



FULL TEXT LINKS



> [J Clin Oncol](#). 2023 Jan 25;JCO2202466. doi: 10.1200/JCO.22.02466. Online ahead of print.

The Burden of Surviving Childhood Medulloblastoma: A Population-Based, Matched Cohort Study in Ontario, Canada

Hallie Coltin ^{1 2 3}, Priscila Pequeno ⁴, Ning Liu ^{4 5}, Derek S Tsang ⁶, Sumit Gupta ^{1 3}, Michael D Taylor ^{2 7}, Eric Bouffet ¹, Paul C Nathan ^{1 4}, Vijay Ramaswamy ^{1 2 8}

Affiliations

PMID: 36696605 DOI: [10.1200/JCO.22.02466](#)

Abstract

Purpose: Survivors of childhood medulloblastoma suffer from substantial late effects. We characterized these sequelae using real-world health services data in a population-based cohort of medulloblastoma survivors.

Methods: All 5-year medulloblastoma survivors diagnosed age < 18 years between 1987 and 2015 in Ontario, Canada, were identified and matched 1:5 with population controls. Index date was 5 years from latest pediatric cancer event. Linkage to provincial administrative health data allowed for comparison of cumulative incidences of several adverse outcomes.

Results: Two hundred thirty survivors, 81.3% of whom had received craniospinal irradiation, were matched with 1,150 controls. The 10-year postindex cumulative incidence of all-cause mortality was 7.9% (95% CI, 3.9 to 11.8) in survivors versus 0.6% (95% CI, 0.1 to 1.1) in controls (hazard ratio [HR], 21.5; 95% CI, 9.8 to 54.0). The cumulative incidence of stroke was higher in survivors (4.8%; 95% CI, 2.2 to 9.0) compared with controls (0.1; 95% CI, 0.01 to 0.7; HR, 45.6; 95% CI, 12.8 to 289.8). Hearing loss requiring an amplification device was present in 24.9% (95% CI, 18.8 to 31.4) of survivors versus 0.3% (95% CI, 0.1 to 1.0) of controls (HR, 96.3; 95% CI, 39.7 to 317.3). Disability support prescription claims were submitted by 44.5% (95% CI, 37.1 to 51.6) of survivors versus 5.5% (95% CI, 4.2 to 7.1) of controls (HR, 10.0; 95% CI, 7.3 to 13.6). Female survivors were significantly less likely to deliver a liveborn child compared with controls (HR, 0.2; 95% CI, 0.1 to 0.7).

Conclusion: Survivors of medulloblastoma have significant long-term medical sequelae, increased all-cause mortality, and are frequently dependent on disability supports. Efforts to reduce the toxicity of current therapy, specifically incorporating molecularly informed risk stratification to spare low- and intermediate-risk survivors the toxicity of treatment, are urgently needed. These findings should prompt a re-evaluation of our current treatment approaches where research focused on late-effect interventions should be prioritized.

LinkOut – more resources

Full Text Sources

[Atypon](#)