

Cancer Incidence in Kosovo

A data analysis from Clinic of Oncology
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Background

Over the past few years Kosovo has seen increase in cancer incidence. In the past four years we have seen a increase in new cases.

When comparing data to other Balkan countries, Kosovo has the lowest incidence rates but with recent trends it is unclear if the current incidence rate is a result of:

- i) young median age of population (30.8 years old with following age structure: 27.2% under 15 years old, 66.1% between 15 and 64 years old, and only 6.7% above age of 65), or
- ii) due to the lack of national screening programs for main type of cancer such as breast, colon or cervical cancer. Appraisal of cancer trends can direct cancer control and public health planning but relevant studies in Kosovo are scarce due to a lack of reliable long-term data.

We are evaluating data of last five years (2019 - 2022) based on improved cancer registry at Institute of Oncology, University Hospital Centre of Kosovo, the only oncology center in the country.

Objectives

Incidence of cancer
Trend with age and diagnosis
Impact of pandemic in cancer incidence

The overall objective of improved data collection, analysis, and visualization is aimed at advancement of services provided by Institute of Oncology for effective, appropriate, and affordable cancer prevention & control strategies that are urgently needed in Kosovo for breast, colon, and cervical cancer.

With accurate information on geographical distribution of incidence, trends, and age groups, the Institute of Oncology will be able to optimize its limited resources and achieve better results with more accurately targeted prevention & control campaigns

Methods

Improvement of incidence data collection

Beginning in 2018 all patient information was captured using predefined templates in Excel.

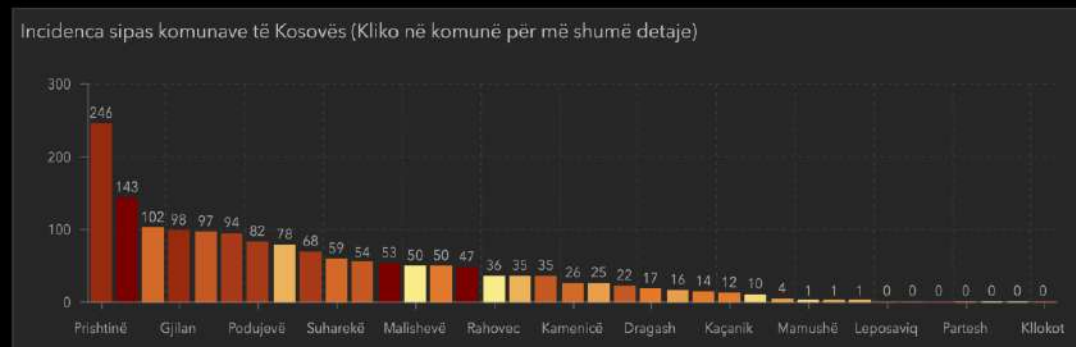
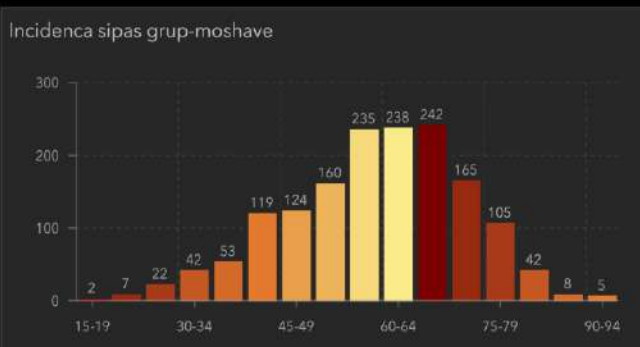
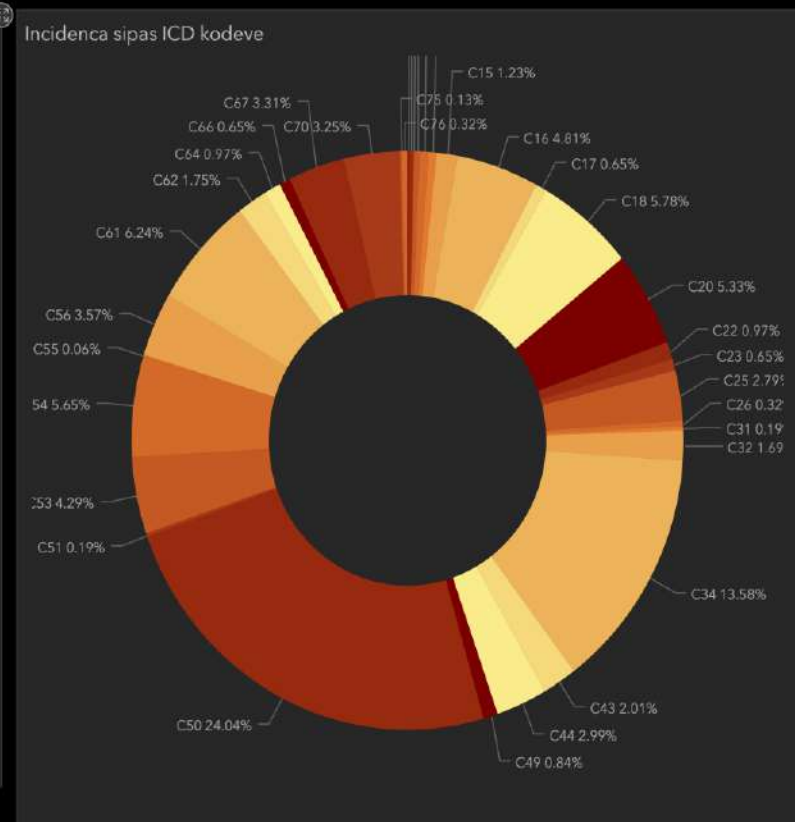
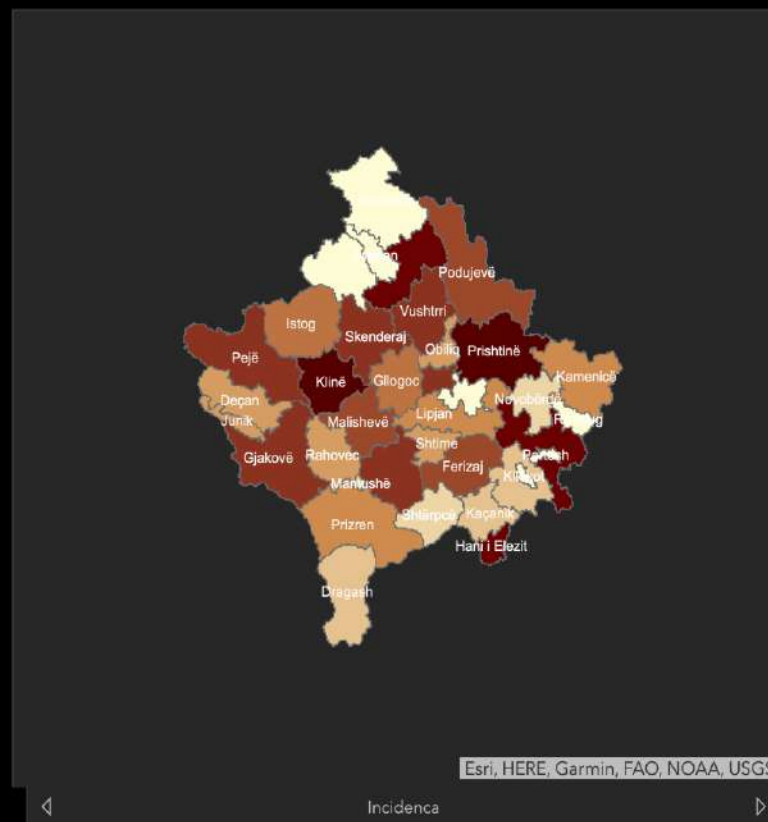
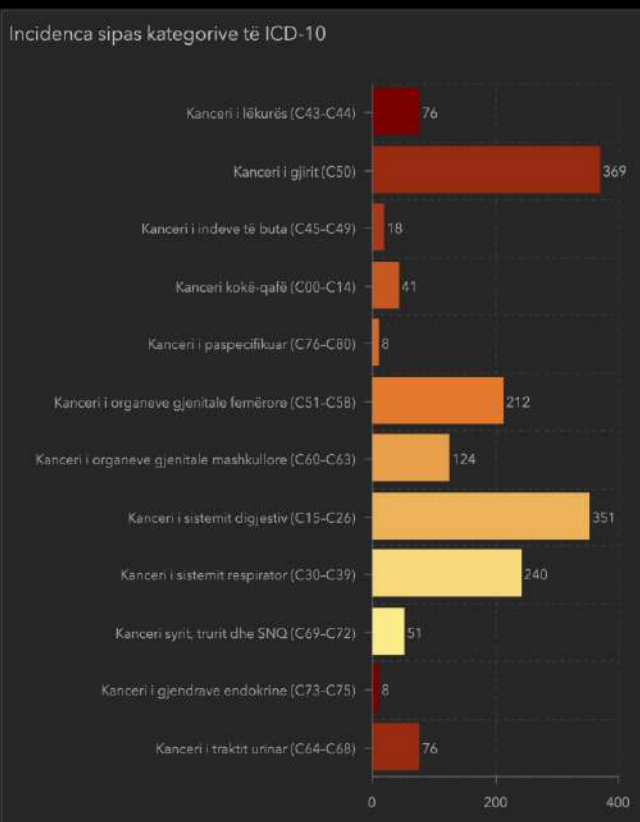
Switching from handwritten notes was already a great improvement for data capture and with introduction of standardized drop-menus with date formats, official municipality and town names, ICD-10 codes in local language for localization, stage, analysis and diagnosis, the number of errors dropped significantly.

