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Background: Brazilian public health system currently provides universal free all oral direct-acting antiviral (DAA) therapy for patients with hepatitis C virus (HCV) infection. Despite high rates of sustained virological response (SVR), patients with cirrhosis remain at risk for hepatocellular carcinoma (HCC).

Objectives: The aim of this study was to investigate incidence, risk factors and tumor pattern at presentation in a cohort of Brazilian HCV-related cirrhotic patients treated with DAAs.

Methods: This prospective cohort study included patients with HCV-related cirrhosis treated with DAAs and followed for at least 24 weeks after therapy at the Viral Hepatitis Outpatient Clinic of Hospital de Clinicas de Porto Alegre, Brazil, between August 2016 and November 2017. Ultrasound screening was performed within 24 weeks before DAA therapy and patients with presumed past or current HCC were excluded. Primary outcome was HCC incidence. Secondary outcomes were risk factors for HCC ocurrence and tumor pattern at presentation. Multivariate analysis was used to identify independent variables associated with HCC development.

Results: A total of 234 patients with HCV cirrhosis were included. Fifty-six percent were males with a mean age of 61.2±10.9 years. Overall SVR was 97.4%. Child-Turcotte-Pugh (CTP) A, B and C at baseline was found, respectively, in 89.3%, 9.4% and 1,3%. Mean Model for End Stage Liver Disease (MELD) score was 9.17 ± 2.82. Esophageal varices were found in 43.6% of the patients. Type 2 diabetes was present in 18.8%. *De novo* HCC was diagnosed in 9% (21/234) of the patients during follow-up. Tumor pattern at presentation according to BCLC staging was 0, A, B, C and D in 19,1%, 47.6%, 4.8%, 28.6% and 0%, respectively. Multivariate analysis showed significant relative risk (RR) for HCC occurrence associated with the following variables: baseline MELD score ≥10 (RR: 1.8; p=0.05); absence of SVR (RR: 6.9; p=0.04); baseline platelet count $<120 \times 10^9$/L (RR: 5.0; p=0.04) and baseline albumin level <3.5 mg/dL (RR: 4.6.

Conclusions: A high incidence of HCC was found after DAA therapy compared to the literature, particularly among patients with more advanced cirrhosis, particularly those with baseline albumin levels < 3.5 g/dL plus platelets $< 120 \times 10^9$/L. Absence of SVR was also significantly associated with HCC development. The majority of patients presented with very early (BCLC 0) or early (BCLC A) HCC, although a significant proportion showed advanced stage (BCLC C) at presentation.

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O-4 IMPACT OF BRIDGE THERAPY FOR HEPATOCELLULAR CARCINOMA IN PATIENTS SUBMITTED TO LIVER TRANSPLANTATION - BRAZILIAN MULTICENTER STUDY

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Background: Hepatocellular carcinoma (HCC) is one of the main indications for liver transplantation (LT). Bridge therapy (BT) is recommended when waiting time on transplant list is longer than six months to avoid tumor progression and dropout. Response to locoregional treatment has been considered as a good prognostic parameter in post-LT, however, its role still needs to be defined.

Aims: To evaluate the role of BT for HCC on survival and post-LT tumor recurrence.

Methods: Brazilian multicenter retrospective cohort study in HCC patients submitted to LT with clinical and radiological data analysis. Data related to HCC pre-LT treatment, type of treatment and the final response according to mRECIST criteria in the last pre-LT image exam were analyzed. Survival curves were presented using the Kaplan-Meier and compared using the log-rank test.

Results: 1,119 patients were included. 81% were males and mean age at LT was 58 ± 8.2 years. At HCC diagnosis, 85% were within Milan criteria (MC) by imaging studies and 67%, underwent BT prior to LT. TACE/TAE were performed in 80%, PEI 9%, RFA 3%, surgery 1% and combined therapy 7%. According to mRECIST, 37% showed

complete response (CR), 38% partial response (PR), 12% stable disease (SD) and 13% progressive disease (PD) after BT. The overall survival (OS) was 63% in 5 years, with a mean follow-up of 28 months. The post-LT tumor recurrence was 8%. There was no difference in the risk of post-LT tumor recurrence or survival among patients who underwent BT or not or between the various types of treatment performed. However, patients who have CR to BT had a higher recurrence-free survival compared to patients with PR, SD or PD (p = 0.019).

Conclusions: This study demonstrated the role of BT in LT, since patients with complete response, had a lower risk of post-transplant tumor recurrence.

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O-5 PROGNOSTIC IMPORTANCE OF TRANSIENT ELASTOGRAPHY (FIBROSCAN®) FOR MORTALITY AND CARDIOVASCULAR OUTCOMES IN PATIENTS WITH TYPE 2 DIABETES

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Background and Aims: It remains unknown whether advanced liver fibrosis is associated with a higher risk of cardiovascular complications in patients with type 2 diabetes mellitus (T2DM) and non-alcoholic fatty liver disease (NAFLD).The aim was to evaluate the prognostic value of transient elastography (TE) by Fibroscan® as a predictor of mortality and cardiovascular outcomes in T2DM.

