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Geographical variation in cancer care has been observed between and within countries. Variation in treatment may occur at any point along the cancer care continuum attributing to potentially avoidable disparities in patient outcomes such as survival. Other studies have shown a large variation in the proportion of patients undergoing treatment with curative intent for esophageal (EC) and gastric cancer (GC). Due to these studies and thus an increased awareness, we hypothesize that variation has decreased over time.

Methods: Patients with potentially curable EC (n = 10,115) or GC (n = 3,983) diagnosed between 2012-2017 were selected from the Netherlands Cancer Registry. Multilevel multivariable logistic regression was used to examine the differences in the probability of treatment with curative intent between hospitals of diagnosis, comparing 2012-2014 with 2015-2017. We compared relative survival (RS) and relative excess risk of death (RER) between hospitals with different probabilities of treatment with curative intent.

Results: The range of proportions of patients undergoing treatment with curative intent per hospital of diagnosis was 45-95% in 2012-2014 and 54-89% in 2015-2017 for EC, and 52-100% and 45-100% for GC. The adjusted variation declined for EC with Odds Ratios (ORs) ranging from 0.50 to 1.72 between hospitals in the first period to 0.70-1.44 in the second period (p < 0.001) and did not change for GC (ORs ranging from 0.78-1.23 to 0.82-1.23, p = 1.00). A higher probability of receiving treatment with curative intent was associated with better RS and reduced RER for both types of cancer.

Conclusion: Although substantial variation between hospitals of diagnosis in the probability in receiving treatment with curative intent still exists for both malignancies, it has decreased for EC, but did not change for GC. A low probability of receiving curative treatment was associated with a worse survival. Further research is needed to elucidate the factors associated with the observed variability.

448 SYSTEMATIC IMPLEMENTATION OF A REGIONAL MULTIDISCIPLINARY TEAM MEETING IMPROVES PROGNOSIS FOR ESOPHAGEAL CANCER PATIENTS.

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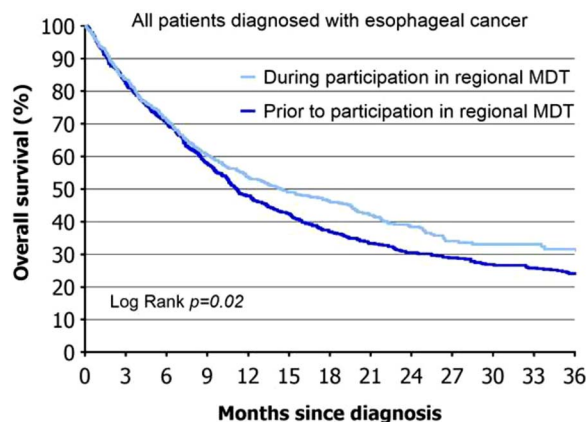
Surgery for esophageal cancer (EC) has been centralized in the Netherlands. However, patients are still diagnosed in referral centers and not all patients are discussed with a resection center. The aim of this study was to examine the impact of the implementation of the regional Upper-GI video multidisciplinary team meeting (MDT) in the Eindhoven region in which all regional patients should be discussed, on the decision-making process, treatment, and survival of patients with EC.

Methods: All patients diagnosed between 2012 and 2018 with EC, in hospitals currently working together with the Catharina hospital, were selected from the Netherlands Cancer Registry (n = 1119). The regional MDT was implemented in 2 hospitals in May 2014 and the other hospitals gradually joined. The primary outcome of this study was the proportion of patients discussed in any MDT. Secondary outcomes were involvement of a resection center in MDT, treatment and survival. Outcomes were described prior to and after participation in the regional MDT and analyzed by chi-square tests. Kaplan-Meier curves and log-rank tests were used to compare overall survival.

Results: Since participation in the regional MDT more patients were discussed in any MDT (80%-89%, p < 0.0001) and involvement of a resection center during the MDT almost doubled (43%-82%, p < 0.0001). The proportion of patient who underwent treatment with a curative intent remained the same (75%). However, esophagectomy (41%-43%) and endoscopic resections (2%-6%) were performed more often and the use of definitive chemoradiation therapy decreased (31%-25%) (p = 0.049). The use of palliative systemic

therapy increased (39%-52%, p < 0.001). Three-year overall survival for all EC patients increased significantly (24%-32%, p < 0.02) (Figure). A non-significant increase in 3-year survival in potentially curable patients (38%-48%, p = 0.09) and 1-year survival in palliative patients (18%-26%, p = 0.13) was observed.