To extract relevant information, carry out initial data audit, analysis, pivot tables and charts were used.

At this stage it was already possible to generate useful information about incidence rates using Kosovo census data and the World (WHO 2000-2025) Standard Population.

The calculation is based on real recorded incidence cases, standardized using the World (WHO 2000-2025) Standard Population, and Kosovo census data from 2011

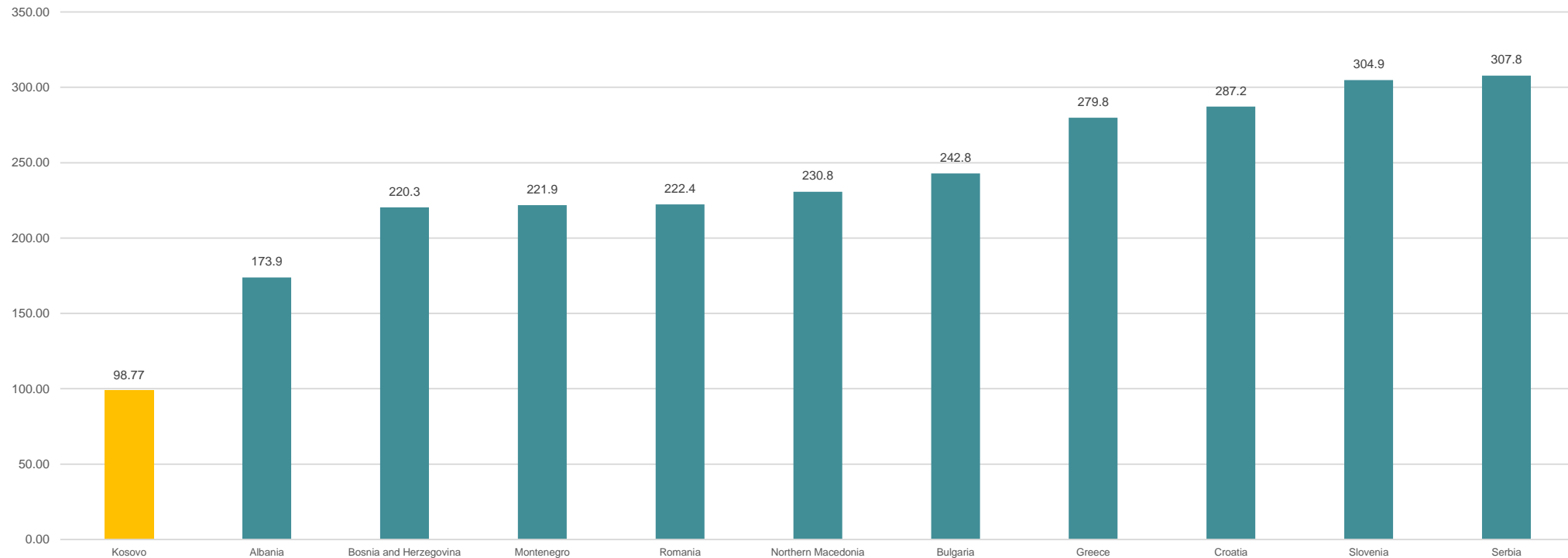




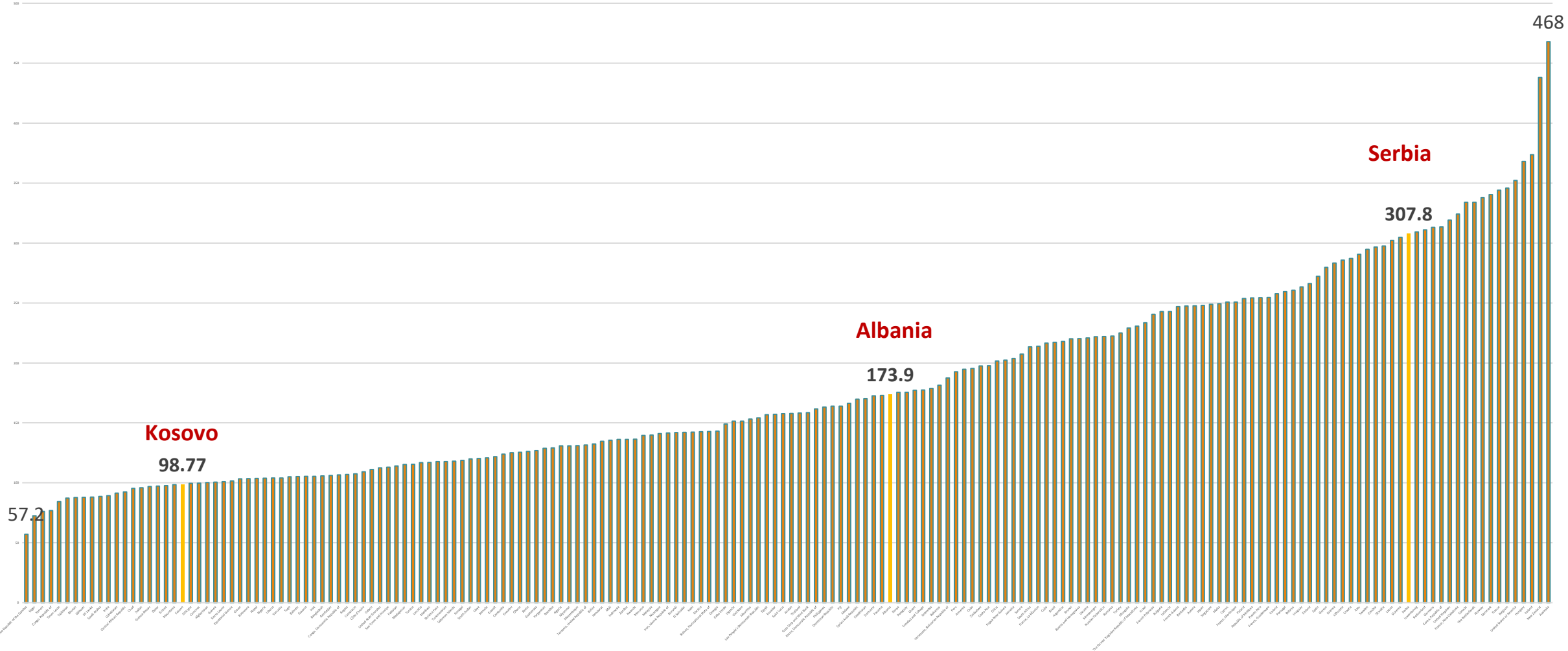
Incidence rates in 2019

The estimated age-standardized incidence rate in Kosovo (all cancers, both sexes, all ages) for 2019 is 98.77.

Age standardized incidence rate in Kosovo compared to other countries in Balkans.

