

Thirty day mortality

Thirty-day [mortality](#) is increasingly a reference metric regarding surgical [outcomes](#).

Data estimate a 30-day mortality rate of 1.4-2.7% after [craniotomy](#) for [pediatric central nervous system tumor](#). No detailed analysis of short-term mortality following a diagnostic neurosurgical procedure (e.g., resection or tissue biopsy) for tumor in the US pediatric population has been conducted.

The Surveillance, Epidemiology and End Results (SEER) data sets identified patients ≤ 21 years who underwent a diagnostic neurosurgical procedure for primary intracranial tumor from 2004 to 2011. One- and two-month mortality was estimated. Standard statistical methods estimated associations between independent variables and mortality.

A total of 5533 patients met criteria for inclusion. Death occurred within the calendar month of surgery in 64 patients (1.16%) and by the conclusion of the calendar month following surgery in 95 patients (1.72%). Within the first calendar month, patients < 1 year of age ($n = 318$) had a risk of death of 5.66%, while those from 1 to 21 years ($n = 5215$) had a risk of 0.88% ($p < 0.0001$). By the end of the calendar month following surgery, patients < 1 year ($n = 318$) had a risk of death of 7.23%, while those from 1 to 21 years ($n = 5215$) had a risk of 1.38% ($p < 0.0001$). Children < 1 year at diagnosis were more likely to harbor a high-grade lesion than older children (OR 1.9, 95% CI 1.5-2.4).

In the SEER data sets, the risk of death within 30 days of a diagnostic neurosurgical procedure for a primary pediatric brain tumor is between 1.16% and 1.72%, consistent with contemporary data from European populations. The risk of mortality in infants is considerably higher, between 5.66% and 7.23%, and they harbor more aggressive lesions ¹⁾.

¹⁾

Hankinson TC, Dudley RW, Torok MR, Patibandla MR, Dorris K, Poonia S, Wilkinson CC, Bruny JL, Handler MH, Liu AK. Short-term mortality following surgical procedures for the diagnosis of pediatric brain tumors: outcome analysis in 5533 children from SEER, 2004-2011. J Neurosurg Pediatr. 2016 Mar;17(3):289-97. doi: 10.3171/2015.7.PEDS15224. Epub 2015 Nov 20. PubMed PMID: 26588456.

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