

HCV Across the Care Continuum:

From Testing and Treatment to Long-Term Liver Health

Jennifer Price, MD, PhD
Professor of Medicine, GI/Hepatology
Director, UCSF Viral Hepatitis Center

Disclosures

- **Grant support:** Gilead, AbbVie, VIR, Cepheid, Aligos
- **Co-Chair** AASLD/IDSA Hepatitis C Guidance

Outline

- HCV treatment in the DAA era
- Finding people with HCV
- Women, pregnancy and infants
- Co-located and test-and-treat models
- Risk of HCC and steatotic liver disease after HCV cure
- Steatotic liver disease and HIV

50 million

chronic hepatitis C cases

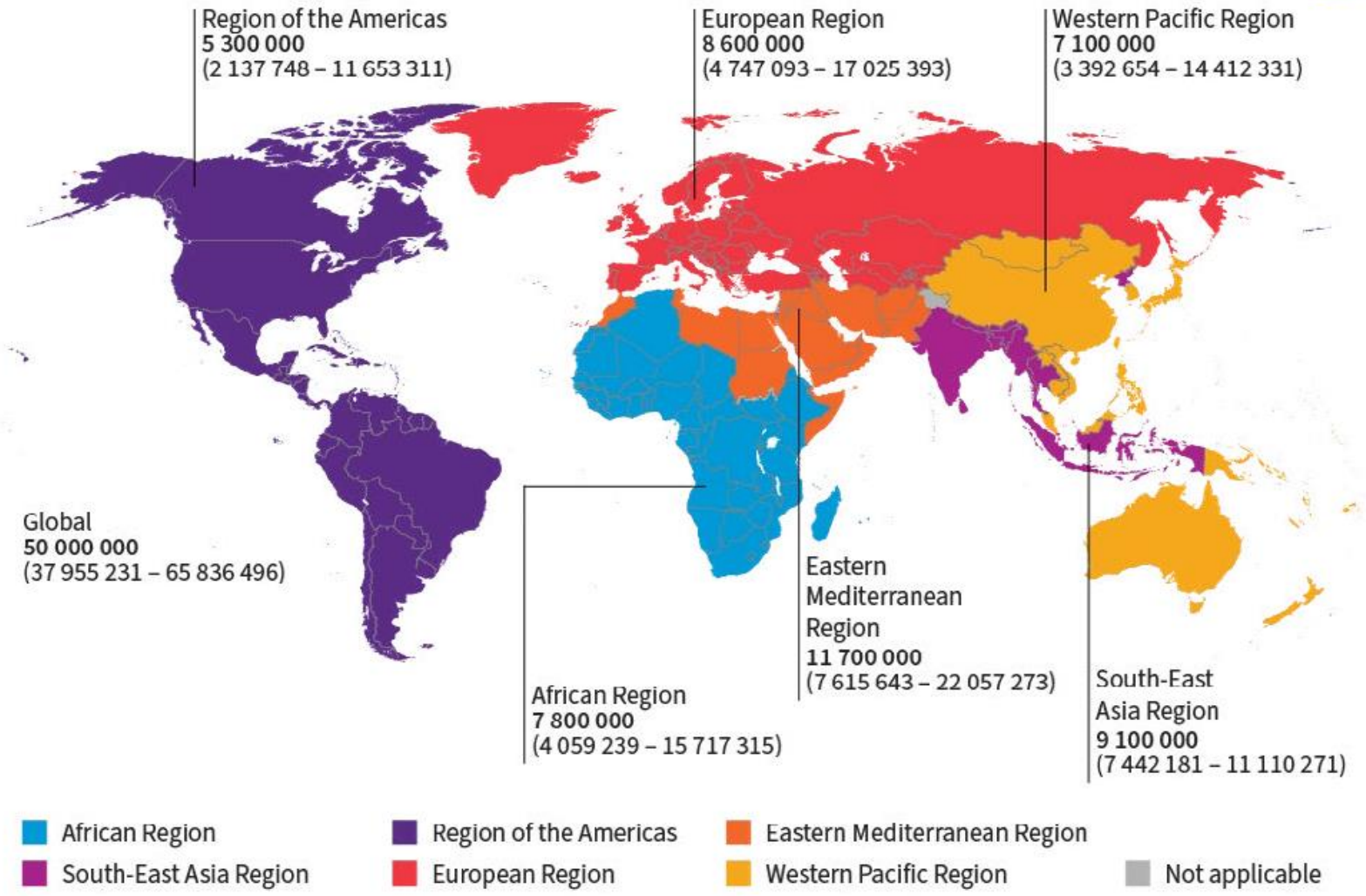
