

## The Focal Hepatic Hot Spot Sign

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The focal hepatic hot spot (formerly “hot quadrate”) sign represents a segment IV focal wedge shaped hyperenhancing area during the arterial or early portal venous phase of contrast-enhanced CT [1,2]. It was first described by Ishikawa in 1983 [3]. This sign indicates obstruction of the superior vena cava, and the source is thought to be the portosystemic venous shunt between the liver's portal vein and the superior vena cava.

The hepatic hot spot sign is characterized by a focal increase in blood flow within the liver. This phenomenon is usually caused by the redirection of blood between the internal mammary vein and the left portal vein through venous collaterals. It can also involve the reopening of previously closed umbilical and para-umbilical veins [4].

Malignancy is the most common cause of superior vena cava syndrome, and lung carcinoma and lymphoma are the most common neoplasms [5]. Some other causes of hepatic hot spots include Budd-Chiari syndrome, liver abscess, hemangioma, focal nodular hyperplasia, and hepatocellular carcinoma [1].

The importance of this sign is that it helps diagnose thoracic

SVC obstruction, in cases where an obstruction is clinically non-apparent on enhanced abdominal CT. The characteristic location in the quadrate lobe of the liver, and wedge shape enhancement in arterial and venous phase are useful in distinguishing a quadrate hot spot from focal hypervascular liver lesion [2].

### References

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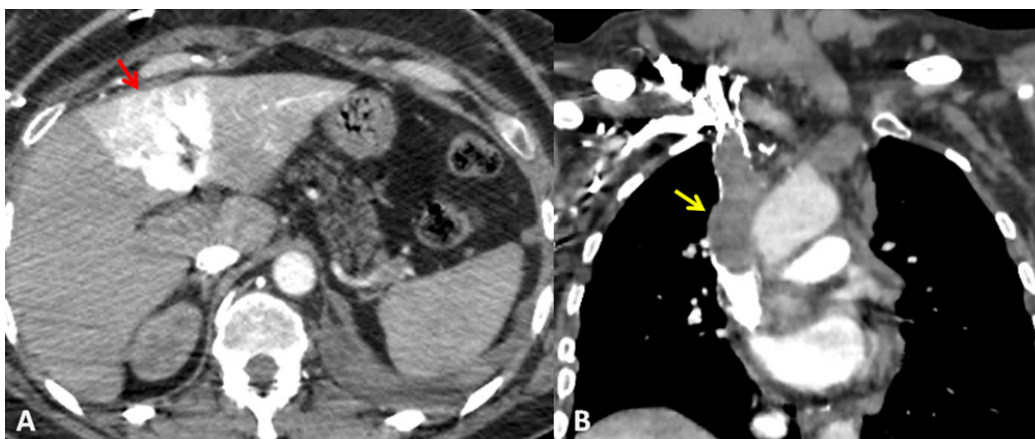


Figure 1 : A : Axial CT scan of the abdomen demonstrates hypervascular region (arrows) in segment IV of liver that represents the hepatic hot spot sign (red arrow). B : Coronal thoracic CT scan showing the superior vena cava thrombosis (yellow arrow).