BACKGROUND MEDIA INFORMATION Fast facts about liver disease

Liver, or hepatic, disease comprises a wide range of complex conditions that affect the liver.

- Liver diseases are extremely costly in terms of human suffering, doctor and hospital visits, and premature loss of productivity¹
- Approximately 29 million people in the European (EU) region suffer from a chronic liver condition²
 and more than 30 million Americans have liver disease³

Cirrhosis

Cirrhosis is late-stage liver disease which occurs when scar tissue (fibrosis) replaces healthy tissue.4

- More than 1,3 million deaths (440,000 female and 883,000 male deaths) worldwide It is estimated that in 2017, liver cirrhosis resulted in 170,000 deaths in Europe¹
- Cirrhosis is the leading cause of adult liver transplants in Europe with 80, 669 carried out between 1988 and 2020⁶

Liver cancer

Liver cancer begins in the liver and the most common form is hepatocellular carcinoma (HCC), which starts in the main type of liver cells, hepatocytes.⁷

- Worldwide, liver cancer is the sixth most common cancer⁸
 - o In 2020, 92'630 new cases of liver cancer were diagnosed in Europe⁸
- Liver cancer is the third most common cause of cancer death worldwide, preceded Lung and colorectal cancer. There were 830,180 deaths due to liver cancer in 2020
- HCC is one of the most serious outcomes of cirrhosis and is responsible for 70 to 90% of cases of primary liver cancer²
- Non-alcoholic fatty liver disease (NAFLD) associated with HCC is rapidly increasing¹⁰

Hepatitis

Hepatitis is a viral infection defined by inflammation of the liver. Viral hepatitis kills 1.4 million people worldwide each year.¹¹

Hepatitis A

Hepatitis A is caused by the Hepatitis A virus. It is most commonly spread by eating food contaminated by the stools of an infected person and can result in mild to severe illness.¹²

- Globally, there are an estimated 1.4 million cases of Hepatitis A every year¹³
- Hepatitis A infection does not cause chronic liver disease and is rarely fatal, but it can cause debilitating symptoms and acute liver failure, which is associated with high mortality¹²

Hepatitis B

Hepatitis B is transmitted through contact with infected blood or other bodily fluids, and can result in acute or chronic disease, ranging in severity from a mild condition lasting a few weeks to a serious, lifelong illness.¹⁴

- An estimated 257 million people worldwide have chronic Hepatitis B¹⁴
- Approximately one third of the world's population has serological evidence of past or present infection with Hepatitis B¹⁵
- More than 686,000 people die every year due to complications of Hepatitis B, including cirrhosis and liver cancer¹⁴
- In the World Health Organization (WHO) EU region, it is estimated that 13.3 million people have chronic Hepatitis B¹⁶

Hepatitis B results in an estimated 36,000 deaths every year in Europe¹⁶

Hepatitis C

Hepatitis C is transmitted through contact with infected blood or other bodily fluids, and can result in acute or chronic disease, ranging in severity from a mild condition lasting a few weeks to a serious, lifelong illness.¹⁷

- Hepatitis C is found worldwide. The most affected regions are Central and East Asia and North Africa¹⁷
- The number of people chronically infected with the Hepatitis C virus worldwide is estimated to be about 71 million, but most are unaware of their infection¹⁸
- Approximately 700,000 people die each year from Hepatitis C-related liver diseases¹⁷
- In the WHO EU region, it is estimated that 15 million people have Hepatitis C, resulting in approximately 86,000 deaths every year¹⁶

Hepatitis D

Hepatitis D is caused by the hepatitis delta virus, and is transmitted through contact with infected blood or other bodily fluids in people who already have Hepatitis B.¹⁹