Methods: On a prospective study, T2DM patients with no other cause of liver disease except NAFLD underwent TE at baseline and were followed-up for the evaluation of outcomes, including all-cause mortality and occurrence of any cardiovascular event. The associations between TE scores and outcomes were evaluated by Cox regressions adjusted for other potential confounders. Liver stiffness measurement (LSM) and Controlled attenuation parameter (CAP) were evaluated as continuous variables and categorized as advanced fibrosis if LSM >7.9 or 7.2 kPa (M-XL probe) and severe steatosis if CAP>296 dB/m.

Results: 403 T2DM patients were included (64% female, mean age of 64±10 yrs) and followed for 94 months until March 2020. 395 (98%) of the TE examinations were successful. At baseline, 104 (26%) individuals had advanced fibrosis and 150(38%) had severe steatosis. During follow-up, 55(14%) patients died, 55(14%) had cardiovascular events, including 35 with coronary artery disease (CAD). As continuous variables, LSM (↑1 kPa) predicted all-cause mortality (HR 1.05, 95%CI 1.01-1.08,p=0.020) and CAP (↑20 dB/m) was associated with a significant reduced risk of cardiovascular mortality (HR 0.80,95%CI 0.66-0.96,p=0.014) and CAD (HR 0.81,95%CI 0.70-0.95,p=0.007). Increased LSM was associated with a significant 98% excess mortality risk (p=0.025), whereas a higher CAP was associated with a borderline 49% reduced risk (p=0.08).

Conclusion: Advanced fibrosis is associated with all-cause mortality, independent of other potential risk factors. Severe steatosis could have some effect in the reduction of cardiovascular mortality and CAD events. Transient elastography may be useful to improve stratification risk of T2DM patients.

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O-6 NON-INVASIVE ASSESSMENT OS HEPATIC FIBROSIS BEFORE AND AFTER HCV CURE AND CORRELATION WITH CLINICAL OUTCOMES

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Introduction: Liver stiffness measurement (LSM) is a widely used non-invasive test to assess the stage of liver fibrosis in chronic liver diseases, particularly in HCV but its clinical usefulness after viral elimination is uncertain.

Objectives: To identify the course of liver fibrosis by LSM 3 years after viral elimination in patients with HCV and its association with clinically relevant outcomes: progression to advanced liver fibrosis/cirrhosis (≥F3) in those with F<3 at baseline, and decompensation (ascites, variceal hemorrhage, encephalopathy) or HCC in those with F3/F4 or F4 at baseline.

Methods: LSM were performed by Fibroscan in 228 patients (32 stage F0-1; 47 F2; 36 F3; 23 F3-4; 90 F4 as determined by LS of <7.1; 7.2-9.5; 9.6-12.5; 12.6-14.5 and >14.5 KPa respectively) prior to treatment and at 6 months, 1, 2 and 3 years after cure.

Results: The course of changes in LSM are depicted in figure1. There was no progression to F≥3 in any of the patients at stages F0-1, F2. Among patients with F≥3, 23 patients developed decompensation (1 F3, 2 F3/F4 and 20 F4) and 9 developed HCC (all F4). Probability of decompensation is lower in patients in whom LSM decreases at 6 months, while it is higher in those in whom LSM increases, however CI are large (Table).

Conclusion: While in patients with F0-1, F2 prior to antiviral therapy, there is no need to follow LSM as progression does not occur, LSM should be continued in those with F3/F4 or F4 (>12.5 kPa). Changes in LSM at 6 months can help determine probability of outcomes but larger studies combining other parameters are necessary to improve predictive value.

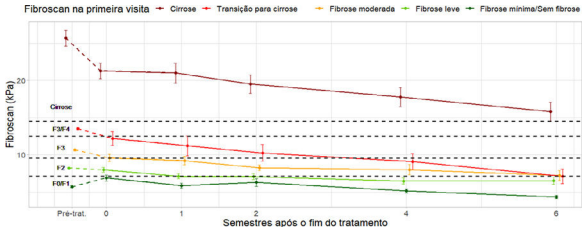

Table 1
Probability of decompensation/HCC and 95% confidence intervals (CI) by percent change in LSM at 6 months

Relative variation of Fibroscan (1ª and 3ª visit)	PointEstimate	CI(95%)
-40%	0.47	[0.23; 0.95]
-30%	0.57	[0.34; 0.97]
-10%	0.83	[0.69; 0.99]
10%	1.21	[1.01; 1.44]
30%	1.76	[1.04; 2.98]
40%	2.12	[1.05; 4.29]

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