

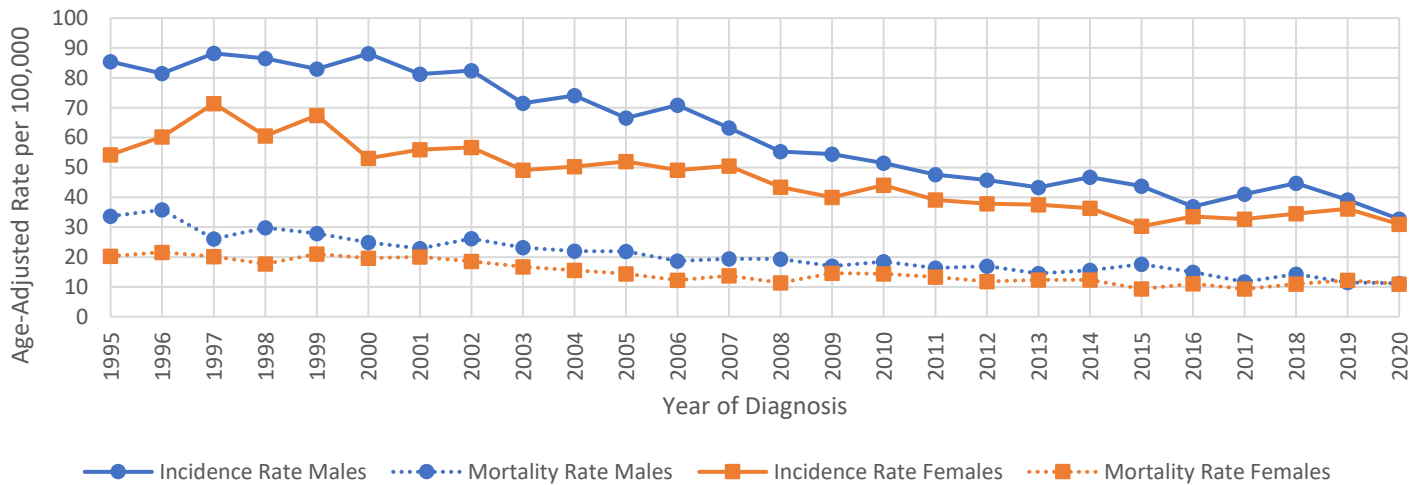
The Burden of Colorectal Cancer in Rhode Island

Prepared by the Rhode Island Cancer Registry (RICR), 2024

Colorectal Cancer Overview

Colorectal cancer is the fourth most common cancer diagnosed among Rhode Island males and females.^{1,2} It accounts for 7% of all new cancer cases and 8% of cancer-related deaths (2015-2019),^{1,2} though the age-adjusted rate of newly diagnosed colorectal cancers has steadily declined since 1995. In recent years, new case diagnoses (by age-adjusted rate) for both males and females were half of what they were in the late 1990s (**Figure 1**). The age-adjusted rate of colorectal cancer deaths in Rhode Island also decreased over the past decades, to around 11 deaths per 100,000 individuals for both males and females in 2020. Colorectal cancer incidence and mortality rates were typically higher among males than females from 1995-2020. A further decline in the incidence rate in 2020, compared to 2019, may be due to disrupted health services that reduced cancer screening and diagnosis during the COVID-19 pandemic.³

Figure 1. Trend of Colorectal Cancer Incidence and Mortality in Rhode Island, RICR 1995-2020



Rates are per 100,000 and age-adjusted to the 2000 US Standard Population (19 age groups – Census P25-1130).

The blue lines with circles in Figure 1 represent males while the orange lines with squares represent females. For both males and females, solid lines indicate incidence rates and dashed lines indicate mortality rates.

