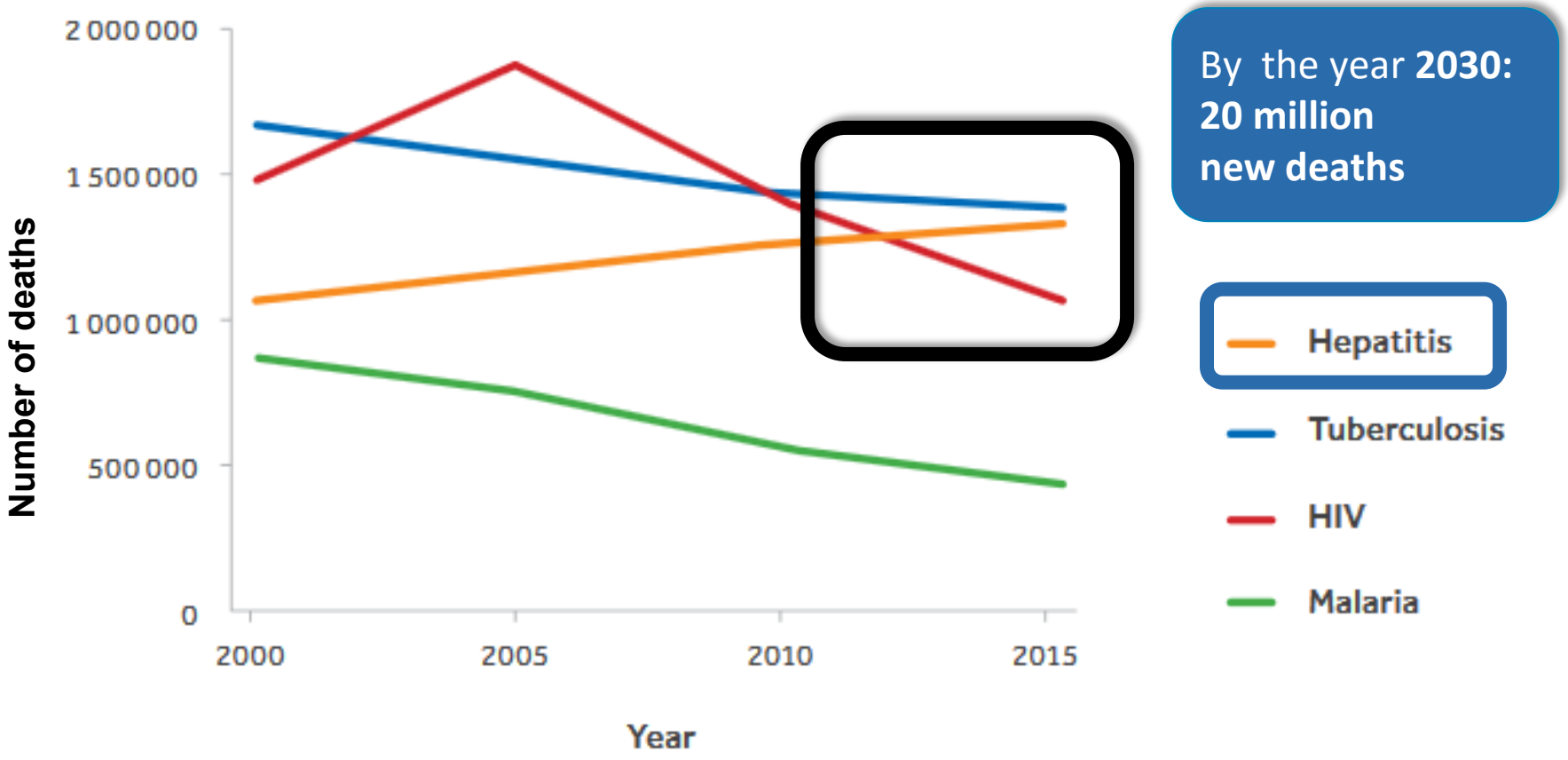
EASL Hepatitis treatment strategies
in the framework of
elimination of viral hepatitis
as a public health treat

Prof. Mojca Matičič, MD, PhD

EASL Policy and Public Health Committee

VHPB Meeting, Budapest: October 30, 2019

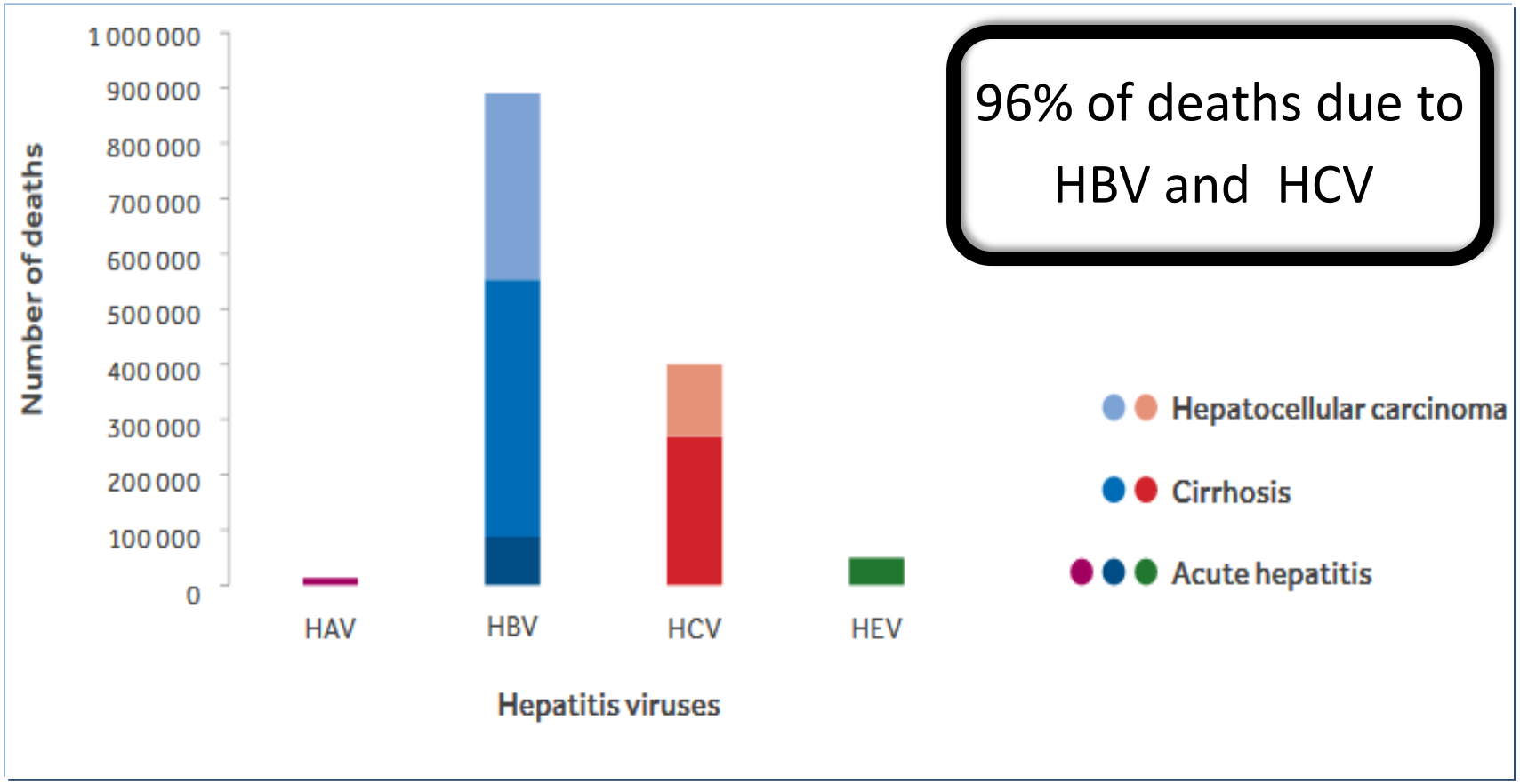
Global number of deaths due to viral hepatitis in 2015



WHO. Global hepatitis report, 2017. http://apps.who.int/iris/bitstream/10665/255017/1/WHO-HIV-2017.06-eng.pdf.