Conclusion: After implementation of the regional MDT more EC patients were discussed during a MDT and also more often with the involvement of a resection center. This is the first study showing an association of the implementation of a regional MDT with an improved survival. Hypothetically, the implementation of the regional tumor specific video MDT could have had a positive effect on the quality and effectiveness of decision making in patients diagnosed with EC.



449 MANAGEMENT OF LATE PRESENTATION OF ESOPHAGEAL CANCER

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The incidence of esophageal carcinoma (EC) in Singapore is declining since 1970s. However, the age-incidence curve in 2010s shows a steep rise after age 40-50s. The majority of EC patients presented with locally advanced or metastatic disease. The 2 common risk factors are cigarette smoking and disease progression from acid reflux-related intestinal metaplasia.

Methods: Consecutive cases of esophageal malignancy (n = 62) including gastro-esophageal junction carcinoma were identified from the hospital electronic medical records between August 2015 to February 2020 for data analysis. True gastric cardia tumors not invading above squamo-columnar junction were excluded.

Results: The mean age was 65 years (range 40-90), predominantly male (n = 51) and 50% were smokers. The histological types were adenocarcinoma (n = 33), squamous cell carcinoma (n = 25), undifferentiated carcinoma (n = 3) and adenosquamous carcinoma (n = 1). Staging CT scan showed M1 disease in 42% of cases whilst 62% received palliative therapy including stent insertion (n = 4). Only a handful of cases received curative-intent treatment such as EMR (n = 2), ESD (n = 1), extended total gastrectomy (n = 2) and 2-staged esophagectomy (n = 2). From the time of EC diagnosis was made, the survival cases at Year 1, 2, 3, and 4 follow up were 30, 8, 5 and 1 respectively.

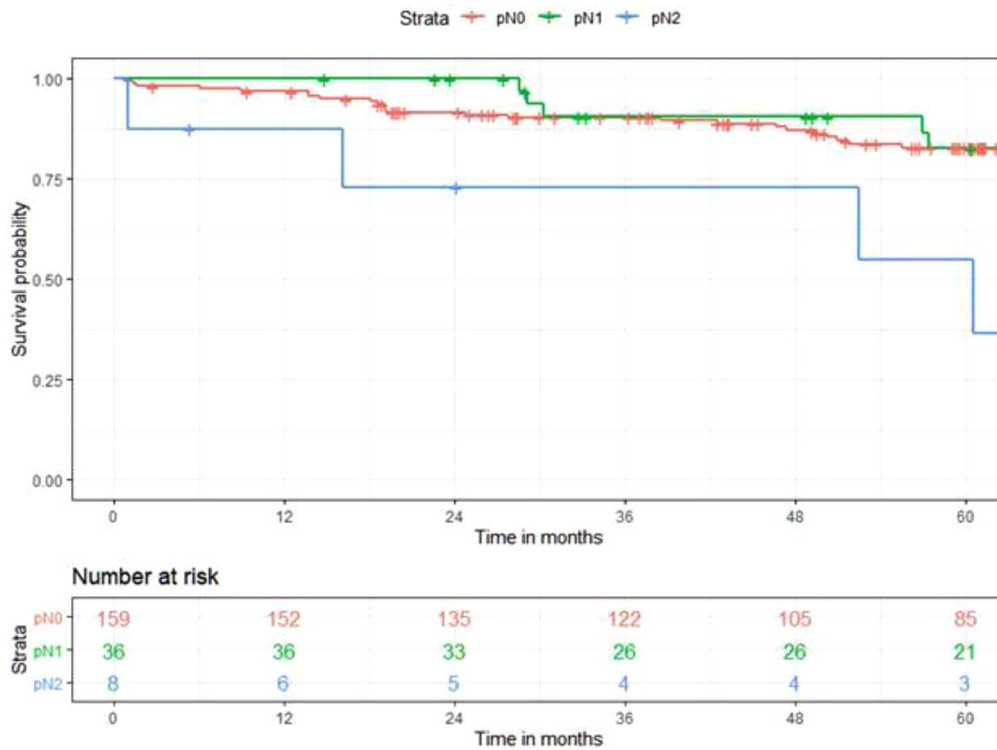
Conclusion: EC is a dismal disease to manage in this population group due to advanced disease at the time of presentation. The majority had Stage IV disease and was given palliative treatment. Primary and secondary preventative healthcare against development of EC should be targeted to reduce the risk factors such as cigarette smoking and chronic acid reflux.

