

Table 1 Diagnostic values for CRP to detect postoperative complications

	Cut-off value CRP (mg/L) ^a	AUCROC	P-value ¹	Sensitivity (%)	Specificity (%)	PPV (%)	NPV (%)
Diagnostic values for prediction of any postoperative complication							
CRP POD-3	99.65	0.657	<0.001	75	53	72	56
CRP POD-5	119.50	0.688	<0.001	34	93	88	48
CRP POD-7	71.90	0.719	<0.001	62	73	81	51
Diagnostic values for prediction of anastomotic leakage							
CRP POD-3	141.40	0.695	0.004	71	61	19	94
CRP POD-5	119.50	0.801	<0.001	71	82	30	96
CRP POD-7	127.85	0.756	0.001	69	79	30	95

^aYouden-index, ¹P Comparison between AUCROC and reference line

CRP = C-reactive protein, POD = postoperative day, NPV = negative predicting value, PPV = positive predicting value

P42 EFFICACY OF ENDOSCOPIC TREATMENT FOR CONTAINED LEAKAGE AFTER IVOR LEWIS ESOPHAGECTOMY

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Aim: Anastomotic leakage after esophagectomy (AL) is a severe complication that often needs aggressive and invasive treatment. However, there is no consensus on what strategy is best. The aim of this study was to analyse the different treatment strategies for AL and evaluate their outcomes.

Background and methods: A retrospective analysis was performed on all patients who developed AL after Ivor Lewis Esophagectomy (IL) from January 2011 until September 2016 in three high volume hospitals. Treatment of AL was based on local expertise, without common guideline. The different treatment strategies (surgical and endoscopic) were compared for patients with contained (confined to the mediastinum) and uncontained AL (leakage with intrapleural complications).

Endpoints were the amount of re-interventions, readmission to the ICU, ICU- and hospital stay, time to restart oral feeding and mortality.

Results: Seventy-three patients with AL were identified in this multicentre cohort with either a contained or an uncontained leak. Basic variables were similar in both groups.

A contained leak was identified in 39 patients. An endoscopic approach was chosen in 25 patients (64%) and was successful in 19 (76%). Fourteen patients (36%) were primarily treated with a surgical approach that was successful in 11 (79%). Significantly more patients were (re)admitted to the ICU in the surgical group versus the endoscopic group (100% vs 52%, p=0.003). The ICU and hospital stay, time to restart oral intake and mortality were not significantly different in both groups.

An uncontained leak was seen in 34 patients. Endoscopic treatment was chosen in 14 patients (41%) and was successful in 10 (71%). A surgical approach was performed in 20 patients (59%) and was successful in 12 (60%). (Re)admission rate to the ICU was significantly higher in the surgical group (95% vs 57%, p=0.012). The ICU- and hospital stay and time to restart oral intake were similar. There was no mortality in this cohort.

Conclusion: The classification of leakages into contained and uncontained might help to determine treatment strategy. In this multicentre cohort, the endoscopic approach for contained leaks appears to be feasible and successful. The operative approach remains the preferred option for uncontained anastomotic leakage.

P43 IS THERE AN OPTIMAL DEFINITION FOR POSITIVE CIRCUMFERENTIAL RESECTION MARGIN IN LOCALLY ADVANCED OESOPHAGEAL CANCER?

