# Does ethnicity play a role in survival from brain tumors?

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White British people who have been diagnosed with a malignant primary brain tumor appear to be more likely to die within one year than patients from at least four other ethnic groups according to a study presented at the NCRI Festival.

The study, which is the first of its kind looking at the impact of ethnicity on brain tumor survival, found that people who were categorised as 'other ethnic' were 30% less likely to die within one year than white British people. The results also showed that patients from three other ethnic categories had a decreased risk of death when compared to white British patients—16% for Indian, 17% for other white and 19% for unknown.

Ms Hiba Wanis (MPhil), a Ph.D. student and research assistant within the Centre for Cancer, Society & Public Health at King's College London, UK, who presented the research, found that brain tumors were diagnosed more often in white British people, but even so, a higher percentage died within one year than people from other ethnic groups. For example, between 2012 and 2017 a total of 13,339 white British people died from brain tumors, representing 64% of these patients. This compares with 19 people of Bangladeshi origin (63%), 166 (52%) of Indian origin, 533 (52%) of other white origin, 95 (51%) of Pakistani origin, and 280 (41.5%) of other ethnic group.

Researchers hope that the outcomes from this analysis will help doctors provide relevant and accurate information on a patient's prognosis, and

also allow patients to understand why they could be at a higher or lower risk of survival than other groups of people.

Ms Wanis looked at data from 24,319 adult patients living in England, who had been diagnosed with a malignant primary brain tumor between 2012 and 2017, and she calculated the risk of death for white British, any other white (includes any other white and white Irish), other ethnic (includes all mixed ethnic groups and any other ethnic groups), Indian, Pakistani, Bangladeshi, Chinese, black African and black Caribbean patients, up to one year following diagnoses.

She was particularly interested in this area of research as previously it has not been explored in great detail.

"Brain tumors are under-researched compared to other cancers, and until now, no study has investigated the impact of a person's ethnicity on brain tumor survival using information on patients in the whole of England" she said.

"The improved and detailed cancer data captured by the National Disease Registration Service now within NHS Digital provided a good opportunity to explore the impact of varied ethnic groups on brain tumor survival for the whole of England."

While the results of this study show a correlation between ethnicity and survival rates, there are other factors to consider that may play a role.

Ms Wanis said: "It is probably too early to speculate on what may lie behind these differences, but a number of factors may be involved. These include how early people ask their doctors about symptoms, how early in the disease a diagnosis is made, better reporting, lifestyle and cultural factors, deprivation, tumor characteristics and behaviour, and treatment options."

Ms Wanis is discussing with colleagues how they can investigate these factors in more detail, and work closely with patient representatives to collect additional data to explore survival differences further, including understanding the accuracy of death registration for patients from ethnic minority groups compared to others.

She added: "These findings inform investigations of whether death is equally well-reported between the different groups, or whether better prognostic factors are operating to improve survival."

Collaborators on this study include the National Disease Registration Service, Dr. Elizabeth Davies, clinical reader and head of the Centre for Cancer, Society & Public Health at King's College London, Professor Henrik Møller, emeritus professor of cancer epidemiology, and Professor Keyoumars Ashkan, professor of neurosurgery and lead for neuro-oncology, both at King's College Hospital.

Michael Jenkinson, Chair of the NCRI Brain Group and Professor of Neurosurgery and Surgical Trials at the University of Liverpool, UK, who is not involved with the research, said: "This new study is not only the first to investigate the impact of ethnicity on brain tumor survival but also the first to consider the different types of brain tumors across patients in England. As the quantity and quality of data has significantly improved in recent years, the researchers have been able to carry out a detailed analysis, and the results help to fill in the gaps in what is currently an under-researched area of cancer. However, further research is needed to consider other factors that may play a role in these differences such as a patient's lifestyle and how early they received their diagnosis. Once explored further, the findings could be vital for doctors to provide appropriate information to patients on their prognosis."

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