Figure 3: Contrast-enhanced T1-weighted MRI of representative glioblastoma patient and \(^{18}\text{F}\)-labeled BPA-PET image after initial debulking surgery. The patients received \(^{18}\text{F}\)-BPA-PET to assess the distribution of BPA and to estimate the boron concentration in tumors before BNCT without direct determination of boron concentration in the tumor. The lesion to normal brain (L/N) ratio of the enhanced tumor was 7.8 in this case. Note that even the periphery of the main mass, i.e., the infiltrative portion of the tumor, showed BPA uptake. The L/N ratio of BPA uptake can be estimated from this study and dose planning was done according to this L/N ratio, and if the L/N ratio was more than 2.5, then BNCT was initiated. \(^{18}\text{F}\)-BPA-PET accurate BPA provided an accurate estimate of the accumulation and distribution of BPA as previously reported [82, 83].