Dynamics of colorectal cancer indicators in Kazakhstan

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Summary slide

Background. In 2020, 1 931 590 cases of colorectal cancer (CRC) were registered worldwide accounting for 10% of all cancer cases (gco.iarc.fr). According to American Cancer Society, the lifetime risk of developing colorectal cancer is about 1 in 23 (4.4%) for men and 1 in 25 (4.1%) for women.

Aim. To estimate the tendencies in CRC incidence in Kazakhstan.

Methods. The material of the study was the data of the Ministry of Health of Kazakhstan, concerning CRC (form 35). The retrospective study employed descriptive and analytical methods of epidemiology.

Research Results

- In 2009, 2364 people were registered with the first-ever diagnosis of CRC and the incidence (crude rate) was $14.37\pm0.30^0/_{0000}$. In 2018, 3218 new cases of CRC were registered (table), and the incidence increased to $16.87\pm0.30^0/_{0000}$ (t=5.890; p=0.000; T=+1.1%).

Table. CRC indicators in Kazakhstan, 2009-2018

Indicators	New cases	Morphologically verified	I-II stage	III-IV stage
2009	2364 (100.0%)	2023 (88.1%)	985 (42.9%)	1309 (57.0%)
2012	2766 (100.0%)	2505 (93.3%)	1308 (48.7%)	1375 (51.2%)
2015	3148 (100.0%)	2843 (95.3%)	1694 (56.8%)	1258 (42.2%)
2018	3218 (100.0%)	2951 (96.3%)	1935 (63.2%)	1120 (36.6%)

Research Results

The rate of morphological verification of CRC in the studied years increased from 88.1% in 2009 to 96.3% in 2018 (T=+1.1%). In the dynamics, the indicators of early diagnosis (I-II stage) increased from 42.9% (2009) to 63.2% in 2018, and the incidence of stage I-II in these years was $6.16\pm0.20^0/_{0000}$ and $10.66\pm0.24^0/_{0000}$ respectively (t=14.400; p=0.000; T=+4.7%). The incidence of stage III tended to slightly decrease from $5.79\pm0.19^0/_{0000}$ (2009) to $4.04\pm0.15^0/_{0000}$ in 2018 (t=7.230; p=0.000; T=−6.2%), and the incidence of stage IV in these years has amounted to $2.40\pm0.12^0/_{0000}$ and $2.13\pm0.11^0/_{0000}$, respectively (t=1.660; p=0.098; T=−3.1%).

Conclusions

The incidence rates of CRC in Kazakhstan tend to rise. However, the analysis of the collected data allows us to draw positive conclusions about improved diagnosis in country. Even though a colorectal cancer screening program already exists, thoughtful attention to early diagnosis must be paid.