EUROPEAN COUNTRIES – POPULATION-BASED RESULTS FROM THE EUROCARE-6 PROJECT
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BACKGROUND: Survival outcomes of pediatric central nervous system (CNS) tumors have been reported to vary largely across countries and regions in Europe. This is the first time the EUROCARE-6 database was used to study survival outcomes for clinically relevant groups of pediatric CNS tumors in Europe. METHODS: Survival data of 14,689 children (<15 years) diagnosed with a CNS tumor between 2008 and 2013 from 31 European countries was analyzed. Multivariable cox regression model was used to compare adjusted risks of dying (HR) from major groups of CNS tumors between countries using Germany as reference. RESULTS: Five-year observed survival (OS) of low-grade gliomas (LGGs) for most countries was >90%. Three countries with comparable hazard ratios (2.6-2.7) showed to have a significantly higher risk of dying compared to Germany. Large variation in survival was seen for high-grade gliomas (HGGs); 0%-70%. When analyzing HGGs, six countries had a significantly higher risk of dying with hazard ratios ranging from 1.2 to 4.2. When excluding malignant gliomas, NOS (ICD-O-M9380/3) from the HGGs the risk of dying became comparable for two out of the six countries. For HGGs, only one country had a significant lower risk of dying. For Medulloblastomas, 5-year OS within the majority of countries ranged between 40-70% but with some countries having no patients surviving their disease. Seven countries had significantly worse survival outcomes with hazard ratios ranging from 1.5-3.2. No countries were found to have better survival outcomes. CONCLUSIONS: This population-based study provides an insightful comparison of survival from CNS tumors in children between European countries corrected for potential incompleteness of non-malignant CNS tumors and misclassification of NOS tumors. Survival disparities were still seen for all tumor groups.

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