However, not all HCC is completely ablated in 1 session. We aimed to determine the independent predictors of complete ablation (CA1) and primary technique effectiveness (PTE) of RFA.

Methods RFA was performed on 298 consecutive HCC patients from June 2007 to November 2018. CA1 was defined as the absence of contrast enhancement (enhancing tumors) or hypodensity that encompasses the original tumor location (non-enhancing tumors) on CT-scan performed 1-month post-RFA. PTE pertains to the ability to completely ablate a tumor after ≥ 1 session. Tumors that were within 5 mm of a large vessel or vital structure were considered high-risk. Multiple logistic regression analysis was used to determine independent predictors.

Results A total of 540 tumors were ablated with a mean size of 2.9 ± 1.7 cm. CA1 (<3 cm=94.3%; 3.1–5 cm=85.2%; >5 cm=70.7% - (figure 1) and PTE rates (<3 cm=95.9%; 3.1–5 cm=91.2%; >5 cm=90.4%) were higher for smaller tumors ($p < 0.001$). Isoechoic tumors had the highest CA1 (93.9%; $p < 0.001$) and PTE rates (96.9%; $p = 0.017$), while mixed echoic tumors had the lowest CA1 (76%; $p < 0.001$) and PTE rates (86.6%; $p = 0.017$). Other associated factors for CA1 on univariate analysis include tumor size, high risk tumor, tumors near a vital structure, and RFA time. However, the only independent predictor of both CA1 (OR[95%CI]=<3 cm=13.15 [0.02–0.25]; 3.1–5 cm=2.03[0.21–1.13]) and PTE rates (OR [95%CI]= <3 cm=2.7[0.13–1.05]; 3.1–5 cm=0.99[0.36–2.81]) on multivariate analysis was tumor size ($p < 0.001$).

Completely Ablated after 1 RFA session (n=540)

Abstract IDDF2019-ABS-0281 Figure 1

Study or Subgroup	PEG		Lactulose		Weight	Risk Ratio M-H, Fixed, 95% CI
	Events	Total	Events	Total		
Rahimi 2014	21	23	13	25	25.7%	1.76 [1.18, 2.61]
Shahata 2018	47	50	36	50	74.3%	1.31 [1.08, 1.57]
Total (95% CI)		73		75	100.0%	1.42 [1.19, 1.69]
Total events	68		49			
Heterogeneity: Chi ² = 1.89, df = 1 (P = 0.17); I ² = 47%						
Test for overall effect: Z = 3.94 (P < 0.0001)						

Abstract IDDF2019-ABS-0295 Figure 1 HE resolution

Conclusions RFA results in satisfactory local tumor control of HCC. Complete tumor ablation is substantial in lesions that do not exceed 5 cm.

IDDF2019-ABS-0295

POLYETHYLENE GLYCOL VERSUS LACTULOSE FOR THE TREATMENT OF OVERT HEPATIC ENCEPHALOPATHY: A META-ANALYSIS

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10.1136/gutjnl-2019-IDDFabstracts.304

Background Hepatic encephalopathy (HE) is one of the most common causes of hospitalization in patients with cirrhosis. It poses an increasingly recognized burden on the health care system and the patient's quality of life. Lactulose has been the standard pharmacologic treatment for overt HE for a long time. Recently, polyethylene glycol (PEG) electrolyte solution has been studied as an alternative but only limited research has shown positive effects.

Methods A comprehensive literature search from the PubMed Central, Embase, Cochrane Library, and Clinical Trials Registry was performed with the following search terms: polyethylene glycol, lactulose, and hepatic encephalopathy. Two studies were selected and validated using the Cochrane risk of bias assessment tool. Trial results were analyzed using Cochrane Review Manager Software version 5.0 with a fixed-effects model. The primary outcome of the study was improvement of HE scoring algorithm (HESA).

Results Two trials comprising of 148 patients met the inclusion criteria. In the fixed-effect model (figure 1), it showed a statistically significant increase in the rates of improvement in the HESA ($p < 0.0001$) among patients given PEG compared to those given lactulose (93.15% vs. 65.33%; RR 1.42, 95% CI: 1.19–1.69). The two trials showed moderate heterogeneity ($I^2 = 47\%$). This can be due to differences in the population of the 2 studies specifically their Child-Turcotte-Pugh scores.

Conclusions PEG is an effective treatment for rapid resolution of HE. It significantly increased the rate of improvement in the HESA suggesting it may be a good alternative to the standard lactulose therapy given its rapid action.