Trends In Malignancies Involving Different Part of the Body From 2000 To 2017 Based on Survey In 18 Areas In United States

Merin Jose MD[1]; Irin Jose MS[2]

[1]Saint Peter's University Hospital, New1 Brunswick, NJ. [2]Delphi Technologies, IN, USA.

Introduction

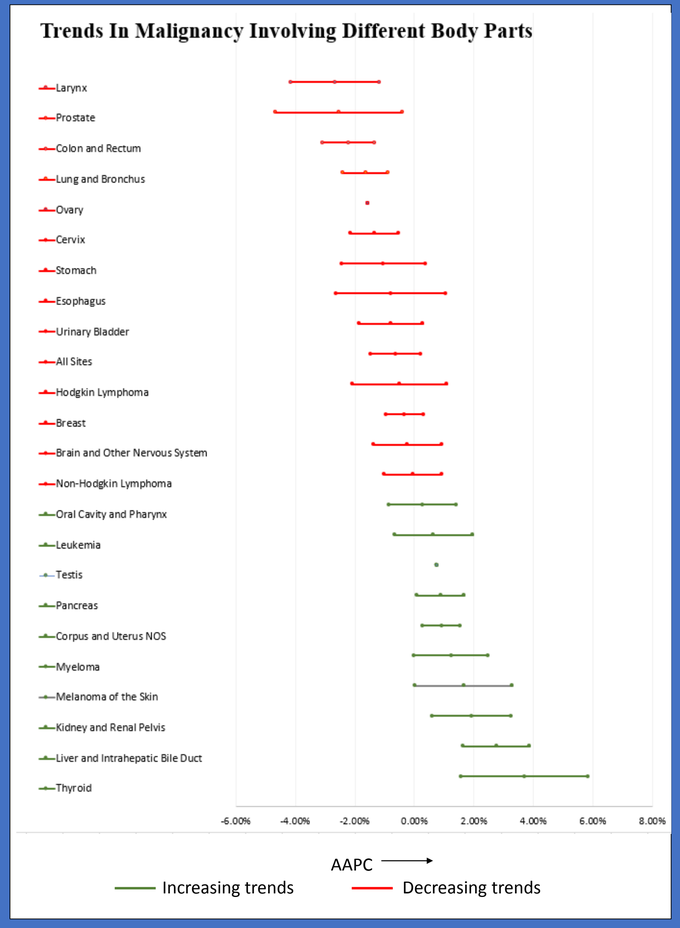
Malignancies are a major cause of morbidity and mortality in the United States. Analysis of trends in various malignancies involving different sites over several years and between different ethnic groups can help us identify the contribution of the genetic and environmental factors.

Methods

In this study, we took the data from the SEER (Surveillance, Epidemiology and End Result Program) database. The information of the delay adjusted cancer incidence of 23 different organs of the human body published in SEER was collected.

Average annual percent change (AAPC) in prevalence was calculated over the years for malignancy at each site. Results are represented as forest plot as shown in figure with 95 % CI of the AAPC to detect the trends in the disease prevalence. The disease prevalence was also calculated and compared for different racial group. It was compared using ANOVA and diseases with significant racial differences were identified.

Fig 1. Average annual change in prevalence



Results

Based on the analysis there were increasing and decreasing trends of the malignancies as shown in the forest plot in the figure. It was noted that the cancers of larynx, prostate, colon and rectum, lung and bronchus, ovary and cervix had a significant decreasing trend over the years.

While the malignancies of testis, pancreas, thyroid, kidney and renal pelvis, liver and intrahepatic anduterus had a significant increasing trend.

Conclusion

Through this we would like to emphasize the fact that certain malignancies have an increasing trend while certain others have a significantly decreasing trend. Also, significant changes in disease trends were noticed among different races. This opens the platform to identify the environmental vs genetic factors influencing the increasing or decreasing trends pertaining to the particular malignancy involving a particular organ and also genetic factors affecting the differences in prevalence noted based on ethnicity.

References

SEER Research Data - Preliminary Cancer Incidence Rates and Trends, 2000-2017 https://seer.cancer.gov/statistics/preliminary-estimates