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Clinical Outcome using CyberKnife Stereotactic Body Radiotherapy (SBRT) for Recurrent Cholangiocarcinoma

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Abstract

Objectives: The purpose of this study is to evaluate the response and local control obtained with Cyberknife SBRT in the management of patients with recurrent cholangiocarcinoma.

Methods: 21 patients with recurrent cholangiocarcinoma were enrolled between October 2009 and November 2015. The SBRT were performed to treat 23 lesions. The median tumor diameter was 3cm. The dose ranged from 40Gy to 50Gy with a median of 45Gy in 3-8 fractions (median value=5 fractions).The overall survival (OS), disease progression-free survival (DPFS) and local progression-free survival (LPFS) rates were calculated by Kaplan-Meier methods and compared with log-rank test.

Results: The median follow-up duration was 14 months. The 1-year actuarial OS and PFS rate were 57% and 28%, and the median OS and PFS were 13 and 8 months, respectively. The 1-year and 2-year LPFS rates were 83%. Grade 3 toxicities were observed in 14% of the patients. No Grade 4 toxicities were reported.

Conclusions: The SBRT using CyberKnife® system appears to be effective and safe for patients with recurrent cholangiocarcinomas.