Conclusion: Stereotactic reirradiation with CyberKnife for recurrent brain metastases, seems to be a safe and effective approach in selected patients. However, in the absence of prospective trials, no recommendation can be strongly established.

Purpose or Objective: Thalamic tumors represent 5.2% of all intracranial tumors and are typically diagnosed in the pediatric population. These tumors arise from glial cells with an aggressive behavior and a high grade histology. They have a poor prognosis. The aim of this study was to find new approaches for defining the clinical target volume for these tumors.

Material and Methods: Clinical data were collected from archived files of 30 patients diagnosed with thalamic gliomas based on pathologic and radiologic criteria.

Results: Three patterns of tumor spread were found. The first pattern followed the thalamic tributaries of the posterior part of the internal cerebral veins. These were the anterior and superior thalamic veins. For the second pattern posterior part of the internal cerebral veins. These were the first pattern followed the thalamic tributaries of the spread across the midline tumors could also spread along the close proximity of the internal cerebral vein branches of the basal vein of Rosenthal.

Conclusion: Thalamic gliomas spread upon the peritumoral architecture of the periventricular/subglial Scherer structures and this knowledge should be used for redefining the clinical target volume for radiation therapy in thalamic gliomas.