

Introduction

- Fibroblastic reticulum cells (FBRCs) are a subtype of dendritic cells, which are stromal cells found in structures such as the spleen and tonsils.
- Other subtypes of dendritic cells include follicular dendritic cells (FDC) and interdigitating dendritic cells (IDC).
- Tumors arising from FDCs and IDCs are common, whereas tumors arising from FBRCs are extremely rare.
- To our knowledge, this is the only documented case of Epstein-Barr virus (EBV) positive FBRC tumor of splenic origin.

Case Description

- **HPI:** 37-year-old male presented with a 1-week history of worsening left upper quadrant abdominal pain. The pain was associated with night sweats and was worse with inspiration and palpation. He also reported increased weakness, fatigue, and loss of appetite.
- **Physical Exam & Labs:** Tenderness in left upper quadrant. Labs all within normal limits.
- **Imaging:**
 - **CT:** large, calcified heterogeneous splenic mass with lobulated contours and ill-defined margins inferiorly, concerning for neoplastic process with metastases (*figure 1 & 2*)
 - **PET:** Two additional splenic lesions, one at the apical posterior aspect and another at the inferior margin
- **Interventions:** Splenectomy and open distal pancreatectomy as the splenic mass was found to be invading the distal pancreas. Spleen was macroscopically normal.

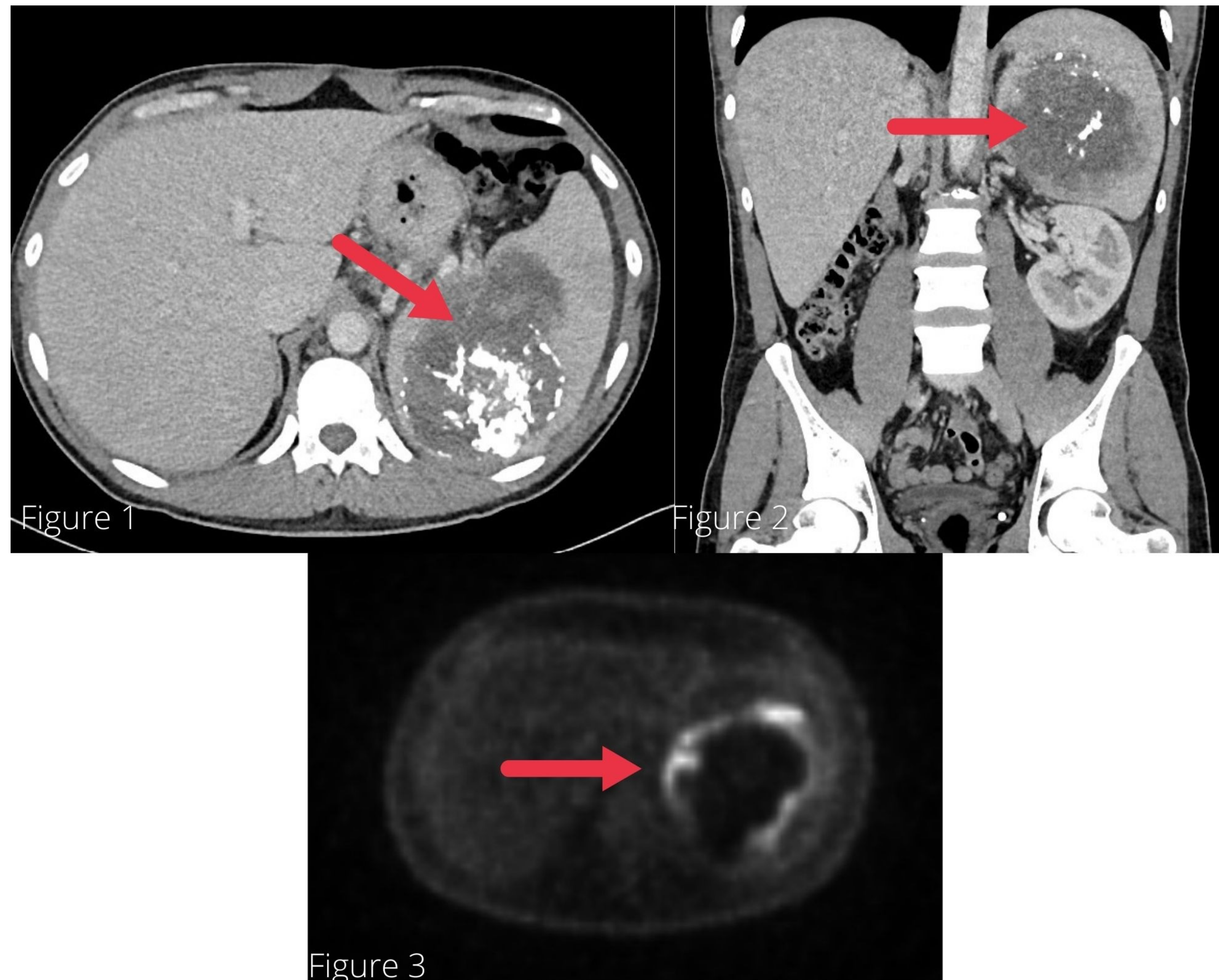


Figure 1 & 2: CT abdomen showing a large heterogenous splenic mass with lobulated contours and irregular calcifications concerning for neoplastic process.

Figure 3: PET scan showing a large heterogeneous splenic mass with rim of severe hypermetabolism consistent with a malignancy.

Case Description (cont.)

- **Pathology:** Showed a well circumscribed tumor within splenic parenchyma composed of spindle cells with atypical, vesicular ovoid nuclei with pale eosinophilic cytoplasm arranged in a fascicular fashion with a background of chronic inflammatory infiltrate.
- **Immunohistochemistry:** Positive for SMA and negative for pan-keratin, CAM5.2, desmin, S100 protein, CD21, CD34, and CD35. The spindle cells displayed nuclear positivity for EBV-encoded RNA by in-situ hybridization.

A diagnosis of EBV positive FBRC tumor was established.

Discussion

- According to our review of the literature, there are only two documented cases of FBRC tumors arising from the spleen, neither of which was EBV positive.
- Our case is the first documented case of EBV positive FBRC tumor of splenic origin.
- These tumors are often mistaken for metastatic lesions and are grossly indistinguishable from other splenic malignancies.
- Microscopic analysis is critical for accurately diagnosing this entity.
- These tumors are thought to be indolent and benign, however the malignant potential is not clear given the lack of literature on this topic.
- Further research is needed to investigate the role of EBV in the development of this disease.

References

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2. Martel M, Sarli D, Colecchia M, et al. Fibroblastic reticular cell tumor of the spleen: report of a case and review of the entity. *Hum Pathol.* 2003;34(9):954-957. doi:10.1016/s0046-8177(03)00399-x