1 million

new hepatitis C cases per year

240,000

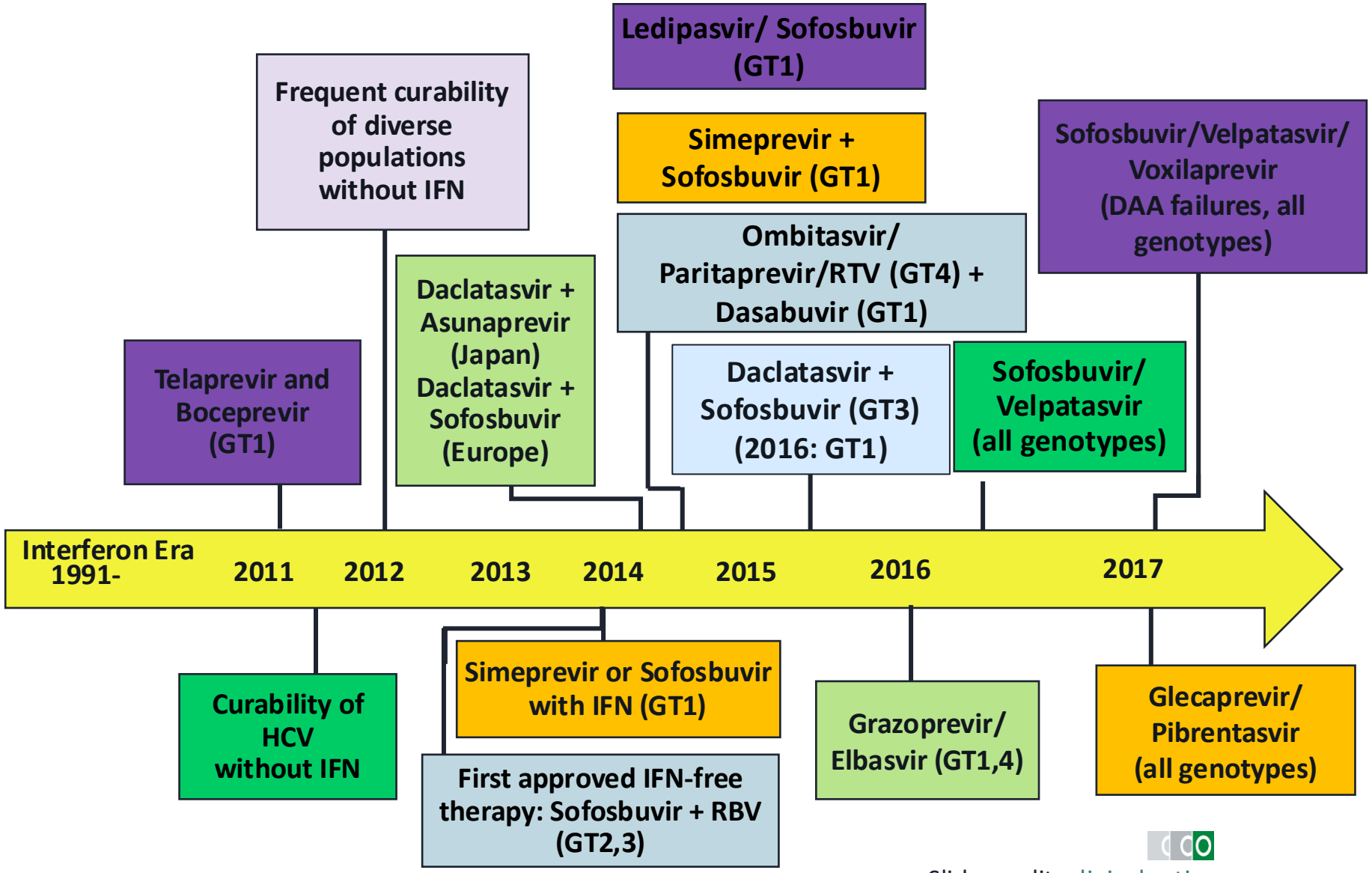
deaths per year

Fig. 2.4 Prevalent cases of chronic hepatitis C by WHO region, 2022



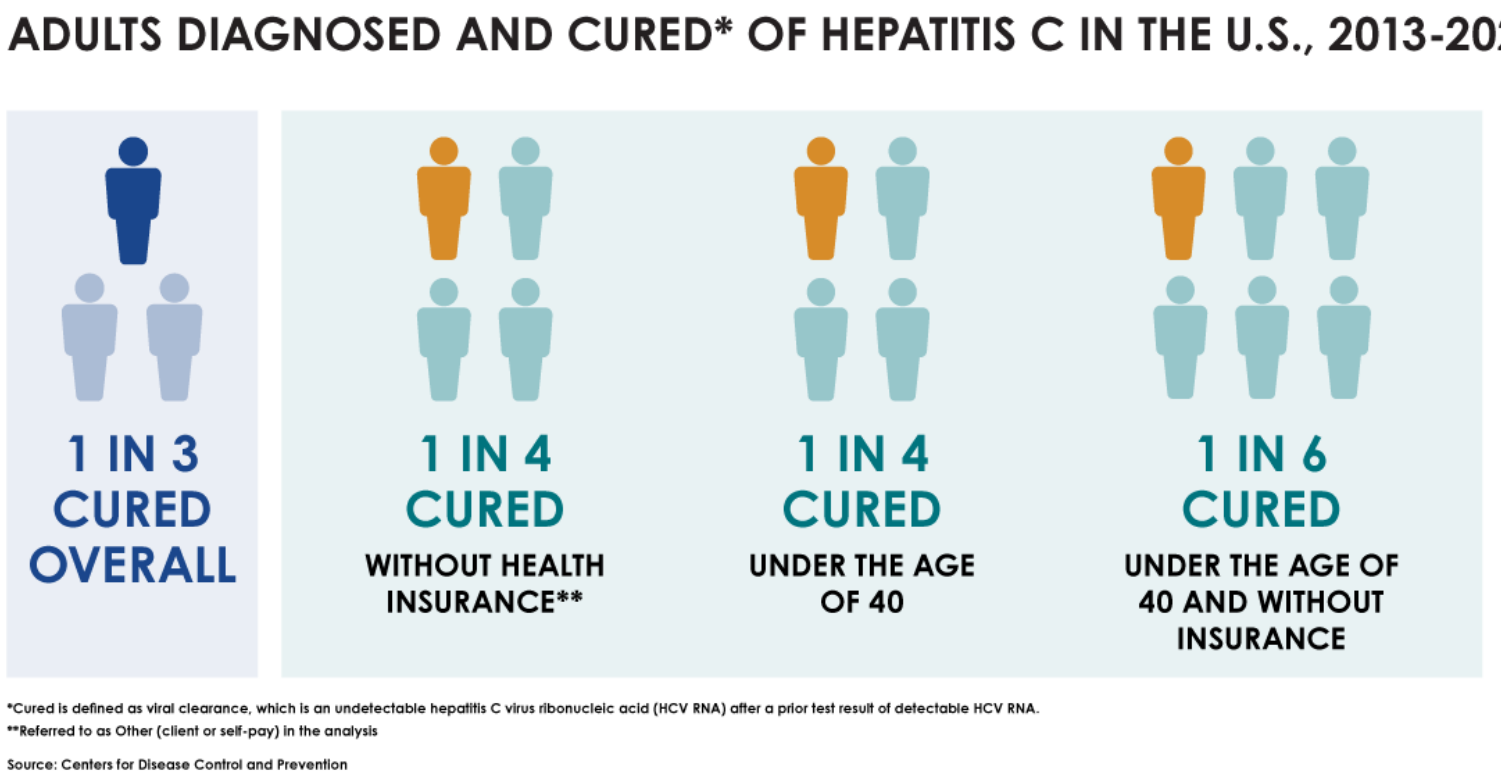
WHO, Global Hepatitis Report 2024. https://www.who.int/publications/i/item/9789240091672