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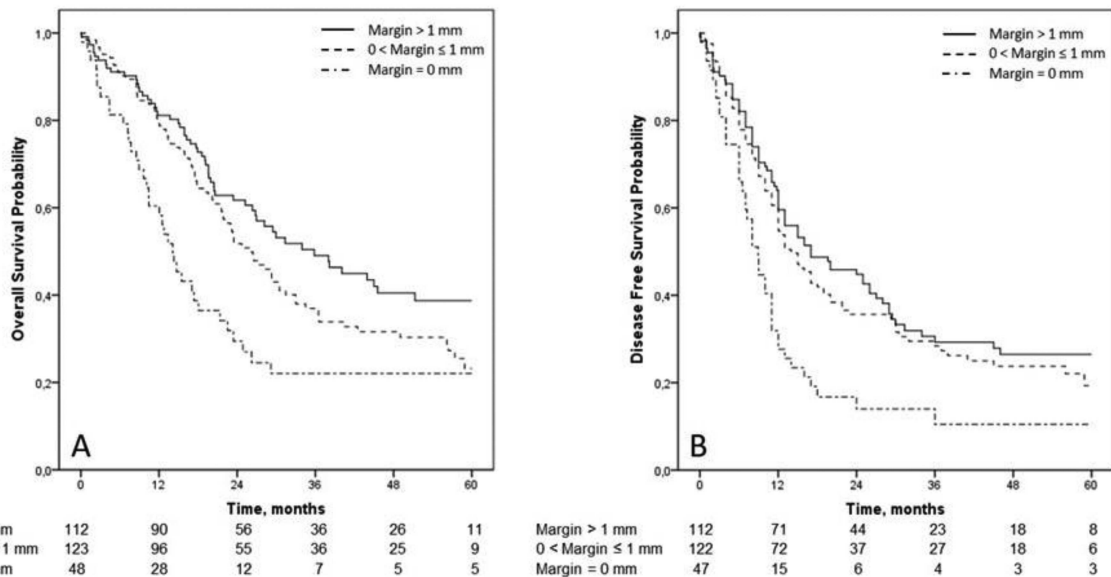


Figure 1. Kaplan-Meier Curves for 5-year overall survival (A) and 5-year progression free-survival (B) according to the three groups of circumferential resection margins. A: P < 0.001, B: p < 0.001.

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Aim: The utility of Circumferential Resection Margin (CRM) status in predicting prognosis in oesophageal cancer remains controversial, with two different definitions of a positive CRM, one from the College of American Pathologists (CAP) (tumour at margin) and the other from the Royal College of Pathologists (RCP) (tumour within 1 mm)¹⁻³. This study aimed to analyze the validity of these definitions in oesophageal tumours and explore the optimal cutoff value for CRM to predict survival.

Background and Methods: Patients who underwent curative radical oesophageal resection for locally advanced (>pT2) adenocarcinoma or squamous cell carcinoma of the oesophagus were selected from 2007 to 2016. Patients with positive longitudinal resection margins were excluded. CRM was histologically reassessed using an ocular micrometer. Overall survival (OS) and disease-free survival (DFS) were estimated with uni and multivariate analyses.

Results: From 860 resected patients, 283 fulfilling the inclusion criteria were selected. CRM was measured as follows: CRM=0mm (n=48), 0<CRM ≤1mm (n=123) and CRM>1mm (n=112). In univariate (figure 1) and multivariate analysis R1 resection, according to both definitions was significantly associated with poor OS (CAP: HR=2.26, p<0.001; RCP: HR=1.42, p=0.035). However only CAP definition accurately predicted DFS (CAP: HR=2.25, p<0.001; RCP: HR=1.28, p=0.094). When comparing the 3 CRM groups and taking 0 < CRM ≤1mm as reference, only CRM=0 predicted OS and DFS (p<0.001). A CRM cutoff at 0.1 mm was the best to predict OS and differed according to histology.

Conclusion: Among existing definitions of CRM, CAP definition was more accurate to predict prognosis and recurrence. New cutoffs are promising.

References:

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P44 THE EXTENT AND CONSEQUENCES OF LYMPHADENECTOMY IN ESOPHAGEAL CANCER SURGERY: A CASE VIGNETTE SURVEY

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Background: Lymph node dissection (LND) is part of standard operating procedure in resectable esophageal cancer patients regardless of lymph node status. The aim of this case vignette survey was to acquire expert opinions on current practice of LND, and to determine potential consequences of non-invasive lymph node staging on the extent of LND and postoperative morbidity.

Methods: An online survey including 5 short clinical cases (case vignettes) was sent to 272 esophageal surgeons worldwide. Extent of standard LND, potential changes in LND based on accurate lymph node staging and consequences for postoperative morbidity were evaluated.

