Cholangiocarcinoma (CCA) is a rare gastrointestinal tumor that carries a poor prognosis and is often diagnosed late in its course. Approximately 70–80% of CCA cannot be surgically resected, leaving only palliative options available for these patients. Radiofrequency ablation (RFA) delivers thermal energy to the malignant tissue, leading to coagulative necrosis and cellular death. However, there is a significant lack of literature describing the life-prolonging effects of percutaneous RFA, specifically in CCA. This meta-analysis aims to determine pooled survival outcomes in patients undergoing percutaneous biliary RFA (PRFA) for palliation of untreated, unresectable CCA.

**METHODS:** A literature search was conducted using the PubMed database for published manuscripts and abstracts analyzing survival outcomes in patients undergoing PRFA for unresectable CCA. Only studies that provided a contingency of data allowing for extrapolation of outcomes related to PRFA were included for quantitative analysis. There were 114 patients who underwent percutaneous biliary RFA for palliative treatment of unresectable cholangiocarcinoma. Mean survival among these patients was 14.3 months, 95% CI 6.8–21.8 months, P ≤ 0.0001. Likewise, median survival differed significantly between the patients undergoing ERFA with stenting (13 months) as compared to those undergoing biliary stenting alone (8 months; log-rank test z = 4.8, P < 0.0001).

**CONCLUSION:** PRFA may be a reasonable palliative therapy for those with previously untreated unresectable cholangiocarcinoma with evidence of increased mean and median survivals relative to biliary stenting alone. However, given the lack of available studies on this patient population, more longitudinal data is needed to draw conclusions of survival benefit.

**References:**

1. [1] Figure 1. Forest Plot of mean survival in studies assessing outcomes in patients with untreated, unresectable cholangiocarcinoma undergoing PRFA.

2. [2] Figure 2. Kaplan-Meier survival curve of patients with untreated, unresectable cholangiocarcinoma treated with ERFA and stenting versus those treated with biliary stenting alone.

3. [3] Figure 3. Kaplan-Meier survival curve of patients with untreated, unresectable cholangiocarcinoma after receiving percutaneous biliary RFA.

**Abstract:** Palliative Endoscopic and Percutaneous Biliary Radiofrequency Ablation With Stenting Compared to Biliary Stenting Alone in the Treatment of Unresectable Cholangiocarcinoma: A Meta-Analysis on Survival Outcomes

Jeffrey Rebhun, MD, Edward C. Villa, MD.
University of Illinois at Chicago, Chicago, IL.

INTRODUCTION: Cholangiocarcinoma (CCA) is a rare gastrointestinal tumor that carries a significant morbidity and mortality rate. Endoscopic (ERFA) and percutaneous biliary radiofrequency ablation (PRFA) are novel technologies with good safety profiles for patients with previously untreated, unresectable CCA. The mean survival among these patients was 14.3 ± 7.5 months and median survival was 10.8 months.

METHODS: A total of four studies met inclusion criteria and were analyzed for quantitative outcomes. A total of 106 patients underwent ERFA with stenting compared to 101 patients that had biliary stenting alone. The mean survival of the ERFA with stenting group (11.7 ± 0.7 months) and the biliary stent control group (6.8 ± 0.3 months) differed significantly (mean difference of 4.9 ± 0.1 months, 95% CI 4.8–5.0, P = 0.0001). Likewise, median survival differed significantly between the patients undergoing ERFA with stenting (13 months) as compared to those undergoing biliary stenting alone (8 months; log-rank test z = 4.8, P < 0.0001).

CONCLUSION: ERFA with biliary stenting may be a reasonable palliative therapy for those with previously untreated unresectable cholangiocarcinoma with evidence of increased mean and median survivals relative to biliary stenting alone. However, given the lack of available studies on this patient population, more longitudinal data is needed to draw conclusions of survival benefit.

**References:**

1. [1] Figure 1. Forest Plot of mean survival in studies assessing outcomes in patients with untreated, unresectable cholangiocarcinoma undergoing PRFA.

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**Meta-Analysis on Survival Outcomes**

Potential submitting authors should submit their abstracts by January 15, 2023. The abstracts will then be reviewed, and acceptance will be communicated by February 15, 2023.