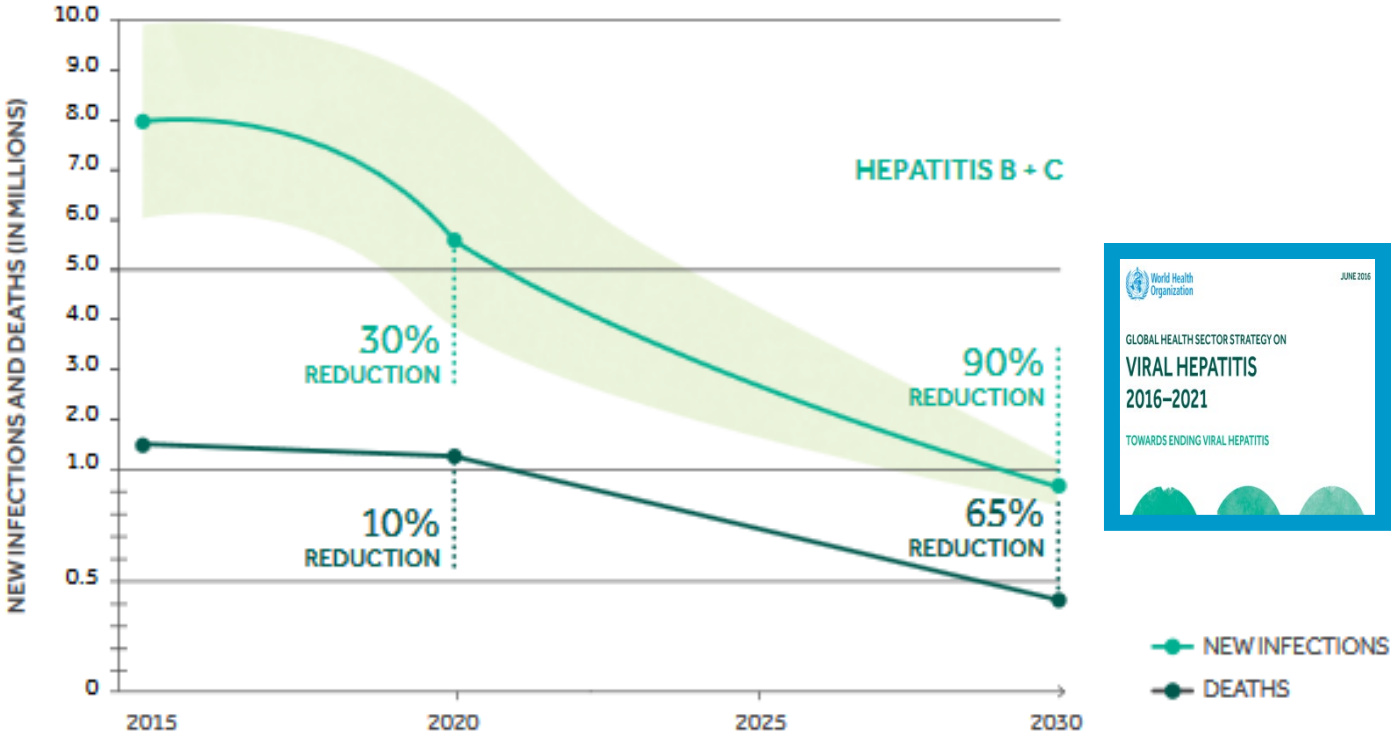
http//apps.who.int/gb/ebwha/pdf_files/WHA69/A69_32-en.pdf?ua=1

Global number of deaths due to viral hepatitis in 2015



WHO. Global hepatitis report, 2017. http://apps.who.int/iris/bitstream/10665/255017/1/WHO-HIV-2017.06-eng.pdf.

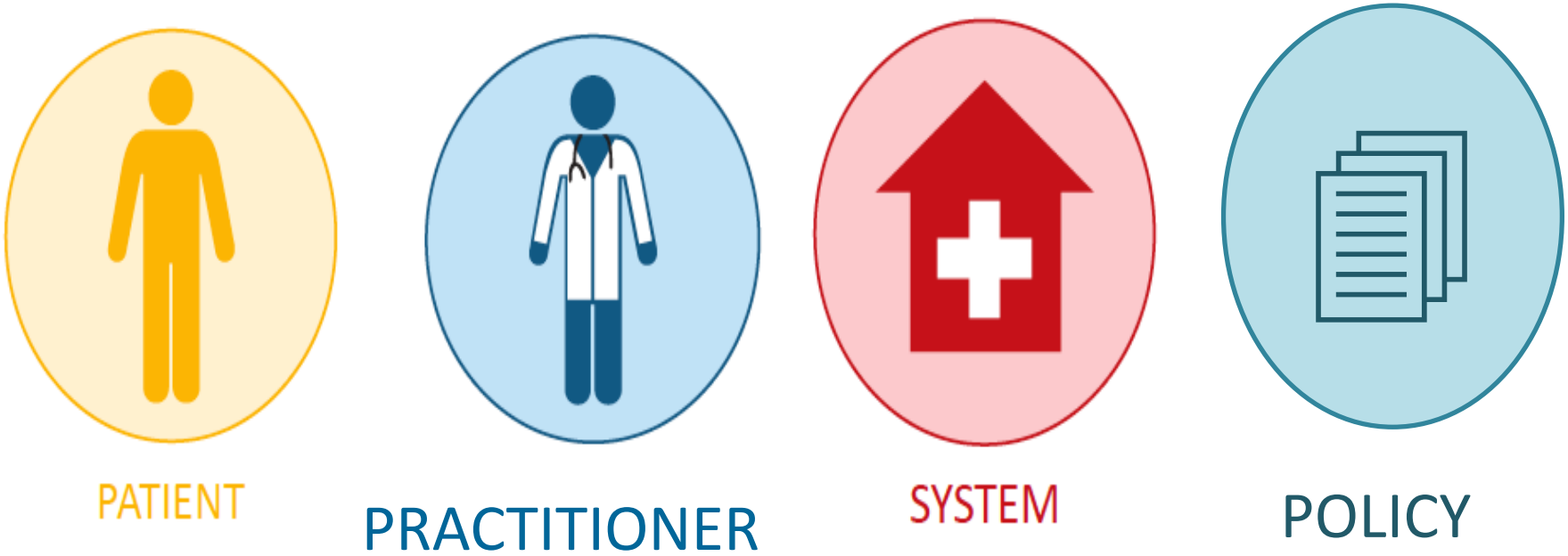
WHO strategy towards elimination of viral hepatitis
as a public health threat



Targets for reducing new cases of infection and deaths from chronic hepatitis B and C by 2030

WHO. Global Health Sector on Viral Hepatitis. Available at: http//apps.who.int/gb/ebwha/pdf_files/WHA69/A69_32-en.pdf?ua=1

Barriers to elimination of viral hepatitis on the national level



Lazarus JV, et al. BMC Infect Dis 2014;14(Suppl 6):S16; Grebely J, et al. J Infect Dis 2013;207:S19–25; Harris M, Rhodes T. Harm Reduct J 2013;10:7; Papatheodoridis GV, et al. Liver Int 2014;34:1452–63

EASL
European Association for the Study of the Liver

Our mission

EASL's mission is to be the Home of Hepatology so that all who are involved with treating liver disease can realise their full potential to cure and prevent it. The purpose of the association is to promote communication between European workers interested in the liver and its disorders

…and MORE

The strategic directions

SCIENCE

To be a key facilitator of excellence in liver research and liver-related innovation

EDUCATION

To be the prime resource for liver-related education and professional development of Health Care Professionals at all layers in the health care system as well as patients

ADVOCACY

To be the advocate of the highest standards of hepatology care for patients

EASL
European Association for the Study of the Liver

A. Promote research concerning the liver

B. Promote education of physicians, scientists and public awareness of liver diseases and their management

C. Act as an advisor to European and national health authorities concerning liver diseases, provision of clinical services and the need for research funding

D. Foster European multicentre controlled trials

E. Facilitate scientific exchange

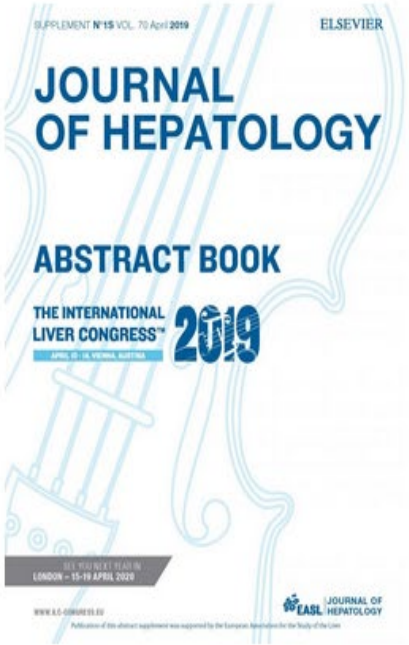
F. Facilitate participation of Young Investigators at its meetings

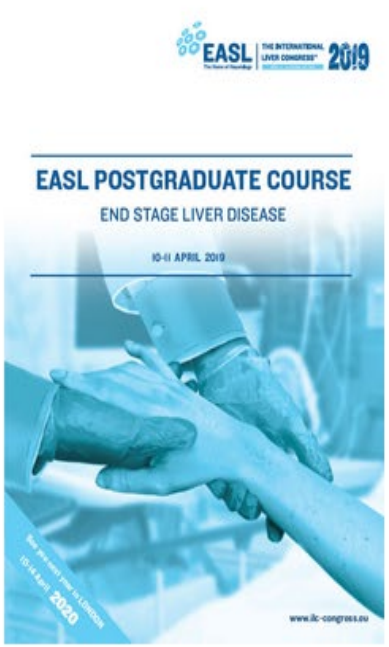
Key partners

- **Institutional**
  - WHO
  - ECDC
  - CDC
  - EMA
  - **VHPB**
  - ECDA
  - Biomed Alliance
- **NGO**
  - Eurocare, SHAAP
  - UEG
  - WHA
  - Biomed Alliance
  - Patients associations: ELPA
    PSC/ERN

