



## The Older Adult & Liver Health

Last reviewed December 2019

### Liver Physiology and Liver Diseases in the Elderly

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3870491/>

This article reviews the various changes that the liver undergoes with aging that can affect clinical characteristics and outcomes in patients with liver disease. These changes can affect drug metabolism which increases susceptibility to drug-induced liver injury. **(OPEN ACCESS)**

### Aging and Liver Disease <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4736713/>

This review assessed the effect of aging on clinical liver disease with references to preclinical models when relevant to pathogenesis. **(OPEN ACCESS)**

### Liver Regeneration and Aging: A Current Perspective

<https://www.hindawi.com/journals/cggr/2011/526379/>

This article explains that many organ systems exhibit significant age-related deficits, but, based on studies in old rodents and elderly humans, the liver appears to be relatively protected from such changes. A remarkable feature of the liver is its capacity to regenerate its mass following partial hepatectomy. Reports suggest that aging compromises the liver's regenerative capacity, both in the rate and to the extent the organ's original volume is restored. **(OPEN ACCESS)**

### Age-Related Changes in Liver Structure and Function: Implications for Disease?

<https://www.sciencedirect.com/science/article/pii/S0531556505001191?via%3Dihub>

This paper overviews liver structure, function change in aging, regeneration, liver transplant, oxidative stress, drug metabolism and more. **(PAID ACCESS)**

### Liver Diseases and Aging: Friends or Foes?

<https://onlinelibrary.wiley.com/doi/pdf/10.1111/acle.12128>

The authors explain how the liver is the only human internal organ capable of natural regeneration of lost tissue. They argue that understanding how aging could affect the molecular pathology of liver diseases is particularly important. **(OPEN ACCESS)**

### Chronic Liver Disease in an Ageing Population

<https://academic.oup.com/ageing/article/38/1/11/41096>

This publication presents the most common chronic liver diseases that geriatricians are likely to encounter in clinical practice. With a mostly asymptomatic or non-specific presentation, these diseases may easily go undiagnosed. **(OPEN ACCESS)**

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### Considerations of Elderly Factors to Manage the Complication of Liver Cirrhosis in Elderly Patients <https://www.wjgnet.com/1007-9327/full/v25/i15/1817.htm>

This mini-review summarizes the therapeutic options to manage various symptoms of liver cirrhosis with careful consideration of the physiological changes of various organs associated with aging. (OPEN ACCESS)

### Undiagnosed Cirrhosis Occurs Frequently in the Elderly and Requires Periodic Follow ups and Medical Treatments <https://onlinelibrary.wiley.com/doi/abs/10.1111/j.1447-0594.2008.00470.x>

The study described examined autopsies to investigate liver cirrhosis in the elderly. (PAID ACCESS)

### Protein Recommendations for Older Adults with Cirrhosis: A Review <http://www.ghrnet.org/index.php/joghr/article/view/1014/1257>

The authors investigated the optimal protein intake for management of cirrhosis and the prevention of hepatic encephalopathy in older adults. (OPEN ACCESS)

### Cognitive Dysfunction in Cirrhosis is Associated with Falls: A Prospective Study <https://www.ncbi.nlm.nih.gov/pubmed/22213000>

The aim of this study was to assess the predictive value of the Psychometric Hepatic Encephalopathy Score (PHES) in identifying patients likely to sustain falls. (PAID ACCESS)

### Falls and Fall-Related Injury are Common in Older People with Chronic Liver Disease <https://link.springer.com/article/10.1007%2Fs10620-012-2193-5>

The authors aimed to determine the prevalence of falls and injury in chronic liver disease and to identify potential modifiable fall risks. (PAID ACCESS)

### Clinical and Histological Determinants of Nonalcoholic Steatohepatitis and Advanced Fibrosis in Elderly Patients <https://aasldpubs.onlinelibrary.wiley.com/doi/full/10.1002/hep.26465>

This article discusses an examination of the differences between elderly and non-elderly patients with nonalcoholic fatty liver disease (NAFLD) and identifies determinants of nonalcoholic steatohepatitis and advanced fibrosis in elderly patients. (OPEN ACCESS)

### Nonalcoholic Fatty Liver Disease and Aging: Epidemiology to Management <https://www.wjgnet.com/1007-9327/full/v20/i39/14185.htm>

This paper discusses the epidemiology and pathophysiology of nonalcoholic fatty liver disease and considerations regarding frailty, multi-morbidity, polypharmacy and dementia. (OPEN ACCESS)

### Relationship Between Diverticulosis and Nonalcoholic Fatty Liver Disease in Elderly Patients <https://journals.sagepub.com/doi/full/10.1177/0300060517751740>

The aim of this retrospective case-control study was to compare clinical and laboratory features of elderly patients with and without diverticulosis and assess factors related to hepatosteatosis. (OPEN ACCESS)

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### **Mechanisms and Implications of Age-Related Changes in the Liver: Nonalcoholic Fatty Liver Disease in the Elderly** <https://www.hindawi.com/journals/cggr/2011/831536/>

This article summarizes the epidemiology, pathogenesis, and clinical course of nonalcoholic fatty liver disease with a focus on adults over the age of 60. (OPEN ACCESS)

