

Loss of muscle mass represents a significant risk to oesophageal cancer survival

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Credit: Medical University of Vienna

Oesophageal cancer patients who suffer loss of muscle mass (sarcopenia) during neoadjuvant therapy (chemotherapy prior to surgery) survive, on average, 32 months less than patients with no sarcopenia. This is the central finding of a recent study conducted at the Comprehensive Cancer Center (CCC) of MedUni Vienna and Vienna General Hospital. The study has recently been published in the European Journal of Cancer Surgery.

Oesophageal cancer is the eighth commonest type of cancer and sixth commonest cause of death from cancer in Austria. According to "Statistik Austria", approximately 420 people develop this type of cancer every year. This means that [oesophageal cancer](#) is a rare form of cancer but the number of cases has grown rapidly over the past few years. The number of cases in men has risen sixfold and has quadrupled in women, men being more likely to develop this type of cancer than women.

Apart from smoking and high alcohol consumption, risk factors for oesophageal cancer also include gastro-oesophageal reflux disease and the resulting cell changes in the lower part of the oesophagus (Barrett metaplasia). The standard treatment for [patients](#) in which the tumour is advanced but not yet metastasised, is to give chemotherapy or a combination of chemotherapy and radiotherapy prior to surgery (multimodal therapy). In local carcinomas that are not advanced, surgery is the treatment of choice.

Nutrition and exercise affect chances of survival

In their study, experts in stomach and oesophageal cancer from the Comprehensive Cancer Center of MedUni Vienna and Vienna General Hospital (CCC GET-Unit, Head: Sebastian Schoppmann) investigated to what extent sarcopenia and body composition changed during multimodal therapy and whether this has any influence upon long-term survival. The results show that patients who suffered sarcopenia (loss of muscle mass below a defined threshold) at any time during treatment had a poorer prognosis for survival: on average, their period of survival was 32 months shorter than that of patients who were not diagnosed with sarcopenia. Sarcopenia was therefore identified as an [independent risk factor](#).

Says Matthias Paireder, Department of Surgery (Head: Michael Gnant) of MedUni Vienna and Vienna General Hospital, member of the CCC-GET and lead author of the study: "Sarcopenia is not necessarily a side effect of chemotherapy. Many patients were already sarcopenic before the treatment and there was no significant progression of sarcopenia during treatment. The reasons for this loss of general [muscle mass](#) are poor nutrition and lack of exercise."

New study planned

In a new study, the team headed up by Paireder and Schoppmann will investigate whether a programme that includes nutritional advice and physical training could significantly increase long-term survival for oesophageal [cancer](#) patients.

More information: M. Paireder et al. Impact of sarcopenia on outcome in patients with esophageal resection following neoadjuvant chemotherapy for esophageal cancer, *European Journal of Surgical Oncology (EJSO)* (2017). [DOI: 10.1016/j.ejso.2016.11.015](#)

Provided by Medical University of Vienna

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