## Long-term advanced cholangiocarcinoma survivor with single-agent capecitabine

Dear Editor,

Cholangiocarcinoma (CCA) is the second most common hepatocellular malignancy after hepatocellular carcinoma (HCC). Conversely, however, in some populations where HCC is uncommon, such as among Danish women, the prevalence of CCA exceeds that of HCC [1]. These tumors progress insidiously, and liver failure, biliary sepsis, malnutrition and cancer cachexia are the general causes of death associated with this disease. Unresectable and metastatic CCA has poor prognosis, and the 5-year survival rate is generally < 5% [2]. Herein we present a case with CCA that has survived for 22 months on capecitabine alone.

A 63-year-old female was presented with fatigue and lack of appetite. Her liver enzyme levels were elevated. An abdominal ultrasonography (USG) was performed, which revealed a 53×44 mm hypoechoic heterogeneous nodular mass in the right lobe of the liver. A dynamic triphasic CT revealed a 59×57×64 mm hypodense necrotic lesion, starting from segment 8 and 5 anteriorly, extending towards the left lobe. Contrast enhancement identified a mass in the fundus of the gallbladder, cystic duct, main hepatic duct and the proximal part of the common bile duct, consistent with CCA. Minimal dilatation in the intrahepatic biliary tree was identified. The patient was operated on, but the mass was evaluated to be unresectable. During the operation, multiple liver biopsies were obtained, which established the diagnosis of CCA with multiple intrahepatic metastases. The patient's history and physical examination was within normal limits except controlled hypertension, and slight hepatomegaly. Initial CA 19-9 level was 6725 U/ml. The patient was scheduled for 600 mg/ m<sup>2</sup> of gemcitabine and 30 mg/m<sup>2</sup> cisplatin every 2 weeks. After the 2nd cycle of chemotherapy, the patient was subjected to radiotherapy. Follow up examinations revealed a 2.5 cm mass localized between liver segments 4 and 5, which had regressed. Chemotherapy was continued up to 6 cycles and CA 19-9 level dropped to 354 U/ ml. A follow up CT identified a 4.7×4.4 cm lesion with central necrosis. Then, chemotherapy was switched to 2500 mg/m<sup>2</sup> capecitabine for 14 days aiming at further reduction of the tumor mass. After the 3rd cycle CA 19-9 level was 111.7 U/ml. A follow up abdominal USG showed stable mass. During capecitabine administration, a pulmonary thromboembolic event developed. The patient was anticoagulated with low molecular weight heparin and after 6 cycles the abdominal USG findings remained stable. The patient continued capecitabine with a 20% decrease in dosage. Twenty-two months after the initiation of capecitabine the CA 19-9 level was 89.51. The patient is still on capecitabine without disease progression.

CCA is one of the most aggressive malignancies. Currently,

there is no standard regimen for the treatment of unresectable CCA. Most commonly, single-agent gemcitabine or 5-fluorouracil (5-FU) is used, occasionally in combination (including gemcitabine plus platinum). NCCN guidelines suggest the use of gemcitabine and cisplatin combination to be considered as the standard of care for advanced biliary patients [3].

Capecitabine is an oral fluoropyrimidine carbamate, which is selectively tumor-activated to 5-FU by utilization of thymidine phosphorylase which is found in higher levels in tumor tissues when compared to normal tissues. The drug has a good patient compliance, as it is taken orally, and can be administered as an outpatient therapy. Reports regarding the efficacy of capecitabine as a second line treatment, as in our case, who was initially treated with gemcitabine and cisplatin, is limited. In a study conducted by Patt et al, who investigated unresectable CCA patients treated with capecitabine, found that 6% of them had either complete response or partial response with median survival of 8.1 months (95% CI 7.4-8.9) [4]. Despite the few number of studies and case reports available, the current evidence is not sufficient to recommend capecitabine as a single agent for advanced CCA. Also, the varying degrees of success in the utilization of this treatment modality underlines the heterogeneous nature of this disease, and the necessity of further studies about this tumor's biology.

## References

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