[626] Risk factors and surveillance measures performed in patients prior to the diagnosis of hepatocellular carcinoma in Germany – a claims data analysis

Selina Becht[1], Simone Schrodi[1], Najib Ben Khaled[2 3 4], Michael von Bergwelt-Baildon[1 3 4], Peter Buggisch[5 6], Wolf Peter Hofmann[6 7], Ursula Marschall[8], Julia Mayerle[2 3], Alexander Philipp[2 3], Jörg Trojan[9], Enrico N. De Toni[2 3 4], Karin Berger-Thürmel[1 3]

[1]Medizinische Klinik und Poliklinik III - LMU Klinikum, München, Deutschland, *[2]Medizinische Klinik und Poliklinik II - LMU Klinikum, München, Deutschland*, *[3]Bayerisches Zentrum für Krebsforschung (BZKF), München, Deutschland*, *[4]Deutsches Konsortium für Translationale Krebsforschung (DKTK), Partnerstandort München, München, Deutschland*, *[5]ifi-Institut für interdisziplinäre Medizin, Asklepios Klinik St. Georg, Hamburg, Deutschland*, *[6]Berufsverband Niedergelassener Gastroenterologen Deutschlands e.V., Ulm, Deutschland*, *[7]Gastroenterologie am Bayerischen Platz, Berlin, Deutschland*, *[8]BARMER, Wuppertal, Deutschland*, *[9]Medizinische Klinik I - Universitätsklinikum Frankfurt, Frankfurt am Main, Deutschland*

Background: The aim of surveillance in patients with high risk of developing hepatocellular carcinoma (HCC) is to maximize the chances of curative treatment by detecting the tumor at an early stage. The current German S3 guidelines on diagnosis and therapy of HCC provide recommendations on the surveillance of patients with liver cirrhosis and/or chronic liver disease, including chronic viral hepatitis and steatotic liver disease. Abdominal ultrasonography (US) every 6 months, which can be complemented by alpha-fetoprotein (AFP) assessment, is considered as standard method for HCC surveillance. So far, reliable data on the implementation/adherence of the recommended surveillance measures in routine care are still lacking.

Objective: This preliminary analysis has been conducted on patients with HCC to analyze risk factors underlying its occurrence and the actual use of surveillance measures prior to the HCC diagnosis.

Methods: In this retrospective observational study, patients with incident HCC (ICD C22.0) between 2016-2020 were identified using claims data from BARMER statutory health insurance funds. Inclusion criteria were the following: ≥18 years (y), either one inpatient primary diagnosis with C22.0 or two confirmed diagnoses in the office-based or the outpatient hospital setting in consecutive quarters (M2Q criterion), BARMER-insured during the entire observation period. Patients with an additional cancer diagnosis within 5y prior to HCC diagnosis were excluded. A descriptive analysis of the documented risk factors for HCC was performed. The number of y with at least 2 documented abdominal US or AFP in the 10y prior to HCC diagnosis was used as a surrogate indicator of surveillance.

Results: A total of 4574 patients with a documented HCC diagnosis were identified. After applying the inclusion and exclusion criteria, 2778 patients were included in the subsequent analyses. Of these patients, 69% were male, the mean age was 71.9y [standard deviation [SD] ±9.7]. Age distribution was as follows: <60y: 11%, 60-69y: 29%, ≥70y: 60%. The risk factors fibrosis/cirrhosis, chronic viral hepatitis, MASLD, and MetALD were documented in 44%, 15%, 16%, and 14% of patients, respectively, within 10y prior to HCC diagnosis. According to the surrogate indicator of at least 2 documented US or AFP per y, 4% of patients had US-based surveillance in 6-10y out of 10y prior to diagnosis and 41% of patients in 1-5y out of 10y. 55% of patients never had at least 2 US per y. AFP was assessed frequently (6-10y with at least 2 assessments per y) in 2% of patients, less frequently in 14% (1-5y with at least 2 assessments per y). In 84% of patients, AFP was never assessed at least 2 times in any y prior to HCC diagnosis.

Implication for research and/or (healthcare) practice: This preliminary claims data analysis suggests an underuse of surveillance in patients at risk of developing HCC. This could be due to a failure to identify patients with a chronic liver disease and/or to a suboptimal implementation of the measures recommended for patients at risk by the German S3 guidelines. Owing to the well-established value of prevention/early diagnosis in determining the prognosis of cancer patients, our findings underscore the need to increase both the detection of at-risk patients and the awareness of HCC surveillance. We suggest that alternative healthcare models, including the use of digital tools at the end-user level, should be assessed as a feasible and easily implementable strategy to reach this goal.