

CHANGES IN INCIDENCE RATES AND MORTALITY IN PATIENTS WITH EXTRAHEPATIC CHOLANGIOCARCINOMA DIFFER AMONG RACES AND ETHNICITIES

Qi Yu, MD, Yi Jiang, MD, Oleg Shulik, MD, Sushil Ahlawat, MD

BACKGROUND: The incidence rates of colorectal cancer (CRC) in patients younger than 50 years (yrs) have increased since the 1970s or before, but present more frequently as distal CRC. This study seeks to elucidate the epidemiology of CRC anatomical distribution in these patients. **METHODS:** All persons with CRC recorded in the SEER 21 database from 2000-2016 were characterized according to age groups. Annual Percentage Change (APC) were calculated by fitting a least-squares regression line to the natural logarithm of the rates using the calendar year as a regressor variable, resulting in a linear model for which a Poisson distribution can be assumed. Total numbers of patients diagnosed with CRC were also downloaded and analyzed using comparison of proportions calculations. **RESULTS:** Between 2000-2016, for the age group of 15-49, the age-adjusted incidence rate of CRC increased by 2.912 per 100,000 with an APC of 1.873 ($p < 0.001$). The incidence rates and APC of patients aged 50 and above indicated statistically significant decrease (negative values, $p < 0.001$). Within the right colon (R) in the 15 – 49 age group, defined as transverse colon and regions proximal, the APCs of appendiceal CRC as well as CRC in the ascending and transverse colon, were 11.4, 1.4, and 0.924, respectively ($p < 0.001$). However, CRC in the cecum and at the hepatic flexure did not show significant APC changes. Starting from the descending colon, with left colon (L) as defined by regions splenic flexure and distal, the APC of CRC reflect increase in CRC incidence, between 1.5 and 2 for each region ($p < 0.001$). For >50 yrs, APC for CRC reflected significant decreases in all regions except the appendix. **CONCLUSION:** Although incidence rates of L CRC in patients <50 yrs are higher than R CRC, these patients are experiencing increased CRC incidences in regions all over the colon, as compared to >50 yrs.