### **Prevalence and Long-Term Outcomes of Non-Alcoholic Fatty Liver Disease Among Elderly Individuals from the United States**

<https://bmcgastroenterol.biomedcentral.com/articles/10.1186/s12876-019-0972-6>

The authors aimed to assess the prevalence, risk factors and mortality of non-alcoholic fatty liver disease (NAFLD) among the elderly. (OPEN ACCESS)

### **Antiviral Therapy in Elderly Patients with Hepatitis C Virus Infection**

<https://www.gastroenterologyandhepatology.net/archives/may-2015/antiviral-therapy-in-elderly-patients-with-hepatitis-c-virus-infection/>

This article highlights the efficacy and safety differences in interferon-based therapy and interferon-free regimens for elderly patients with hepatitis C virus infection. (OPEN ACCESS)

### **Treatment of Chronic Hepatitis C in the Aged – Does it Impact Life Expectancy? A Decision Analysis**

<https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0157832>

The aim of this review was to estimate the life year (LY) and quality-adjusted life year (QALY) gained by treatment of naïve patients with hepatitis C as a function of a patient's age and fibrosis stage. (OPEN ACCESS)

### **Hepatitis C Treatment in the Elderly: New Possibilities and Controversies Towards Interferon-Free Regimens**

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4481436/>

This review, updates the epidemiology pointing to HCV as an infection of the elderly, the evidences that HCV harms the health of the aged patient more than that of the young one, and the available experiences of HCV treatment in the elderly with the "old" IFN-based regimens and with the newer drugs. (OPEN ACCESS)

### **Direct-Acting Antivirals are Effective for Chronic Hepatitis C Treatment in Elderly Patients**

[https://journals.lww.com/eurojgh/Abstract/2017/06000/Direct\\_acting\\_antivirals\\_are\\_effective\\_for\\_chronic.11.aspx](https://journals.lww.com/eurojgh/Abstract/2017/06000/Direct_acting_antivirals_are_effective_for_chronic.11.aspx)

This paper describes the real-world effectiveness of direct-acting antivirals (DAAs) among elderly patients. (PAID ACCESS)

### **Drug-Induced Liver Injury in Older Adults**

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4110803/>

The authors discuss the increased susceptibility to drug-induced liver injury in older adults and the need for a systematic approach in determining what drugs are hepatotoxic or increase hepatotoxicity risk. (OPEN ACCESS)

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### Curative Treatments and Survival Benefit in Elderly Patients With Hepatocellular Carcinoma: A SEER Population-Based Analysis

<https://meetinglibrary.asco.org/record/104749/abstract>

This poster suggests that transplant, resection and ablation are potentially curative treatments for hepatocellular carcinoma (HCC) with limited outcome data in young-old (65-74) and older ( $\geq 75$ ) patients. (OPEN ACCESS)

### Impact of Age on the Survival of Patients with Liver Cancer: An Analysis of 27,255 Patients in the SEER Database

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4359244/>

This retrospective study used the Surveillance, Epidemiology, and End-Results (SEER) population-based data to identify patients diagnosed with liver cancer to analyze long-term survival outcomes and risk factors. (OPEN ACCESS)

### Hepatocellular Carcinoma in Elderly Patients: Challenges and Solutions

<https://www.dovepress.com/hepatocellular-carcinoma-in-elderly-patients-challenges-and-solutions-peer-reviewed-fulltext-article-JHC>

This review of the literature supports the same treatment options for older patients as younger ones and provides recommendations for unfit patients. (OPEN ACCESS)

### Hepatocellular Carcinoma in Elderly: Clinical Characteristics, Treatments and Outcomes Compared with Younger Adults

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5590882/>

The study described sought to evaluate the role of age on treatments and outcomes for hepatocellular carcinoma patients. (OPEN ACCESS)

### Hepatocellular Carcinoma in Older Adults: Clinical Features, Treatments and Survival

<https://onlinelibrary.wiley.com/doi/full/10.1111/j.1532-5415.2010.03273.x>

The objective of the study described was to evaluate the clinical features, treatments, stages and survival of older adults with hepatocellular carcinoma. (OPEN ACCESS)

### Management and Prognosis of Hepatocellular Carcinoma in the Elderly: Results of an In-Field Multicenter Cohort Study

<https://www.ncbi.nlm.nih.gov/pubmed/28214386>

This study evaluated the role of ageing on clinical characteristics, treatment allocation and outcomes of new hepatocellular carcinomas in clinical practice. (PAID ACCESS)

### Palliative Care for People With Hepatocellular Carcinoma, and Specific Benefits for Older Adults

[https://www.clinicaltherapeutics.com/article/S0149-2918\(18\)30092-4/pdf](https://www.clinicaltherapeutics.com/article/S0149-2918(18)30092-4/pdf)

The authors discuss the evidence that illustrates that integrating palliative care into the treatment of hepatocellular carcinoma patients can improve outcomes. (OPEN ACCESS)

### Hepatic Encephalopathy Masquerading as Delirium

<https://www.actascientific.com/ASNE/pdf/ASNE-01-0005.pdf>

This paper discusses a case study where liver cirrhosis decompensated quickly with hepatic encephalopathy which presented as hypoactive delirium. (OPEN ACCESS)