

Progression by Index Category

SIM N=350	No. Patients	Person Years	Progression % per year
HGD	15	1980	0.76
EAC	20	1980	1.0
IND N=252			
HGD	22	866	2.5
EAC	14	866	1.6
LGD N=258			
HGD	50	905	5.5
EAC	37	905	4.1

gene programs consistent with cancer stem cells. Cancer stem cells are a critical subpopulation that drive tumour initiation, growth, and resistance to therapy. Esophagus sparing approaches in pCR may subject patients to risk of progression.

516 THE CHARACTERIZATION OF DYSPLASIA IN BARRETT'S ESOPHAGUS—A PROSPECTIVE NATIONWIDE REGISTRY FROM THE RIBBON NETWORK

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Barrett's Esophagus is the main pathological precursor to esophageal adenocarcinoma (EAC), dysplasia is known to be one of the principal predictors of progression to malignancy. The RIBBON Registry was established with six academic medical centers in the Republic of Ireland to identify and manage high risk Barrett's Esophagus (BE) patients. From our database of over 4,000 patients our aim was to establish characteristics of those patients who progressed to dysplasia and furthermore to malignancy.

Methods: Data was gathered prospectively from December 2007—December 2019. Ethical approval was sought for the database at the time of establishment. Detailed endoscopic, pathological and clinical data was collected via a web-based data capture system at time of initial diagnosis and at each subsequent encounter. A data manager was appointed at each site and a national lead coordinating the project.

The Vienna Grading system was used to grade histology. Patients were included if they had an initial or subsequent diagnosis of Specialized intestinal metaplasia (SIM), Indefinite for dysplasia (IND) or Low-Grade Dysplasia (LGD).

Results: 860 patients were included with a total of 3792 patient years, a male to female ratio of 2.9:1 and a median age at diagnosis of 63. 50 patients had

an initial diagnosis of SIM with subsequent episodes of dysplasia while 510 patients had IND or LGD at diagnosis.

158 (18.37%) progressed to High grade dysplasia (HGD) and EAC. The overall incidence of EAC was 1.7% per year, HGD 2.4% per year and a combined rate of 4.2% per year. Median time to progression in SIM was 4.7 years, 1.1 years for IND and 9 months for LGD.

Conclusion: The overall progression of the group was much higher compared to looking at those who had SIM alone without dysplasia from the same registry (0.9% per year). Time to progression was significantly faster in the groups with initial dysplasia be that IND or LGD. In our centers those patients were followed up with repeat endoscopy as per international guidelines, the above results highlight the importance of this practice given the potential for malignancy.

519 PERIOPERATIVE FLUID MANAGEMENT IN ESOPHAGECTOMY FOR CANCER AND ITS RELATION TO POSTOPERATIVE RESPIRATORY COMPLICATIONS

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The optimal perioperative fluid management during esophagectomy is still not clear. Liberal regimens have been associated with higher morbidity and respiratory complications. Restrictive regimens might raise concerns for kidney function and increase the need to associate vasopressors. Recently, perioperative care is changing towards goal-directed fluid regimens as part of early recovery programs. The aim of this study was to investigate retrospectively the perioperative fluid administration during esophagectomy and to correlate this with postoperative respiratory outcome.

Methods: All patients who underwent esophagectomy between January–December 2016 were retrospectively analyzed. Patient characteristics, type of surgery and postoperative course were reviewed. Fluid administration and vasopressor use were calculated intra-operatively and during the post-operative stay at the recovery room. Fluid overload was defined as a positive fluid balance of more than 125 mL/m²h during the first 24 hours. Patients were divided in 3 groups: GRP0 (no fluid overload/no vasopressors);

Logistic regression; dependant = "ANY RESPIRATORY COMPLICATION"

	Sig.	OR	95% C.I. for OR	
			Lower	Upper
GRP	0,008			
GRP(1)	0,023	3,57	1,19	10,73
GRP(2)	0,003	10,24	2,24	46,79
Primary surgery versus Neoadjuvant + Surgery	0,350	0,58	0,19	1,81
Surgery: MIE versus Open	0,668	0,81	0,31	2,10
Age	0,355	1,02	0,98	1,07
Histology AC versus SCC	0,659	0,78	0,25	2,41
BMI	0,209	1,07	0,96	1,18
Gender	0,019	4,19	1,27	13,80
Charlson Comorbidity Index	0,159	0,79	0,57	1,10

GRP1 (need for vasopressors); GRP2 (fluid overload with/without vasopressors). Postoperative complications were prospectively recorded according to Esophagectomy Complications Consensus Group criteria. Multivariable analysis (binary logistic regression) for “any respiratory complication” was performed.

Results: 103 patients were analyzed: 35 (34%) GRP0, 50 (49%) GRP1 and 18 (17%) GRP2. No significant differences were found for age, treatment (neoadjuvant vs. primary), type of surgery (Open/MIE), histology and comorbidities.

There were significant ($p \leq 0.001$) differences in fluid balance/m²/h (75 ± 21 mL; 86 ± 22 mL and 144 ± 20 mL) across GRP0, GRP1 and GRP2 respectively.

We found differences in respiratory complications GRP0 (20%) versus GRP1 (42%; $p = 0.034$) and GRP0 (20%) versus GRP2 (61%; $p = 0.002$) and “Comprehensive Complications Index” GRP0 (20.5) versus GRP1 (34.6; $p = 0.015$) and GRP0 (20.5) versus GRP2 (35.1; $p = 0.009$). Multivariable analysis for any respiratory complication is presented in FIGURE 1.

