

# Distance from hospital impacts cancer diagnosis, survival in young adults

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Credit: AI-generated image ([disclaimer](#))

Adolescents and young adults living in rural versus metropolitan U.S. counties and those living farther from the hospital where they were diagnosed are more likely to be detected at a later cancer stage, when it is generally less treatable and have lower survival rates compared with those living in metropolitan counties and closer to the reporting hospital,

finds a new study from the Brown School at Washington University in St. Louis.

"A number of studies have indicated that place of residence can influence [cancer](#) survival; however, few studies have specifically focused on geographic factors and outcomes in adolescents and [young adults](#) (AYAs) with cancer," said Kimberly Johnson, associate professor and lead author of the paper "Associations between geographic residence and US adolescent and young adult cancer stage and survival," published in the journal *Cancer*.

Johnson and her co-authors examined National Cancer Database data on nearly 180,000 AYAs aged 15 to 39 years who were diagnosed with cancer from 2010-14. They determined residence in metro, urban or rural counties at the time of diagnosis using Rural-Urban Continuum Codes. Distance between the patient's residence and the reporting hospital was classified as short (less than 12.5 miles), intermediate (between 12.5 and 50 miles) or long (more than 50 miles).

Odds of a late-stage diagnosis were found to be 1.16 times greater for AYAs living in rural counties and 1.2 times greater for AYAs living at long versus short distances from the reporting hospital. The rate of death was 1.17 times greater for those living in rural versus metro counties and 1.30 times greater for long versus [short distances](#) to the reporting hospital.

"Hopefully, this research will draw attention to geographic disparities in AYA [cancer survival](#)," Johnson said. "It will be important to conduct further research to understand the mechanisms for these findings and to develop interventions to address these disparities."

**More information:** Kimberly J. Johnson et al, Associations between geographic residence and US adolescent and young adult cancer stage

and survival, *Cancer* (2021). [DOI: 10.1002/cncr.33667](https://doi.org/10.1002/cncr.33667)

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