

The brain is the managing center and is accountable for the execution of all activities throughout the human body. Formation of tumor in brain can threaten the human life directly. The early diagnosis of brain tumor will increase the patient's survival rate. Among the number of imaging modalities, Magnetic resonance (MR) imaging is extensively used by physicians in order to decide the existence of tumors or the specification of the tumors.¹ Magnetic resonance imaging (MRI) contrast agents plays a vital role in diagnosing diseases. This increases the demands for new MRI contrast agents, with an improved sensitivity and superior functionalities. A contrast agent (or contrast medium) is a substance used to increase the contrast of structures or fluids within the body in medical imaging. In the proposed work, the contrast enhanced MRI images are used for analysis. There are four different types of MRI modalities such as T1, T1c, T2 and FLAIR. Fig 1 shows four different types of MRI modalities. These different MRI modalities generate different types of tissue contrast images. Thus it provides valuable information of tumor structure and enabling diagnosis and segmentation of tumors along with their sub regions. Some of the primary brain tumors are Gliomas, Meningiomas, Pituitary tumors, Pineal gland tumors, ependymomas. Gliomas are tumors that develop from glial cells.