EASL/ILC - Conferences

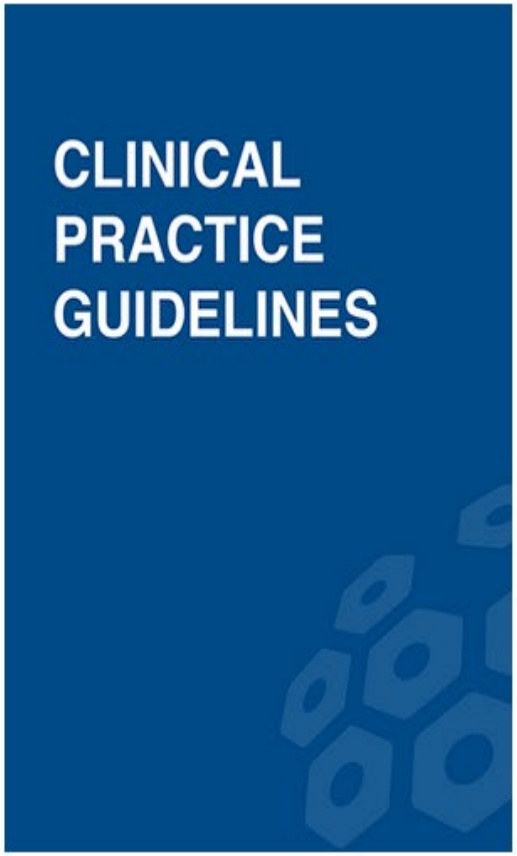
ILC 2019 resources

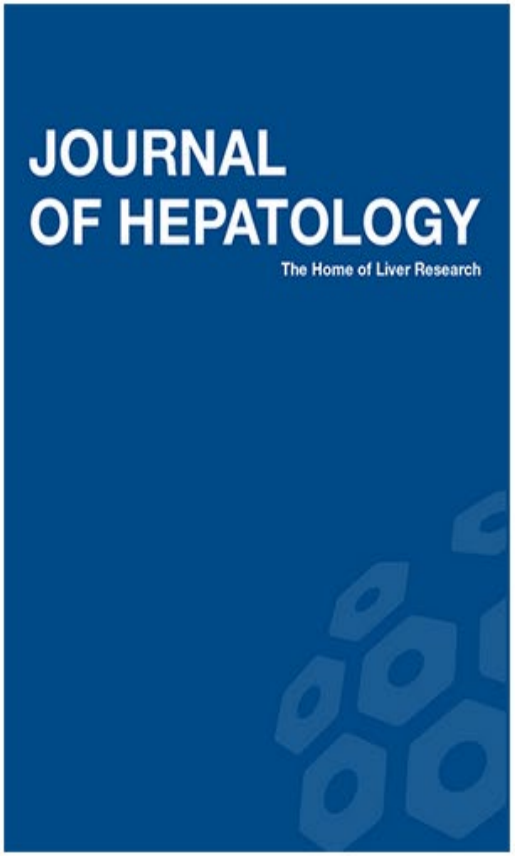




EASL
European Association for the Study of the Liver

Publications



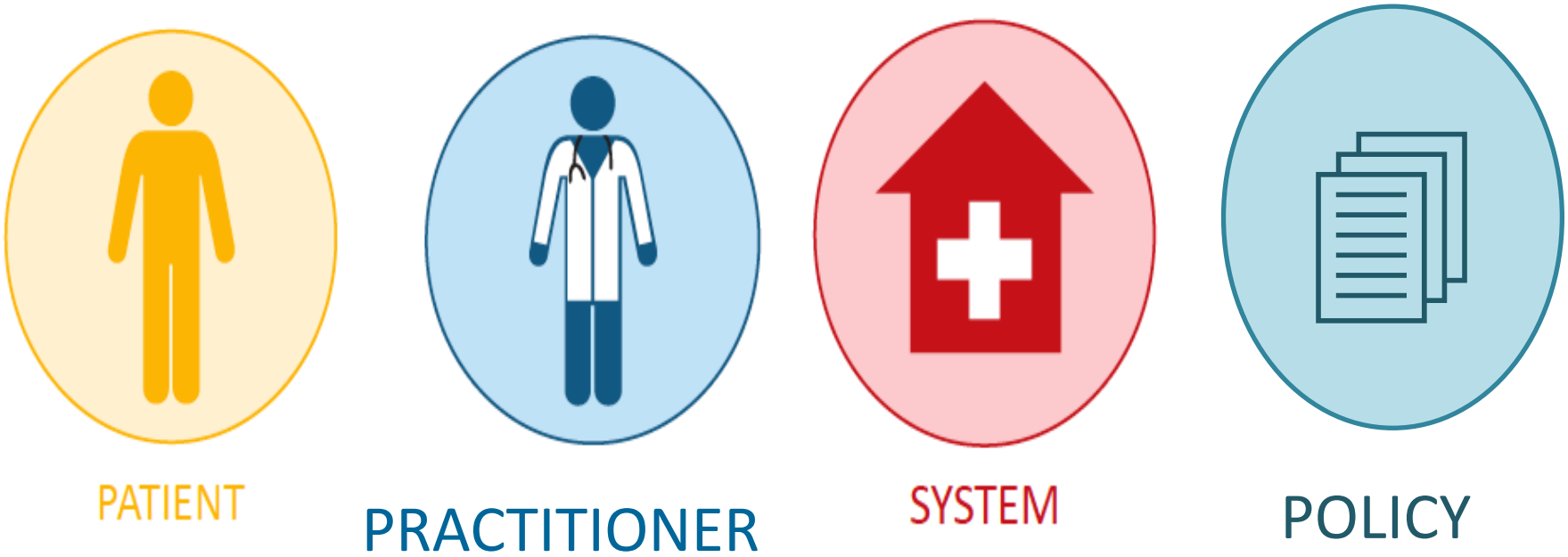


Main focuses of EASL Policy

- **Viral Hepatitis**
- Alcohol and alcohol-related policies
- NAFLD and food policy
- EU research policy (Horizon 2020,Horizon Europe)

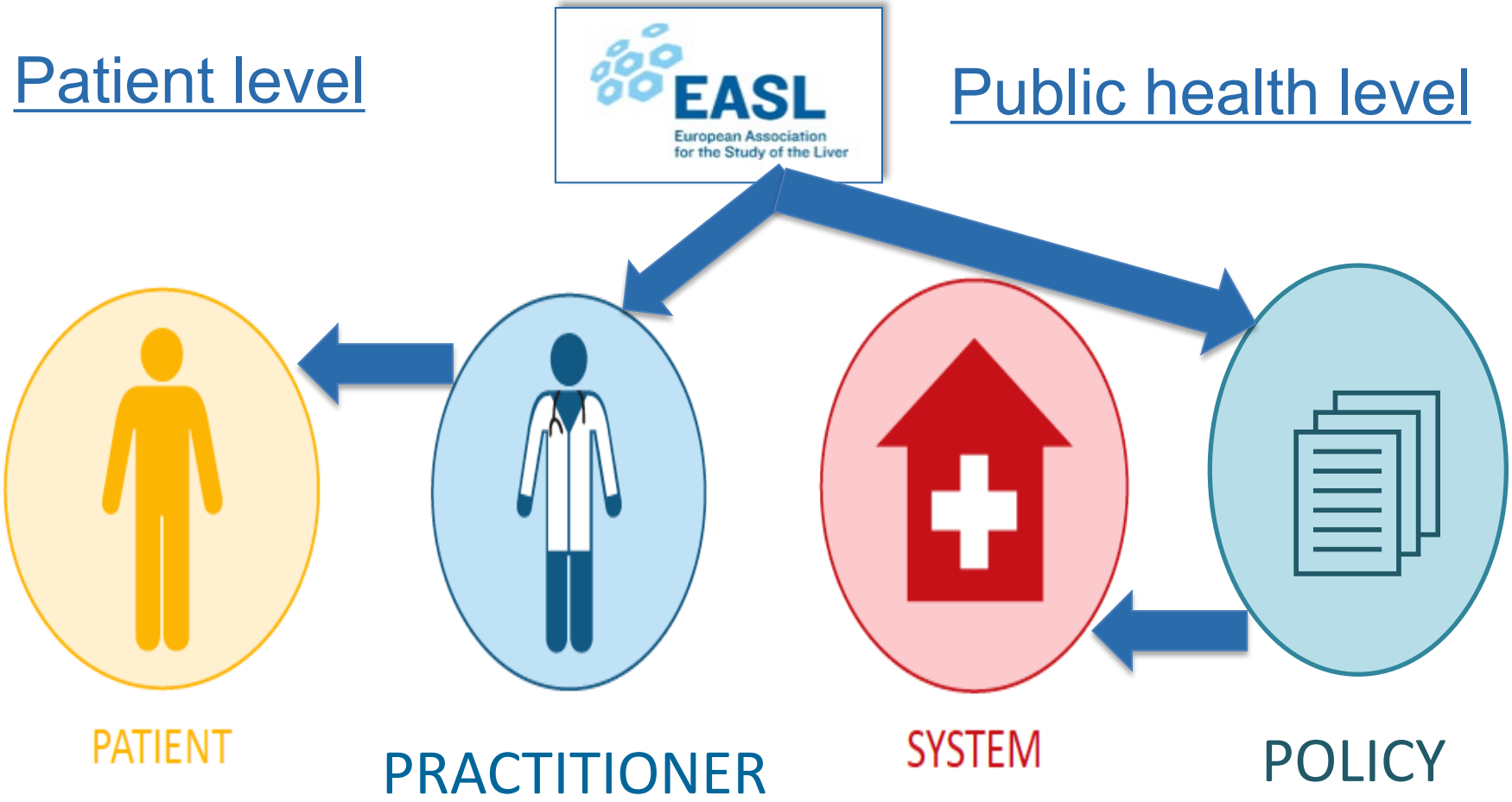
EASL Hepatitis treatment strategies in the framework of **elimination of viral hepatitis** as a public health treat

EASL
European Association for the Study of the Liver



Lazarus JV, et al. BMC Infect Dis 2014;14(Suppl 6):S16; Grebely J, et al. J Infect Dis 2013;207:S19–25;
Harris M, Rhodes T. Harm Reduct J 2013;10:7; Papatheodoridis GV, et al. Liver Int 2014;34:1452–63

EASL Hepatitis treatment strategies in the framework of **elimination of viral hepatitis** as a public health treat



EASL
European Association for the Study of the Liver

PATIENT
Clinical Practice Guidelines on Viral Hepatitis

- Hepatitis B
- Hepatitis C
- Hepatitis E

- Decompensated cirrhosis
- HCC

Grade of evidence

Grade of recommendation

EASL
European Association for the Study of the Liver

EASL Clinical Practice Guidelines – Hepatitis B

2012

2017

EASL
European Association for the Study of the Liver

EASL Recommendations on Treatment of Hepatitis B 2017

Chair

Pietro Lampertico

Panel members

Kosh Agarwal, Thomas Berg, Maria Buti, Harry LA Janssen,
George Papatheodoridis, Fabien Zoulim, Frank Tacke (EASL Governing Board representative)

