Intrahepatic cholangiocarcinoma (iCCA) trends and treatment lines:

real life evidence from French National Hospital discharge database (PMSI)

M. Delaye[1], **B. Grenier**[2], **A. Lièvre**[3], **C. Neuzillet**[1]

1. GI Oncology, Department of Medical Oncology, Institut Curie - Site Saint Cloud, Versailles Saint-Quentin University, Paris Saclay University, Saint-Cloud, France (matthieu.delaye@curie.fr) ; 2. Heva, Epidemiology department, Lyon, France ; 3. Pontchaillou University Hospital, Department of Gastroenterology, University of Rennes 1, INSERM Unité 1242, Rennes, France

ESMO GI Congress 2024
26-29 June 2024,
Munich, Germany

294P

INTRODUCTION

Little is known about patients treated in hospital for iCCA and patterns of care in daily clinical practice.

This work aimed at:

- Updating the clinical outcome from our previous study (2014-2015)[1]
- Analysing treatment lines in French iCCA patients

METHODS

Observational retrospective study performed on the French National Hospital discharge database.

Inclusion criteria

- All patients with a diagnosis of iCCA who had a first hospital stay (S1)
- From January 1, 2016, to December 31, 2021

Follow-up

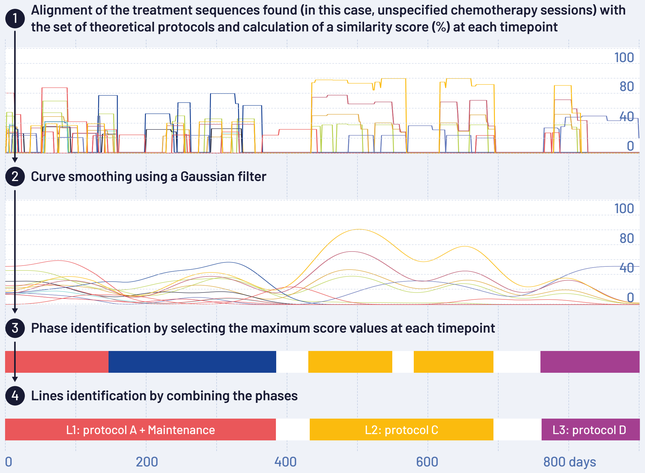
- Until December 31, 2021, or in-hospital death, whichever occurred first

Data collected

- Patients comorbidities according to ICD-10
- Treatments and surgical procedure codes during the 4 years before S1
- Hospital stays

Analyses

- Crude annual hospitalization rates were computed (new cases were defined by the absence of iCCA stay between index date and January 2012)
- Treatment lines were identified from 2012 to 2021 with an artificial intelligence algorithm (ATLAS, description below)[2]



- Transition rates between lines: Multi-state model (limited to patients with enough treatments claims [eligible patients]: ie. with at least 4 chemotherapy sessions/one surgery/one radioembolization)
- One-year persistence rate: Share of patients still under treatment one year after initiation
- Time to next treatment (TTNT): Time between initiation of line N and initiation of line N+1 (in months)

RESULTS

Flowchart

Overall, 13,491 patients included, and mean (SD) follow-up duration: 13.1 (17.9) months.

21,496 patients

Adult patients with a hospital stay with the code C221 (Intrahepatic bile duct carcinoma) as primary diagnosis between 2016 and 2021 in the PMSI

Exclusion : 8,005 patients

Patients with a hospital stay to be excluded with a primary or associated diagnosis between the index date and 2021 in the PMSI MCO: N = 6,713

- C220 (Liver cell carcinoma): N = 3,937
- C227 (Other specified carcinomas of liver): N = 176
- C18 (Malignant neoplasm of colon): N = 478
- C25 (Malignant neoplasm of pancreas): N = 1,447
- C21 (Malignant neoplasm of anus and anal canal): N = 149
- C23 (Malignant neoplasm of gallbladder): N = 1,023
- C24 (Malignant neoplasm of other and unspecified: N = 4,180 parts of biliary tract) with a biliary drainage: N = 2,006

Patients with a hospital stay to be excluded with a primary or associated diagnosis between the index date and 2021 in the PMSI SSR/HAD: N = 2,606

Patients who underwent a cholecystectomy procedure (CCAM) during the index hospital stay (PMSI MCO): N = 484

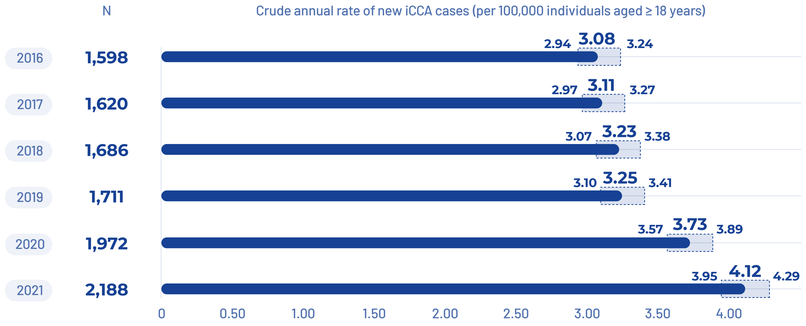
Patients with a hospital stay beginning before 2016: N = 81

Study population: 13,491 patients

(incl. 4,855 patients with enough claims to analyse treatment lines)

New iCCA cases

Increased from 2016: 3.08 per 100,000 adult person-years, to 2021: 4.12 per 100,000 adult person-years.