Racial Differences in Colorectal Cancer Incidence

In Rhode Island, non-Hispanic White individuals, who make up the largest population in the state, accounted for the majority of colorectal cancer cases from 2001-2020 (**Table 1**). The relative percentage of colorectal cancer cases among non-Hispanic White individuals decreased from 93% during 2001-2010 to 87% during 2011-2020. However, the proportion of cases among non-Hispanic Black, non-Hispanic Asian or Pacific Islander, and Hispanic individuals in Rhode Island increased slightly. There were fewer than 20 cases among non-Hispanic American Indian or Alaska Native individuals during each decade (2001-2010 and 2011-2020).

Table 1. Colorectal Cancer Cases in Rhode Island by Race/Ethnicity, RICR 2001-2020

Year	Non-Hispanic White	Non-Hispanic Black	Non-Hispanic American Indian or Alaska Native	Non-Hispanic Asian or Pacific Islander	Hispanic	Total*
2001-2010	5,860 (93%)	149 (2%)	<20 (<1%)	54 (1%)	207 (3%)	6,309
2011-2020	3,986 (87%)	154 (3%)	<20 (<1%)	85 (2%)	300 (7%)	4,604

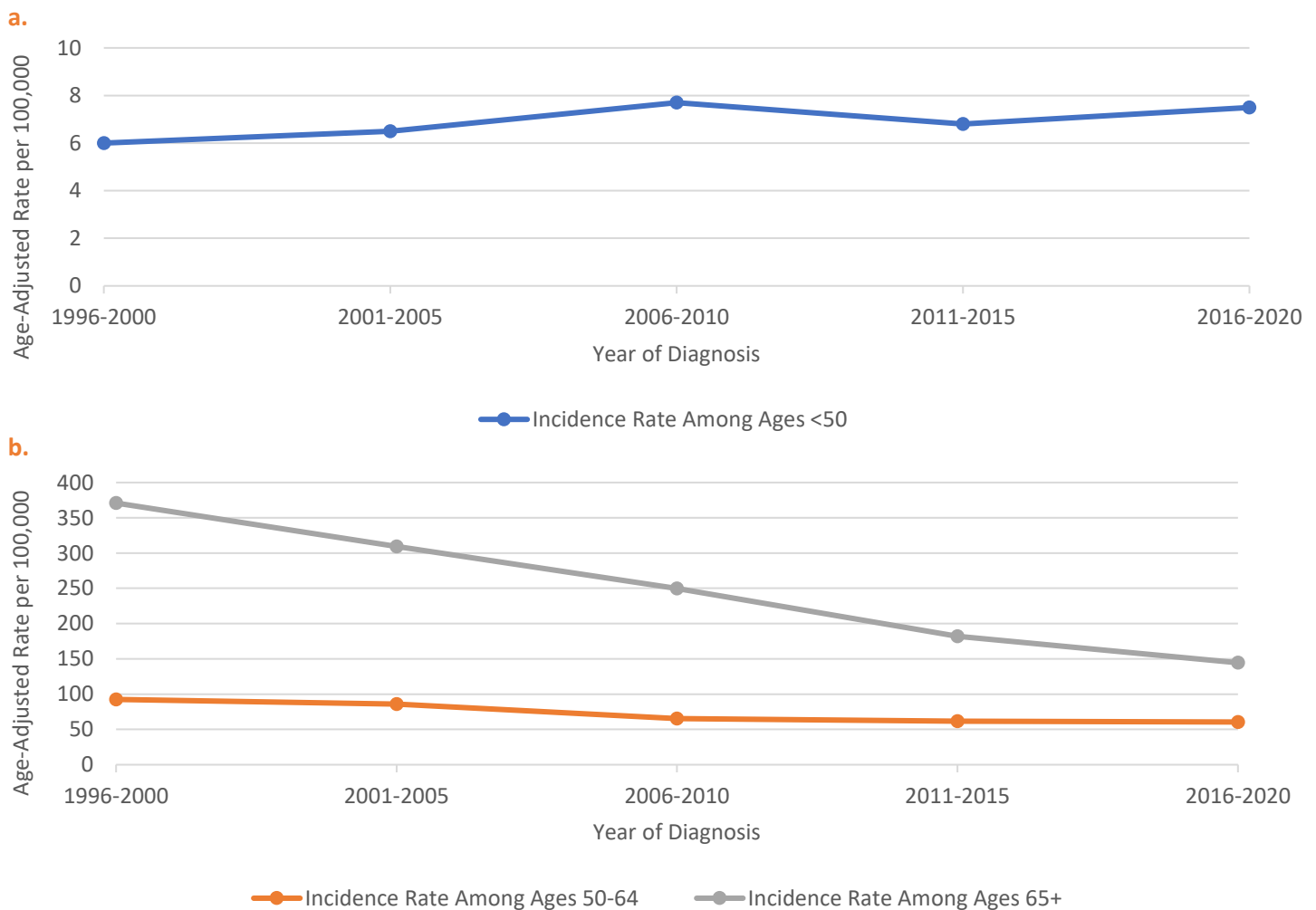
*All cell values do not add up to the total, due to missing or unknown information on race and ethnicity. There were 39 (1%) incident cases during 2001-2010 and 79 (2%) incident cases during 2011-2020 which had unknown information on race (non-Hispanic) but are included in the total. The total also excludes cells with a case count less than 20 due to unavailable data for counts less than 20. The table includes cases among both males and females in Rhode Island. Mortality data were not reported by these subgroups, due to the small population size in Rhode Island and thus small number of mortalities from colorectal cancer among racial and ethnic minorities.