Reviewers

Maurizia Brunetto, Henry Chan, Markus Cornberg

EASL Clinical Practice Guidelines – Hepatitis C

EASL
European Association for the Study of the Liver

2011 2013 2015 2016 2018

EASL
European Association
for the Study of the Liver

EASL Recommendations on Treatment of Hepatitis C 2018

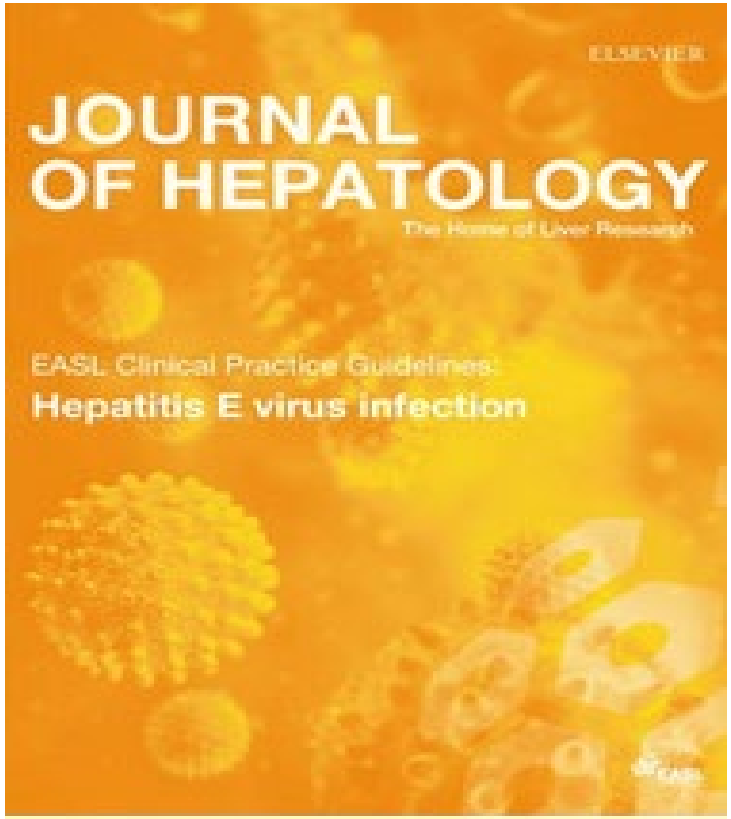
Chair
Jean-Michel Pawlotsky

EASL govrning board Representative
Francesco Negro

Panel
Alessio Aghemo , Marina Berenguer, Olav Dalgard, Geoffrey Dusheiko, Fiona Marra, Massimo Puoti, Heiner Wedemeyer

EASL Clinical Practice Guidelines – Hepatitis E

2018



EASL Clinical Practice Guidelines – Decompensated cirrhosis

2018

EASL
European Association for the Study of the Liver

EASL Clinical Practice Guidelines – Hepatocellular carcinoma

2012

2018

EASL Recommendations

HCV

EASL™
The Home of Hepatology

WHO / HOW to test ?

Screening for chronic HCV infection

Recommendations	Grade of evidence	Grade of recommendation
Screening strategies		
• Screening according to local epidemiology and within framework of national plans	A	1
• May include at-risk populations, birth cohort testing and general population testing in areas of intermediate to high seroprevalence (≥2–5%)	B	2
• Based on detection of serum/plasma anti-HCV Abs using EIA	A	1
Anti-HCV Ab testing		
• Should be offered with linkage to prevention, care and treatment	A	1
• Dried blood spots can be used as alternative to serum or plasma*	A	2
• Use RDTs† (as an alternative to classical EIA) at patient's care site to facilitate screening and improve access to care	A	2
HCV RNA testing		
• If anti-HCV Ab detected, test for serum/plasma HCV RNA (or HCV core antigen)‡ to identify patients with ongoing infection	A	1
• Dried blood spots can be used as alternative to serum or plasma*	A	2
• Reflex testing for HCV RNA in patients who are anti-HCV Ab+ should be applied to increase linkage to care	B	1
• Anti-HCV Ab screening can be replaced by a point-of-care HCV RNA assay (LLOD: ≤1000 IU/mL) or HCV core antigen testing§	C	2

*After shipment to a central laboratory where the EIA will be performed; †Using serum, plasma, fingerstick whole blood or saliva as matrices; ‡If HCV RNA assays are not available and/or not affordable; § If available and screening strategy is cost effective

EASL CPG HCV. J Hepatol 2018;69:461–511.

WHO to treat ?

Indications for treatment

Recommendations	Grade of evidence	Grade of recommendation
All patients with HCV infection must be considered for therapy, including treatment-naïve and treatment-experienced* patients	A	1
Patients who should be treated without delay • Significant fibrosis or cirrhosis (METAVIR score ≥F2): including compensated (Child–Pugh A) and decompensated (Child–Pugh B or C) cirrhosis • Clinically significant extra-hepatic manifestations† • HCV recurrence after liver transplantation • Patients at risk of rapid evolution of liver disease due to concurrent comorbidities‡ • Individuals at risk of transmitting HCV – PWID – MSM with high-risk sexual practices – Women of child-bearing age who wish to get pregnant – Haemodialysis patients – Incarcerated individuals	A	1
• In patients with **decompensated cirrhosis** and an indication for liver transplantation (MELD score ≥18–20), transplant first and treat after transplantation	B	1
• For waiting time >6 months, treat before transplant (clinical benefit not well established)	B	2
• Treatment is generally not recommended in patients with limited life expectancy due to non-liver-related comorbidities	B	2

*Individuals who failed to achieve SVR after prior treatment; †Symptomatic vasculitis associated with HCV-related mixed cryoglobulinaemia, HCV immune complex-related nephropathy and non-Hodgkin B-cell lymphoma; ‡Non-liver solid organ or stem cell transplant recipients, HBV coinfection, diabetes

EASL CPG HCV. J Hepatol 2018;69:461–511.

WITH WHAT to treat ?

IFN-free / RBV-free combination regimens recommended for each genotype

Genotype	Pangenotypic regimens			Genotype-specific regimens		
	SOF/VEL	GLE/PIB	SOF/VEL/ VOX	SOF/LDV	GZR/EBR	OBV/PTV/r + DSV
1a	Yes	Yes	No*	Yes†	Yes‡	No
1b	Yes	Yes	No*	Yes	Yes	Yes
2	Yes	Yes	No*	No	No	No
3	Yes§	Yes	Yes‖	No	No	No
4	Yes	Yes	No*	Yes†	Yes¶	No
5	Yes	Yes	No*	Yes†	No	No
6	Yes	Yes	No*	Yes†	No	No

*Triple combination therapy efficacious but not useful due to the efficacy of double combination regimens;
†TN patients without cirrhosis or with compensated (Child–Pugh A) cirrhosis;
‡TN and TE patients without cirrhosis or with compensated (Child-Pugh A) cirrhosis with HCV RNA ≤800,000 IU/mL (5.9 Log_{10} IU/mL);
§ TN and TE patients without cirrhosis;
‖TN and TE patients with compensated (Child–Pugh A) cirrhosis;
¶TN patients without cirrhosis or with compensated (Child–Pugh A) cirrhosis with HCV RNA ≤800,000 IU/mL (5.9 Log_{10} IU/mL)

EASL CPG HCV. J Hepatol 2018;69:461–511.

HOW to treat ?

Treatment recommendations for TN or TE patients with CHC without cirrhosis

GT		SOF/VEL	GLE/PIB	SOF/VEL/VOX	SOF/LDV	GZR/EBR	OBV/PTV/r + DSV
1a	TN	12 weeks	8 weeks	No	8–12 weeks	12 weeks (HCV RNA ≤800,00 IU/mL)	No
	TE	12 weeks	8 weeks	No	No	12 weeks (HCV RNA ≤800,00 IU/mL)	No
1b	TN	12 weeks	8 weeks	No	8–12 weeks	8 weeks (F0–F2) 12 weeks (F3)	8 weeks (F0–F2) 12 weeks (F3)
	TE	12 weeks	8 weeks	No	12 weeks	12 weeks	12 weeks
2	TN	12 weeks	8 weeks	No	No	No	No
	TE	12 weeks	8 weeks	No	No	No	No
3	TN	12 weeks	8 weeks	No	No	No	No
	TE	12 weeks	12 weeks	No	No	No	No
4	TN	12 weeks	8 weeks	No	12 weeks	12 weeks (HCV RNA ≤800,00 IU/mL)	No
	TE	12 weeks	8 weeks	No	No	No	No
5	TN	12 weeks	8 weeks	No	12 weeks	No	No
	TE	12 weeks	8 weeks	No	No	No	No
6	TN	12 weeks	8 weeks	No	12 weeks	No	No
	TE	12 weeks	8 weeks	No	No	No	No

EASL CPG HCV. J Hepatol 2018;69:461–511.

HOW to treat ?

Treatment recommendations for TN or TE patients with CHC with compensated cirrhosis (Child–Pugh A)

GT		SOF/VEL	GLE/PIB	SOF/VEL/VOX	SOF/LDV	GZR/EBR	OBV/PTV/r + DSV
1a	TN	12 weeks	12 weeks	No	12 weeks	12 weeks (HCV RNA ≤800,00 IU/mL)	No
	TE	12 weeks	12 weeks	No	No	12 weeks (HCV RNA ≤800,00 IU/mL)	No
1b	TN	12 weeks	12 weeks	No	12 weeks	12 weeks	12 weeks
	TE	12 weeks	12 weeks	No	12 weeks	12 weeks	12 weeks
2	TN	12 weeks	12 weeks	No	No	No	No
	TE	12 weeks	12 weeks	No	No	No	No
4	TN	12 weeks	12 weeks	No	12 weeks	12 weeks (HCV RNA ≤800,00 IU/mL)	No
	TE	12 weeks	12 weeks	No	No	No	No
5	TN	12 weeks	12 weeks	No	12 weeks	No	No
	TE	12 weeks	12 weeks	No	No	No	No
6	TN	12 weeks	12 weeks	No	12 weeks	No	No
	TE	12 weeks	12 weeks	No	No	No	No

EASL CPG HCV. J Hepatol 2018;69:461–511.

