## Liver transplant in HCC

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Hepatocellular carcinoma (HCC) is the fifth most common cancer worldwide, and is the leading cause of death in cirrhotic individuals. 80% of HCC develops in cirrhotic patients. Unfortunately only 20 to 25% of patients can have a radical treatment, like resection, liver transplantation (LT), or percutaneous ablation. The other 75 to 80% of patients can only have supportive care.

There is no evidence to establish the optimal first-line treatment for early HCC (one tumor of 5 cm or less,) in patients with well preserved liver function, because of the lack of RCTs comparing these radical therapies. Resection and transplantation achieve a very good outcome (5-year survival of 60 to 70%) but with very different recurrence rates (60-70% and 15-20% respectively). Due to the lack of liver donors, these two techniques compete as the first option for treatment in cirrhotic patients with well preserved liver function and only one tumor.

There is no question in considering LT as the best option for patients with liver function impairment (Child-Pugh B-C patients) and early tumors (less than three tumors of less than three centimeters). LT provides cure of both the neoplastic disease and the underlying liver disease.

There are a few numbers of reports that shows a decrease in the overall survival, from an intention-to treat perspective as a result of the impact of dropouts from the waiting list because of death or progression. These numbers can be as high as 20%. Adjuvant therapies during the waiting period, although intuitively effective, have not had an impact on the outcome. Expansion of the accepted Milan criteria (single nodule <5 cm, two or three nodules <3 cm) has been advocated by some groups, but there are few data to support the benefit of this policy, which otherwise would make the management of the shortage of donors more difficult and less cost effective. Living donor liver transplantation (LDLT) has been mostly applied in patients beyond the Milan criteria, and thus the results should be analyzed with caution.

Maybe in the future, when other parameters of the tumor are incorporated in the preoperative protocol, like: tumor doubling time, micro vascular invasion, number of mitoses, and histological grading, the question of what patient really benefits of expanding criteria can be answer, the expansion of the standard criteria is going to be more benefit for the patient due to the less influence in prognosis.

Treatment of HCC to reduce waiting list dropout has become a priority at most centers. Ablative therapies (percutaneous or laparoscopic) and chemoembolization are the most frequently applied treatments, these treatments have been tested only in the setting of observational studies, and at present there is no evidence of survival benefit. Thus, randomized studies are clearly required.

## Immunosupression in liver transplant for hepatocellular carcinoma JUAN-CARLOS RESTREPO<sup>2</sup>

The hepatocellular carcinoma (HCC) has turned into a frequent indication for liver transplant. The reports of different series indicate that it represents at least 12% of all liver

transplants in Europe. But what kind of inmunosuppression is better in these patients is an unanswered question. Our intension with this review is to give basic information to

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