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INTRODUCTION

We present the case of a 53 year old male diagnosed with glioblastoma multiforme (GBM) and his eventual decision for only osteopathic manipulative treatment (OMT). A GBM is a fast-growing tumor of astrocyte cells in the central nervous system.¹ To date, no studies have incorporated OMT in GBM management. Targeted OMT for somatic dysfunction is known to have systemic benefits, and here we evaluate its influence on visceral complaints in terminal malignancy.

CASE

Initial presentation to the emergency department on 08/21/21 was suspicious for seizure or stroke, with magnetic resonance imaging of the head performed 8/28/21 (Figure 1) supporting a diagnosis of GBM. Chemoradiation with Temozolomide was implemented 10/06/21 - 11/24/21, followed by adjuvant treatment using Temozolomide from 12/15/21 - 04/19/22. The patient lost appetite for food during this treatment, and reduced eating led to a decrease in weight from 210 pounds on 08/21/21 to 156 lbs during the first OMT on 04/19/22.

Figure 1: Patient MRI demonstrating ring-enhancing lesion from 8/28/21

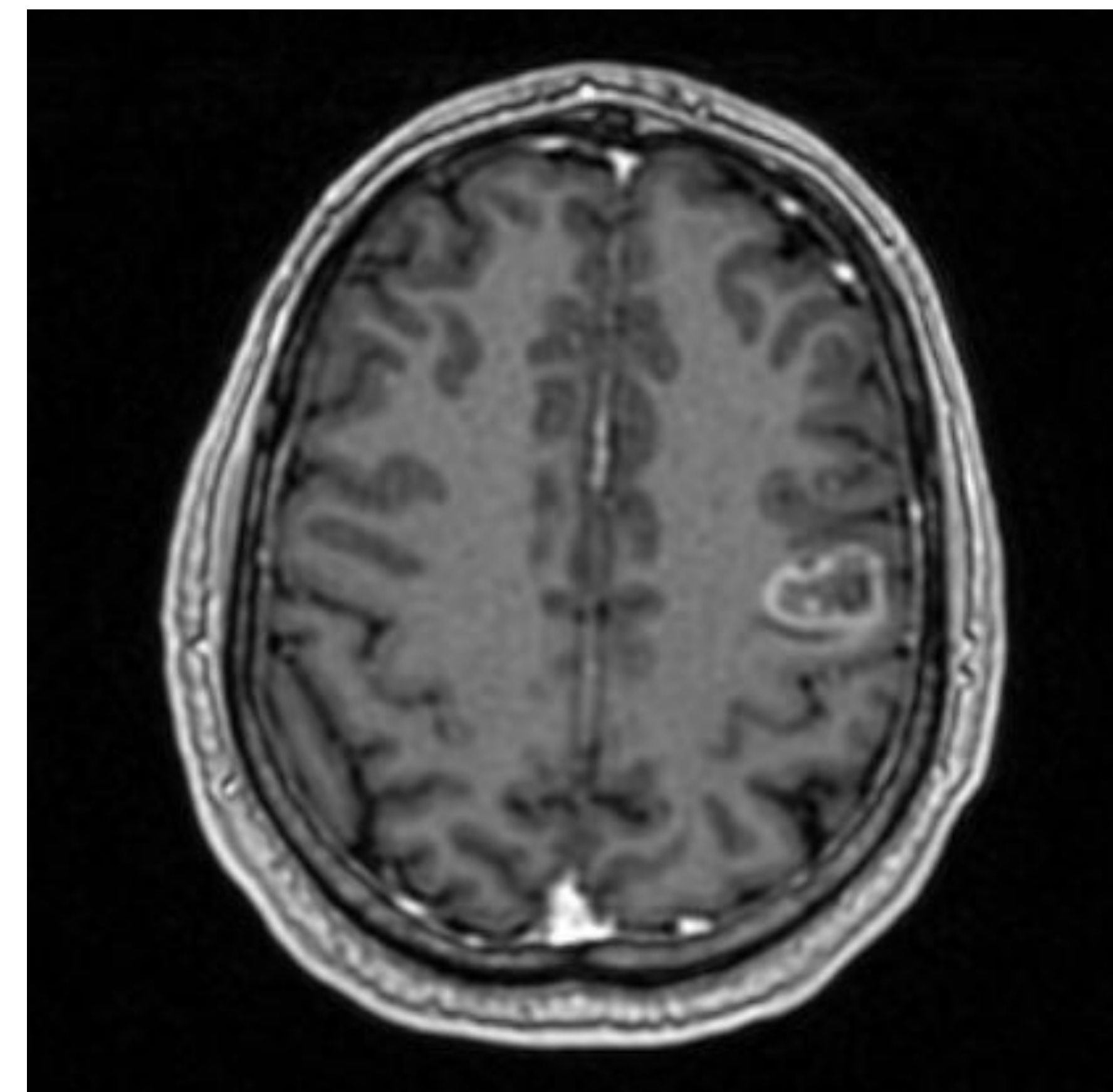
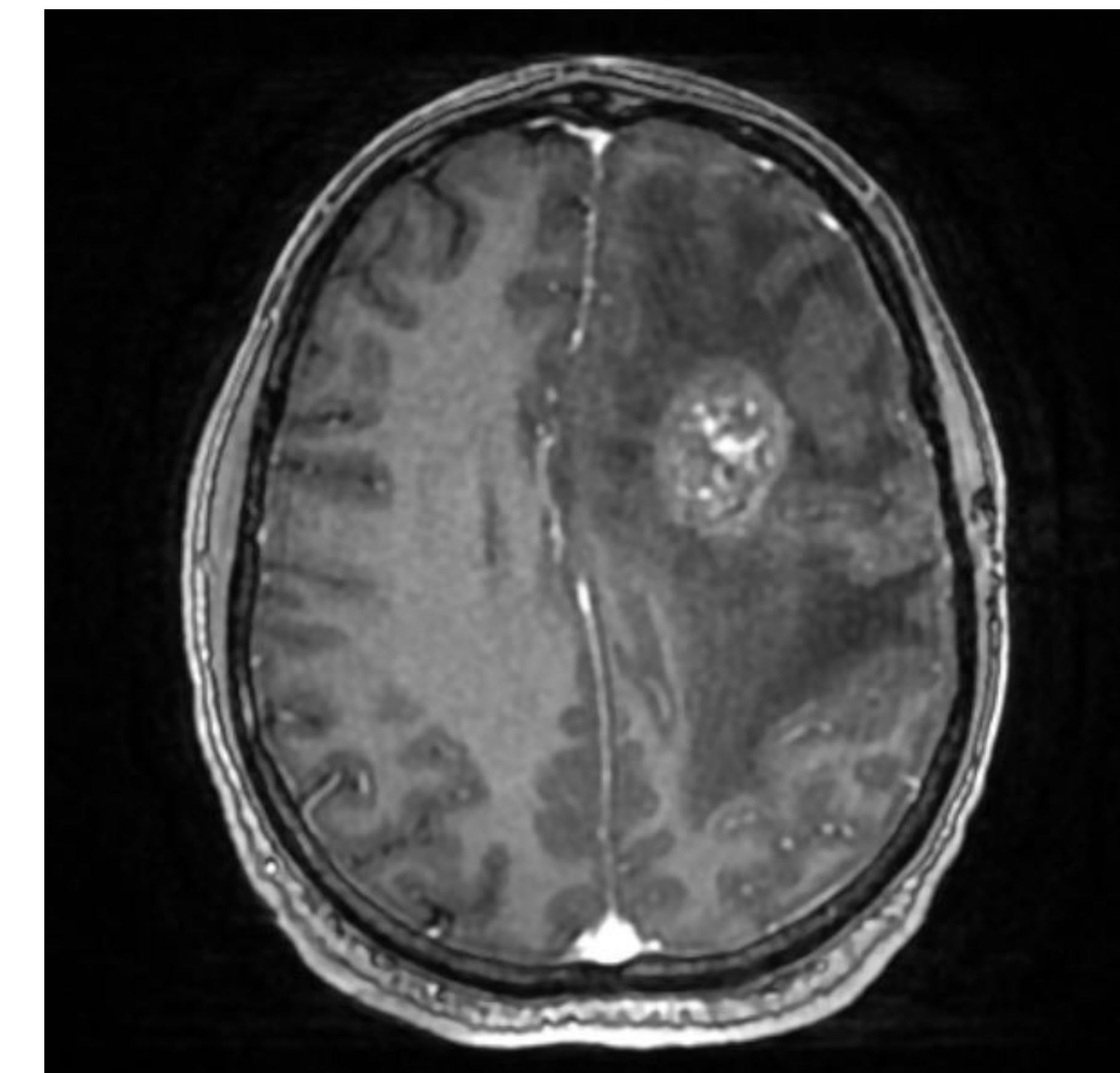