HOW to treat ?

Treatment recommendations for TN or TE patients with CHC with HCV genotype 3 and compensated cirrhosis (CPA)

Patients infected with HCV genotype 3 with compensated cirrhosis				
Availability/ performance of HCV NS5A resistance testing	Results of HCV NS5A resistance testing*	SOF/VEL-based regimen		GLE/PIB-based regimen
		SOF/VEL/VOX available and affordable	SOF/VEL/VOX not available or affordable	GLE/PIB available
Not available/ not performed	-	SOF/VEL/VOX for 12 weeks	SOF/VEL + RBV for 12 weeks	GLE/PIB for 12 weeks in TN or 16 weeks in TE patients†
Available and performed	Presence of Y93H RAS at baseline	SOF/VEL/VOX for 12 weeks	SOF/VEL + RBV for 12 weeks	GLE/PIB for 12 weeks in TN or 16 weeks in TE patients†
	No Y93H RAS at baseline	SOF/VEL for 12 weeks	SOF/VEL for 12 weeks	GLE/PIB for 12 weeks in TN or 16 weeks in TE patients†

*The presence of the NS5A RAS Y93H at baseline is by population sequencing or >15% by deep sequencing;
†Data with 12 weeks of treatment with GLE/PIB in TE patients with cirrhosis are needed

EASL. J Hepatol 2018; doi: 10.1016/j.jhep.2018.11.004;
EASL CPG HCV. J Hepatol 2018;69:461–511.

HOW to treat ?

Patients with severe liver disease (1)

Recommendations	Grade of evidence	Grade of recommendation
Indications for treatment		
• MELD score <18–20: treat prior to liver transplantation	A	1
• MELD score ≥18–20:		
– Transplant first without antiviral treatment and treat HCV infection after transplantation	B	1
– Treat before transplant if waiting time exceeds 6 months (depending on the local situation)	B	2
Treatment (MELD score <18–20)		
• SOF/LDV (GT 1, 4, 5 and 6) or SOF/VEL (all genotypes) + RBV* for 12 weeks	A	1
• PI-containing regimens are contraindicated	A	1
• Contraindications/poor tolerance to RBV: SOF/LDV (GT 1, 4, 5, 6) or SOF/VEL (all genotypes) for 24 weeks	A	1

*Daily weight-based RBV (1,000 mg or 1,200 mg in patients <75 kg or ≥75 kg, respectively); start RBV at a dose of 600 mg daily and adjust dose depending on tolerance

EASL CPG HCV. J Hepatol 2018;69:461–511.

HOW to treat ?

Patients with severe liver disease (2)

Recommendations		
Post-liver transplant recurrence		
• All patients with post-transplant recurrence should be considered for therapy	A	1
• Treatment should be initiated early after transplantation (≥3 months)	A	1
• Treatments include:		
– SOF/VEL for 12 weeks (all genotypes)	A	1
– SOF/LDV for 12 weeks (GT 1, 4, 5, 6)	A	1
– GLE/PIB for 12 weeks (eGFR ≤30 mL/min/1.73 m^2; all genotypes)*	B	1
– SOF/LDV or SOF/LDV + RBV for 24 weeks (decompensated cirrhosis)†	B	1
HCC with an indication for liver transplant		
• Liver transplantation must be considered the main therapeutic goal	A	1
• Make treatment decisions on a case by case basis through MDT discussion	A	1
• HCV treatment can be initiated before or delayed until after transplantation, depending on circumstances	A	1/2
HCC without an indication for liver transplant		
• HCV treatment should not be withheld but HCC surveillance should be carried out post-SVR	A	1
• Use the same DAA regimens as for patients with decompensated cirrhosis without HCC awaiting liver transplantation		

*Monitor immunosuppressant drug levels and dose adjust;
†Daily weight-based RBV (1,000 mg or 1,200 mg in patients <75 kg or ≥75 kg, respectively); start RBV at a dose of 600 mg daily and adjust dose depending on tolerance

EASL CPG HCV. J Hepatol 2018;69:461–511.

CAUTION !

Drug–drug interactions

Recommendations	Grade of evidence	Grade of recommendation
Numerous and complex DDIs are possible with HCV DAAs A thorough risk assessment is required in all patients prior to starting DAAs and before starting other medications during treatment*	A	1
DDIs are a key consideration in treating HIV-HCV coinfected patients Close attention must be paid to anti-HIV drugs that are contraindicated, not recommended or require dose adjustment with particular DAA regimens	A	1
Patients should be educated on the importance of: • Adherence to therapy • Following dosing recommendations • Reporting the use of: – Other prescribed medications – OTC medications – Medications bought via the internet – Use of party or recreational drugs	A	1

- Key internet resource: www.hep-druginteractions.org

EASL CPG HCV. J Hepatol 2018;69:461–511.

Follow-up
Post treatment

Recommendations	Grade of evidence	Grade of recommendation
Patients who achieve SVR		
• Discharge patients with no/moderate fibrosis (F0–F2) and no ongoing risk behaviour or other comorbidities	A	1
• Monitor for HCC (by US every 6 months) in patients with advanced fibrosis (F3) or cirrhosis (F4)	A	1
– In patients with cirrhosis, perform surveillance for oesophageal varices by endoscopy if varices were present at pre-treatment endoscopy (A1)*		
• Explain risk of reinfection to positively modify risk behaviour	B	1
• Bi-annual/annual monitoring in PWID, MSM with ongoing risk behaviour	A	1
• Make retreatment available if reinfection is identified during post-SVR follow-up	A	1
Untreated patients or patients with treatment failure		
• Follow untreated patients and those who failed prior treatment at regular intervals	A	1
• Carry out non-invasive methods for staging fibrosis at intervals of 1 to 2 years	A	1
• Continue HCC surveillance every 6 months indefinitely in patients with advanced fibrosis and cirrhosis	A	1

*Index variceal bleed seldom seen in low-risk patients after SVR (unless additional causes for ongoing liver damage are present and persist)

EASL CPG HCV. J Hepatol 2018;69:461–511.

Special groups

Treatment: who, with what, how, follow-up

- HBV-HCV coinfection
- Immune-complex mediated manifestations of CHC
- Patients with renal impairment, including haemodialysis
- Non-hepatic solid organ transplant recipients
- Recipients of an HCV+ organ transplant
- Haemoglobinopathies and bleeding disorders
- Adolescents and children

- PWID and patients receiving OST

EASL CPG HCV. J Hepatol 2018;69:461–511.

PWID and patients receiving OST

Recommendations	Grade of evidence	Grade of recommendation
Test routinely and voluntarily for anti-HCV Abs and HCV RNA; test HCV RNA annually and following any high-risk injecting episode	A	1
Provide appropriate access to OST and clean drug injecting equipment as part of widespread comprehensive harm reduction programs, including in prisons	A	1
All HCV-infected PWIDs have an indication for antiviral therapy; DAA-based therapies are safe and effective in HCV-infected patients receiving OST, those with a history of IDU and those who recently injected drugs	A	1
HCV treatment should be offered to HCV-infected patients in prison	B	1
Pre-therapeutic education: include discussions of HCV transmission, risk factors for fibrosis progression, treatment, reinfection risk, and harm reduction strategies	B	1
In patients on OST, DAA-based anti-HCV therapy does not require methadone or buprenorphine dose adjustment	A	1
Provide harm reduction, education and counselling to prevent HCV reinfection following successful treatment	B	1
Monitor after SVR in PWID with an ongoing risk behaviour*	A	1
Retreat if reinfection identified during post-SVR follow-up	A	1

*Ideally bi-annual or at least annual HCV RNA assessment

EASL CPG HCV. J Hepatol 2018;69:461–511.

Adherence

Measures to improve it

Recommendations	Grade of evidence	Grade of recommendation
HCV treatment should be delivered within a MDT setting, with experience in HCV assessment and therapy	A	1
HCV-infected patients should be counselled on the importance of adherence for attaining an SVR	A	1
Social support services should be a component of HCV clinical management for patients with socioeconomic disadvantages, migrants	B	1
Peer-based support and patient activation assessment are recommended to improve HCV clinical management	B	2
Patients with harmful alcohol consumption should receive additional support during antiviral therapy	B	1

EASL CPG HCV. J Hepatol 2018;69:461–511.

Simplification

Treatment of chronic hepatitis C

Recommendations	Grade of evidence	Grade of recommendation
Pre-treatment assessment		
• Proof of HCV replication (presence of HCV RNA or of HCV core antigen)	B	1
• Assessment of cirrhosis by **simple non-invasive** markers (e.g. FIB-4 or APRI)*		
Treatment - pangenotypic		
• TN and TE patients† (without cirrhosis/with compensated cirrhosis)		
– Fixed-dose SOF/VEL for 12 weeks	B	1
– Fixed-dose GLE/PIB (8 weeks without cirrhosis;‡ 12 weeks with cirrhosis)	B	1
– Generic drugs can be used, provided quality controls met and guaranteed	A	1
– Check possible DDIs and implement dose modifications when necessary	A	1
Follow-up		
• **Checking SVR12** after EOT is dispensable (given high expected SVR12 rates)	B	1
• Test patients **with high-risk behaviour/reinfection risk** for SVR12 and yearly where possible	B	1
• **HCC surveillance** (when treatment for HCC is available) in patients with advanced fibrosis (F3) or compensated cirrhosis (F4)	A	1

*Determines whether the patient needs post-treatment follow-up; †Without testing genotype; ‡If cirrhosis can be reliably excluded by means of a non-invasive marker in TN patients, fixed-dose combination GLE/PIB can be administered for 8 weeks only (A1)

EASL CPG HCV. J Hepatol 2018;69:461–511.