Age and Staging of Colorectal Cancer Diagnosis

The risk of colorectal cancer development increases as individuals age.⁴ Colorectal cancer incidence rates from 1996-2020 in Rhode Island were higher among adults over 50 years old compared to adults younger than 50 years old, with the highest incidence rate among those ages 65 or older (**Figure 2**). The national median age at colorectal cancer diagnosis is 66 years for males and 69 years for females.⁵ Lifestyle factors that increase the risk of colorectal cancer include obesity, type 2 diabetes, a long-term diet high in red meats and processed meats, smoking, and alcohol consumption.⁴ According to national cancer statistics, colorectal cancer incidence is rising among younger adults under 50 years old.⁶

Among Rhode Island residents, trends were distinct in age-adjusted incidence rates when comparing individuals younger than 50 years old (<50) and those 50 years old or older (50+). The 5-year age-adjusted incidence rate of colorectal cancer among those <50 years old in Rhode Island remained between 6 and 7.7 cases per 100,000 individuals from 1996-2020 (**Figure 2a**). In contrast, the 5-year age-adjusted incidence rate among Rhode Islanders aged 50-64 years old has decreased since 1996 and hovered around 60 cases per 100,000 individuals from 2006-2020 (**Figure 2b**). Among those 65 years old or older, the 5-year age-adjusted incidence rate has steadily decreased from 370.9 cases per 100,000 individuals (1996-2000) to 144.5 cases per 100,000 individuals (2016-2020). More data will be collected over time to monitor these trends by age group and to compare to national trends.