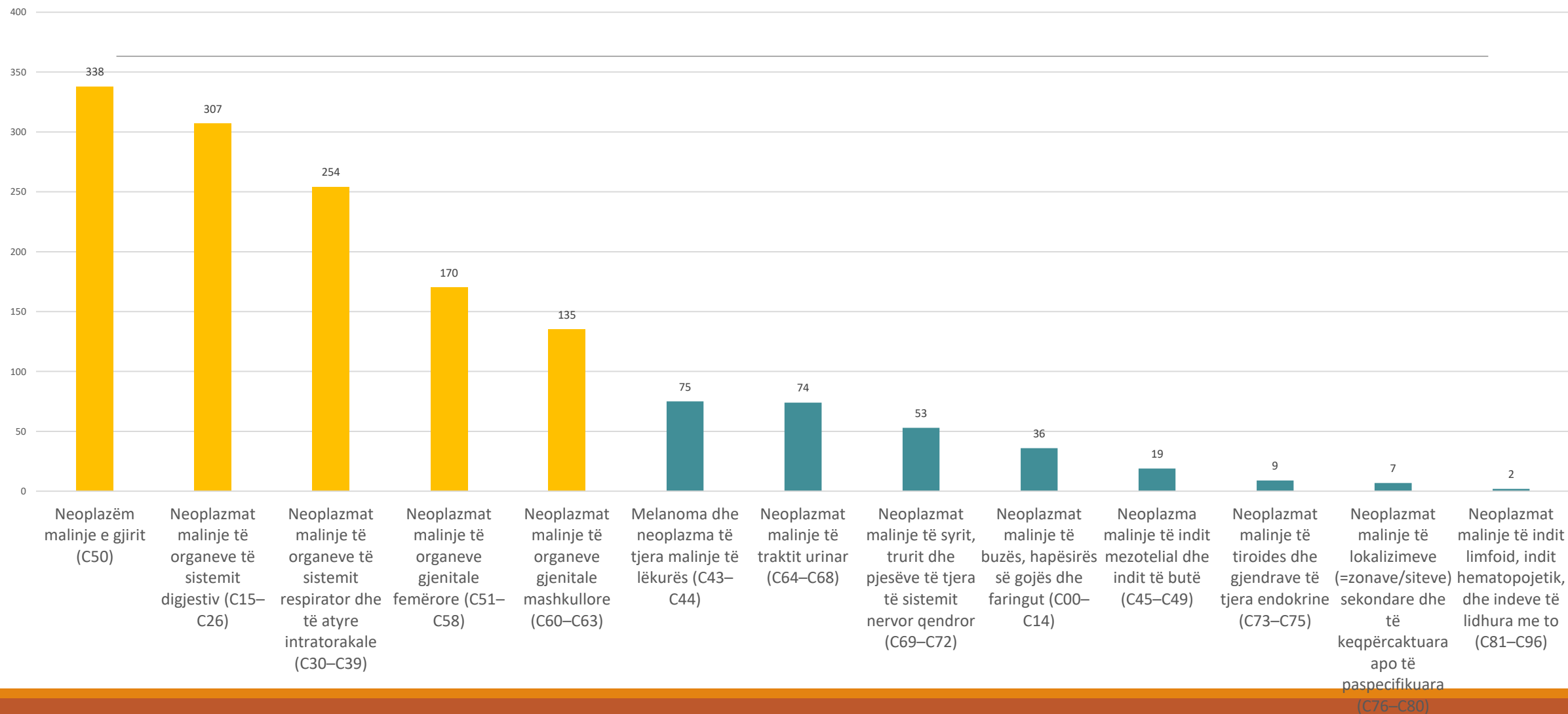


Incidence rates of Kosovo compared to other regions worldwide



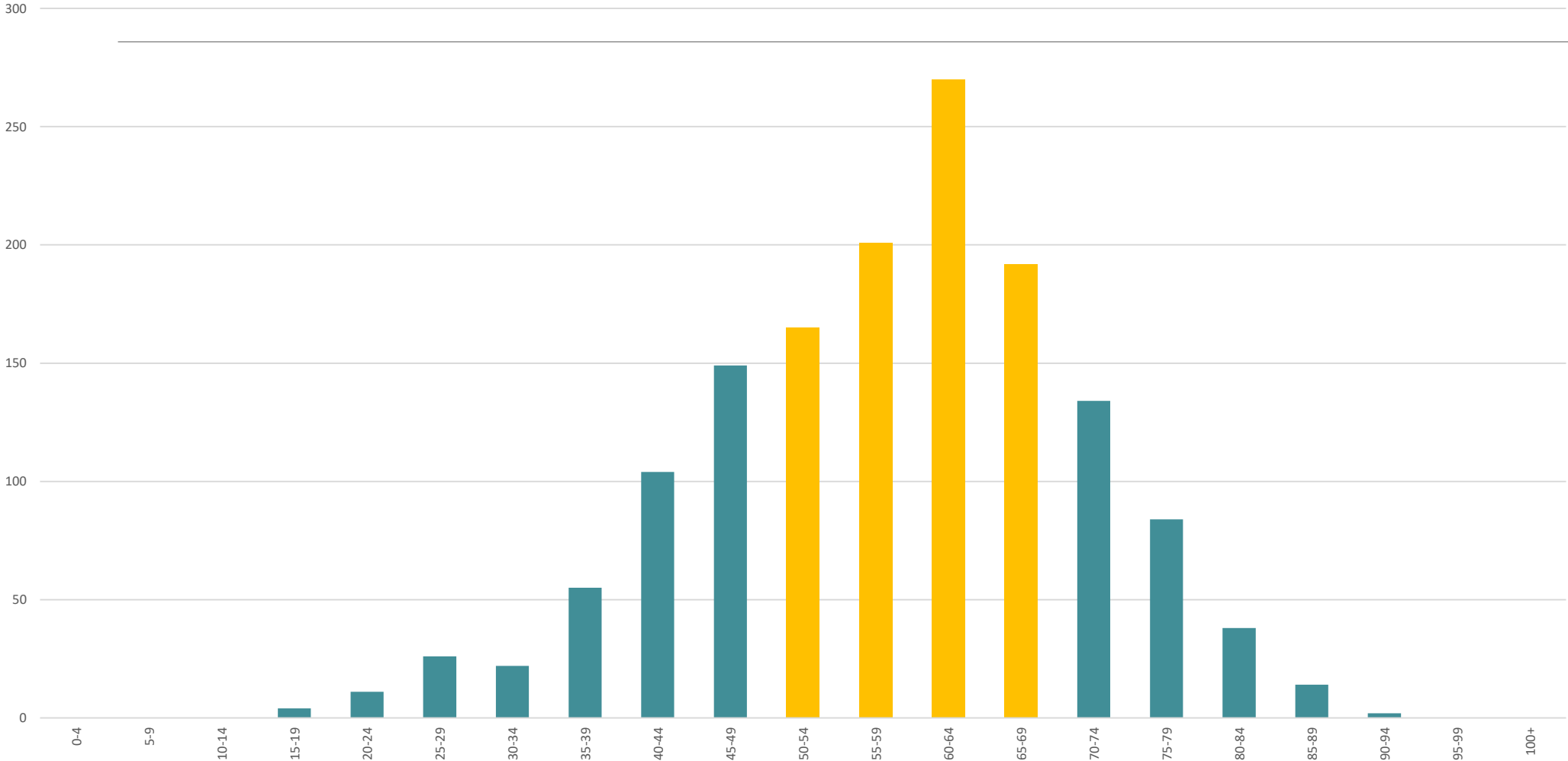
Case distribution according to ICD Codes

Breast cancer is the most common cancer in our center, with 338 cases in 2019, followed by the digestive system and respiratory system.



Case distribution among age groups

On country scale we see highest incidence in age groups 60-64 (18.93%), 55-59 (13.95%), 65-69 (12.9%), 50-54 (10.99%).





CORONAVIRUS PANDEMIC

In 2020 the national lockdown had a significant impact in all areas of health system.