Simplification

Treatment of chronic hepatitis C

Recommendations	Grade of evidence	Grade of recommendation
Pre-treatment assessment		
• Proof of HCV replication (presence of HCV RNA or of HCV core antigen)		
• Assessment of cirrhosis by **simple non-invasive** markers (e.g. FIB-4 or		
Treatment - pangenotypic		
• TN and TE patients† (without cirrhosis/with co		
– Fixed-dose SOF/VEL for 12 weeks	B	1
– Fixed-dose GLE/PIB (8 w	B	1
– Generic drugs	A	1
– Check	A	1
ic (given high expected SVR12 rates)	B	1
haviour/reinfection risk for SVR12 and yearly where	B	1
nance (when treatment for HCC is available) in patients with advanced brosis (F3) or compensated cirrhosis (F4)	A	1

Mission ACCOMPLISHED

*Determines whether the patient needs post-treatment follow-up; †Without testing genotype; ‡If cirrhosis can be reliably excluded by means of a non-invasive marker in TN patients, fixed-dose combination GLE/PIB can be administered for 8 weeks only (A1)

EASL CPG HCV. J Hepatol 2018;69:461–511.

The global burden of HBV and HCV infections: A public health problem

	HBV	HCV
Chronically infected	257 million	71 million
Infection diagnosed	**9%**	**20%**
Infection **treated**	**8%**	**7%**

WHO. Global hepatitis report, 2017. http://apps.who.int/iris/bitstream/10665/255017/1/WHO-HIV-2017.06-eng.pdf.

A path to global elimination of HCV

In 2017 we had:

- the biomedical tools that make elimination possible (DAAs)
- a global strategy to eliminate HCV (WHO)
- strong interest among many stakeholders in carrying it out

Lazarus JV et al for EASL International Liver Foundation. J Hepatol. 2017;67: 665-6.

PUBLIC HEALTH

- **PPHC (EASL Policy&Public Health Committee)**
  - organised by the European Policy Councillor and supports his duties
- **EASL International Liver Foundation**
- **The LANCET-EASL Commission on liver diseases in Europe**

EASL International Liver Foundation

Founded in 2017

Mission:

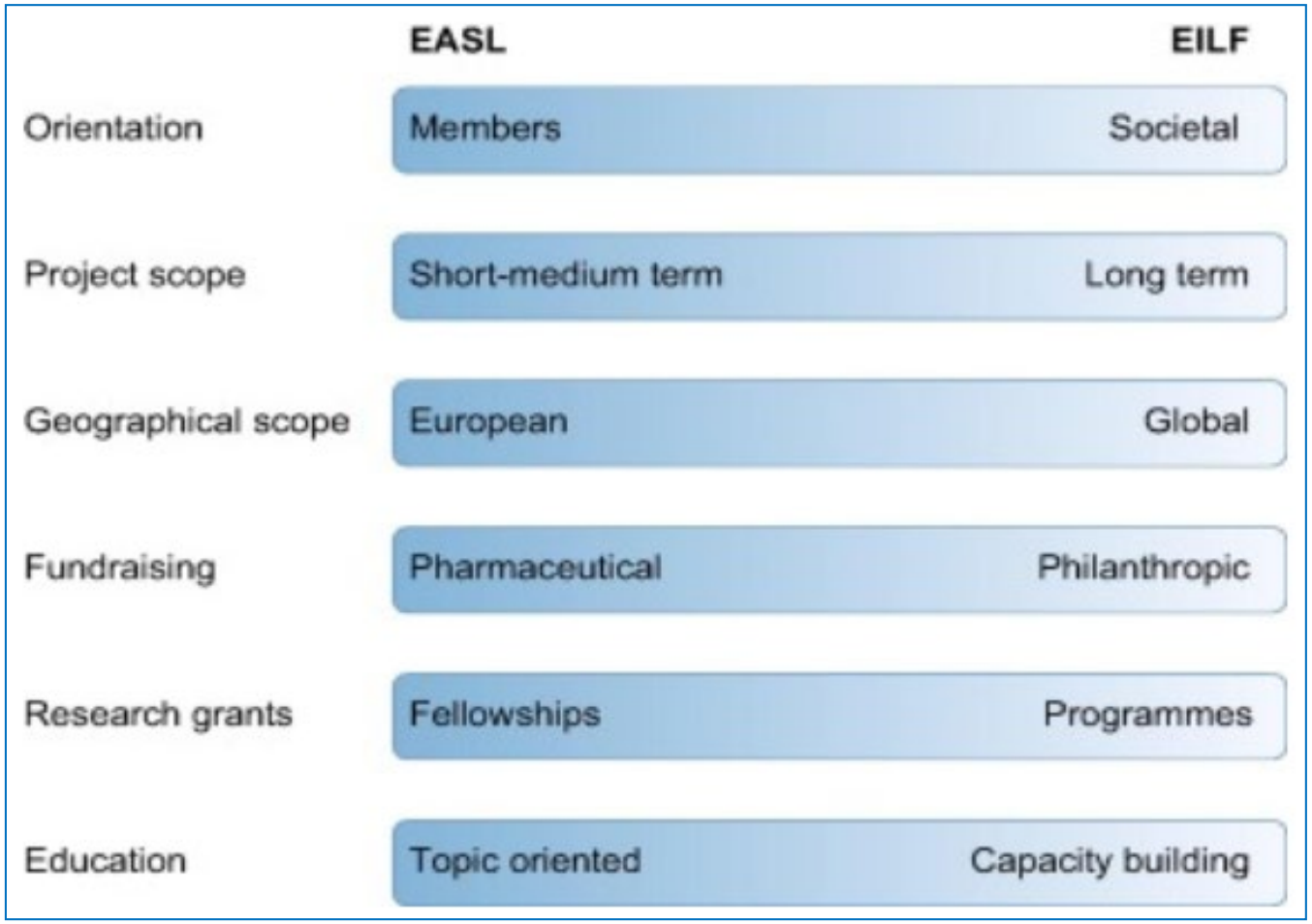
A foundation that could complement EASL's mission and increase its outreach in various arenas worldwide - fundraise to reach complementary, yet common, objectives

Program areas:

- foster scientific research
- provide educational services to an audience beyond the traditional EASL target groups and include the general public
- promote disease awareness and healthcare interventions

Colombo M, Karlsen T. J Hepatol 2019; 70: 349-52.

EASL International Liver Foundation



	EASL	EILF
Orientation	Members	Societal
Project scope	Short-medium term	Long term
Geographical scope	European	Global
Fundraising	Pharmaceutical	Philanthropic
Research grants	Fellowships	Programmes
Education	Topic oriented	Capacity building

Colombo M, Karlsen T. J Hepatol 2019; 70: 349-52.

The LANCET-EASL Commission on liver diseases in Europe

Founded: in 2018

Mission:

- **identify key challenges and opportunities** for tackling the increasing health burden and the changing and diverse landscape of liver diseases in Europe
- **quantify the burden of liver disease in Europe** and addressing optimal diagnosis and standards of care for patients with liver diseases – closing the gaps between primary and secondary care physicians

Program areas:

- address optimal standards of care for patients with liver diseases
- tackling inequity throughout European countries, both for patients and clinical and research infrastructure
- the role of specialty groups beyond hepatology in the multidisciplinary management of liver diseases
- improve awareness and education of primary care physicians; and overcoming the stigmatisation of patients with liver diseases.

https://easl.eu/news/the-lancet-easl-commission-on-liver-diseases-in-europe-overcoming-unmet-needs-stigma-and-inequities-2/

EASL
European Association for the Study of the Liver

PUBLIC HEALTH

- Micro-elimination
- Position statements for viral hepatitis
- HEPAHEALTH

Micro-elimination

A NEW treatment strategy by EASL (in 2017)

EASL suggested to fight the HCV elimination challenge by setting micro-elimination goals

- break down national elimination goals into **smaller goals** for individual population segments, for which treatment and prevention interventions can be delivered more **quickly and efficiently** using targeted methods
- achieve the WHO targets in specific sub-populations, settings, generational cohorts or geographic areas
- most high-income countries have already begun micro-elimination for at least one group, by rightly prioritising people with advanced liver disease.

Lazarus JV et al for EASL International Liver Foundation. J Hepatol. 2017;67: 665-6.

Micro-elimination

Target groups

Patients with advanced liver disease
Haemophilia patients
Prisoners
Children
Patients engaged with drug treatment units
Migrant communities from high prevalence regions
People who inject drugs in networks
Men who have sex with men
Generational cohorts of high prevalence
Geographically defined areas

Lazarus JV et al for EASL International Liver Foundation. J Hepatol. 2017;67: 665-6.

Micro-elimination

Approach

- a **PLAN** for how to **tailor health resources and services** to overcome known barriers and achieve **high levels of HCV diagnosis and treatment** in one or more clearly definable populations of interest within a **specified timeframe**

- the plan sets forth achievable **annual targets**, basing these on **mathematical modelling** when relevant to determine the levels of diagnosis and treatment required to progress to the plan's ultimate elimination targets

- the plan is developed and implemented through a **multi-stakeholder** process, with essential participants including government officials, health service providers, and civil society representatives

- progress and outcomes are **monitored** and publicly reported using indicators selected at the outset of the process.

Lazarus JV et al for EASL International Liver Foundation. J Hepatol. 2017;67: 665-6.

