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A Painful Gluteal Mass

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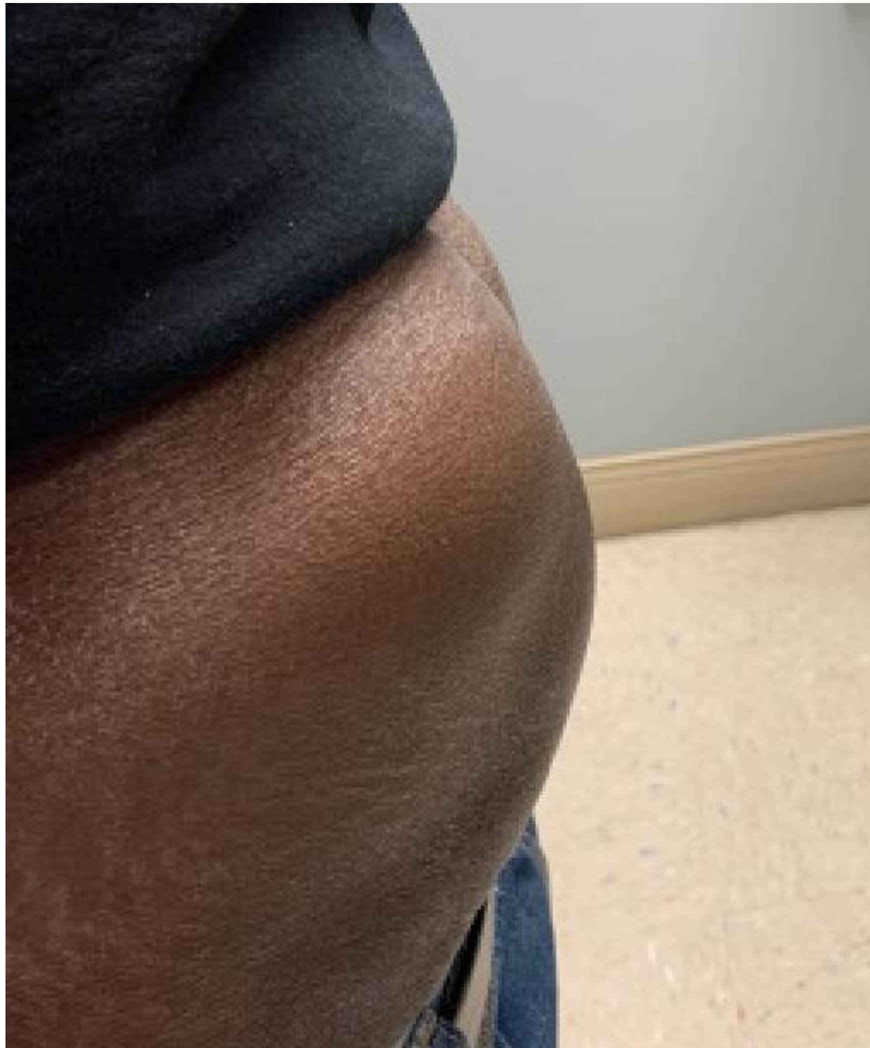
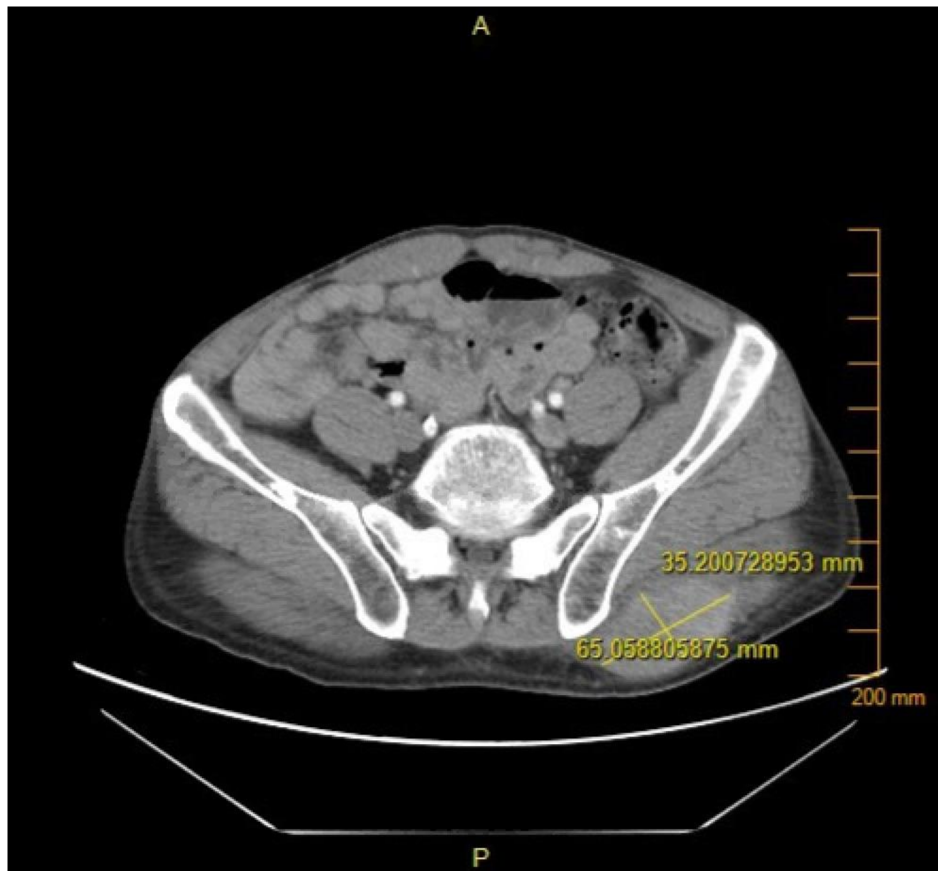
Case Report