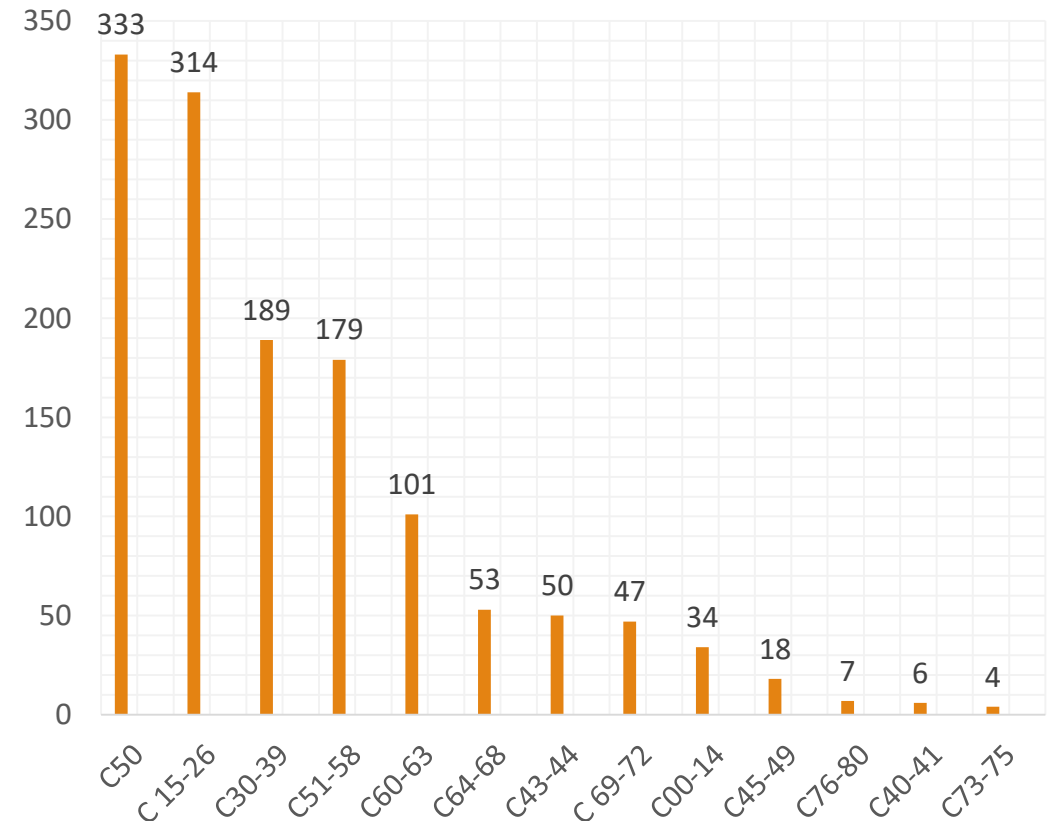
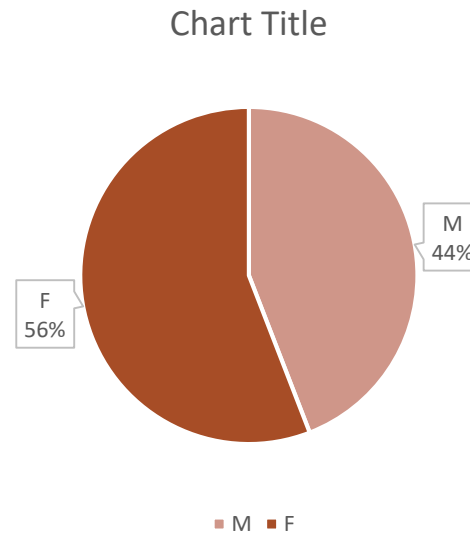
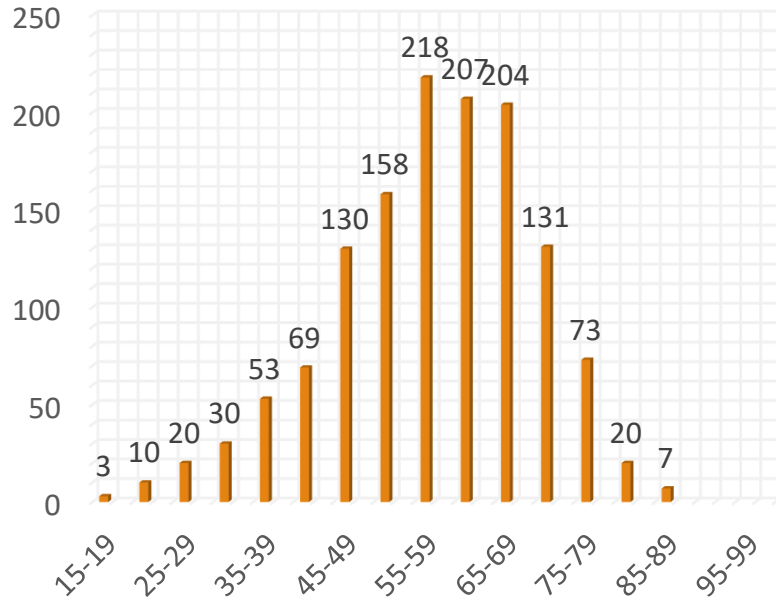
The IO continued working under difficult circumstances.

The impact of pandemic was reflected in the overall incidence as well as in the number of new cases.

2020

