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Factors Associated with High Costs of Patients with Non-Alcoholic Fatty Liver Disease: An Observational Study Using the French Constances Cohort

Arnaud Nze Ossima[1], Angélique Brzustowski[2], Valérie Paradis[2,3], Bernard Van Beers[2,4], Catherine Postic[2], Cédric Laouénan[5,6], Stanislas Pol[7], Laurent Castéra[8], Jean-François Gautier[9], Sebastien Czernichow[10], Anais Vallet-Pichard[11], Etienne Large[12], Lawrence Serfaty[13], Marie Zins[14], Dominique Valla[15], Isabelle DURAND-ZALESKI[1,16]

[1]: DRCI - Health economics, Assistance Publique-Hôpitaux de Paris, Hôpital de l'Hôtel Dieu; [2]: Université Paris Cité, INSERM, Centre de recherche sur l'inflammation, [3]: Service des Urgences, Hôpital Pitié–Salpêtrière, AP-HP, Paris, France; [4]: Université Paris Cité, INSERM, Centre de recherche sur l'inflammation; [5]: Radiology, AP-HP, Hôpital Beaujon; [6]: Université Paris Cité and Université Sorbonne Paris Nord, Inserm, IAME; [7]: Liver department, Hôpital Cochin-APHP; Université Paris Cité; [8]: Hepatology department, Hôpital Beaujon, AP-HP, Université Paris Cité, INSERM UMR 1149; [9]: Université Paris Cité, APHP, Hôpital Lariboisière group and Inserm U1151, Service de diabétologie et d'endocrinologie – Centre Universitaire du Diabète et de ses Complications; [10]: Université de Paris-Cité, APHP, Service de Nutrition, Centre Spécialisé Obésité, Hôpital Européen Georges Pompidou; [11]: Université Paris Cité, Pathology department, Hôpital Cochin-APHP; [12]: Université Paris Cité, Diabetology department, Hôpital Cochin-APHP; [13]: Université de Strasbourg, Hepatogastroenterology Service, Hôpital Hautepierre, Hôpitaux Universitaires de Strasbourg, INSERM UMR_S938, Sorbonne Université, [14]: UMS 11 Inserm, Versailles-Saint Quentin University; [15]: Service hépatologie, AP-HP, Hôpital Beaujon; [16]: Universite Paris Est Créteil, Assistance Publique-Hôpitaux de Paris, Service de Santé Publique

INTRODUCTION

- In France the prevalence of non-alcoholic fatty liver disease (NAFLD) is 18% [1] yet little targeted pharmacological therapy is available.
- Understanding the risk factors and healthcare utilization in this population could help to identify efficient interventions and improve outcomes.
- This research evaluates healthcare utilization and identifies factors associated with high-cost NAFLD patients in France.

OBJECTIVES

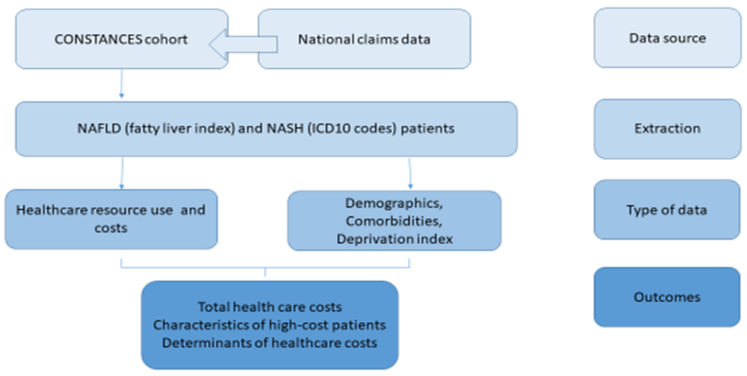
Principal: Describe the healthcare resource utilization (HCRU) and direct medical costs

Secondary:

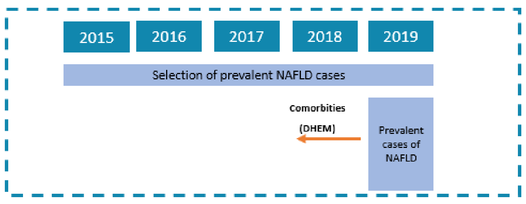
- Describe the demographic, socioeconomic and comorbidities.
- Identify factors associated with high-cost NAFLD patients.

METHODS

Study design and data sources: We conducted a prevalence-based cost study of NAFLD sufferers using data collected from participants in the CONSTANCES cohort, a nationally representative sample of 200,000 adults aged between 18 and 69, linked to the French national claims database (SNDS).



Inclusion criteria: NAFLD patients were identified based on the fatty liver index (FLI) [1] over the period 2015-2019 (at the baseline recruitment visit).



