

# The presence of tumor infiltrating lymphocytes is associated with improved melanoma prognosis.

Anna Nikolajeva<sup>1</sup>, Sergejs Isajevs<sup>1,2</sup>, Tatjana Zablocka<sup>1,2</sup>

1. University of Latvia, Faculty of Medicine, Riga, Latvia

2. Riga East University Hospital, Pathology centre, Riga, Latvia



## Introduction.

Despite new opportunities for treating one of the most aggressive skin cancers, the prognosis for a melanoma patient depends on the stage of the disease at diagnosis. The most common reason of death due to melanoma is widespread regional lymph node metastasis. Advance detection and treatment of melanoma and metastasis reduces mortality.

## Methods.

A retrospective study included 71 patients from the Riga Eastern University Hospital from 2011 to 2017 with primary melanoma tumors. The study was approved by the Central ethical committee. The histopathological characteristics were assessed according to the current WHO and AJCC 8. edition guidelines.

## Results.

The study included 71 patients (47 were females and 24 were males) with a mean age 62.08 years. Distant metastases are detected 18 patients (10 were females and 8 were males). The tumor infiltrating lymphocytes (TIL) was more prominent in nodular and superficial spreading melanoma. Patients with mild lymphocyte infiltration were identified in 45.1% of patients, 31.0% were non-metastatic and 14.1% metastatic melanoma. Moderate lymphocytic infiltration was observed in 52.1% of patients, 40.8% without metastases and 11.2% with metastases melanoma. Patients with plurality lymphocyte infiltration were identified in 4.2% of patients with non-metastatic melanoma and no patients with metastases. Regression was observed in 1 patient with moderate lymphocytic infiltration and without metastatic melanoma. The correlation between TILs and melanoma histopathological subtype was observed ( $p=0.009$ ).

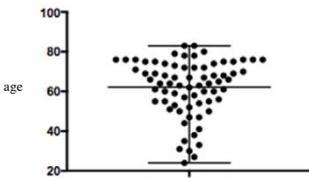


Figure 1. The study included 71 patients (47 were females and 24 were males) with a mean age 62.08 years. (M=62.08; SD=14.15 gadi).

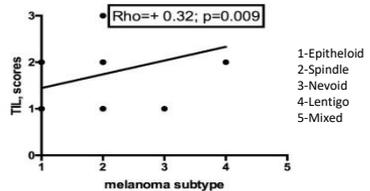


Figure 2. Correlation between histopathological form of melanoma and peritumoral lymphocytic infiltration (TIL), Spearman method, (Rho = + 0.32; p = 0.009)

## Conclusions.

TIL play an important role in the prognosis of the disease. Its presence associated with the best prognosis of melanoma and the highest life expectancy. TIL is present in all cases and stages of melanoma. It reflects the ongoing host tumor communication.