In 2020 we have seen a decrease in the number of new cases, from 1,583 cases in 2019 to 1335 in 2020, a decrease of 15%.

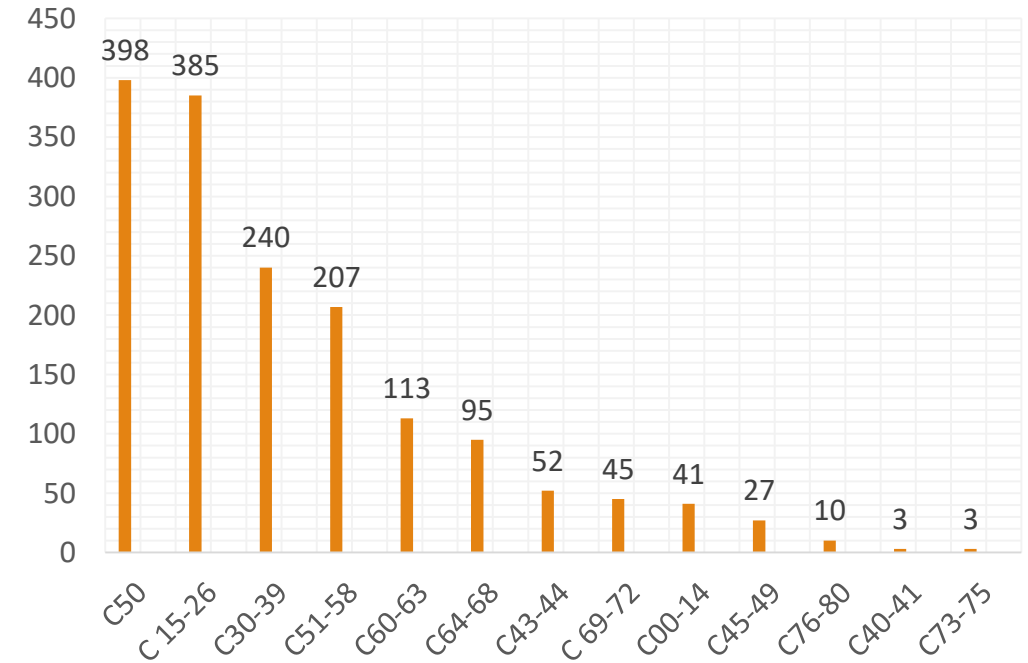
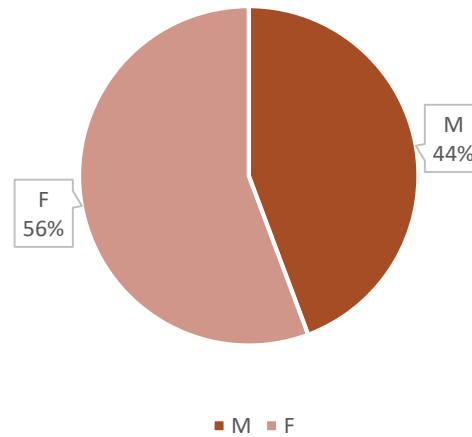
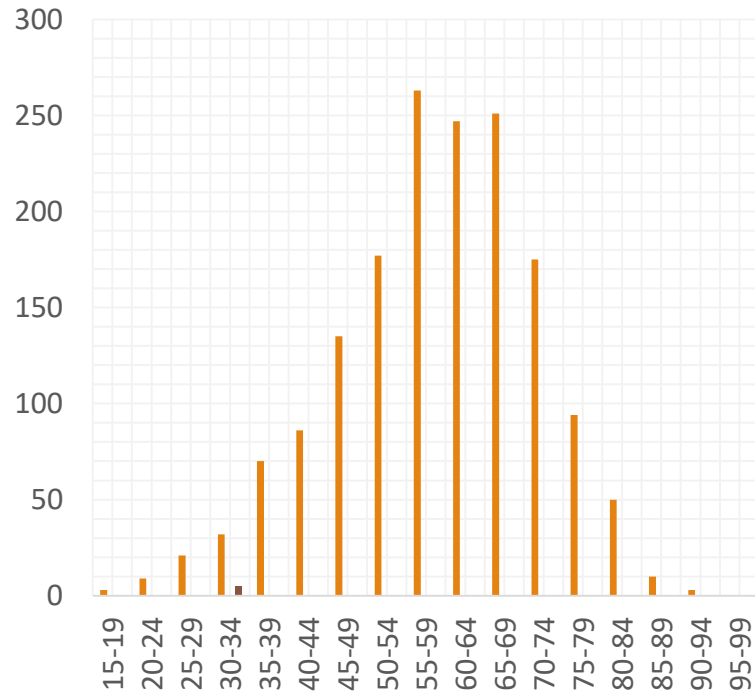
The age standardized incidence rate for 2020 was 88.42.