Exclusion criteria: Exclusion of patients who died before 31/12/2019 and patients with no healthcare reimbursements in 2019.

Variables of interest:

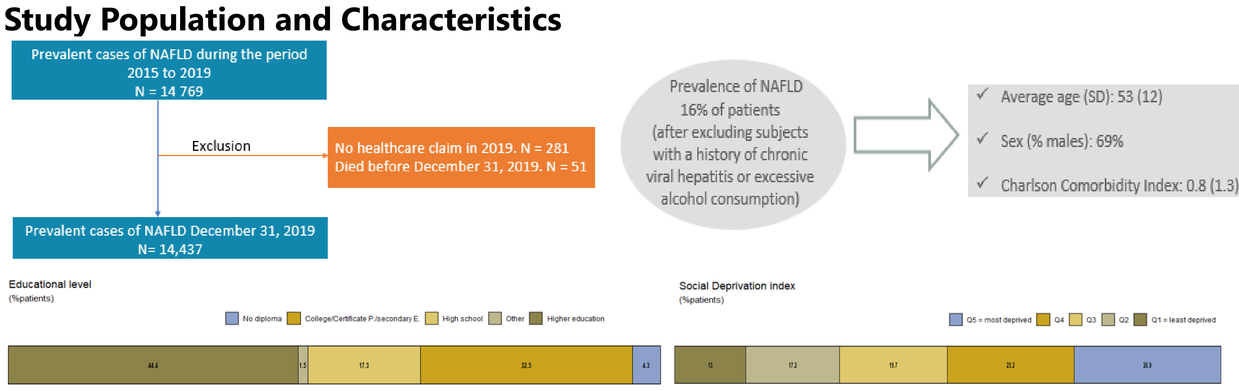
- Demographic, socioeconomic and clinical characteristics in 2018: age, gender Social Deprivation Index, Charlson Comorbidity Index, comorbidities (comorbidities were identified using the Diseases and Health Expenditures Mapping (DHEM) [2]).
- HCRU and their costs (€2022).
- Factors associated with high-cost ("high-cost" (above 90th percentile) vs "non-high cost" (below 90th percentile)).

Data analyses:

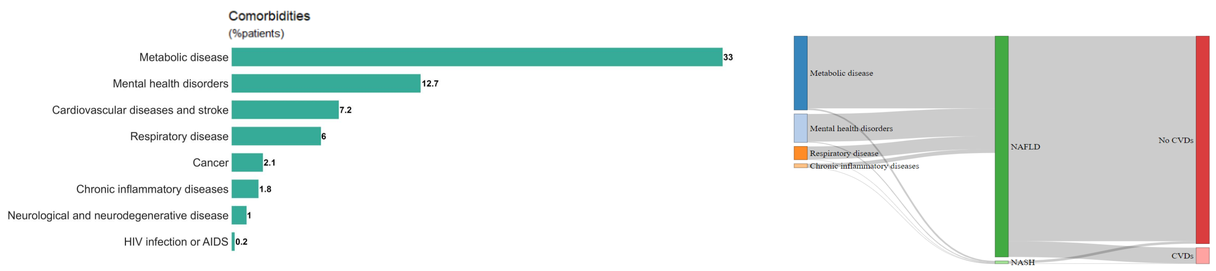
- Mean (standard deviation [SD]).
- Costs were estimated from the French National Health Insurance perspective.
- Factors significantly associated with high costs were identified using a multivariate logistic regression model.