- Hepatitis D is present worldwide and current estimates suggest that 15 to 20 million people have been exposed to the hepatitis delta virus²⁰
- Hepatitis D occurs more commonly in areas such as the Mediterranean, Middle East, Pakistan, Central and Northern Asia, Japan, Taiwan, Greenland, parts of Africa, the Amazon Basin and certain areas of the pacific. Prevalence is low in North America, Northern Europe, South Africa and Eastern Asia¹⁹
- The majority of patients infected with the Hepatitis D virus have a progressive disease which over time eventually evolves into cirrhosis²⁰

Hepatitis E

Hepatitis E is caused by the Hepatitis E virus and is mainly transmitted via contaminated water.²¹

- Hepatitis E is found worldwide, but the prevalence is highest in East and South Asia²¹
- It is usually self-limiting but (like Hepatitis A) it may develop into acute liver failure²¹
- Every year there are an estimated 20 million Hepatitis E infections, over three million symptomatic cases of Hepatitis E and 56,600 Hepatitis E-related deaths²¹

Liver transplant

A liver transplant is a surgical procedure to remove a diseased liver and replace it with a healthy liver from a donor.²²

- It is estimated that over 32,000 liver transplants were conducted globally in 2018²³
- More than 10,000 liver transplants are performed each year in Europe²
- Based on data from the European Liver Transplant Registry, 119,803 liver transplants took place across Europe between 1988 and 2015⁶
- In terms of survival post transplantation, more than nine out of ten people are still alive after one year, around eight in every ten people live at least five years, with many people living for up to 20 years or more²²

Alcoholic liver disease (ALD)

Alcoholic liver disease or alcohol-related liver disease is damage to the liver caused by excessive alcohol consumption, resulting in serious and life-threatening complications. ²⁴

- ALD is the most prevalent cause of advanced liver disease in Europe²⁵
- ALD is the most common cause of cirrhosis in the Western world and one of the ten most common causes of death²⁶
- Europe is the heaviest drinking region in the world in terms of the prevalence of alcohol consumption; therefore, ALD is an important issue for Europe to address²⁵

Non-alcoholic fatty liver disease (NAFLD) and non-alcoholic steatohepatitis (NASH)

Non-alcoholic fatty liver disease (NAFLD) is a condition in which fat builds up in the liver. In some people NAFLD can progress to non-alcohol related steatohepatitis (NASH), leading to permanent scarring (cirrhosis), which can seriously impair the liver's ability to function. ²⁷

- Guidelines on NAFLD published in 2016 by European Association for the Study of the Liver (EASL), European Association for the Study of Diabetes (EASD) and European Association for the Study of Obesity (EASO), state that NAFLD is the most common liver disorder in Western countries²⁸
- NAFLD affects approximately 20% of the population worldwide²⁹
 - The prevalence of NAFLD in Western countries is estimated to be between 17 and 46% of the general population²⁸
 - As many as 116 million people in the EU may suffer from some form of NAFLD¹
 - Two large European studies reported NAFLD prevalence rates of between 46 and 70% in samples of adults with type 2 diabetes²
 - $_{\odot}$ The prevalence of NAFLD in the general population in the United States is as high as $46\%^{30}$
- Between 10 and 30% of patients with NAFLD have NASH that can progress to cirrhosis³¹

Autoimmune, cholestatic and drug-induced liver diseases

Liver diseases that affect bile secretion are termed 'cholestatic' and they can be caused by drugs, genetic defects, developmental disorders and autoimmune damage of the bile ducts. Autoimmune liver diseases may also affect the liver cells (autoimmune hepatitis).

Drug-induced liver disease

- Drug-induced liver injury is the most common cause of acute liver failure in Western countries³²
- The incidence and seriousness of drug-induced hepatitis are largely underestimated in the general population³³

Autoimmune and cholestatic liver disease

- Autoimmune and cholestatic liver diseases are relatively rare compared with viral hepatitis and fatty liver disease, but are associated with a significant societal and economic burden¹
- These diseases account for approximately 10% of the liver transplants performed in Europe during the last 20 years¹
- Despite recent advances in understanding of the diseases and available treatments, there remain significant areas of unmet clinical need in each of the autoimmune liver diseases³⁴

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