2021

The post pandemic year had an increase in new cancer patients, with a total of 1621 cases or an increase of 17.6%.

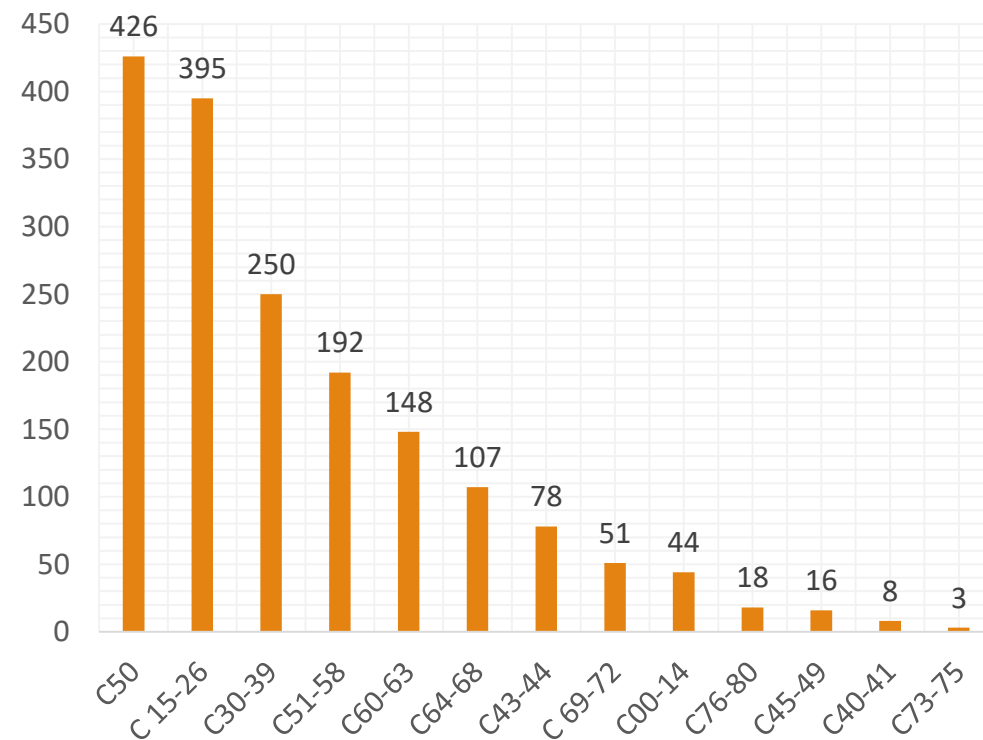
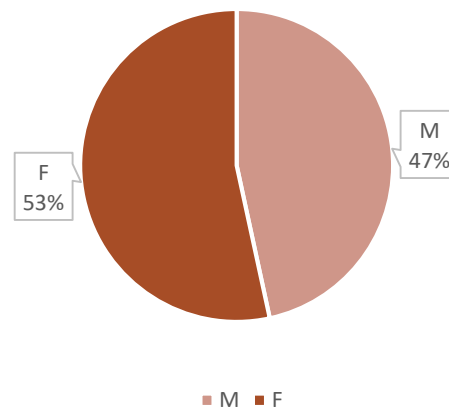
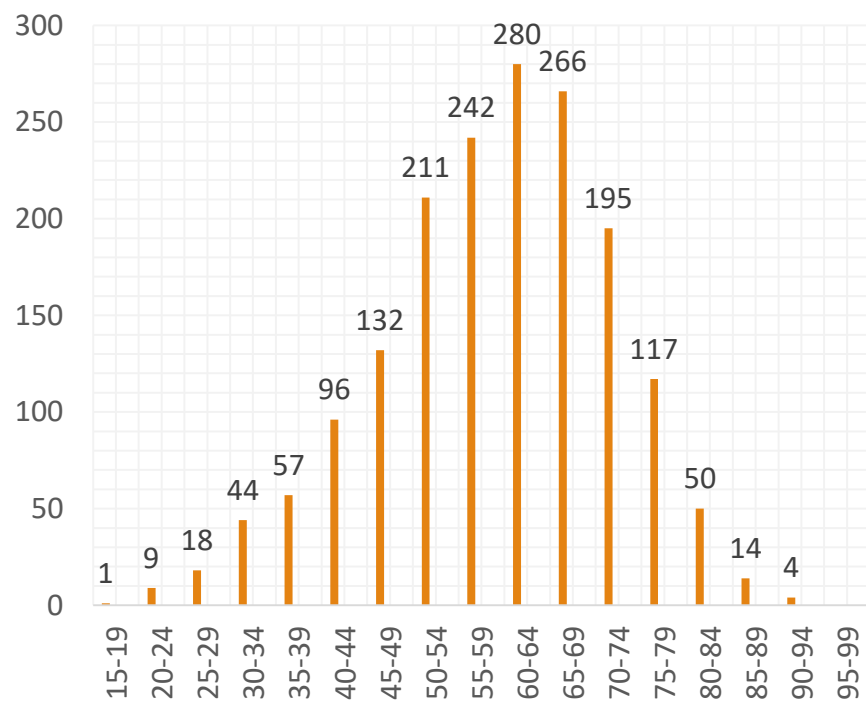
The age standardized incidence rate for 2021 was 109.17.



