

# Unmasking Hepatocellular Carcinoma in a Non-Cirrhotic Liver: A Case Report of an Advanced Tumor in the Absence of Traditional Risk Factors

Nora Abdul-Aziz<sup>1\*</sup>, Omar Abdul-Aziz<sup>1</sup>, Elizabeth Schumacher<sup>1</sup>, Noor Abdulhameed<sup>1</sup>, Divya Vijendra<sup>2</sup>, Ellen Hagopian<sup>3</sup>

<sup>1</sup>College of Medicine and Life Sciences, 3000 Arlington Avenue, The University of Toledo, Toledo OH 43615

<sup>2</sup>Assistant Professor, Division of Hematology and Oncology, Department of Medicine, 3000 Arlington Avenue, The University of Toledo, Toledo OH 43615

<sup>3</sup>Faculty, Division of Hepatobiliary Surgery, Department of Surgery, 3000 Arlington Avenue, The University of Toledo, Toledo OH 43615

**Email:** Nora.Abdul-Aziz@rockets.utoledo.edu

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**Introduction:** Hepatocellular carcinoma (HCC) arises from chronic liver damage leading to dysregulated hepatocyte proliferation and tumor formation. HCC is predominantly associated with cirrhosis and traditional risk factors such as chronic hepatitis B and C, alcohol use, and non-alcoholic steatohepatitis (1). Long-standing diabetes can lead to steatosis and increase the risk of developing HCC, yet current screening guidelines do not include the diabetic population. This case emphasizes the importance of developing screening guidelines for HCC in diabetics as exemplified by this patient's presentation.

**Case Presentation:** A 73-year-old native Nigerian male with type 2 diabetes mellitus presented to the emergency department in March 2024 for evaluation of abdominal pain. He denied history of alcohol abuse, hepatitis B or C. A CT abdomen demonstrated a large left liver tumor. Further work-up demonstrated an elevated AFP at 131,025. CT abdomen in April 2024 demonstrated a large heterogeneously enhancing mass in the left hepatic lobe, measuring 13.8 x 10.1 x 10.5 cm. US elastography demonstrated moderate fibrosis of the liver. Portal hepatic venous duplex US demonstrated patent portal vein with normal directional flow. In May 2024, the patient underwent left hepatic artery chemoembolization. In July 2024, he underwent surgery at which time, a larger tumor encompassing the entire left liver and involving the middle and left hepatic veins was found. A left hepatectomy was performed. Pathology demonstrated a moderately to poorly differentiated HCC measuring 18.0 cm with focal treatment-associated necrosis (10%). The background liver did not demonstrate cirrhosis.

**Conclusion:** Hepatocellular carcinoma is a malignancy typically associated with chronic liver disease, such as cirrhosis, and traditional risk factors like hepatitis B and C, alcohol use, or non-alcoholic steatohepatitis. Chronic diabetes can result in steatosis and elevate the risk of HCC; however, existing screening guidelines do not encompass the diabetic population. HCC in a non-cirrhotic liver is a complex condition characterized by distinct risk factors, pathogenesis, clinical features, management, and prognosis compared to its cirrhotic counterpart. This case highlights the need for broader studies to include the incidence of HCC in diabetic populations to develop screening recommendations.

**Keywords:** Hepatocellular Carcinoma, Diabetes

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## References

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