

**Goals**

The aim of this study is to get an intraoperative predictive model of no more axillary metastasis in breast cancer patients with macrometastasis in sentinel lymph node (SLN).

**Methods**

This study included patients with clinically and ultrasonographically node negative, cT1-3 invasive breast cancer, who had undergone intraoperative sentinel lymph node evaluation by one step nucleic acid amplification (**OSNA**) with a result of macrometastasis.

A logistic regression model, "**La Paz Score**", modified from previously published "**Teramoto Score**", including tumor size, number of affected SLN, total tumor load (TTL) of cytokeratin 19 (CK19) mRNA, histopathological and molecular pheno-type of the tumor was developed to predict intraoperatively the likelihood of non-SLN axillary metastasis.

Logistic regression was used to define predictive models for non SLN affectation. The discriminating ability of some variables and logistic regression models, was assessed by plotting the ROC curve and computing the area under the curve (AUC) and corresponding 95% confidence interval (CI). All statistical analyses were performed with the statistical language R version 3.0.1.

**Results**

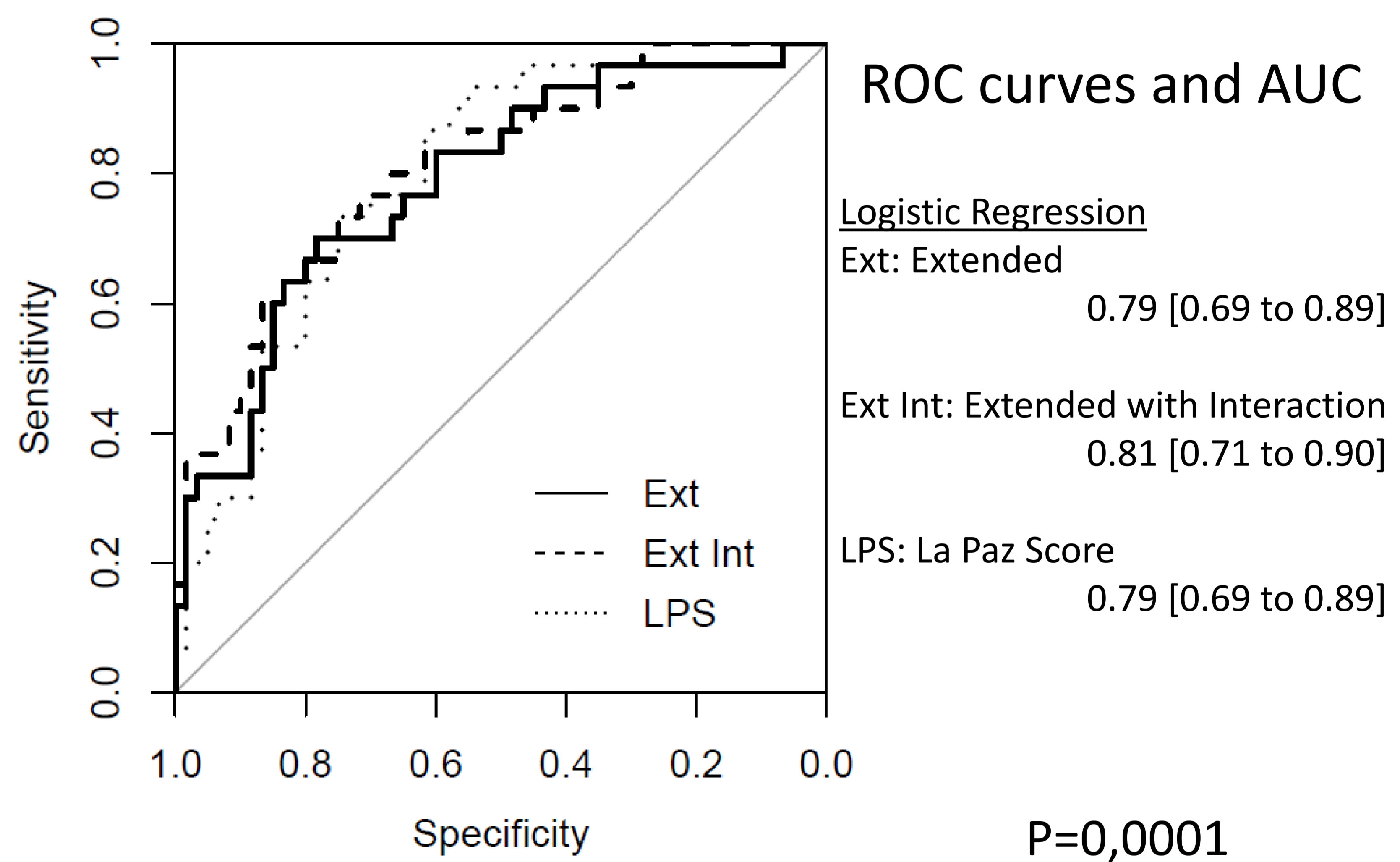
- Ninety patients were recruited. The size of tumors ranged from 5 to 100 mm, with a median (IQR) of 19.5 (12.75).
- TTL values (expressed as 10E3 copies/uL) ranged from 5.34 to 8401, with median (IQR) of 44.5 (219.5).
- The main descriptive results for the categorical variables were:

Variable	Levels	N	%
SLN	1	58	64,4%
	2	25	27,8%
	3	7	7,8%
	All	90	100%
Histology	Ductal	65	72,2%
	Lobular	23	25,6%
	Coloide	1	1,1%
	Tubular	1	1,1%
	All	90	100%
Phenotypic Molecular Type	Luminal A	52	57,8%
	Luminal B	32	35,6%
	Luminal B-Her2	3	3,3%
	Basal	3	3,3%
	All	90	100%
Non SLN	Negative	60	66,7%
	Positive	30	33,3%
	All	90	100%

# Intraoperative predictive model for non-SLN metastasis using Total Tumor Load assessed by OSNA

J.I. Sanchez-Mendez<sup>1</sup>, C. Martí Álvarez<sup>2</sup>, A. Román Guindo<sup>2</sup>, L. Paz Ramírez<sup>3</sup>, L. Yébenes Gregorio<sup>4</sup>, G. Steinberg Contreras<sup>2</sup>, S. Serrano Velayos<sup>2</sup>, A. Rychlik<sup>2</sup>, J. De Santiago García<sup>1</sup>, D. Hardisson<sup>4</sup>.

<sup>1</sup>Hospital Universitario La Paz - IdiPaz, Breast Unit - Gynaecologist, Madrid/Spain,  
<sup>2</sup>Hospital Universitario La Paz, Breast Unit - Gynaecologist, Madrid/Spain,  
<sup>3</sup>Universidad Autónoma de Madrid, Gynaecologist Department. Madrid/Spain,  
<sup>4</sup>Hospital Universitario La Paz - IdiPaz, Breast Unit - Pathologist, Madrid/Spain.



**"La Paz Score"**

**Negative Predictive Value = 90.24%,**  
**Sensitivity = 86.67%,**  
**Specificity = 61.67%,**  
**Positive Predictive Value = 53.06%.**

**Conclusions**

- We showed that a predictive model with five variables may significantly improve the discrimination ability of the score proposed by Teramoto (p=0.001).
- The logistic regression model including the (log10) TTL, tumor size, number of positive SLN, histology and molecular subtype, provides a reasonable discrimination ability (AUC = 0.79).
- However, this should be validated in a new sample of larger size.

**Reference**

Teramoto et al. One-step nucleic acid amplification assay for intraoperative prediction of non-sentinel lymph node metastasis in breast cancer patients with sentinel lymph node metastasis. Breast, 2014 Oct; 23(5): 579-85.