Literature Search

ACR Appropriateness Criteria®

Diagnosis and Monitoring of Sarcopenia

Literature Search Performed on: 06/11/2025

Beginning Date: January 2001

End Date: May 2025

Database: Ovid MEDLINE(R) ALL <1946 to June 10, 2025>

Search Strategy

1 Sarcopenia/ and Muscle Strength/ and (Obesity/ or Resistance Training/) (328)

2 Muscle, Skeletal/ and Resistance Training/ and Absorptiometry, Photon/ (104)

3 Tomography, X-Ray Computed/ and Contrast Media/ and (Portal Vein/ or Muscle, Skeletal/ or Paraspinal Muscles/) (372)

4 Muscle, Skeletal/ and Body Composition/ and Magnetic Resonance Imaging/ and Thigh/ (31)

5 Breast Neoplasms/ and Muscle, Skeletal/ and Tomography, X-Ray Computed/ (25)

6 Esophageal Neoplasms/ and Esophageal Squamous Cell Carcinoma/ and Positron Emission Tomography Computed Tomography/ (97)

7 (Multiparametric Approach to the Colorectal Cancer or frailty measures associated with postoperative deceased or portable ultrasound in hospitalized older adults or Neutropenia in Cancer Patients or Progressive Sarcopenia in Patient or assessment of low muscle quantity identifies mortality).tw. (96)

8 Frailty.mp. and Predict Postoperative Outcomes.tw. (24)

9 (Sarcopenia.mp. and frailty in patients.tw.) or predicting pancreatic cancer prognosis.tw. (61)

10 (Sarcopenia.mp. and Pancreatic Cancer Survival.tw.) or (Multiparameter body composition and resectable non-small cell lung cancer).tw. or (Positron Emission Tomography Computed Tomography/ and Head.mp. and Neck Neoplasms/ and Muscle, Skeletal/) (7)

11 Colorectal Neoplasms/ and Muscle, Skeletal/ and Sarcopenia/ and Tomography, X-Ray Computed/ (45)

12 (Sepsis/ and Sarcopenia/ and Muscle, Skeletal/) or (Stroke/ and Ultrasonography/ and Adipose Tissue/) or (Bone density/ and Body Composition/ and Absorptiometry, Photon/ and Nutrition Surveys/) or (Adipose Tissue/ and Tomography, X-Ray Computed/ and Frailty/) or (Liver Neoplasms/ and Magnetic Resonance Imaging/ and Sarcopenia/ and Muscle, Skeletal/) (49)

13 Tomography, X-Ray Computed/ and Cardiovascular Diseases/ and (Fractures, Bone/ or Sarcopenia/) (12)

14 (Colorectal Neoplasms/ and Tomography, X-Ray Computed/ and Artificial Intelligence/) or (Hematologic Neoplasms/ and Muscle, Skeletal/) (29)

15 Lung Neoplasms/ and Sarcopenia/ and Muscle, Skeletal/ and Tomography, X-Ray Computed/ (32)

16 (Lung Neoplasms/ and Sarcopenia/ and Carcinoma, Non-Small-Cell Lung/ and Pectoralis Muscles/) or (Neoplasms/ and Quadriceps Muscle/ and Sarcopenia/) (5)

17 (Adenocarcinoma/ and Fluorodeoxyglucose F18/ and Esophageal Neoplasms/ and Positron Emission Tomography Computed Tomography/) or (Multiple Myeloma/ and Muscle, Skeletal/ and Sarcopenia/) (41)

18 (((Sonographic Muscle Measurement or outcomes in acute hospitalized older adults).tw. or Sarcopenia in Lymphoma.mp. or frailty in older patients with cancer.tw. or Sarcopenia on Hepatocellula.tw. or frailty in older adults.tw.) and muscle ultrasound.tw.) or Longitudinal changes in sarcopenia.tw. or Sarcopenia Correlates with Poor Response.tw. (5)

19 Sarcopenia/ and Magnetic Resonance Imaging/ and (Liver Cirrhosis/ or Pectoralis Muscles/) (11)

20 (Tomography, X-Ray Computed/ and Pectoralis Muscles/ and COVID-19/) or (Sarcopenia/ and Crohn Disease/ and Biological Products/) or (Aortic Valve Stenosis/ and Muscle, Skeletal/ and Aortic Valve/) or (Mass Screening/ and sarcopenia/ and X-Rays/) (17)

21 Multiple Myeloma/ and Muscle, Skeletal/ and Sarcopenia/ (5)

22 (COPD.mp. and their association with clinical outcomes.tw.) or assessment of low muscle quantity identifies mortality.tw. (7)

23 Frailty/ and Laparotomy/ and Tomography, X-Ray Computed/ (3)

24 Geriatric Assessment/ and Frail Elderly/ and Sarcopenia/ (214)

25 ((radiological sarcopenia.mp. and frailty.tw.) or Sarcopenia.mp.) and Its Impact on Frailty.tw. (1)

26 Sarcopenia.mp. and Its Impact on Frailty.tw. (1)

27 Sarcopenia/ and Tomography, X-Ray Computed/ and Aortic Valve Stenosis/ (22)

28 Sarcopenia in Children.tw. (34)

29 Changes in Muscle Thickness.mp. and Echo.tw. (16)

30 Quadriceps Muscle/ and Critical Illness/ and Critical Care/ (12)

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31 (Deep learning-quantified body composition or assessing cancer-related sarcopenia or sarcopenia on postoperative recovery or mortality in elderly hip fracture patients or sarcopenia to assess frailty or Sarcopenia on Hepatocellular or Sarcopenia in Chronic Liver Disease or frailty in haemodialysis recipients or sarcopenia in untreated non-small cell or Sarcopenia in Lymphoma or Progressive Sarcopenia in Patients).tw. or (Sex.mp. and Vascular Phase.tw.) (63)