2022

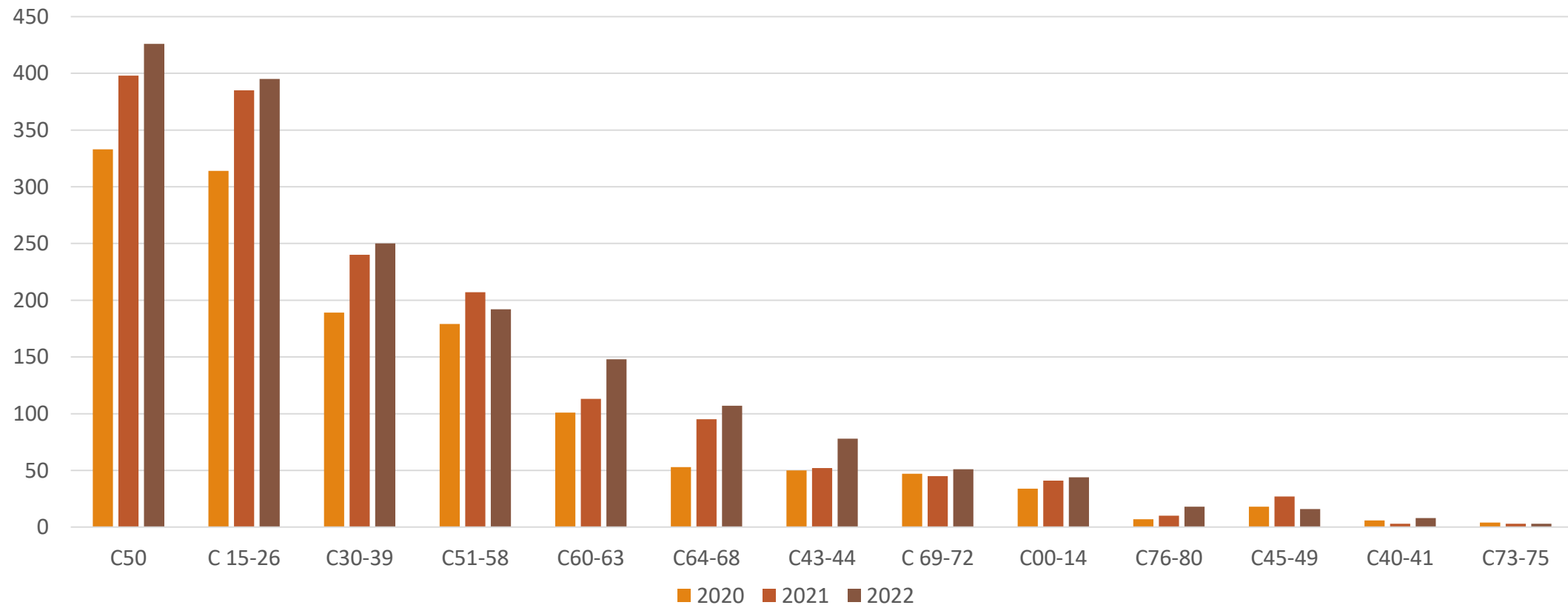
In 2022, an improvement in the patient reporting system resulted in a higher number of new cases. An increase of 6.6% from 2021 was observed, with a total number of 1736 patients.

The age standardized incidence rate for 2022 was 116.91.



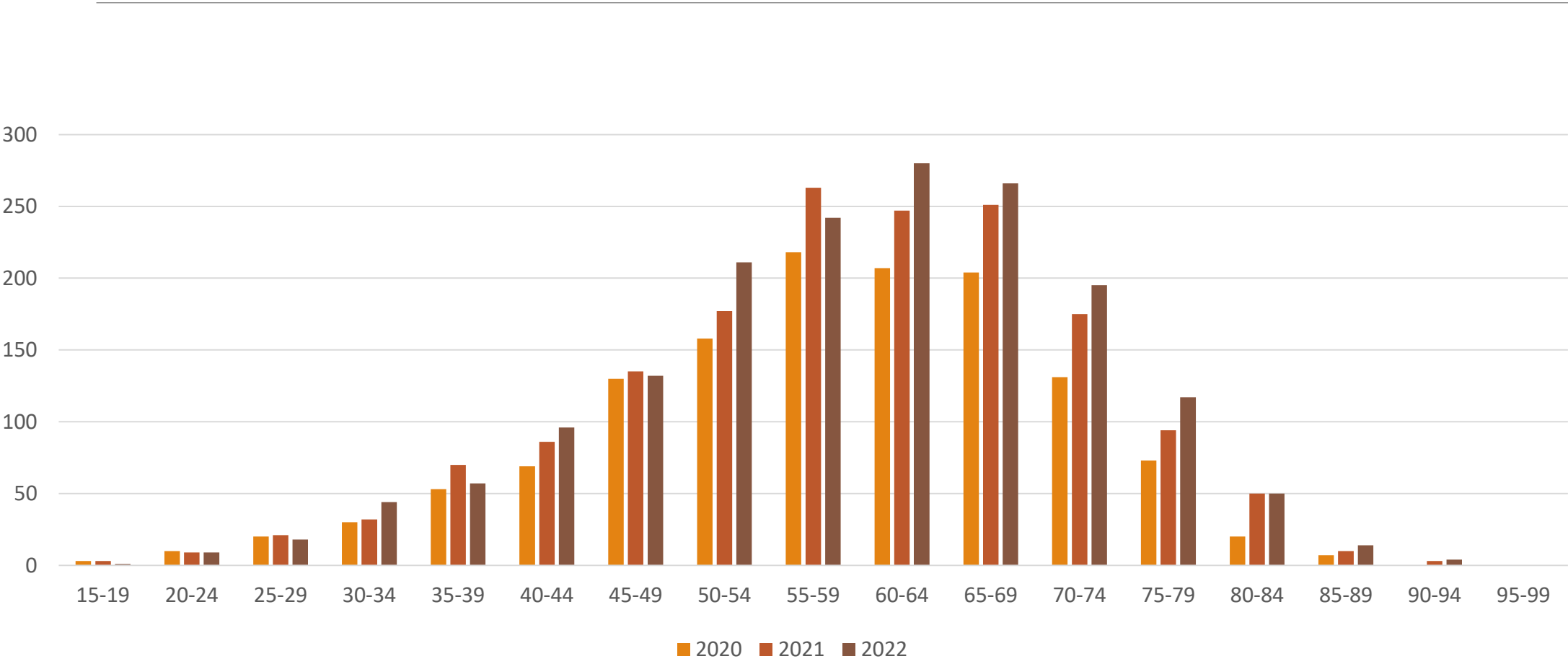
Comparative data of case distribution according to ICD 10 codes.

Breast cancer is the most common cancer in our clinic. The digestive system, follows in second place, due to a large number of organs involved.