HCV Therapy Evolution in the DAA Era



Slide credit: clinicaloptions.com

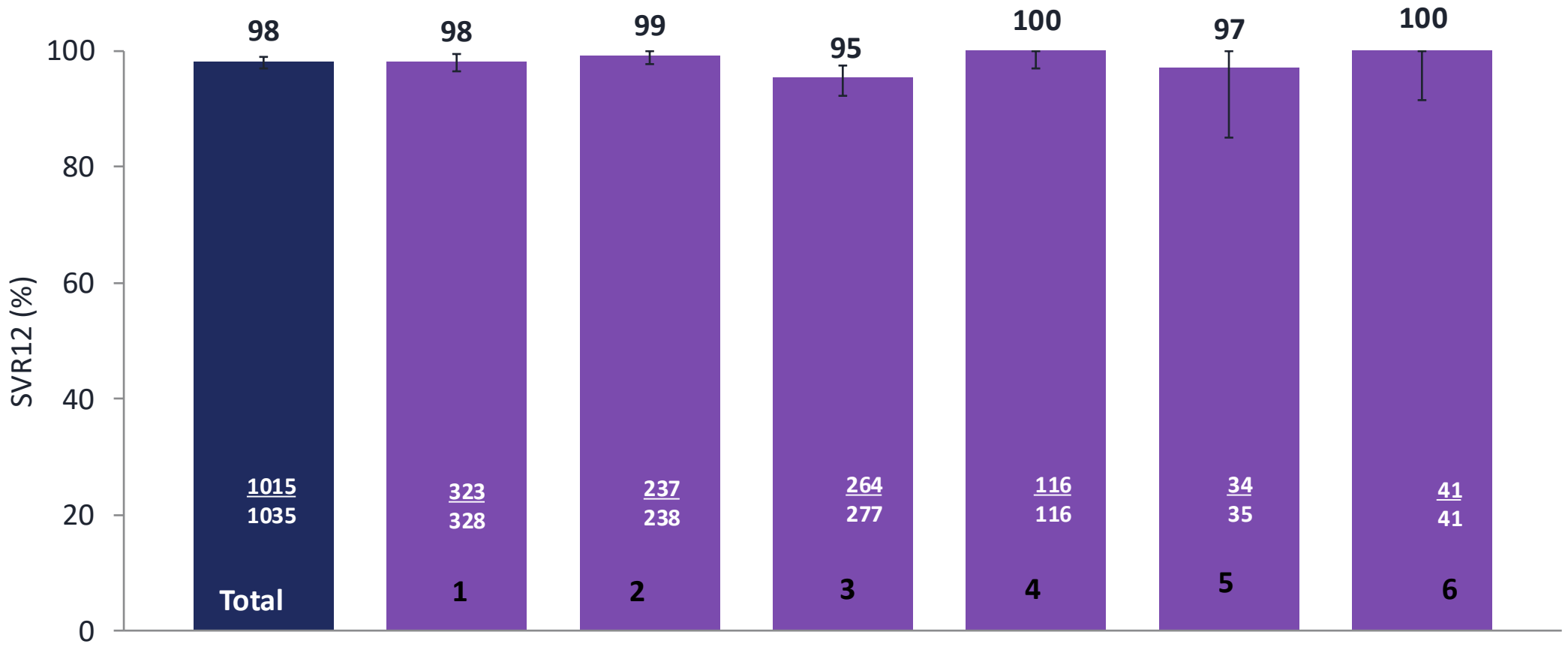
Most People Living with Hepatitis C are Untreated



Wester C et al, MMWR 2023.

Persons with HCV genotype 1, 2, 3, 4, 5, or 6 infection can be effectively treated with 1 tablet daily for 12 weeks

