

Peer Review File

Article information: <https://dx.doi.org/10.21037/jtd-21-1580>

Reviewer A

The authors have demonstrated in a retrospective cohort that patients with a lower body fat composition have a higher risk of Chyle leak. A few issues need clarification

Comment 1: Please describe if the thoracic duct is intentionally taken as part of the lymphadenectomy or left insitu during an oesophagectomy

Reply 1: Thank you for your comment. If the thoracic duct is visualized intraoperatively it is ligated with ties or clips.

Changes in the text:

Comment 2: The discussion should mention that the EWGSOP recommends using the presence of both low muscle mass and low muscle function (strength or performance) for the diagnosis of sarcopenia (acknowledge that muscle function has not been measured)

Reply 2: Thank you for your helpful comment. We have added this to the limitations section of the discussion

Changes in the text: Please see tracked changes line 198.

Comment 3: Was the entire cohort of oesophagectomies from 2006 to 2020, 86 patients? if so a discussion on high incidence of chyle leak. Was there a trend over time, CL more frequent earlier or later in the cohort?

Reply 3: Thank you for your comment. The cohort of oesophagectomy was larger over this time but our cohort was limited due to availability of suitable scans for assessment of body composition measures. The reason for the cohort of 86 patients was that the 60 patients we used as controls were those who had suitable CT scans available to assess body composition measures.

Reviewer B

Thanks for the opportunity to review this interesting manuscript. The authors investigated the association between body composition and the incidence of chyle leak after oncologic esophagectomy. The study demonstrated that lower fat mass

resulted in an increased risk of chyle leakage. In addition, multivariate analysis showed that CT-based quantification of fat mass can be considered as independent risk factor in contrast to conventional assessment.

General comments:

The manuscript is well written, the study was adequately conducted, and deals with a clinically relevant topic.

Comment 1: The main limitation of the study is certainly the small number of patients. However, this can be explained by the rarity of the complication and is therefore comparatively large and thus acceptable. This should be included in the limitations.

Reply 1: Thank you for your comment. We have added this to the limitations section of the discussion

Changes in the text: Please see tracked changes line 196.

Comment 2: Unfortunately, the authors do not address the fact that CT-based measurements, unlike BMI, can be seen as an independent predictor. Since this result is very interesting, I think it should be listed and a routine assessment based on preoperative CT imaging should be discussed.

Reply 2: Thank you for your comment. We have added this to the discussion

Changes in the text: Please see tracked changes line 169

Specific comments:

Abstract: Good

Thank you

Introduction: Good but short, the value of body composition in cancer patients could be included.

Thank you

Methods: Please describe which CT scan was used for the body composition analysis and the period between imaging and surgery. (I assume that the preoperative imaging was used. However, this should be clear from the manuscript.)

Thank you – we have added in a statement to make this clear in the methods section – line 104

Please revise:

Line 101: Computerised tomography -> Computed Tomography

Changed thank you.

Line 115: Smooth Muscle Index -> Skeletal Muscle Index

Changed thank you.

Results: Good

Discussion: s. General comments

References: Reference 8 and 21 correspond to the same publication. Please adapt.

Changed, thank you.

Comment: Since the topic of body composition is currently receiving a lot of attention, I recommend including more recent publications on this topic (e.g. doi: 10.1002/jcsm.12540, (Hagens) doi: 10.3390/cancers13122921 (Fehrenbach) ; doi: 10.1093/dote/doab016 (Boshier) ; doi: 10.3390/jcm9092974 ; doi: 10.1002/bjs5.50331 (den Boer) ; doi: 10.1093/dote/doaa002 (Papaconstantinou)

Response: Thank you for your helpful suggestion, we have added this is to the introduction, line 78.