A healthy 26-year-old white man presented with a several-week history of fevers and a painful swelling in the left side of his neck. He denied having dysphagia, dyspnea, or dysphonia. He did state that he had lost a filling from one of his teeth before the onset of symptoms. His medical history was otherwise remarkable for a 13 pack-year history of smoking. Physical examination revealed erythema, swelling, and induration of the left side of the neck, extending from the submental area inferiorly to the ipsilateral clavicular region. On inspection of the oropharynx, mucopurulence was noted at the left third molar. Laboratory analysis demonstrated a mild elevation in the white blood cell count. Blood cultures yielded anaerobic gram-negative rods. Computed tomography (CT) of the neck showed an abscess lateral to the left carotid sheath, extending superiorly into the jugular foramen and inferiorly to the superior mediastinum.

The patient underwent incision and drainage of the left neck abscess. Initial broad-spectrum antibiotic therapy was tailored to culture results. Initial improvement was seen, with diminution of preoperative symptoms and signs. However, by postoperative day 5, the fevers and leukocytosis recurred, while increased purulence could be expressed from the wound. Another CT scan, followed by magnetic resonance imaging (Figure 1 and Figure 2), was performed.

What is your diagnosis?