452 SURVIVAL IMPACT OF CLINICALLY NEGATIVE BUT PATHOLOGICALLY POSITIVE NODES IN C-STAGE I ESOPHAGEAL CANCER PATIENTS

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Survival curves by pN stage



Clinical diagnosis of lymph node metastasis has a great significance particularly in cT1 or cT2 esophageal cancer patients, since their clinical “N” diagnosis determines the treatment strategy according to the Esophageal cancer practice guidelines 2017 edited by the Japan Esophageal Society. Then clinically node-negative but pathologically node-positive status could potentially have negative impact on survival outcome. The purpose of this study is to see the impact of clinical node diagnosis.

Methods: Esophageal squamous cell carcinoma patients diagnosed as cT1N0 or cT2N0 who underwent radical esophagectomy from 2003 to 2017 were enrolled retrospectively. Clinically node-positive was defined as any of the followings; 1) 10 mm or more longest diameter, 2) 8 mm or more longest diameter and round or irregular shaped, 3) 5 mm or more longest diameter and FDG uptake on PET-CT scan. Survival curves with Kaplan–Meier method were plotted by the pathological N stage and examined by the log rank test.

Results: Totally 203 patients were enrolled in this study. There were 159(78%)/36(18%)/8(4%)/0(0%) pN0/pN1/pN2/pN3 patients, respectively. There was no significant survival difference between pN0 and pN1 patients ($p = 0.9$). But pN2 patients had worse survival than pN0 patients ($p = 0.0037$).

Conclusion: There was no negative survival impact of two or less clinically negative but pathologically positive nodes. This might suggest that clinical node diagnosis should be assessed carefully enough in order to have as less number of clinically negative but pathologically positive nodes as possible. Further investigation is needed for those having three or more clinically negative but pathologically positive nodes.

Methods: A 52-year-old male was diagnosed of a symptomatic giant epiphrenic diverticulum after previous complaints of dysphagia and regurgitation of undigested food. Preoperative barium-swallow and upper endoscopy confirmed the diagnosis, excluding any other secondary aetiology, and conventional oesophageal manometry did not show any relevant findings.

Results: Surgery was indicated for symptomatic disease, and a laparoscopic procedure was performed, with pneumoperitoneum created through a Veress needle and trocars placed similar to those used for a hiatal hernia repair. After opening the hiatus, access was granted to the mediastinum and the diverticulum was identified and dissected, and when its neck was completely exposed, diverticulectomy was performed using endostapler loads reinforced with Peri-strips Dry[®]. Afterwards, both an oesophageal myotomy (from the oesophago-gastric junction to the distal point of the diverticulum's neck) and a partial Dor fundoplication (despite the absence of relevant findings in the conventional manometry) were performed.

Conclusion: Surgical management of epiphrenic diverticula should entail both resection of the pouch (diverticulectomy, to avoid postoperative persistent symptoms) and treatment of the underlying motility disorder that has been demonstrated in other studies in nearly 100% of the patients using high-resolution manometry (myotomy and fundoplication, both to avoid recurrences and leakages of the staple line). The laparoscopic approach is feasible without video-assisted thoracoscopy in diverticula with their neck up to 10 cm from the oesophagogastric junction.

Video: <https://www.dropbox.com/s/hugbemgi6wl55kp/EpiphrenicDiverticulumx2.mp4?dl=0>

453 LAPAROSCOPIC RESECTION OF A GIANT EPIPHRENIC DIVERTICULUM

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Epiphrenic diverticula are acquired mucosal out-pouchings of the distal third of the oesophagus; vastly undiagnosed due to their usual asymptomatic status, with limited number in all published series, and a still ongoing debate both in their surgical indication and technique. This video shows all steps we think that are necessary when operating an epiphrenic diverticulum, in order to illustrate them all and to show the feasibility of performing such operation with minimally invasive procedures.

456 PARAVERTEBRAL AND RECTUS SHEATH CATHETERS AS AN ALTERNATIVE TO THORACIC EPIDURAL FOR ANALGESIA POST-ESOPHAGECTOMY

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Thoracic epidural (TE) analgesia has been the gold standard for pain management post-esophagectomy and is still being widely used. While it offers excellent analgesia, it can negatively impact on recovery due to hypotension.