

# **SURVIVAL OF PATIENTS WITH HEPATOCELLULAR CARCINOMA IS SIGNIFICANTLY IMPROVING: A POPULATION-BASED STUDY FROM SOUTHERN SWITZERLAND.**

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## **Introduction**

During the last 20 years relevant diagnostic procedures and advanced treatments were progressively introduced in the management of hepatocellular carcinoma (HCC).

## **Objectives**

Aim of this study is to assess up-to-date survival trends for HCC in southern Switzerland, a region with the highest incidence in Switzerland.

## **Materials and Methods**

HCC diagnosed in 1996-2009 were selected by Ticino Cancer Registry. Cancer-specific survival (CSS) was performed through the Kaplan-Meier method according to the calendar period of observation: 1996-2000, 2001-2005, 2006-2009. Log-rank test was used to detect differences in survival curves. Simultaneous assessment of prognostic factors was performed by the multivariate analysis of the Cox proportional-hazards regression model.

## **Results**

A total of 619 HCC were analyzed. There was a significant increase of patients undergoing transarterial chemoembolisation (TACE), whereas patients undergoing curative and palliative supportive treatments remained unchanged ( $p < 0.0001$ ). No shift to earlier stages was detected. Significant differences in survival were observed according to age group ( $p < 0.0001$ ), period of diagnosis ( $p < 0.0001$ ), diagnosis technique ( $p = 0.0035$ ), Barcelona-Clinic liver cancer stage ( $p < 0.0001$ ) and treatment approach ( $p < 0.0001$ ). The multivariate analysis confirmed the independent impact on CSS of factors above mentioned, with the exception of the diagnosis technique. Death risk was higher for patients diagnosed in 1996-2000 (HR:1.32;95%CI:1.03;1.68) and 2001-2005 (HR:1.33;95%CI:1.05;1.67) in comparison with 2006-2009 (reference group).

## **Discussion and Conclusions**

The current population-based report describes a major increase in HCC survival. Simultaneously an increased use of TACE has been detected, probable cofactor of the observed survival increase. Possibly, additional efforts could be made to decrease the HCC stage at diagnosis through active surveillance of cirrhotic patients to allow an increase in curative treatments. For sure, efforts should be made to comply with a standardised staging system for HCC, particularly for comparative population-based issues

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