

# Primary Small Cell Carcinoma Of Liver: Rare And Aggressive Tumor

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## Introduction

Primary small cell carcinoma of liver is a rare tumor. Only 15 cases has been reported in literature.

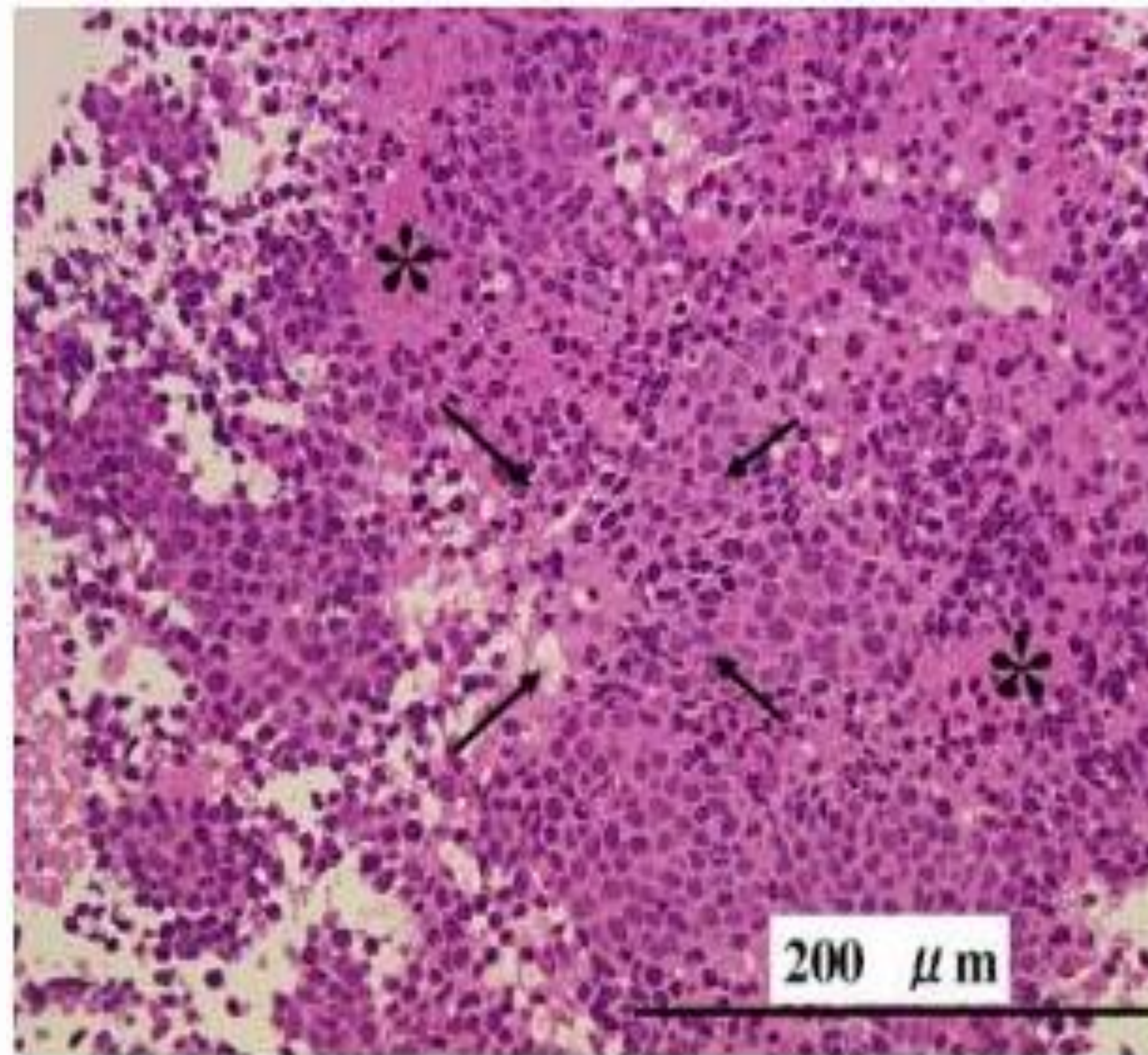
## Case

A 63-year-old female presented with right upper quadrant pain of gradual onset. Her past medical history was significant for DVT, PE, and smoking for 20 years.

Her exam showed mild tenderness in the right hypochondria and the liver edge was palpable 1 cm below right costal margin. A CT scan of the abdomen showed a 8.6 x 7.6 cm mass in right lobe of the liver with extension in the intrahepatic portion of portal vein along with celiac adenopathy.