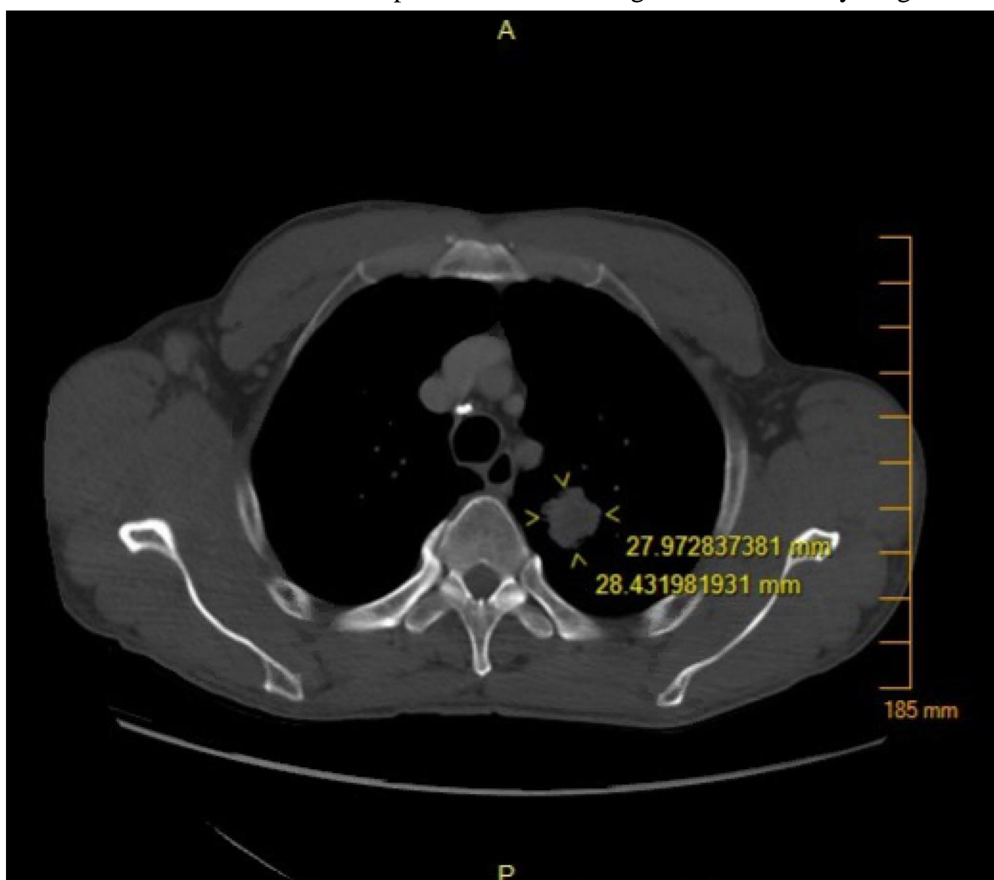
A 59 year old African American male with past medical history of hypertension, hyperlipidemia, cerebrovascular accident, and nicotine dependence (47-pack-years) presented to the emergency room (ER) for complaints of left gluteal mass for two months. The mass was associated with a dull, aching pain, and was progressively increasing in size.



