NEUTROPHIL-LYMPHOCYTE RATIO (NLR) AND PLATELET -LYMPHOCYTE RATIO (PLR) MAY BE SUPERIOR TO C-REACTIVE PROTEIN (CRP) FOR PREDICTING THE OCCURRENCE OF DIFFERENTIATED THYROID CANCER

Dr. Sevilay Ozmen[1], Dr. Ozge Timur[2], Dr. Ilknur Calik[1], Dr. Konca Altinkaynak[3], Dr. Elif Zipak[4], Dr. Eda Simsek[5], Dr. Faruk Yildiz[2], Dr. Hakan Sevimli[2], Dr. Hakan Gozcu[2], Dr. Abdulmuttalip Arslan[2], Dr. Ayse Carlioglu[6]

[1]Department of Pathology, Erzurum Training and Research Hospital, Erzurum, Turkey
[2]Department of Internal Medicine, Erzurum Training and Research Hospital, Erzurum, Turkey
[3]Department of Biochemistry, Erzurum Training and Research Hospital, Erzurum, Turkey
[4]Department of Anesthesiology, Erzurum Training and Research Hospital, Erzurum, Turkey
[5]Department of Otorhinolaryngology, Erzurum Training and Research Hospital, Erzurum, Turkey
[6]Department of Endocrinology, Erzurum Training and Research Hospital, Erzurum, Turkey

AIM:

Neutrophil-lymphocyte ratio (NLR) and platelet-lymphocyte ratio (PLR) are prognostic markers of differentiated thyroid cancers. In our study we evaluated NLR, PLR and C-reactive protein for predicting the occurence of differentiated thyroid cancer. This is the first study that compares NLR and PLR to C-reactive protein indifferantiated thyroid cancer not only papillary cancer but also folliculer cancer.

MATERIALS AND METHOD:

This study includes 51 papillary carcinoma, 42 papillary microcarcinoma and 31 folliculer carcinoma patients attending to our outpatient Endocrinology Clinic at Erzurum Region Training and Research Hospital between 2009 and 2014. The control group include 50 age, sex and body mass index matched healty subjects. Blood counts and CRP were measured at the day before surgery. Thyroglobulin was measured after 6 months of operation.

RESULTS:

There were positive correlations between tumor diameter, age, white blood cell (WBC) and thyroglobulin levels. There were also positive correlation between NLR, PLR and CRP levels. (Table 1) NLR and PLR were more successful in diagnosing thyroid cancer than CRP which have AUC value 0,58. (p=0.28). AUC value of NLR was 0,831 (p=0.000) and PLR was 0,796 (p=0.000). The results of ROC analysis are shown in figure 1.

Variables	Correlation Coefficient	P value
Tumor Diameter	0,219	0,03
PLR	0,610	0,00
Age	0,234	0,002
WBC	0,571	0,00
Tg	0,261	0,02
CRP	0,290	0,01

Table 1: Correlation coefficients determined by simple correlation between the NLR and other clinical factors
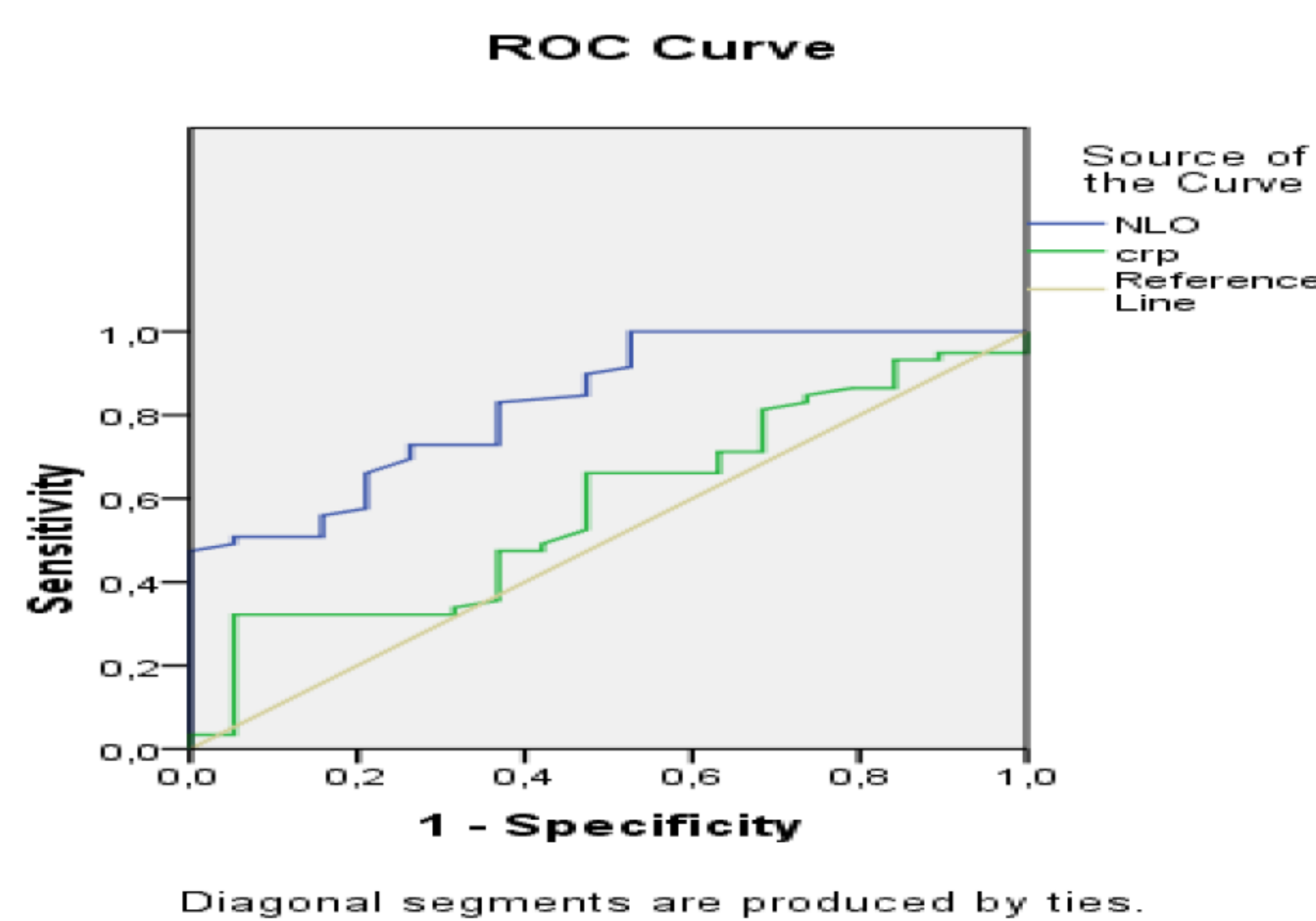

Figure 1: The ROC curve. AUC NLR: 0.831, AUC CRP: 0.581 and true area 0.5.

CONCLUSION:

In our study we found out that higher NLR and PLR was associated with higher levels of thyroglobulin which indicates worse survival. CRP levels were also associated with poorer tumor profile but the determining rate was lower according to ROC analysis

ECE 2016
1151--EP
Thyroid Cancer
Ozge Timur
Poster presented at: ECE2016 28 – 31 May 2016 MUNICH, GERMANY
PosterSessionOnline.com