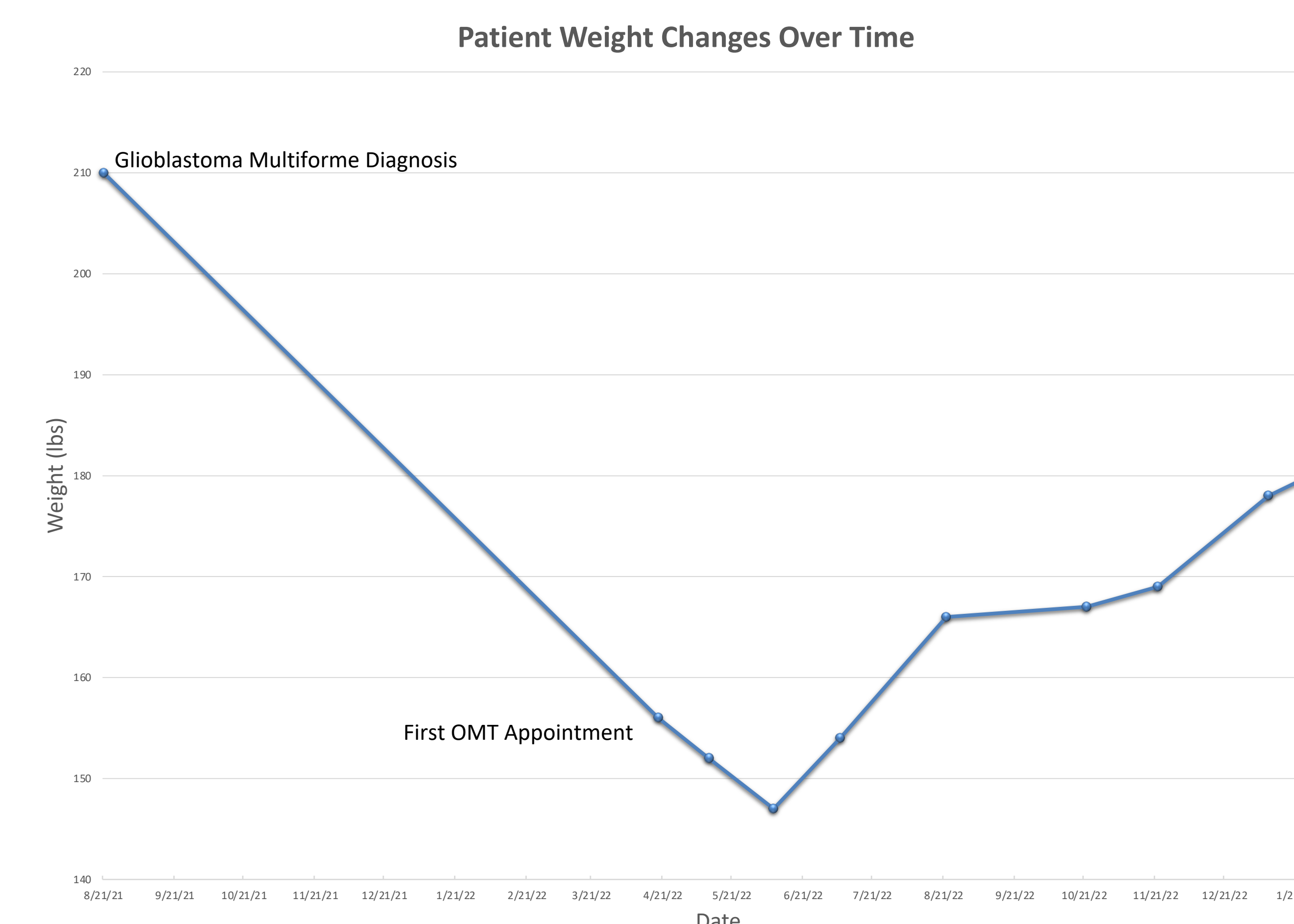
Figure 2: Patient MRI demonstrating ring-enhancing lesion from 12/19/22



RESULTS

Despite therapy, imaging on 04/11/22 demonstrated tumor enlargement. Given disease progression, the patient elected to discontinue radiation and pharmaceutical therapies. Therefore, the patient's only medical treatment from 4/19/22 to 2/6/23 was OMT consisting of visceral manipulation, myofascial release, soft tissue, and lymphatic techniques directed to the celiac, superior mesenteric, and inferior mesenteric ganglia. Figure 2 from 12/19/22 demonstrates further progression of GBM. Appointment weights in pounds were 152, 147, 154, 166, 167, 169, 178, 180, and 182 at one-month follow-ups. As this is the first known case of GBM management with OMT, there is a lack of comparative literature to this patient outcome. This weight gain demonstrates the effect of OMT in promoting appetite and feelings of wellness.

Figure 3: Patient weight changes over time with identified times of diagnosis (8/28/21) and first OMT appointment (4/19/22)



DISCUSSION

The patient endorses increased appetite, alleviation of stomach cramping, and weight gain following OMT sessions. Our study did not have comparison to patients who continued cancer treatment in conjunction with OMT. Future research may incorporate a retrospective case review. A possible limitation of this case is the patient's prior aversion to certain foods which may have been solely psychogenic. This case supports the use of OMT techniques to promote appetite and improve patient-reported wellness in a patient with GBM.

REFERENCES

1. Glioblastoma (GBM) - american brain tumor association: Learn more. American Brain Tumor Association. https://www.abta.org/tumor_types/glioblastoma-gbm/. Published October 4, 2022. Accessed January 2, 2023.

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