RESULTS

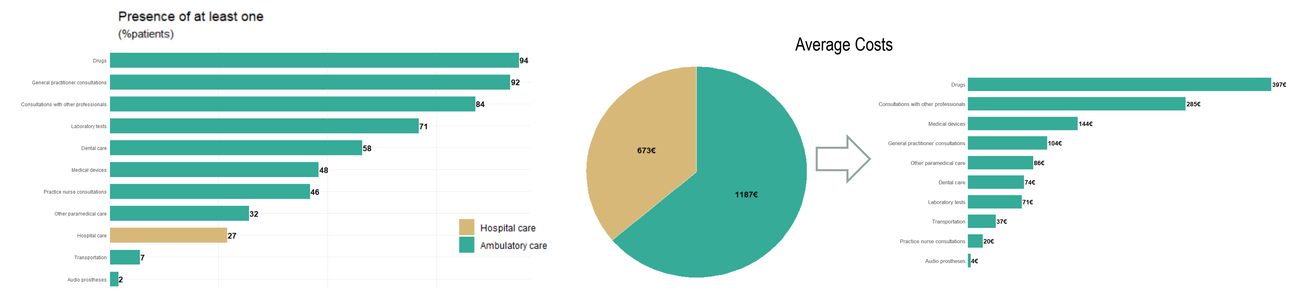
Study Population and Characteristics



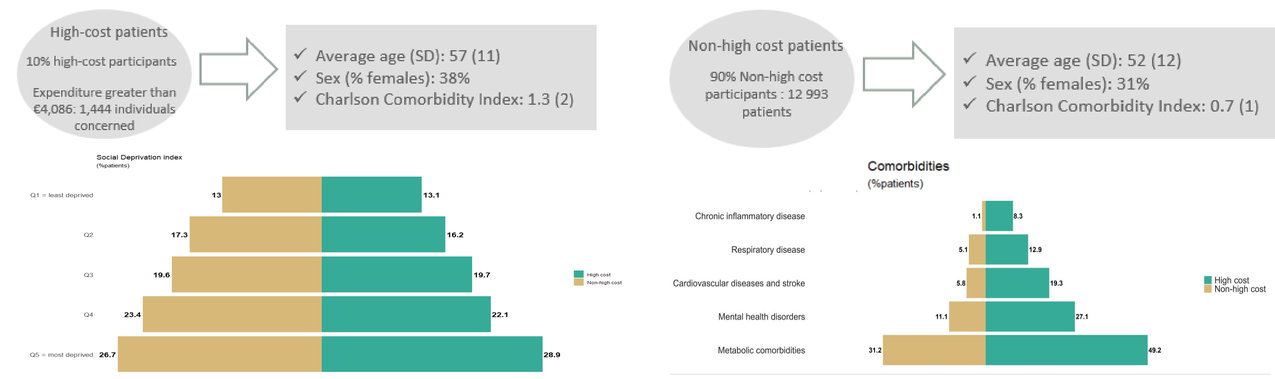
Prevalence of risk factors and complications



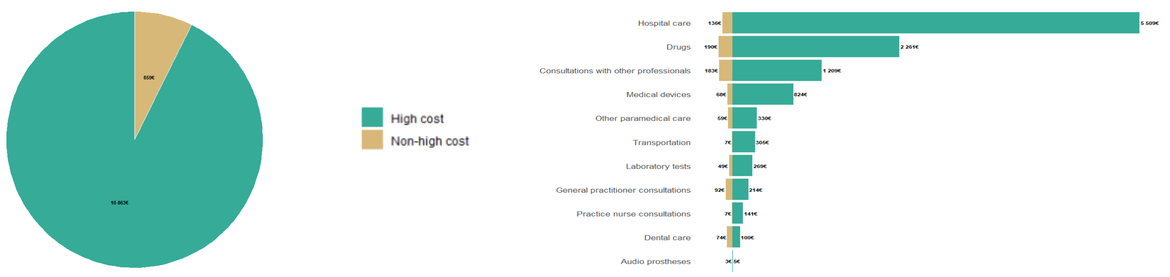
HCRU and related costs



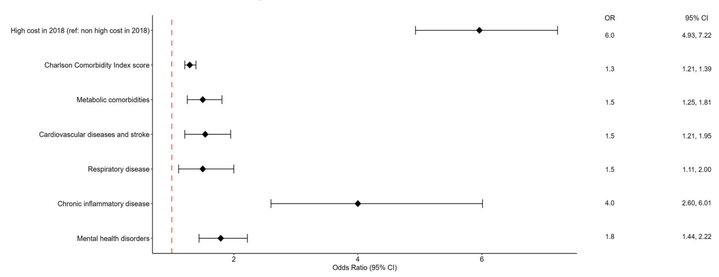
Characteristics of high-cost and non-high cost NAFLD individuals



Healthcare expenditure of high-cost and non-high cost NAFLD individuals



Factors associated with high cost



CONCLUSION:

NAFLD is a prevalent but low-cost condition. Over 50% of NAFLD patients belong to the most deprived population group.
The low average cost may result from limited awareness about complications.
Higher healthcare costs for NAFLD treatments are associated with comorbid conditions, in particular psychiatric disorders, diabetes, cardiovascular and respiratory diseases.

1. Nabi, O., Lacombe, K., Boursier, J. *et al.* Prevalence and risk factors of nonalcoholic fatty liver disease and advanced fibrosis in general population: the French Nationwide NASH-CO Study. Gastroenterology, 159(2), 791-793.

2. Cartographie des pathologies et des dépenses de l'Assurance Maladie. Disponible en ligne : https://assurance-maladie.ameli.fr/sites/default/files/2022_methode-reperage-pathologies_cartographie_0.pdf.

Contact : Arnaud Nze Ossima, arnaud.nzeossima@aphp.fr