Applicability of a pathology-based combined model NOLUS (NON- LUminal Score) in HR+/HER2- early breast cancer patients treated at a tertiary referral center in México.

Ana Karen Valenzuela Vidales³, Alejandra Armengol-Alonso¹.
Departamento de Hematología y Oncología, Instituto Nacional de Ciencias Médicas y Nutrición Salvador Zubirán³.

BACKGROUND
In Mexico, breast cancer (BC) is the leading cause of cancer death in women over 25 years old. Access to genomic platforms for biological intrinsic subgroups identification is not cover by the public health system.

Within early BC (EBC) RH+/HER2- the non-luminal subgroup is associated with poor oncologic outcomes

METHODS

A combined score based on ER, PR and Ki67 levels was calculated. NOLUS formula was derived: -0.45*ER -0.28*PR +0.27*Ki67 + 73.02. High-NOLUS cutoff point ≥ 51.38 identified non-luminal population and low NOLUS < 51.38. The model was tested in EBC to identify the frequency of the non-luminal subtype.

RESULTS
In the global cohort: luminal subtype was 65.9%, triple negative 17.7%, HER2+ 16.4% (Figure 1). St Gallen classification: luminal A 58.3%, luminal B 33.8%, luminal B HER2+ 7.9%.

Within the RH+/HER- subgroup (n 175) low-NOLUS was 90.3%, and high-NOLUS 9.7% (non-luminal subgroup Figure 2).

Tumor grade was G1 37.7%, G2 49.7%, G3 12.6%. 63.9% of the patients with low-NOLUS had luminal A and 36.1% were luminal B. 5.9% of patients with high-NOLUS had luminal A vs 94.1% luminal B (p<0.001).

Median follow-up was 35.5 months, disease-free survival (DFS) of the entire cohort was 95.4% and cancer-specific survival (CSS) 97.1%.

CONCLUSION
The frequency of the non-luminal subgroup in Mexican patients with EBC RH+/HER2- represented by high-NOLUS is comparable to that reported in the literature. Patients with high-NOLUS have worse outcomes in DR and CSS. The NOLUS model is useful to identify non-luminal subgroups in RH+/HER2- EBC in the absence of genetic platforms.

REFERENCES