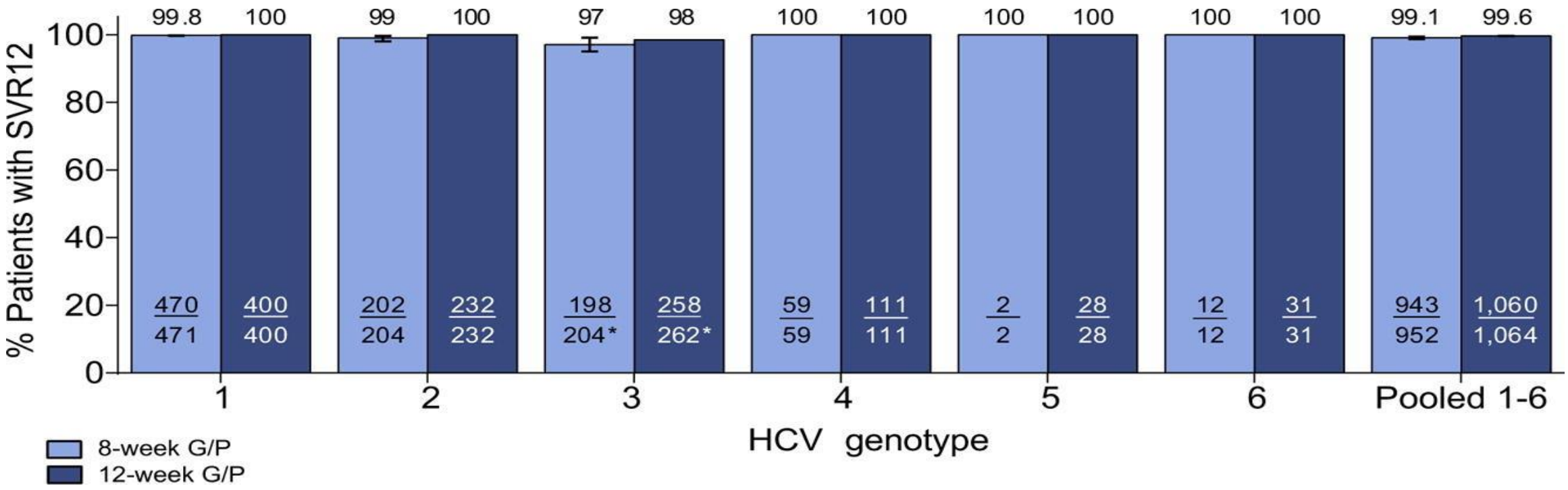
Sofosbuvir/velpatasvir



Feld JJ, et al. NEJM 2016; Foster G, et al. NEJM 2016.

Persons with HCV genotype 1, 2, 3, 4, 5, or 6 infection can be effectively treated with 3 tablets daily for 8 weeks

