

# Recurrent B-Cell Acute Lymphoblastic Leukemia Presenting as a Breast Mass

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## INTRODUCTION

Acute lymphoblastic leukemia (ALL) makes up a family of lymphoid neoplasms derived from B and T cell lymphoid populations. (Mihaela) Diagnosis is performed by tissue examination of bone marrow, blood analysis and sampling of any solid masses, whether nodal tissue or other lymph tissue. Immunophenotypic features as well as genetic analysis of the tissue aides in the exact diagnosis and helps to tailor the treatment to the specific disease at hand. ALL presenting as a solid breast mass is extremely rare and recurrent breast leukemia is more common in acute myeloid leukemia. We describe a case of a 26 year-old male with ALL to the breast presenting as a single solitary mass.

## Case Presentation

A 26-year-old male presented to our surgical clinic with an isolated solid right breast mass. He had a history of pediatric B-cell ALL when he was 16-years-old. He underwent an ALL regimen times two followed by Inotuzmab with a complete response. He then underwent Chimeric Antigen Receptor-T cell therapy and was followed appropriately post treatment. The patient initially presented to our emergency room 2 weeks prior to our clinic visit with an asthma exacerbation. At that time, the ER physician noted a small right breast mass and referred him to our clinic for evaluation. At that time it was noted to be around 0.5 cm and firm. Upon presentation to our clinic, the mass had grown to 4 cm, was round and firm. (Figure 1) The patient denied any fever, chills, lymphadenopathy, nipple discharge and nipple retraction.



Figure 1: R breast mass s/p biopsy

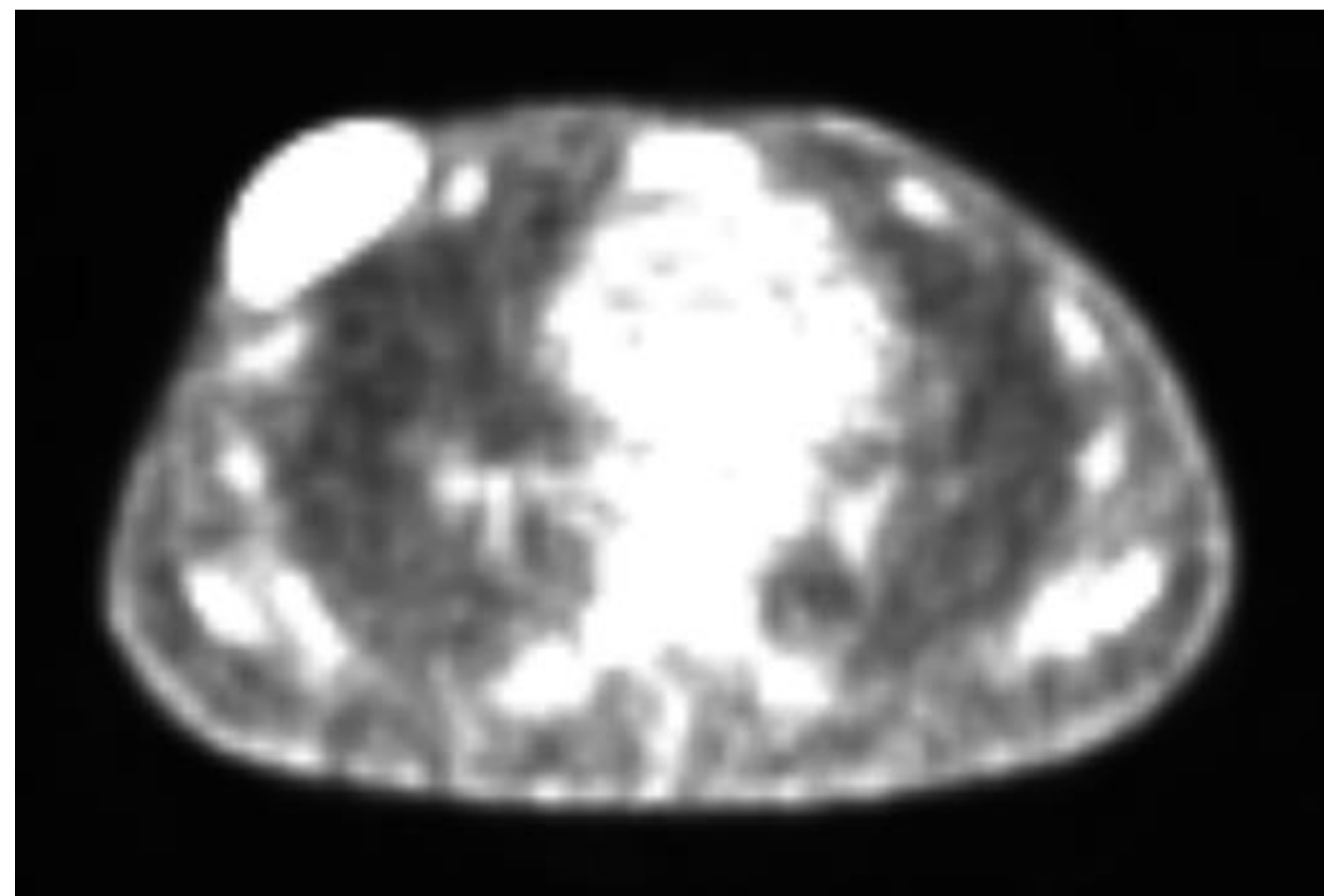


Figure 2: PET-CT

## Case Presentation (continued)

A core needle biopsy was performed in office that day which was sent for flow cytometry. Pathology showed an immature B-cell population and flow cytometry showed an abnormal B-lymphoid population consistent with lymphocytic leukemia/lymphoma. Bone marrow biopsy was later performed showing recurrent precursor B-cell lymphoblastic leukemia. Medical oncology took over the care for the patient.

## CONCLUSIONS

B-cell ALL can present atypically as a breast mass. Appropriate management includes prompt tissue diagnosis and management by medical oncology. While breast masses often present first to a surgical office, it is important for these patients to be promptly worked up and referred to medical oncology for management. While there is no role for surgical management, it is important to keep within your differential in the appropriate patients.

## REFERENCES

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