Results: 86 esophageal surgeons (median experience in esophageal surgery of 15 years) participated in the survey (response rate 32%). Standard LND varied considerably between experts, for example pulmonary ligament, splenic

artery, aortopulmonary window and paratracheal lymph nodes are routinely dissected in less than 60%. The omission of (parts of) LND is expected to decrease the number of chyle leakages, pneumonias laryngeal nerve pareses and reduce operating time. In order to guide surgical treatment decisions, a diagnostic test for lymph node staging after neoadjuvant therapy requires a minimum sensitivity of 92% and specificity of 90%.

Conclusion: This expert case vignette survey study shows that there is no consensus on the extent of standard LND. Esophageal surgeons seem more willing to extend LND rather than omit LND, based on accurate lymph node staging. The majority of surgeons expect that less extensive LND can reduce post-operative morbidity.

P46 TRANSTHORACIC VERSUS TRANSHIATAL ESOPHAGECTOMY FOR ESOPHAGEAL CANCER: A NATION-WIDE PROPENSITY SCORE MATCHED COHORT ANALYSIS

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Aim: The current study aims to compare transthoracic and transhiatal esophagectomy in a propensity score matched nation-wide cohort study.

Background and Methods: Chemoradiotherapy followed by resection is the standard therapy for resectable esophageal carcinoma in the Netherlands. The optimal surgical approach remains a matter of debate.

Data was acquired from the Dutch Upper-GI Cancer Audit. Patients who underwent esophagectomy with curative intent and gastric tube reconstruction for mid/distal esophageal or esophagogastric junction carcinoma from 2011-2016 were included. Patients with missing baseline data and patients undergoing emergency or hybrid surgery were excluded. Patients who underwent a transthoracic (TTE) or transhiatal (THE) esophagectomy were compared after propensity score matching.

Results: After propensity score matching, 1532 patients were included for analysis. The transthoracic approach yielded more lymph nodes (median 19 vs 14; p<0.001). There was no difference in the number of positive lymph nodes, however, the median (y)pN-stage was higher after TTE (p=0.044). The TTE group experienced more chyle leakage (9.7% vs 2.7%, p<0.001) and more pulmonary (35.5% vs 26.1%, p<0.001) and cardiac complications (15.4% vs 10.3%, p=0.003). The TTE group required a longer hospital stay (median 14 vs 11 days, p<0.001), ICU stay (median 3 vs 1 day, p<0.001) and had a higher early mortality rate (4.0% vs 1.7%, p=0.009). Subgroup analysis on anastomotic level showed that TTE with intrathoracic anastomosis (TTEi) had a significantly lower recurrent nerve lesion incidence (0.5%) compared to TTE with cervical anastomosis (TTEc) (7.4%, p<0.001) and THE (5.9%, p<0.001). There was no statistical difference in anastomotic leakage rates on anastomotic level, however incidence was lowest after TTEi (TTEc 21.5%, TTEi 15.1%, THE 19.5%). The higher early mortality rate after TTE was mainly caused by TTEc (4.6%), however, only the difference of early mortality between TTEc and THE (1.7%) reached statistical significance (p=0.006).

Conclusion: TTE provided a more extensive lymph node dissection which resulted in a higher N-stage, at the cost of increased morbidity and short-term mortality. Although results in high-volume centers are often superior, these data reflect nationwide results. Future research should investigate if a more extensive lymph node dissection leads to an improved long-term survival.

P47 A PREDICTION MODEL OF HOSPITAL STAY AFTER ESOPHAGECTOMY WITHIN AN ENHANCED RECOVERY AFTER SURGERY (ERAS) PATHWAY

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Background and aims: ERAS principles have been applied even in oesophageal surgery, however low compliance and high rates of deviation from protocols are often reported. Aim of this study was to assess whether ERAS protocol deviation and other perioperative factors could be associated with a delayed discharge.

Methods: Patients who underwent esophagectomy at our Institution between 2014 and 2017 were included in the study. All patients were managed according to our perioperative ERAS protocol. In-hospital deaths were excluded. All data were prospectively entered in an electronic database. The 8th postoperative day (POD) was considered as the ideal day for discharge and therefore