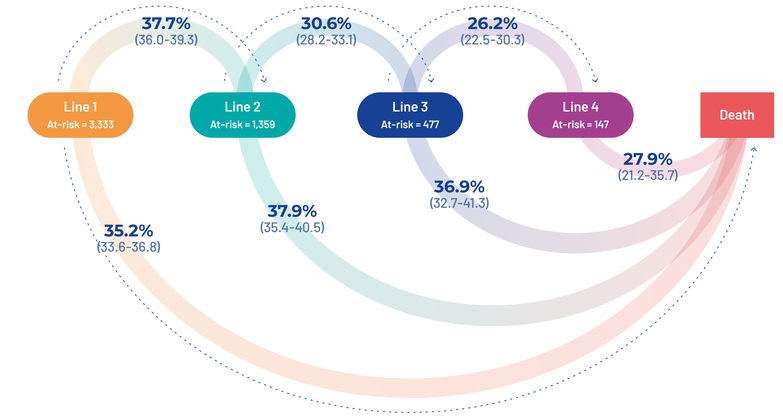
Patients characteristics on first stay (S1)

Patients characteristics	
Median age	72.0 (≥75 years: 42.8%)
Female	44.1%
S1 characteristics	
Admission via emergency room	20.7%
Metastatis	32.1%

Comorbidities	
Ulcerative colitis	0.7%
Crohn	0.5%
NASH	0.6%
Cirrhosis	9.4%
Hepatitis B	0.8%
Hepatitis C	1.3%

Transition rate between treatment lines (N=4,855 patients)

Among the 3,333 patients receiving L1, 37.7% (95%CI: 36.0-39.3) received a second line and 35.2% (33.6-36.8) died.



	L1	L2	L3
One-year persistence rate	35%	30%	20%
Median time to next treatment (months)	7.0	6.5	6.5

CONCLUSION

This study provides up-to-date national real-world data on iCCA

Increasing burden of iCCA year by year in France, potentially linked to:

- Increased number of cases[3-5]
- Increased awareness of physicians to ICD-10 coding of the pathology
- Improvements in diagnostic techniques[6-8]

Poor outcome of iCCA patients on L1 systemic therapy:

- Low persistence rate and short treatment duration of L1,
- Low proportion of patients receiving a L2 (< 40% of L1 patients).

Strong interest in updating the study with data including chemo-immunotherapy as first line treatment options to assess its impact

Strenghts

- Nationwide coverage
- Implementation of a published algorithm

Limitations

- Claims database: Reimburstment purposes (ICD-10 coding can influence the income from a stay)
- No laboratory exams/Anatomopathology results
- No data from community: No information about death occurring outside of hospital setting

References

[1] Neuzillet C, Emery C, Teissier C, Bouée S, Lièvre A. Patient healthcare trajectories of intrahepatic cholangiocarcinoma in France: A nationwide retrospective analysis. The Lancet Regional Health - Europe. 2022 Apr;15:100324.

[2] Prodel M, Lamarsalle L, Augusto V. ATLAS: A Robust Algorithm for Temporal Sequence Alignment of Treatment Lines using Claim Databases. In: 2019 IEEE Conference on Computational Intelligence in Bioinformatics and Computational Biology (CIBCB). 2019. p. 1–8

[3] Patel T. Worldwide trends in mortality from biliary tract malignancies. BMC Cancer. 2002 Dec;2(1):10.

[4] Saha SK, Zhu AX, Fuchs CS, Brooks GA. Forty-Year Trends in Cholangiocarcinoma Incidence in the U.S.: Intrahepatic Disease on the Rise. The Oncologist. 2016 May 1;21(5):594–9.

[5] Khan SA, Tavolari S, Brandi G. Cholangiocarcinoma: Epidemiology and risk factors. Liver International. 2019 May;39(S1):19–31.

[6] Jusakul A, Cutcutache I, Yong CH, Lim JQ, Huang MN, Padmanabhan N, et al. Whole-Genome and Epigenomic Landscapes of Etiologically Distinct Subtypes of Cholangiocarcinoma. Cancer Discovery. 2017 Oct 1;7(10):1116–35.

[7] Selvadurai S, Mann K, Mithra S, Bridgewater J, Malik H, Khan SA. Cholangiocarcinoma miscoding in hepatobiliary centres. European Journal of Surgical Oncology. 2021 Mar;47(3):635–9.

[8] Khan SA, Emadossadaty S, Ladep NG, Thomas HC, Elliott P, Taylor-Robinson SD, et al. Rising trends in cholangiocarcinoma: Is the ICD classification system misleading us? Journal of Hepatology. 2012 Apr;56(4):848–54.

Data source

PMSI bases provided by ATIH, Data controller: Les Laboratoires Servier ; Processing implementation officer: Heva. Study registered under MR006 with the Health Data Hub on Oct. 10, 2022 (Declaration of conformity n° 2204950 v 0 of Aug 8, 2018)

COI and funding

M. Delaye declares no COI.
The study was funded by Les Laboratoires Servier