32 (Carcinoma, Squamous Cell/ and Lung Neoplasms/ and Sarcopenia/ and Prognosis/) or (Carcinoma, Hepatocellular/ and Sarcopenia/ and Yttrium Radioisotopes/) or (Thorax/ and Tomography, X-Ray Computed/ and Muscle, Skeletal/) or (Pulmonary Disease, Chronic Obstructive/ and Smokers/ and Pectoralis Muscles/) or (Body Composition/ and Longevity/ and Longitudinal Studies/) (40)

33 ((Acute Kidney Injury/ and Continuous Renal Replacement Therapy/ and Muscle, Skeletal/) or (Inpatients/ and Muscle, Skeletal/ and Sarcopenia/ and Tomography, X-Ray Computed/) or Psoas Muscles/) and Muscle, Skeletal/ and Ultrasonography/ (6)

34 1 or 2 or 3 or 4 or 5 or 6 or 7 or 8 or 9 or 10 or 11 or 12 or 13 or 14 or 15 or 16 or 17 or 18 or 19 or 20 or 21 or 22 or 23 or 24 or 25 or 26 or 27 or 28 or 29 or 30 or 31 or 32 or 33 (1769)

35 limit 34 to (abstracts and yr="2001 -Current") (1559)

Literature Search Performed on: 12/02/2024

Beginning Date: January 2014

End Date: November 2024

Database: Ovid MEDLINE(R) ALL <1946 to November 27, 2024>

Search Strategy

1 exp diagnostic imaging/ (3011869)

2 (CT or Computed tomography or US or MRI or Magnetic resonance imaging or ultrasonography or WBC scan or Gallium scan or FDG-PET* or fluorodeoxyglucose-positron emission tomography or 18F-FDG PET*).kw. (108428)

3 ((Cachexia or Malnutrition or frailty or Muscle wasting or Nutritional status or Myopenia or Myosteatosis or Geriatric syndromes or aging or Functional decline or Muscle wasting) and Sarcopenia).mp. (10650)

4 Sarcopenia/ and (Myopenia/ or Myosteatosis/ or Geriatric syndromes/ or aging/ or Functional decline/ or Muscle wasting/ or Cachexia/ or Malnutrition/ or frailty/ or Muscle wasting/ or Nutritional status/) (3293)

5 1 and 4 (303)

6 2 and 3 (193)

7 5 or 6 (471)

8 limit 7 to (abstracts and english language and yr="2014 -Current") (415)

9 exp *adolescent/ or exp *child/ or exp *infant/ or (infant disease* or childhood disease*).ti,kf. or (adolescen* or babies or baby or boy? or boyfriend or boyhood or girlfriend or girlhood or child* or girl? or infan* or juvenil* or kid? or minors or minors* or neonat* or neo-nat* or newborn* or new-born* or paediatric* or peadiatric* or pediatric* or perinat* or preschool* or puber* or pubescen* or school* or teen* or toddler? or underage? or under-age? or youth*).ti,kf. or (pediatric* or paediatric* or infan* or child* or adolescen* or young).jn,jw. or (pediatric* or paediatric* or infan* or child* or adolescen* or young).in. (3400941)

10 8 not 9 (403)

11 10 not (("case reports" or "clinical conference" or comment or congress or editorial or letter or news).pt. or ("case report*" or comment* or editorial or letter or news).ti. or ((protocol and (study or trial)) not ("therapy protocol*" or "treatment protocol*")).ti,ab,kw.) (384)

12 (animal or animals or canine* or dog or dogs or feline or hamster* or lamb or lambs or mice or monkey or monkeys or mouse or murine or pig or piglet* or pigs or porcine or primate* or rabbit* or rat or rats or rodent* or sheep* or swine or veterinar* or (vitro not vivo)).ti,ab,kw. (5439599)

13 11 not 12 (370)

14 clinical protocols/ or Consensus/ or "Consensus Development Conference".pt. or "Consensus Development Conference, NIH".pt. or Consensus Development Conferences as Topic/ or Consensus Development Conferences, NIH as Topic/ or critical pathway/ or guidelines as topic/ or practice guidelines as topic/ or Health Planning Guidelines/ or practice guideline/ or (clinical adj3 pathway).ti,ab,kf. or (clinical adj3 pathways).ti,ab,kf. or (practice adj3 parameter).ti,ab,kf. or (practice adj3 parameters).ti,ab,kf. or algorithms/ or (care adj2 pathway).ti,ab,kf. or (care adj2 pathways).ti,ab,kf. or guidance.ti,ab. or guideline*.ti,ab. (1180715)

15 (3 or 4) and 14 (580)

16 limit 15 to (abstracts and english language and yr="2014 -Current") (486)

17 13 or 16 (842)

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18 remove duplicates from 17 (840)

Summary

Source	Excluded	Included in document	Included in Evidence Table
Old Bib	0	0	0
Lit Search 1,2,3...	2245	87	82
Hand Search	NA	30	24
Author Added	NA	30	7
Guidance Documents	NA	15	5
Total	2245	162	118

References from the literature search that were not retained had a poor study design, were not relevant to the topic, or had unclear or biased results.