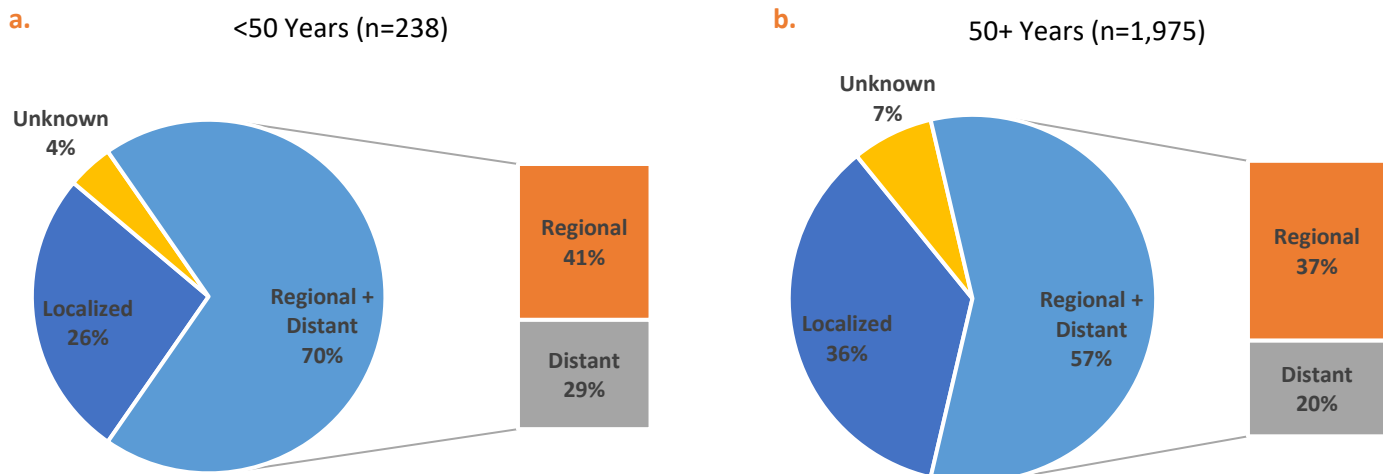
Figure 2. Colorectal Cancer Incidence by Age (<50 vs. 50+ Years Old) in Rhode Island, RICR 1996-2020 (5-Year Intervals)



The graphs above display age-adjusted incidence rates of colorectal cancer per 100,000 individuals among both males and females in Rhode Island. It compares age-adjusted incidence rates over time between individuals younger than 50 years old (0-49 years) (**Figure 2a**) and individuals 50 or older (**Figure 2b**).

Currently, colorectal cancer screening is recommended for average-risk adults ages 45 and older.⁷ This recommendation was recently updated in 2021 and resulted in the colorectal cancer screening age being lowered from 50 years old to 45 years old.⁷ Although effective screening measures have become more widely available and can often be covered by insurers, there remains a gap in colorectal cancer screening rates statewide. The screening rate in Rhode Island was 66.7% in 2020 for adults aged 50-75.⁸ When considering staging at diagnosis, over half of colorectal cancer cases were diagnosed at the regional or distant stages (2016-2020), after the cancer had spread from its original location. Specifically, patients younger than 50 years old presented with more advanced-stage (regional or distant stage) cancers (70%) more frequently compared with individuals 50+ years old (57%) (**Figure 3**).

Figure 3. Stage at Colorectal Cancer Diagnosis by Age in Rhode Island, RICR 2016-2020



For individuals <50 years old (0-49 years), 70% of cases were diagnosed in the regional or distant stages (**Figure 3a**). For individuals 50 or older, 57% of cases were diagnosed in the regional or distant stages (**Figure 3b**). Figure 3 includes cases among both males and females in Rhode Island.

Cancer staging terminology:⁹ In the localized stage, the cancer is confined to the primary site. In the regional stage, the cancer has spread directly beyond the primary site or to regional lymph nodes. In the distant stage, the cancer has spread to other organs or remote lymph nodes.

Colorectal cancer screening for individuals with above-average risk: Individuals with above-average risk are often advised by their providers to start screening earlier. Above-average risks may include personal history of colorectal cancer or certain types of polyps, family histories of (or close relatives diagnosed with) colorectal cancer, history of inflammatory bowel disease such as ulcerative colitis or Crohn’s disease, a confirmed or suspected hereditary colorectal cancer syndrome such as familial adenomatous polyposis (FAP) or Lynch syndrome (hereditary non-polyposis colon cancer), or history of radiation treatment of the abdomen or pelvic area (source: <https://www.cancer.org/cancer/colon-rectal-cancer/detection-diagnosis-staging/acs-recommendations.html>).

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