

A JOINTPOINT REGRESSION ANALYSIS OF LONG-TERM TRENDS IN LEUKEMIA INCIDENCE AND MORTALITY IN CENTRAL SERBIA AND NIŠAVA DISTRICT (1999-2014)

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Leukemia contributes 2.3% to the overall cancer incidence in Serbia and 2.9% in the total mortality, while the estimated incidence and mortality rate for males and females were 8.7 and 6.3 ‰, respectively and occupies 13th place among both sexes in Central Serbia.

The objective of our study was to examine the time trends of leukemia in Central Serbia, with a focus on Nišava district, from 1999-2014, using a Joinpoint regression analysis and compare them with the trend in other populations, and identify possible changes.

The standardised incidence and mortality were obtained from the Serbian Cancer Registry of Central Serbia. Time trends for incidence and mortality of leukemia were assessed using the annual percent change, estimated through Joinpoint regression analysis (age period cohort models – APC) using the Joinpoint Regression Software.

Our results demonstrate a stable trend of the age-adjusted leukemia incidence rate both in males and females in Central Serbia during the observed 1999-2014 period. However, statistically significant decreasing trend of leukemia incidence rate was found in men from Nišava district, while non-significant slightly increasing pattern was present in women. Joinpoint analysis in our research demonstrated favorable mortality declines until the 2002, and then stable trend in Central Serbia in both sexes to the end of the observed period. Conversely, mortality among males in Nišava district shows a positive trend, but not statistically significant.

The results of the study suggest that leukemia profile in Central Serbia was stable during the study period. It is particularly interesting that incidence is decreasing among male population from Nišava district.

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