

## SARCOPENIA IS HIGHLY PREVALENT AND ASSOCIATED WITH POORER OUTCOMES IN PANCREATIC AND OESOPHAGO-GASTRIC CANCER: SYSTEMATIC REVIEW AND META-ANALYSIS

Donal O'Connor<sup>1,2</sup>, Hartnet J<sup>2</sup>, Bashir Y<sup>1</sup>, Mockler D<sup>2</sup>  
Griffin O<sup>1,2</sup> and Duggan SN<sup>1</sup>

<sup>1</sup>Tallaght University Hospital, Ireland

<sup>2</sup>Trinity College Dublin, Ireland

**Background:** Sarcopenia is a depletion of skeletal muscle mass associated with increased morbidity and mortality in gastrointestinal malignancy. It has been increasingly reported with the recent advent of software to measure sarcopenia using standard staging CT. Patients with pancreatic, oesophageal and gastric cancer are potentially at increased risk due to nutritional complications. The aim of this review was to determine the prevalence and impact of sarcopenia in these malignancies.

**Methods:** Systematic literature search of Medline and Embase databases was developed with a medical librarian and performed by two investigators following the PRISMA guidelines. (Search period 1990-August 2017). Studies were included for prevalence and method of sarcopenia measurement were reported. Other outcome measures included effect on morbidity and survival. Studies were grouped into pancreatic and oesophago-gastric for analysis. Pooled estimation(ES) for prevalence was computed using random effects model and presented with 95% CI.

**Results:** After screening 473 titles, 17 observational studies (4206 patients) in pancreatic and 30 studies (5561 patients) in oesophago-gastric were analyzed. Prevalence of sarcopenia was higher in pancreatic cancer (49.6%) compared to oesophago-gastric (34%) ES 0.49(0.39-0.59)v 0.34(0.27-0.4) There was significant heterogeneity regarding definition of sarcopenia and reporting of outcome measures. In studies with sufficient data, sarcopenia was independent of BMI and independently associated with poorer survival and higher post-operative complications.

**Conclusion:** Sarcopenia detected during staging CT was present in half and one third of patients with pancreatic and oesophago-gastric cancers respectively and is a poor prognostic indicator. This justifies further research into the mechanism and potential treatment.

## BIOGRAPHY

Donal O'Connor is an Assistant Professor/Registrar, department of surgery in Trinity College Dublin. He has been nominated for provost teaching award 2017. His research interest lies in Pancreatitis Surgical outcomes Undergraduate education: teaching methods Assessment methods in post graduate surgical examinations.

[oonnd15@tcd.ie](mailto:oonnd15@tcd.ie)