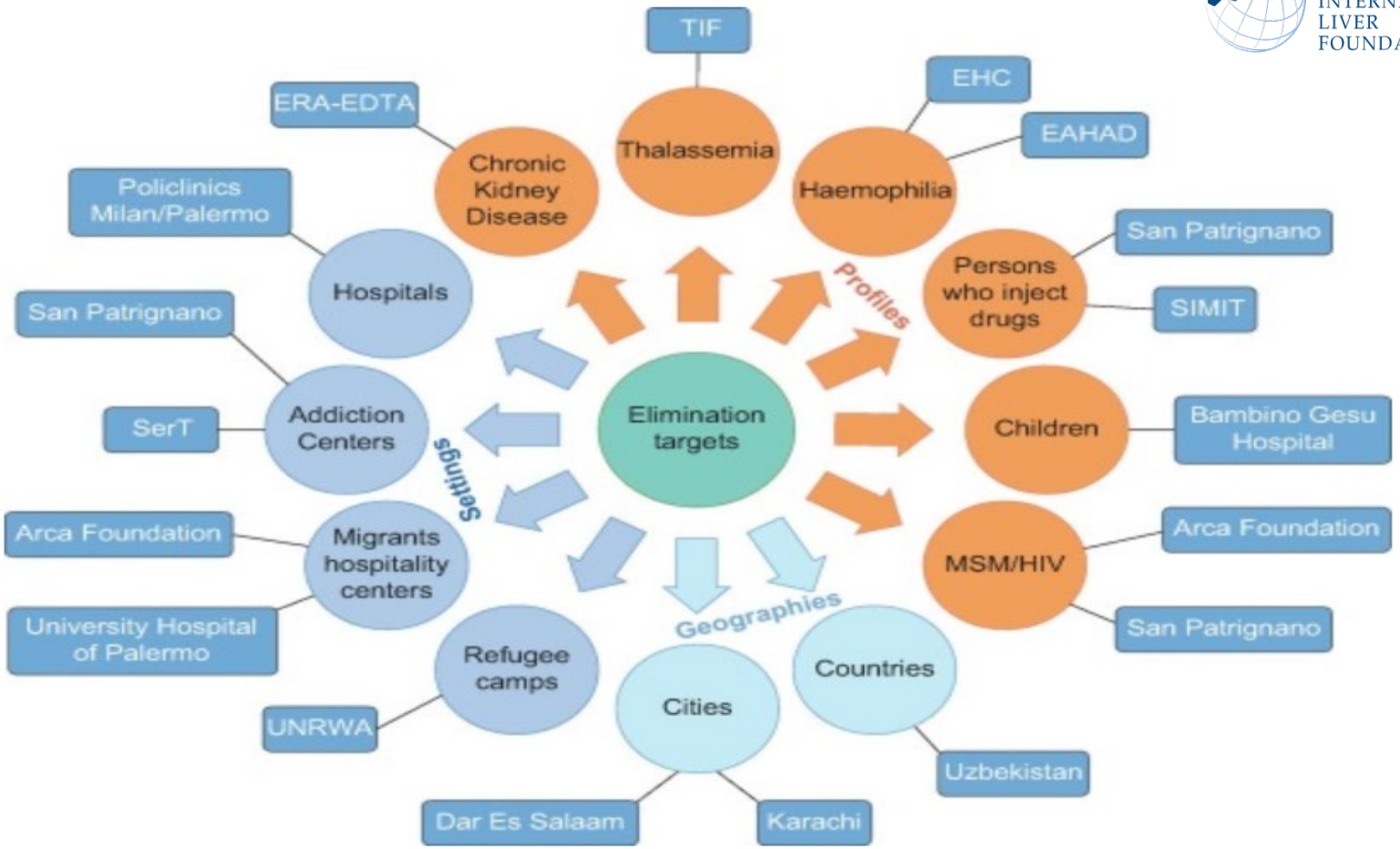
Micro-Elimination

Advantages

- Realistic targets/goals
- Pragmatic
- Defined timeline to achievements
- Tailored strategy
- Defined costs
- Prevention of re-infection
- Provides programatic development templates

Lazarus JV et al for EASL International Liver Foundation. J Hepatol. 2017;67: 665-6.

The viral hepatitis micro-elimination network orchestrated by the EILF



Colombo M, Karlsen T. J Hepatol 2019; 70: 349-52.

EASL
European Association for the Study of the Liver

Position statements on viral hepatitis

POLICY AND PUBLIC HEALTH COMMITTEE (PPHC)

Position statement on hepatitis C

The aim of this policy statement from theEuropean Association for the Study of the Liver (EASL) is to inform policy-makers,health care professionals, affected communities and patients that hepatitis C can- and should- be eliminated as a public health threat by 2030, or even earlier as could be the case in many central and western European countries. We believe that medical associations and clinicians, in collaboration with other key stakeholders,such as patients and affected communities,play a critical role in eliminating HCVas a public health threat and we commit to working with the HCV community to do so.

Position statement on hepatitis C

Key messages

EASL recommends that:

- All European countries develop a comprehensive hepatitis C national strategy or action plan to: increase awareness throughout the population and to ensure appropriate preventive measures; offer testing; provide linkage to care, treatment and follow-up ofpatientsin line with the *WHO Global Health Sector Strategy on Viral Hepatitis*and the WHO Action Plan for the health sector response to viral hepatitis in the WHO European Region (2017);
- All European countries adopt EASL recommendations on the management of hepatitis C, where it is stated that every hepatitis C patientshould be considered for treatment, and that treatment should be initiated with DAAs;
- DAAs be globally available at reasonable prices, to avoid any further reimbursement restrictions, and to allow governments to implement a comprehensive elimination strategy.

EASL
The Home of Hepatology

Eliminating Hepatitis C – An Action Plan

Globally, there are an estimated 71 million people actively infected with HCV, and 11-14 million of these reside in Europe

EASL Recommends:

1. Increasing awareness amongst HCPs, patients, policy -makers, the media and the public (especially high risk groups), whilst combating the stigma and discrimination that is associated with HCV infection
2. Implementing harm reduction strategies, such as access to opioid substitution therapy, safe injecting equipment for drug users and safe sex education
3. Making DAAs available at reasonable prices, to avoid any further reimbursement restrictions and to allow governments to implement a comprehensive elimination strategy
4. Improving access to treatment and care by increasing the number of authorised prescribers, promoting telemedicine and by increasing input from AHPs during and after treatment
5. Treating every Hepatitis C patient at the earliest opportunity, especially those at high risk
6. Providing rapid testing, in all relevant settings, with priority given to high -risk persons

Position statement on hepatitis C

Recommendations

EASL supports World Health Assembly resolution 67.6 (8) calling on all countries to develop viral hepatitis strategies and recommends that such strategies should now have the goal of eliminating hepatitis C as a public health threat by the year 2030. National action plans should specifically mention this goaland should be costed and comprehensive, i.e. covering all steps of the continuum

Prevention

EASL supports the United Nations General Assembly resolution (11) on harm reduction in all settings to prevent HCV transmission. Both healthcare personnel and the general population should be made aware of the different transmission modalities, and of the most effective preventive measures. As there is no prophylactic vaccine, the implementation of harm reduction strategies (e.g. access to opioid substitution therapy and safeinjecting equipment for people who inject drugs, safe sex, and increased awareness among all high-risk populations, including prisons) should be increased, while at the same time combating the stigma and discriminationthat is associated with HCV infection. Preventive measures should also be encouragedin those cured, as a successful treatment does not protect from reinfection.

Position statement on hepatitis C

Testing for hepatitis C

EASL advocates the use of rapid point-of-care tests, including for viremia. These assays should be implemented in all relevant settings. Screening should include testing for HIV and the hepatitis B virus, as these two pathogens are often transmitted together with HCV, and priority should be given to persons engaging in high-risk practices. General practitioners and drug and alcohol specialists should be informed about the importance of testing members of these groups. Screening strategies other than risk-based (such as those targeting birth cohorts or even the general population) should be evaluated in regard to their cost-effectiveness and feasibility, depending on the local epidemiology. Countries should take actions to avoid late presentation and diagnosis (4) by increasing testing in non-hospital settings, such as addiction and harm reduction services and prisons.

Linkage to care

Linkage to care should be facilitated by increasing the number of authorized prescribers if needed, by promoting telemedicine-based clinical case discussion and decisions, and by an increased involvement of peers and mid-level providers in the continuum of care, during and after treatment.

Position statement on hepatitis C

Treatment

Countriesshould focus on removing anyexisting reimbursement restrictions, as theyimpede access to DAAs, in line with EASL recommendations on the treatment of hepatitis C (5). Payers and providers must recognize the advantage of treating HCV infection early, to prevent later disease development and onward transmission.Treating hepatitis C patients early will reduce costs relatedto monitoring disease progressionand improve the quality of life for patients as well asreduce loss of work productivity. On the other hand, treating at advanced disease stages will require continued care, even after achievement of cure, to monitor for the development of liver cancer. Treatment should be expanded to shared care between specialists and addiction centers, prisons and other relevant settings. The positive effect of DAA therapy on morbidity and mortality should be described at the national level, to support policy-makers in increasing access to DAA therapy. Special attention should be devoted to retreat those patients who get re-infected after achieving SVR, since they are likely to be engaging in high-risk practices and therefore contributing to onward transmission. Payers and the pharmaceutical industry should agree on price reductions,ashas been the case in numerous European countries.

EASL believes that medical associations and clinicians, in collaboration with other key stakeholders, play a critical role in eliminating HCVandwe will continue to work on the implementation of the WHO viral hepatitis strategy and our guidelines to ensure that hepatitis C virus elimination in Europe by 2030 will become a reality.

