Gliomas are slow growing tumors that arise from glial cells in the central nervous system. The tumors tend to grow near white matter tracts and cause a variety of symptoms depending on their location. Treatment is usually surgical.

A patient with a left frontal glioma measuring 2.2 cm\(^3\) is undergoing preoperative planning. The surgeon has requested diffusion tensor imaging and BOLD fMRI to locate the tumor. Anatomic imaging shows that its borders are:

- Posterior: left precentral sulcus
- Lateral: left superior frontal sulcus
- Medial: longitudinal fissure

1. Indicate the location of the tumor and label its borders on the figure below.

![Brain Diagram](image)

2. Diffusion tensor imaging indicated the superior frontal gyrus lesion is compressing the left corticospinal tract. What is the function of this tract? What is its path?

3. The surgeon determines this tumor is located in cortex and subcortical white matter of the left posterior supplemental motor area. What symptoms would you expect a patient with this tumor to present?