

Supplemental Digital Content

SDC1. Newcastle-Ottawa Scale Ratings for Included Papers

First Author	Year	Selection	Comparability	Outcome
Akahoshi	2016	***	*	***
Chang	2017	***	*	***
Couch	2017	***		***
Deandrade	2018	***		***
Deren	2017	***	*	***
Ebbeling	2014	***	*	***
Fairchild	2015	***	*	***
Hida	2016	***	*	***
Hu	2018	***	*	***
Kaplan	2017	***	*	***
Leeper	2016	***	*	***
Lisiecki	2013	***		***
Malekpour	2017	***	*	***
Mccusker	2018	***	*	***
Mitchell	2018	***		***
Oskutis	2016	***	*	***
Shibahashi	2017	***	*	***
Touban	2019	***	*	***

Supplemental Digital Content 2. Sarcopenia Relation to Outcome

Outcome of Interest	Paper Name	First Author	Relation to Outcome	Association with outcome
<i>In hospital complications</i>	Sarcopenia is predictive of nosocomial infection in care of the elderly	Cosquéric	Sarcopenia is a predictive factor for the occurrence of nosocomial infection (NI) in the next 3 weeks.	Yes
	Sarcopenia is a risk factor for complications and an independent predictor of hospital length of stay in trauma patients	De Andrade	Sarcopenia was associated with overall complications and was an independent risk factor for UTI, wound infection, need for reintubation, and length of hospitalization	Yes
	Sarcopenia defined by a computed tomography estimate of the psoas muscle area does not predict frailty in geriatric trauma patients.	Mccusker	Sarcopenia is not predictive of complications, and mortality and adverse disposition in geriatric-trauma patients.	No
	Lean psoas area does not correlate with clinical outcomes in moderately to severely injured older people	Couch	No association between lean psoas cross-sectional area and in-hospital mortality, inpatient complications or length of hospital stay among older trauma patients	No
Independence post discharge	Sarcopenia and frailty in elderly trauma patients	Fairchild	Lower psoas muscle CSA is related to loss of independence upon discharge in the elderly.	Yes
Mortality	Sarcopenia predicts 90-day mortality in elderly patients undergoing emergency abdominal surgery	Brandt	Sarcopenia is predictive of 90-day mortality in elderly patients undergoing emergency abdominal surgery	Yes
	Increased Mortality in Elderly Patients with Sarcopenia and Acetabular Fractures	Deren	Sarcopenia is common in elderly patients with acetabular fractures and is associated with lower-energy mechanisms, anterior column fractures, and higher risk of 1-year mortality.	Yes
	Sarcopenia Measured Using Masseter Area Predicts Early Mortality following Severe Traumatic Brain Injury	Hu	Patients with sarcopenia had significantly increased rates of 30-day mortality	Yes
	Association of Radiologic Indicators of Frailty With 1-Year Mortality in Older Trauma Patients: Opportunistic Screening for Sarcopenia and Osteopenia	Kaplan	Sarcopenia and osteopenia were associated with higher risks of 1-year mortality alone and in combination	Yes

	Computed tomography abbreviated assessment of sarcopenia following trauma: The CAAST measurement predicts 6-month mortality in older adult trauma patients.	Leeper	Sarcopenia is a strong predictor of 6-month postdischarge mortality for older trauma patients.	Yes
	The Effect of Sarcopenia on Outcomes in Geriatric Blunt Trauma.	Malekpour	Sarcopenia is predictive of in-hospital mortality and length of stay	Yes
	Sarcopenia Is Predictive of 1-Year Mortality After Acetabular Fractures in Elderly Patients.	Mitchell	Sarcopenia is an independent risk factor for 1-year mortality in elderly patients with acetabular fractures.	Yes
	Skeletal Muscle as a Factor Contributing to Better Stratification of Older Patients with Traumatic Brain Injury: A Retrospective Cohort Study	Shibahashi	Decreased skeletal muscle mass is associated with poor outcomes 6 months following TBI in older patients.	Yes
	Decreased Lean Psoas Cross-Sectional Area Is Associated With Increased 1-Year All-Cause Mortality in Male Elderly Orthopaedic Trauma Patients.	Touban	Sarcopenia was associated with increased 1-year mortality in males	Yes
	Lean psoas area does not correlate with clinical outcomes in moderately to severely injured older people	Couch	No association between lean psoas cross-sectional area and in-hospital mortality, inpatient complications or length of hospital stay among older trauma patients	No
	Psoas:lumbar vertebra index: central sarcopenia independently predicts morbidity in elderly trauma patients	Ebbeling	PLVI was not associated with mortality in univariate or multivariable modeling. After controlling for comorbidities, low PLVI was found to be strongly associated with morbidity (OR 4.91, 95 % CI 2.28–10.60).	No
Morbidity	Psoas:lumbar vertebra index: central sarcopenia independently predicts morbidity in elderly trauma patients	Ebbeling	PLVI was not associated with mortality in univariate or multivariable modeling. After controlling for comorbidities, low PLVI was found to be strongly associated with morbidity (OR 4.91, 95 % CI 2.28–10.60).	Yes
	Sarcopenia and sarcopenic leg as potential risk factors for acute osteoporotic vertebral fracture among older women	Hida	Higher prevalence of sarcopenia and lower leg muscle mass among patients with acute OVF compared with patients who did not have an OVF.	Yes

	Increased Mortality in Elderly Patients with Sarcopenia and Acetabular Fractures	Deren	Sarcopenia is common in elderly patients with acetabular fractures and is associated with lower-energy mechanisms, anterior column fractures, and higher risk of 1-year mortality.	Yes
	Are frailty markers associated with serious thoracic and spinal injuries among motor vehicle crash occupants?	Oskutis	Sarcopenia is associated with severe thoracic injury	Yes
Length of stay	Sarcopenia is a predictive factor for prolonged intensive care unit stays in high-energy blunt trauma patients	Akahoshi	Sarcopenia is predictive of length of stay in ICU	Yes
	Effect of sarcopenia on clinical and surgical outcome in elderly patients with proximal femur fractures	Chang	Lower PSD was associated with longer hospitalization and higher volume of blood transfusion, while lower SMI was only associated with longer hospitalization	Yes
	Sarcopenia is a risk factor for complications and an independent predictor of hospital length of stay in trauma patients	Deandrade	Sarcopenia was associated with overall complications and was an independent risk factor for UTI, wound infection, need for reintubation, and length of hospitalization	Yes
	Morphomic measurement of the temporalis muscle and zygomatic bone as novel predictors of hospital-based clinical outcomes in patients with mandible fracture.	Lisiecki	Decreased thicknesses of the zygomatic bone and temporalis muscle are significantly correlated with higher hospital, ventilator, and intensive care unit days in patients with mandibular fracture receiving reconstructive operations.	Yes
	The Effect of Sarcopenia on Outcomes in Geriatric Blunt Trauma.	Malekpour	Sarcopenia is predictive of in-hospital mortality and length of stay	Yes
	Lean psoas area does not correlate with clinical outcomes in moderately to severely injured older people	Couch	No association between lean psoas cross-sectional area and in-hospital mortality, inpatient complications or length of hospital stay among older trauma patients	No