Screening of blood donations for **Hepatitis E** virus (HEV)

Transmission of HEV:


Contaminated drinking water


Infected pork


Fruit and vegetables


HEV containing blood products

EASL Recommends:

1. EASL recommends that blood donations should be tested for HEV RNA by nucleic acid testing (NAT) to reduce the risk of transfusion transmitted infections

2. HEV screening should ideally include all blood donations but, if this is not feasible, a selective screening should be performed for blood products used in immunocompromised patients such as organ transplant recipients .

EASL
The Home of Hepatology

EASL
The Home of Hepatology

Liver Disease and Migrant Health

In 2017, six hundred and fifty thousand first-time asylum seekers applied for international protection in the Member States of the EU.

EASL Recommends:

European Association for the Study of the Liver

1. Improved reception facilities for migrants to remove preventable sources of Hepatitis A infection, such as overcrowding, unsafe food and water and lack of access to decent sanitation and washing facilities.
2. Expanded screening programmes for newly arrived migrants, to include HBV and HCV, and early access to curative treatment for all infected (HCV) or adequate long-term suppressive therapy when needed (HBV).
3. Early and effective provision of information about the risk of abusive alcohol use and drug injection
4. Training for healthcare professionals on their obligations to treat migrants who must be involved in discussions on their treatment decisions and treated with respect and in a culturally sensitive manner.
5. Early recognition of migrants' medical qualifications and the development of training and inclusion programmes for migrant doctors to integrate quickly into employment in their host state.
6. Provision of information about rights to seek healthcare and the use of cultural mediators to communicate in the migrant's own language to help facilitate access to and use of healthcare

HEPAHEALTH I , II , III

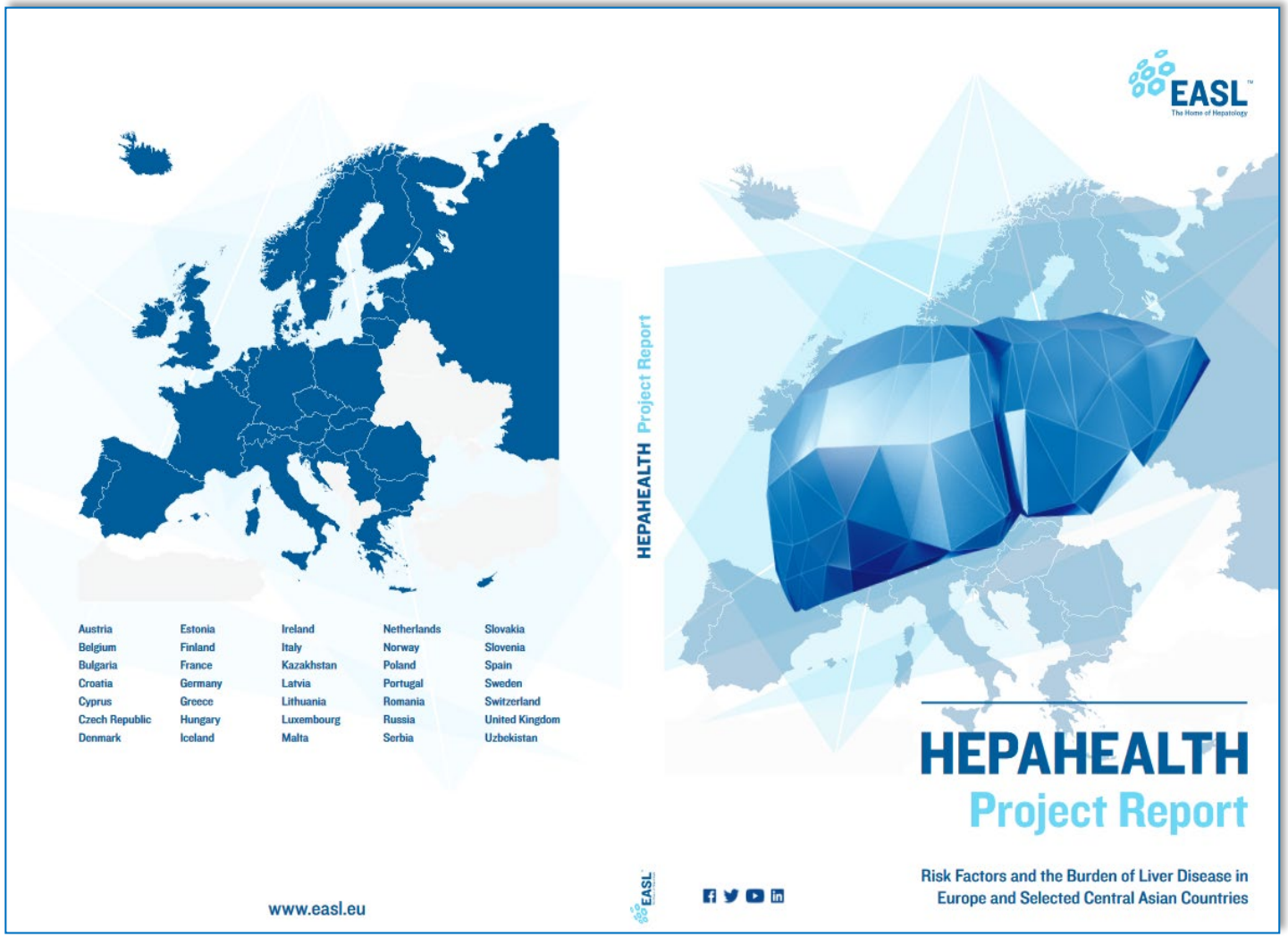
- **Epidemiologic data repository on liver disease burden**
  - to have data to be presented to politicians

- **Micro Simulation Model** to examine:
  - synergies between risk factors for liver disease
  - the impacts of potential interventions

- **Establish a liver observatory**
  - to have real data from sentinel countries

- **Relating data with the attributable fraction studies**
  - collaboration with WHO and ECDC

EASL
European Association for the Study of the Liver



https://easl.eu/wp-content/uploads/2018/09/EASL-HEPAHEALTH-Report.pdf

EASL International Liver Foundation -
a partner in viral hepatitis elimination in Georgia

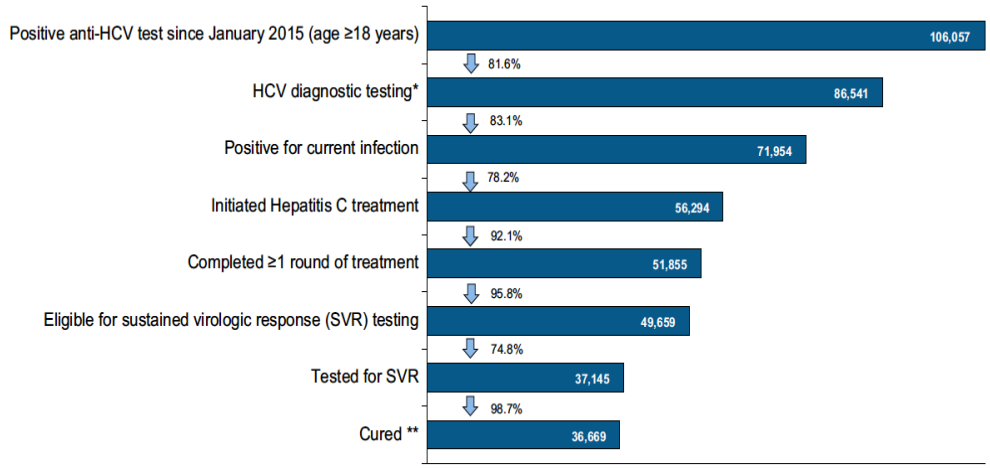
Editorial

JOURNAL OF HEPATOLOGY

Excellence in viral hepatitis elimination – Lessons from Georgia

Francisco Averhoff[1], Jeffrey V. Lazarus[2,3], David Sergeenko[4], Massimo Colombo[3], Amiran Gamkrelidze[5], Tengiz Tsertsvadze[6], Maia Butsashvili[7], David Metreveli[8], Lali Sharvadze[9], Margaret Hellard[10], Stefano Gnes[3], Tamar Gabunia[4], Muazzam Nasrullah[1,*]

[1]Centers for Disease Control and Prevention, Division of Viral Hepatitis National Center for HIV, Hepatitis, STD and TB Prevention, Atlanta, USA; [2]Barcelona Institute for Global Health (ISGlobal), Hospital Clínic, University of Barcelona, Barcelona, Spain; [3]European Association for the Study of the Liver (EASL) International Liver Foundation, Geneva, Switzerland; [4]Ministry of Internally Displaced Persons from the Occupied Territories, Labour, Health, and Social Affairs of Georgia, Tbilisi, Georgia; [5]National Center for Disease Control and Public Health of Georgia, Tbilisi, Georgia; [6]Infection Diseases, AIDS, and Clinical Immunology Research Center, Tbilisi, Georgia; [7]Neolab, Tbilisi, Georgia; [8]Medical Center Mrcheveli, Tbilisi, Georgia; [9]Joint Georgian-French Hepatology Clinic Hepa, Tbilisi, Georgia; [10]Burnet Institute, Melbourne, Australia



April 2015 - April 2019 :

36,098/37,582 (**96.1%**) achieved **SVR**

1,327 initiated 2° round of Tx

with 94.2% SVR

EASL INTERNATIONAL LIVER FOUNDATION

Averhoff G et al. J Hepatol 2019; 4: 645-7.

CONCLUSIONS

- EASL Hepatitis treatment strategies are oriented towards elimination of viral hepatitis as a public health treat
- Elimination goals are to be reached through the EASL activities on a patient and public health level
- Several projects towards elimination of viral hepatitis have been going on under the umbrella of EASL

EASL
European Association
for the Study of the Liver

THE INTERNATIONAL LIVER CONGRESS™

15-19 April 2020
London, UK

EASL™
The Home of Hepatology

THE INTERNATIONAL LIVER CONGRESS™

15-19 April 2020
London, UK