Physical exam was remarkable for cervical lymphadenopathy and a 5 x 6 cm firm, non-fluctuating mass on the left gluteal region (figure 1). Patient had triedantibiotics and pain medications from another provider but the mass had only enlarged. A computerized tomography (CT) scan of the pelvis in the ER demonstrated a 6.5 x 3.5 x 4.7 cm oval mass in the left gluteus maximus muscle and a 2.1 x 2.5 cm expansile lytic lesion in the anterior left iliac bone (figure 2).



Patient was admitted to hospital, and had a CT chest and abdomen with contrast which revealed a 2.8 x 2.8 cm left upper lobe mass (figure 3). He was then scheduled for an outpatient ultrasound-guided needle biopsy of the left gluteal mass. Based on the patient's history and physical examination, which one of the following is the most likely diagnosis?



A. Metastatic lung cancer to the left gluteus maximus muscle

B. Left Intramuscular Gluteal Abscess

C. Liposarcoma of Gluteal muscle

Selected Differential Diagnosis of Abnormal EKG changes in hypothermia (Osborne Waves)	
Condition	*Characteristics*
Metastatic lung mass to left gluteus Maximus muscle	Rare site of metastases, but mostly seen in nicotine users and associated with firmness, regional lymphadenopathy and pain.
Liposarcoma	Seen in elderly patients, and more common in lower extremities. Typically non tender nor erythematous in the early stages of presentation.
Left intramuscular Gluteal abscess	Characterized by inflammation and a collection of pus with associated tenderness, redness, warmth and swelling in gluteal region.

Discussion

The correct answer is A.

Lung cancer is still the number one cause of deaths worldwide.[1] The majority of these patients (85%) are diagnosed with non-small cell lung cancer (NSCLC) with the most common metastatic sites from NSCLC including lung, bone, brain, adrenal glands, and liver.[2] Metastases to the soft tissue, especially the buttock, are rare but documented.[3]

Our patient's histopathology showed cohesive groups of pleomorphic tumor cells strongly positive for CK7, weakly positive for CDX2, and negative for CK20, CK5/6, P63, PSA and TTF-1. He was subsequently diagnosed with metastatic high-grade carcinoma most likely from poorly differentiated squamous cell carcinoma of the lung.

An intramuscular gluteal abscess is an intramuscular soft tissue lesion of the gluteal region characterized by inflammation and the collection of pus, often at the site of intramuscular injections.[4] Signs and symptoms include tenderness, warmth, pain, erythema, and swelling. Our patient had a non-erythematous mass and no obvious sign of infection.

Liposarcoma presents as well differentiated Liposarcoma (WDL) or Dedifferentiated Liposarcoma (DDL),[5] and is more common in lower extremities. It, however, initially presents as a soft, painless subcutaneous nodules ranging between 1 to 10 cm that has persisted for years. Our patient had no prior history of such swellings his mass was painful at initial presentation, which is uncharacteristic of lipoma.

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