Conclusion: Among patients undergoing esophagectomy, there is a wide variety in the administration of fluid during the first 24 hours. There was a higher incidence of respiratory complications if patients received higher amounts of fluid or if vasopressors were used. Type of surgery (open versus MIE) did not impact respiratory outcome. We believe that a personalized and protocolized fluid administration algorithm should be implemented and that individual risk factors for patients at risk should be identified.

525 SURGICAL MORBIDITY AND MORTALITY FROM THE NEORESII TRIAL: STANDARD VS. PROLONGED TIME TO SURGERY AFTER NEOADJUVANT CHEMORADIO THERAPY FOR ESOPHAGEAL CANCER

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For carcinoma of the esophagus or esophagogastric junction the time to surgery (TTS) has traditionally been 4–6 weeks after completed neoadjuvant chemoradiotherapy (nCRT). However, the optimal timing is not known. A majority of previous non-randomized studies addressing this issue, have not detected any significant differences in complication rates comparing patients operated with standard TTS compared to prolonged TTS. The aim of this sub-study was to investigate if prolonged TTS after completed nCRT improves postoperative outcomes.

Methods: A multicenter clinical trial was performed with randomized allocation to standard TTS (4–6 weeks) or prolonged TTS (10–12 weeks). All patients received nCRT according to the CROSS regimen. Patients were enrolled between 2015–2019 from 10 University Hospitals in Sweden, Norway and Germany. The primary endpoint of this sub-study was overall postoperative complications defined as Clavien-Dindo grade II–V. Secondary endpoints included complication severity according to Clavien-Dindo grade IIIb–V, postoperative 90-day mortality and length of hospital stay. The study was registered in [Clinicaltrials.gov](https://clinicaltrials.gov) (NCT02415101).

Results: In total 248 patients were randomized. There were no significant differences between standard TTS and prolonged TTS regarding overall complications Clavien-Dindo II–V (59.0% vs. 69.8%, $P = 0.092$) or Clavien-Dindo IIIb–V (31.6% vs. 35.0%, $P = 0.603$). Furthermore, there were no significant differences regarding anastomotic leak ($P = 0.601$), conduit necrosis ($P = 0.524$), chyle leak ($P = 0.427$), pneumonia ($P = 0.548$) or respiratory failure ($P = 0.723$). The 90-day postoperative mortality was 4.3% (5 patients) in the standard TTS, and 3.8% (4 patients) in the prolonged TTS arm ($P = 1.0$). Median length of hospital stay was 15 days in the standard TTS arm and 17 days in the prolonged TTS arm ($P = 0.220$).

Conclusion: The timing of surgery after completed nCRT for carcinoma of the esophagus or esophagogastric junction is not of major importance with regard to short-term postoperative outcomes.

526 MICROSATELLITE INSTABILITY IN GASTRO-ESOPHAGEAL ADENOCARCINOMAS

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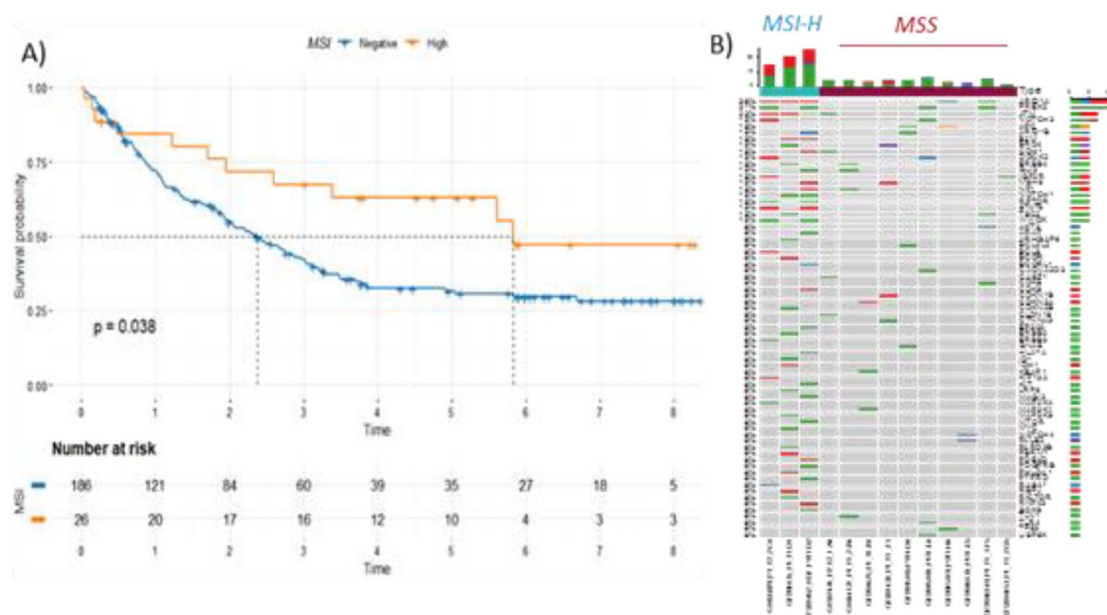


Figure 1. Kaplan Meier Overall Survival curve demonstrates significant better survival in MSI-H patients (A), Oncoplot of Next Generation Sequencing in 3 MSI-H and 10 MSS Organoids demonstrating high mutational burden in MSI-H cases (B).