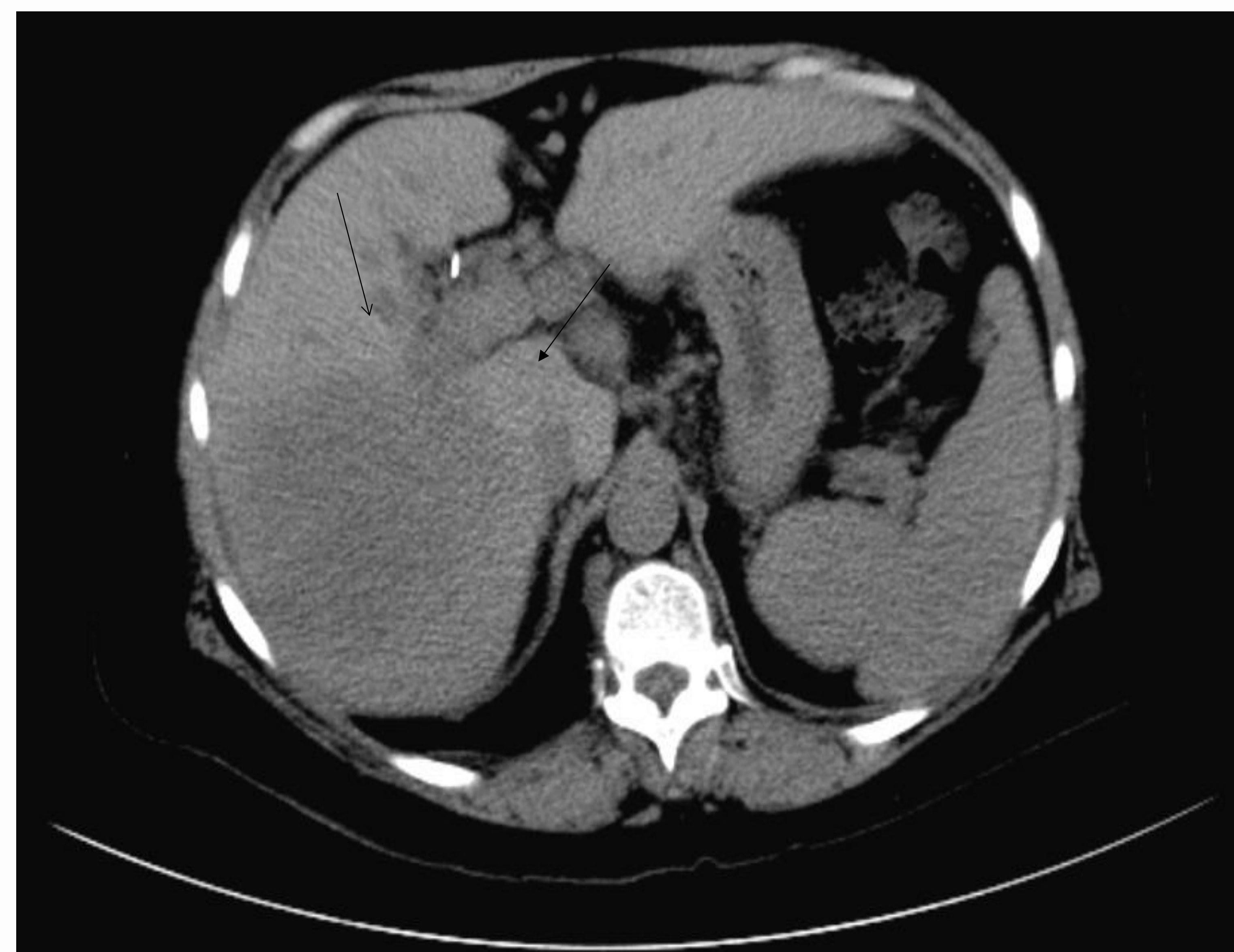
Results for serum markers were alpha fetoprotein 3.48ng/ml (0-6.1), carcino-embryonic antigen 3.8 ng/ml(0-5), and CA 19-9 86ng/ml (<37). Anti-HCV was positive. The results of a liver biopsy were consistent with small cell carcinoma. Immunohistochemical staining was positive for markers of neuro-endocrine origin including synaptophysin and chromogranin, and negative for HepPar1, TTF-1, CK20, and cirrhosis. Chest X-ray, CT of the chest, and PET scan were negative for any pulmonary lesion.

Carboplatin and Etoposide was started, but the patient died within 30 days of diagnosis.



H & E stain showing **small round cells** and **cell necrosis(\*)** resembling SCC of lung.

(Morikawa H, Nakayama Y, Maeda T, Nadatani Y, Kobayashi S, Iwai S, Enomoto M, et al. A case of primary small cell carcinoma of the liver that was treated with chemotherapy. *Hepatol Int* 2008;2(4):500-504.



Abdominal CT scan shows a right lobe liver mass.

## Discussion

Comparison of 15 cases from the literature revealed:

- Male:female ratio was 1.8:1
- 85.71% patients were above 50 years of age at the time of diagnosis
- Synaptophysin was positive in 100% (8/8) of cases
- Neuron specific enolase was positive in 87.5% (7/8) of cases
- More than 90% (11/12) of cases were diagnosed at an advanced stage

Of 7 deaths, 5 died within 3 months of diagnosis despite standard treatment.

## Conclusion

- Primary small cell carcinoma of liver is a rare tumor usually diagnosed at advanced stage.
- Synaptophysin was a reliable marker for diagnosis.
- Tumor proves to be fatal in majority of cases.

## References

1. Zanconati F, Falconieri G, Lamovec J, Zidar A. Small cell carcinoma of the liver: a hitherto unreported variant of hepatocellular carcinoma. *Histopathology* 1996;29:449-53
2. Kim KO, Lee HY, Chun SH, Shin SJ, Kim MK, Lee KH, Hyun MS, et al. Clinical overview of extrapulmonary small cell carcinoma. *J Korean Med Sci* 2006;21(5):833- 837.