

Impact of Socioeconomic Status on Colorectal Cancer Survival in the United States: A Population-Based Study 2010–2018.

Abdul Rahman Al Armashi¹, Dina Elantably², Faris Hammad³, Anas Al Zubaidi⁴, Apoorva Krishna Chandar¹,
Kanchi Patell³, Francisco Somoza-Cano¹, Patil Balozian³, Mohamed Homeida³, Keyvan Ravakhah³, Akram Alkrekshi²

¹Seidman Cancer Center, University Hospitals, Cleveland, OH; ²Metrohealth Medical Center, Cleveland, OH; ³St. Vincent Charity Medical Center, Cleveland, OH; ⁴Johns Hopkins University, Baltimore, Maryland

BACKGROUND

- Colorectal cancer is the second leading cause of cancer-related deaths in the United States and worldwide. Disparities in cancer survival result from several variables, including socioeconomic, behavioral, and biological factors. The impact of socioeconomic status (SES) on colorectal cancer patient outcomes in the United States (US) needs identification.

METHODS

- We performed a database query into the Surveillance, Epidemiology, and End Results (SEER) Program 18 registry.
- Between 2010 and 2018, we included individuals diagnosed with colorectal cancer. The following SES data were gathered: race, insurance status, and marital status.
- We calculated the Cox proportional hazard model, logistic regression, and chi-square test using SPSS software, version 28.0 (IBM).

RESULTS

- We included 188,003 patients diagnosed with colorectal carcinoma between 2010 and 2018.
- In multivariable adjusted analyses, the mortality of patients who were uninsured or receiving Medicaid was statistically significantly higher than patients who were insured (Hazard ratio [HR] = 1.797, 95% confidence interval [CI]: 1.724-1.873, and HR= 1.597, 95% CI: 1.562-1.633, respectively).
- When compared to divorced, single, and widowed cohorts had a statistically significantly higher risk of death (HR = 1.123, 95% CI:1.090-1.157 and HR= 1.054, 95% CI: 1.022-1.087, respectively), while married cohorts had a better HR with a significant reduction of risk of death by 23.7%.
- On comparing race, mortality was statistically significantly lower in white than in black with HR= 0.876, 95% CI: 0.856-0.897.

Socioeconomic status contributed to the disparities in colorectal cancer survival in the US

Colorectal cancer mortality was higher in uninsured patients (80%) and Medicaid patients (60%) compared to insured patients

The mortality rate was 12.4% lower in the white than in the black population



For more information, scan the QR code, email abd.armashi@gmail.com, or on social media @aboude_armashi



or Tap with your phone here



TABLE 1

Covariates	HR (95% CI)	p-value
Insurance		
Insured	Reference	
Any Medicaid	1.597 (1.562-1.633)	<0.001
Insured/No specifics	1.206 (1.181-1.231)	<0.001
Uninsured	1.797 (1.724-1.873)	<0.001
Gender		
Female	Reference	
Male	1.202 (1.182-1.222)	<0.001
Marital status		
Divorced	Reference	
Married (including common law)	0.763 (0.743-0.784)	<0.001
Separated	1.006 (0.934-1.084)	0.875
Single (never married)	1.123 (1.090-1.157)	<0.001
Unmarried or Domestic Partner	0.919 (0.771-1.096)	0.349
Widowed	1.054 (1.022-1.087)	<0.001
Race		
Black	Reference	
White	0.876 (0.856-0.897)	<0.001

CONCLUSION

Insurance, marital, and racial SES variables contribute to the disparities in colorectal cancer survival in the US. Married and insured had the most favorable survival outcome, while uninsured and single had the lowest survival. Racial disparities were also evident as the risk of mortality was reduced by 12.4% in the white population compared to black. Socioeconomic attributes may affect cancer survival and at least partly explain the disparity between the black and white populations in the US.

