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Background: Despite standard multimodality treatment, > 50% of operable gastro-oesophageal adenocarcinoma (GEA) relapse following curative-intent surgery in the West. Although treatment decision relies on established clinicopathologic features, they are flawed by a limited predictive value and inability to capture interpatient heterogeneity. We aimed at externally validating our previously-described nomogram (Salati et al. ESMO 2019) to enable a more accurate estimate of individualized risk in resected GEA.

Methods: Electronic medical records of patients undergoing curative-intent surgery for cT2/T4 and/or node-positive gastric and gastroesophageal junction adenocarcinoma were retrieved and variables deemed of potential interest were collected. The Modena Cancer Centre cohort served as the training cohort (TC), while the joint cohort of Cremona Cancer Centre and Forli Cancer Centre served as the validation cohort (VC). Cox proportional hazards in univariate and multivariate regression were used to assess the effects of the prognostic factors on OS. A graphical nomogram, derived from the multivariate Cox regression model, was constructed using the package Regression Modeling Strategies (ver. 5.0-1) in R software. The performance of the prognostic model was evaluated and external validation performed.

Results: The TC and VC consisted of 112 and 319 patients, respectively. The following covariates retained independent prognostic value in the TC and were used for the construction of a nomogram estimating 3-year and 5-year OS: ECOG PS >0 (p 0.05), and 67% were node-positive (vs 80%; p=0.08); junctional cancers account for 16% (vs 12%; p=0.15) of the overall population and 42% (vs 48%; p=0.25) of patients received adjuvant chemotherapy. The discriminatory ability of the prognostic model was evaluated with the c-Harrell index (0.78 and 0.76, in the TC and VC, respectively). Then, a 3-tier scoring system was developed through a linear predictor grouped by 25 and 75 percentiles, which strengthened the good discrimination of the model (p< 0.001). A calibration plot demonstrated concordance between the predicted survival and actual survival both in the TC and VC. Finally, a decision curve analysis was plotted that depicts the clinical utility (net benefit) of the nomogram.

Conclusion: We externally validated a prognostic nomogram to predict 3-year and 5-year OS in a joint independent cohort of resectable GEA. This tool incorporates readily-available and inexpensive patient and disease characteristics, as well as immune-inflammatory determinants. It has been shown to be accurate (well-calibrated with good discriminative ability), generalizable and clinically effective. Although a prospective validation in a larger patient population is warranted, the NOMOGAST could represent a useful tool to be implemented in the clinic to assist decision-making and clinical trial design.

Legal entity responsible for the study: The author.

Funding: This study was supported by the Research group in cytogenetic, phylogeny and evolution of populations of Tolima University, Infectious Diseases Research Unit of Instituto Mexicano del Seguro Social and by the program for the formation of High-Level Human Capital for the Department of Tolima of COLCIENCIAS and Tolima governate (755-2016).

Disclosure: The presenting author has declared no conflicts of interest.

https://doi.org/10.1016/j.annonc.2020.04.027

SO-12 Multicentre validation of an immune-inflammation-based nomogram to predict survival in western resectable gastrooesophageal adenocarcinoma: The NOMOGAST

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Background: Ninety-four percent of pancreatic cancer patients die within 5 years of their diagnosis. Most patients experience no obvious symptoms until the tumour is well advanced. It is now possible, via a blood test, to detect pancreatic cancer before symptoms of late-stage disease become evident. However, in order to be cost-effective, this test should only be applied to a limited group of individuals.

Methods: We conducted a national, population-based, case-control study to determine whether it is possible to identify a sub-population of patients at high risk of developing pancreatic cancer. Our hypothesis was that patients with early malignancy share similar profiles of early, diffuse, warning signs which might be detectable through the application of machine learning approaches. We used the Clinical Practice Volume 31 ■ Issue S3 ■ 2020 S221