Introduction: Neoadjuvant chemoradiotherapy (NA CRT) has shown benefit in overall survival (OS) in patients with locally advanced esophageal carcinoma. However, toxicity and postoperative morbidity are not negligible.

Methods: We retrospectively reviewed patients with locally advanced esophageal carcinoma treated at Catalan Institute of Oncology and integrated centers who underwent NA CRT from 2009 to 2013. G3/G4 toxicity and postoperative complications were recorded. OS and disease free survival (DFS) curves and medians were performed by using Kaplan Meier method as well as identification of prognostic factors using multivariate Cox regression.

Results: 61 pts were studied: median age 61 (34-75); 90% male; 97% PS ≤ 1, 3% PS2; 20% Barrett esophagus; 51% adenocarcinoma (ADC)/ 49% squamous cell carcinoma (SCC). Location: 82% esophagus, 18% esophagogastric junction (Siewert I or II). Clinical stage included cT2N+ , cT3-4a N0/+ . 95% were node positive (cN+). 90% pts received 2 cycles of NA CT, being the most used regimen CDDP-5FU (87%). Total RT dose received was 45 Gy (75%) and 50.4 Gy (25%), depending on the centre protocol. G3/G4 toxicity occurred in 9% pts (5% nonhematologic, 4% hematologic). Treatment radiological response was assessed by PET: 16% complete response, 56% partial response, 20% stable disease, 8% progression. 51 pts (84%) underwent surgery, 88% R0. Pathologic complete response (ypT0N0) was achieved in 12 pts (24%): 15% of resected ADC, 30% of SCC, ypN+ 38%. Deaths due to post-operative complications (within 30 days) occurred in 2 patients (4%). Overall recurrence rate (ORR) of pts who underwent surgery was 43% (54% of resected ADC, 32% of SCC). 25 pts had distant recurrence (DR), 8% locoregional recurrence (LR), and 10% synchronic DR and LR. After a median follow-up of 18 months (m), median OS was 31,2 m (IC 95% 20,9-41,5): 22,4m ADC vs 39,7m SCC (p < .38). 1 and 2 years overall survival rate were 76,9% and 53,7%, respectively. mDFS was 17m (IC 95% 12-22); ADC 13m vs SCC 18m (p < .29). In the multivariate Cox regression, two independent factors influenced positively in OS: R0 (p< .001) and PS ≤ 1 (p < .012).

Conclusion: NA CRT is a safe strategy for locally advanced esophageal carcinoma in selected pts, who have been treated with multidisciplinary approach. It improves R0 rate and tumor downstaging with similar results than previous reports. ADC and SCC represent two distinct diseases with different epidemiology and prognosis. However, no significant differences were achieved in our cohort probably due to small number of pts.