BACKGROUND: Primary intracranial germ cell tumors (GCTs) are rare heterogeneous tumors; germinoma accounts for two-thirds of cases. While neoadjuvant chemotherapy followed by response-based reduced radiation therapy dose and field is the established approach for managing localized CNS germinomas, controversy persists regarding the treatment of primary metastatic disease. Additionally, limited research exists on the utilization of neoadjuvant chemotherapy in primary metastatic germinoma. METHODS: A retrospective multi-institutional analysis was conducted to assess overall survival (OS) and event-free survival (EFS) among patients diagnosed with metastatic germinoma who were treated with various modalities. RESULTS: We identified 88 patients, including 63 males and 25 females. The median age at presentation was 13.5 years. All patients, who had undergone both brain and spine MRIs, had their diagnoses confirmed through a biopsy, positive CSF cytology, and/or positive CSF tumor markers at presentation. Primary Tumor location was pineal (n=37), suprasellar (n=27), bifocal (n=14) and others (n=9). Eight patients underwent subtotal resection. Craniospinal irradiation (CSI; 21-24 Gy) was administered to 71 patients (81%), while eight patients (9%) received whole ventricular irradiation (WVI; 23.4-30 Gy). Whole brain radiation was given to four patients (5%; 24 Gy), and two patients (2%) had unknown fields. Boosts to primary and/or metastatic sites were administered in all but seven patients. Notably, thirty patients (34%) received CSI without neoadjuvant chemotherapy. At the end of therapy, 69 patients had complete response, 10 partial response and the response was unknown in six. Three patients did not receive irradiation, all died of disease progression. The median follow-up was 64 months (range 6-159 months), yielding an OS of 96.6%. Ongoing multi-institutional data collection and analysis will be presented at the meeting. CONCLUSION: Our study is one of the largest studies to date in metastatic germinoma and may provide insight into the role of neoadjuvant chemotherapy with lower CSI doses.