



AB020. 183. Prevalence of sarcopenia and its impact on survival in breast cancer—a systematic review and meta-analysis

Lydia Olive Simmons¹, David Cagney¹, Farrah Hassan¹, Jia Ying Lim², Donal Peter O’Leary¹, Aaron Liew¹, Henry Paul Redmond¹, Mark Corrigan¹, Martin O’Sullivan¹, Louise Kelly¹

¹Department of Surgery, Cork University Hospital, Wilton, Cork, Ireland; ²School of Medicine, University College Cork, Cork, Ireland

Background: Sarcopenia has been associated with chemotherapy toxicity, disease recurrence, and reduced overall survival in many forms of cancer. The prevalence of this condition in breast cancer, as well as its effects on breast cancer outcomes, however, is not well studied. Thus, we aimed to establish the prevalence of sarcopenia in breast cancer patients and investigate its effect on overall survival and disease-free survival in female breast cancer patients.

Methods: As per preferred reporting items for systematic reviews and meta-analyses (PRISMA) guidelines, we conducted a systematic review of four databases—PubMed,

Embase, CINAHL and Cochrane from January 1998 to July 2018 using relevant filters and keywords related to breast cancer, sarcopenia, and prognosis. Relevant outcome was extracted and recorded in a Microsoft Excel spreadsheet.

Results: After screening for eligibility, eight studies were included, comprising of 5,744 patients. Five studies assessing the effect of sarcopenia in patients with non-metastatic disease, two in patients with metastatic disease and one in palliative patients. The overall prevalence of sarcopenia amongst breast cancer patients (n=2,178) is 37.6%. The prevalence amongst non-metastatic cancer patients is 36.3% and amongst metastatic patients is 55.1%. Sarcopenia had an overall negative effect on both overall survival in both patient groups and disease-free survival.

Conclusions: The results of our study suggest that prevalence of sarcopenia amongst breast cancer patients is substantial and adversely affects survival. Reduced muscle mass can be considered a modifiable risk factor for poor outcomes in these patients and suitable interventions to counteract it may improve survival.

Keywords: Sarcopenia; breast; cancer; survival; prognosis

doi: 10.21037/map.2019.AB020

Cite this abstract as: Simmons LO, Cagney D, Hassan F, Lim JY, O’Leary DP, Liew A, Redmond HP, Corrigan M, O’Sullivan M, Kelly L. Prevalence of sarcopenia and its impact on survival in breast cancer—a systematic review and meta-analysis. *Mesentery Peritoneum* 2019;3:AB020.