Case distribution according to age groups

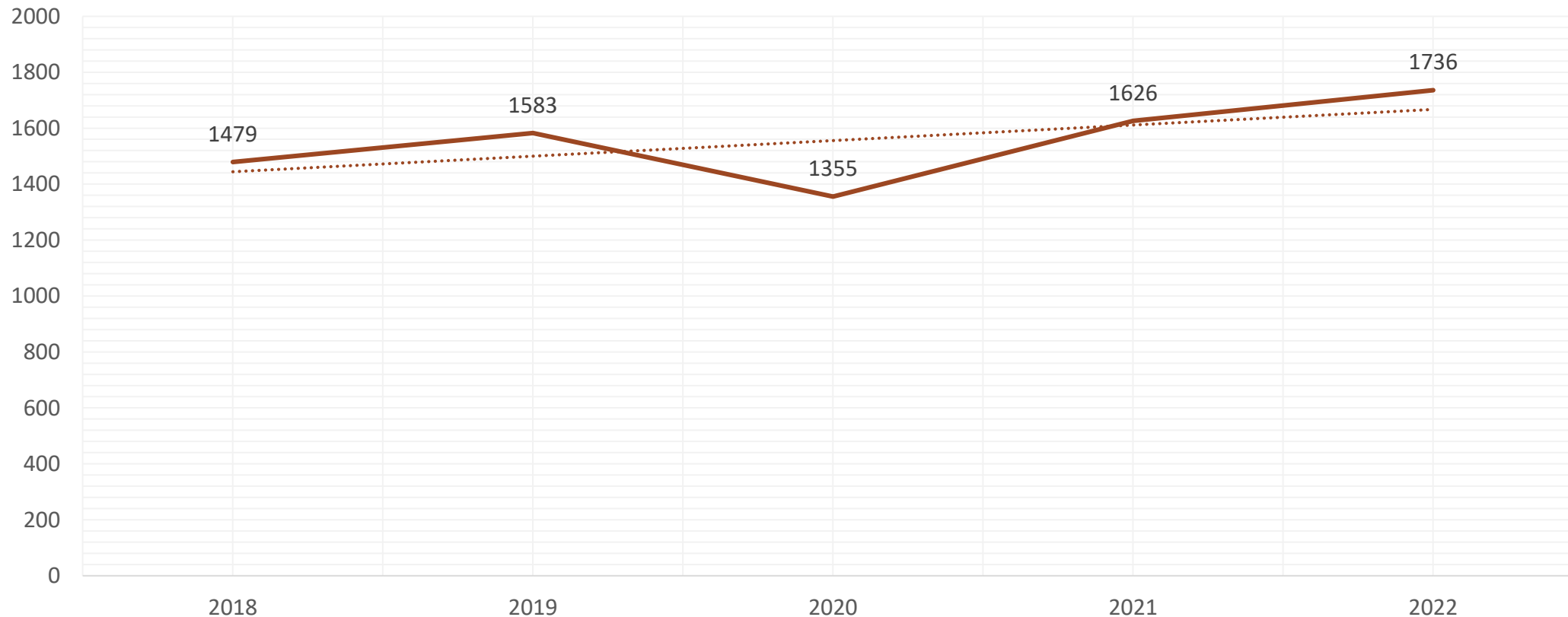
The most affected age groups are 60-64, 65-69 and 65-69.



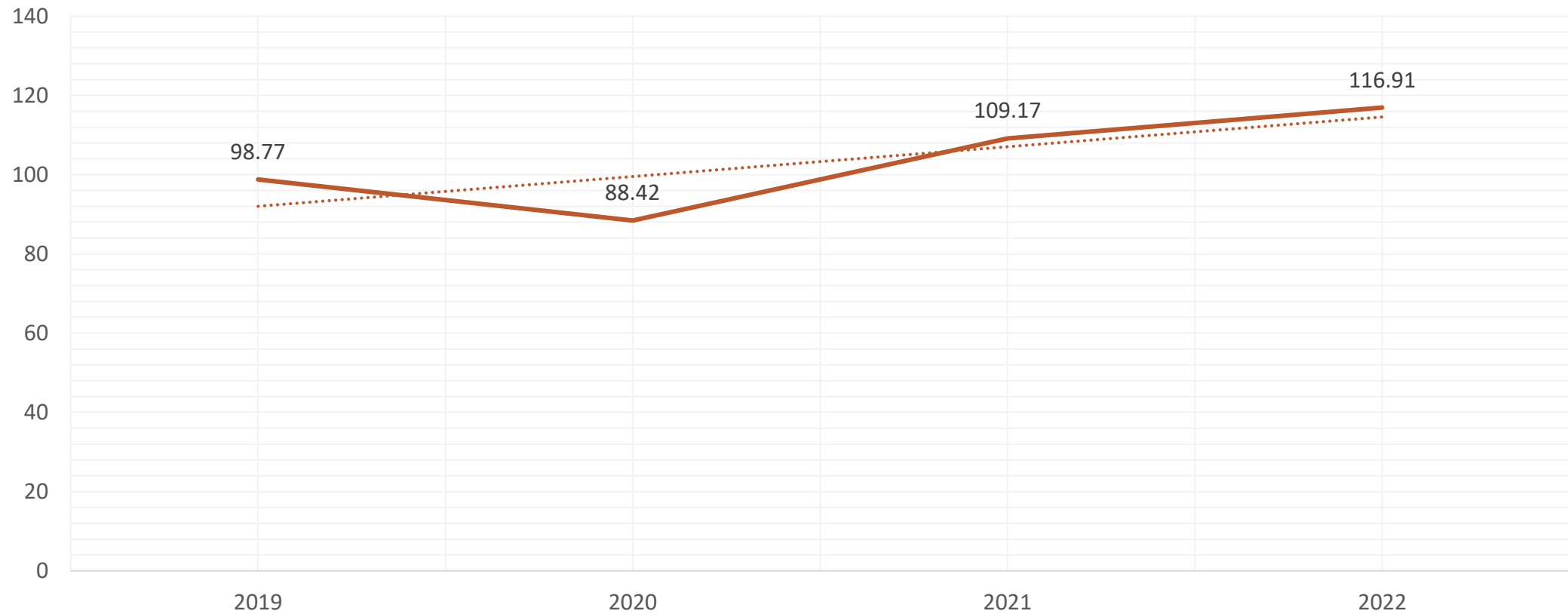
Total number of cases from 2018 to 2022

From data analysis there is a clear progressive trend of increased new cases per year.

In 2020 a decrease of new cases of 15% was observed. In the post pandemic years there is a rapid increase in new diagnosed cases.



A rapid increase in new diagnosed cases reflects the constant increasing trend of age standardized incidence rate (all cancers, both sexes, all ages).
Still Kosovo has the lowest incidence rate compared to other countries in Balkans.



Discussion

Based on our current understanding of low incidence rate, but with rapidly increasing trend and taking into account low median age of Kosovo population, we see an opportunity that with right policy, properly designed and implemented prevention & control campaigns we may be able to influence and slow down the negative trend.

In parallel, the effort must be supported with actions in other sectors to reduce risk factors such as pollution prevention and environmental remediation, access to clean water, and access to preventive healthcare services throughout Kosovo