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NURS-08. CLINICAL MANAGEMENT OF PATIENTS RECEIVING CAR T CELL THERAPY FOR CNS TUMORS: FIVE YEAR UPDATE
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BACKGROUND: Chimeric antigen receptor (CAR) T cells are an innovative new therapy with proven efficacy in some pediatric cancers such as leukemia and lymphoma, but there has been less experience in solid tumors, especially tumors of the central nervous system (CNS). Seattle Children’s Hospital (SCH) has opened a total of four phase 1 CAR T cell studies for recurrent/refractory CNS tumors and DIPG. These include BrainChild-01; targeting HER2, BrainChild-02; targeting EGFR, BrainChild-03; targeting B7-H3, and BrainChild-04; targeting B7-H3, EGFR, HER2, and IL13-zetakine (QUAD). As of February 2024, 103 patients have been treated at SCH with CAR T cells infused on a weekly to bi-weekly schedule through indwelling catheters into the tumor resection cavity or ventricular system. APPs provide much of the day-to-day care of these patients and have learned best management practices for these patients. METHOD: Given the scrutiny of clinical care needed for Phase 1 studies, we are now able to report detailed clinical information around management of patients receiving CNS immunotherapy that we have learned during the treatment of these patients over the past five years. RESULTS: Clinical care includes the judicious use of steroids, clinical support of each patient’s symptoms, and management of Ommaya catheters and reservoirs. Additionally, providing psychosocial support is essential for families who travel long distances to receive this therapy compounded by the many emotional components of being enrolled on any Phase 1 trial. CONCLUSION: Case studies will be provided and discussed to provide the most up-to-date management of patients receiving CNS Immunotherapy. With now over 550 CAR T cell infusions completed, our discussion will provide recommendations for management of side effects from CAR T cell therapy and discuss clinical standard around accessing Ommaya catheters and shunt reservoirs for immunotherapy infusions.