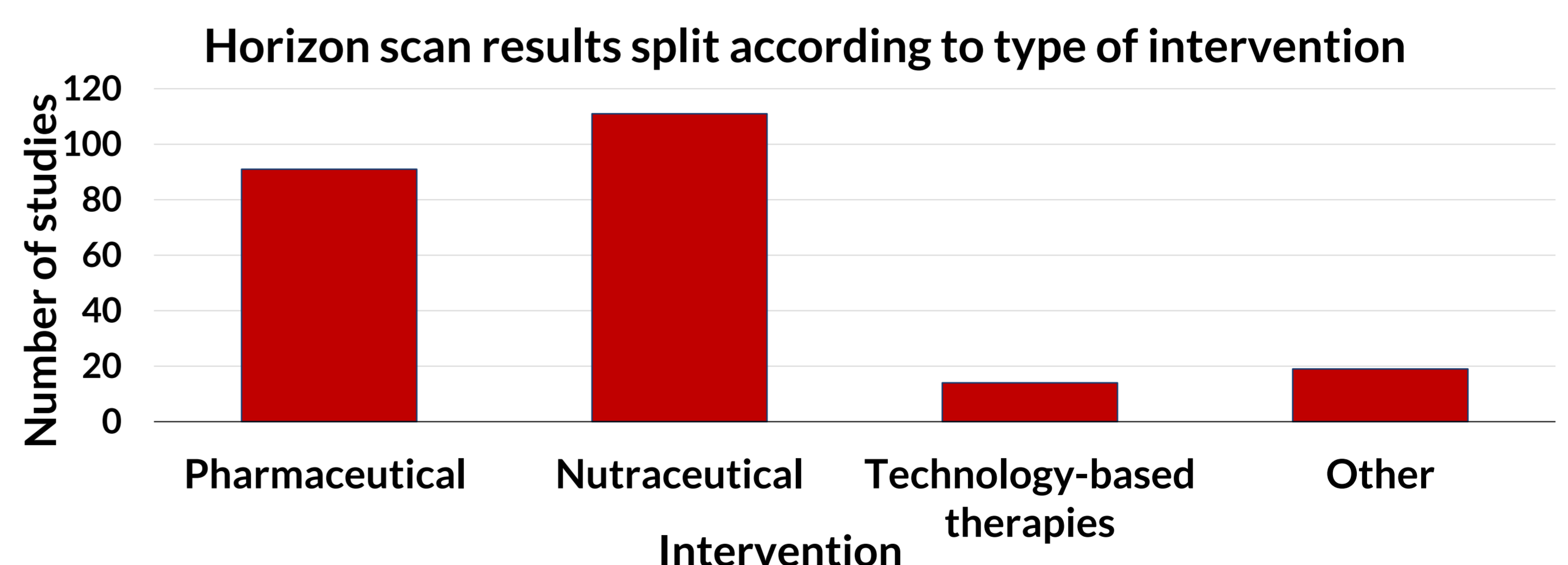
Results:

Search source	Number of records obtained and screened	Number of records included
PubMed	3,223	164
MedRXiv and BioRXiv	6	0
Clinicaltrials.gov.uk	569	48
UK Funders	37	23
Total	3,835	235

• Preclinical 138
• Clinical trials 97

- 57 studies included individuals with sarcopenia.

Fig 2 Intervention types



Conclusion

This scan has generated a comprehensive list of therapeutic interventions for the management of sarcopenia that are still in early stage development.

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This project is supported by the Newcastle National Institute for Health Research (NIHR) Biomedical Research Unit. The views expressed are those of the author(s) and not necessarily those of the NIHR or the Department of Health and Social Care.