# Angiosarcoma Presenting as Hemorrhagic Shock: A Rare Diagnosis of Liver Lesions in a Young Patient

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## Introduction

Angiosarcoma is a highly aggressive and rare tumor in young, seemingly healthy patients. It is associated with exposure to arsenic, vinyl chloride, and oral contraceptives.[1] We present a case of angiosarcoma in a young patient presenting with an acute abdomen from hemorrhagic shock. Angiosarcoma has poor prognosis and there is not definitive treatment. Some of the treatment interventions include surgical excision of the tumor or liver transplant. Despite these interventions, patient continue to have poor outcome post-operatively. [1] It is important to include angiosarcoma in the differential for patients presenting with acute abdomen and explore aggressive medical therapy along with surgical resection.

## Case Presentation

A 19-year-old male with no past medical history presented with sudden severe diffuse abdominal pain, difficulty breathing, nausea, vomiting, and diarrhea. FAST exam showed a large volume of free fluid in the abdomen. Initial labs showed elevated liver associated enzymes ALT 122, AST 117, Hgb 5.4, lactic acidosis, and fibrinogen 171. CT of the abdomen and pelvis showed hepatomegaly with multiple small hyper-vascular lesions in the liver [Figure 1]. Massive transfusion protocol was initiated, and he subsequently required emergent exploratory laparotomy that showed 3 liters of old-appearing blood. Intraoperatively, the liver was found to be multinodular, woody, enlarged, and cirrhotic with fresh heme. Final surgical pathology showed angiosarcoma with atypia over epithelioid hemangioendothelioma. Patient continued losing blood and required a hepatic angiogram with embolization. He continued to worsen, developing acute liver failure. The patient continued to decompensate, eventually requiring palliative care.

## Figures

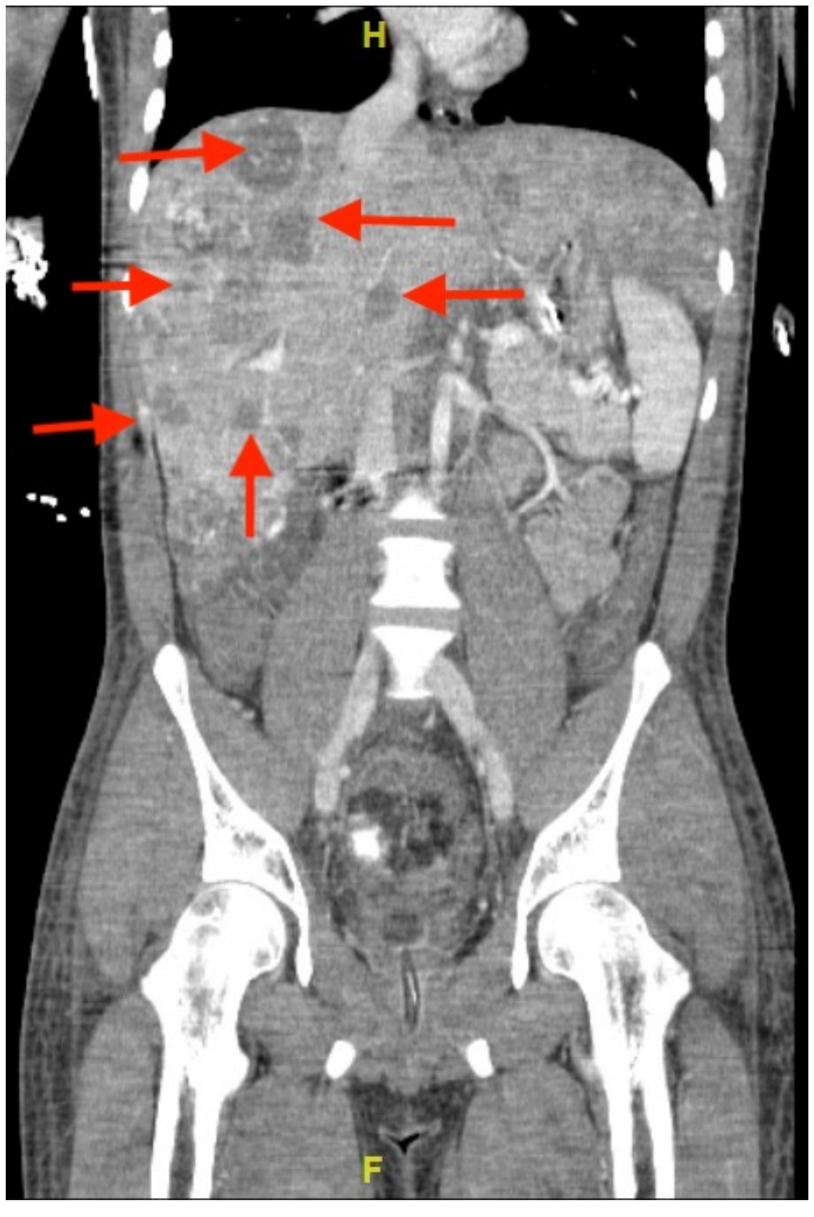


**Figure 1:** CT abdomen and pelvis demonstrating liver angiosarcomas w/ red arrows

## Discussion

Angiosarcoma often presents in elderly patients with nonspecific symptoms such as abdominal distention, abdominal discomfort, weight loss, and fatigue.[2,3,4] Differentiating liver tumors such as hepatoma, adenoma, or vascular malformations on imaging is challenging and surgical resection is essential. Average survival of patients with untreated liver angiosarcoma is approximately 6 months and it increases by 2 years with treatment.[2,3,4] The standard treatment for liver angiosarcoma is surgical resection. Liver transplant is not indicated because of the high recurrence rate and poor prognosis.[2,3,4] There are no standardized treatments for patients presenting with hemorrhagic shock other than embolization and resection. More treatments need to be explored for aggressive treatment for hepatic angiosarcoma, as this case highlights a healthy 19-year-old patient dying one month after initial diagnosis with limited options for therapeutic intervention.

## Conclusion

This case highlights the importance of aggressive treatment options for young healthy patients who are newly diagnosed with angiosarcoma of the liver.

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