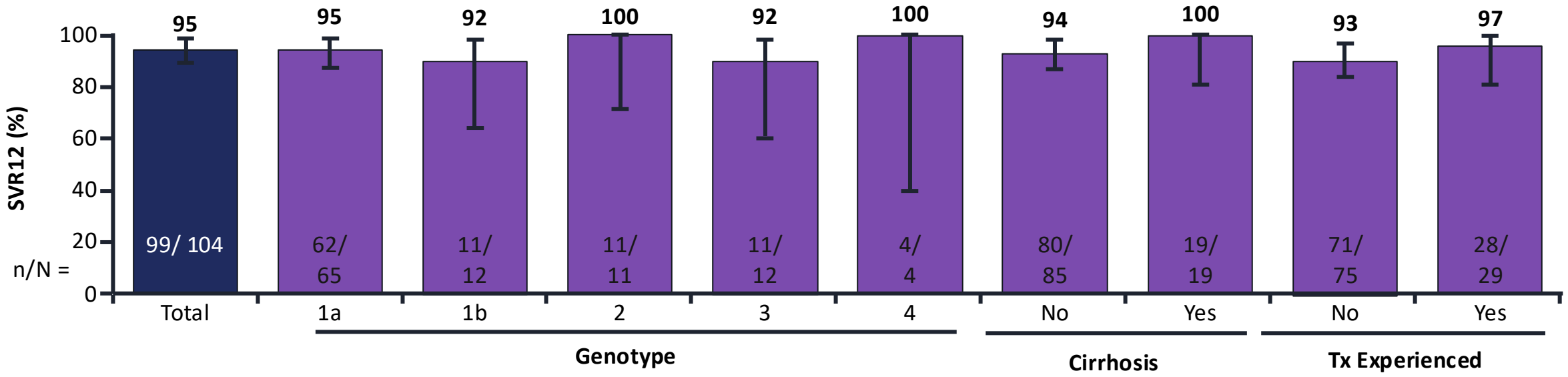
Glecaprevir/pibrentasvir



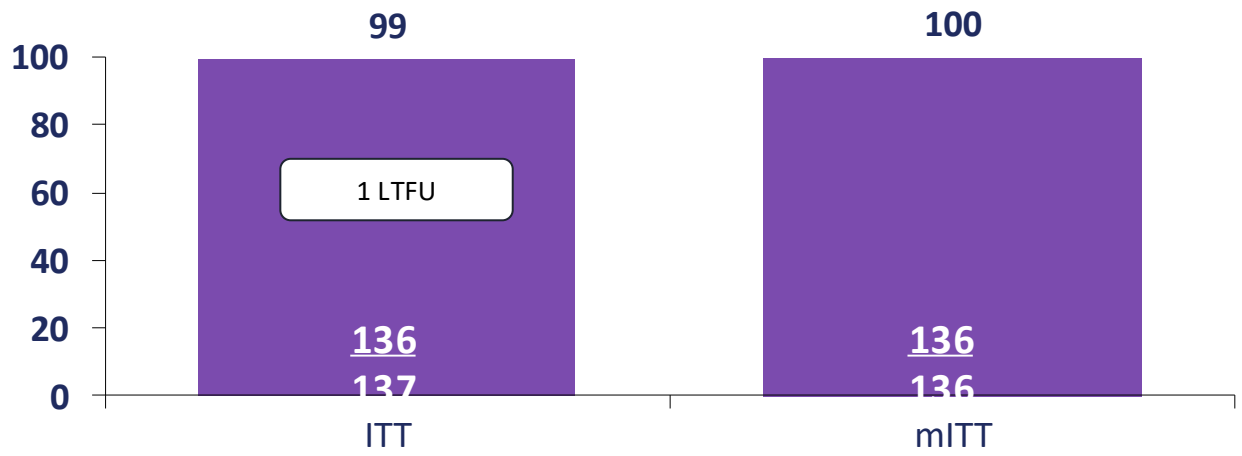
Puoti M, et al. Journal of Hepatology 2018; Brown RS, et al. Journal of Hepatology 2019.

Individuals with HIV/HCV coinfection have similar cure rates

Sofosbuvir/velpatasvir × 12 weeks



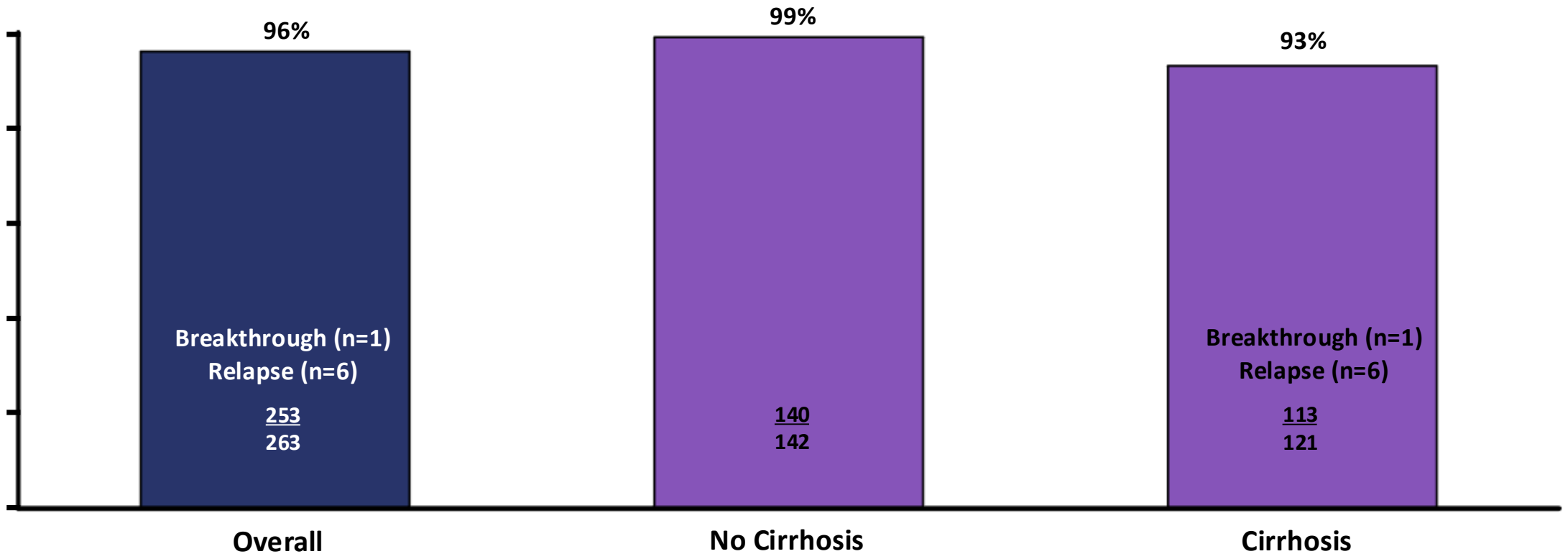
Glecaprevir/pibrentasvir × 8 weeks



Wyles D, et al. EASL 2016. Abstract PS104. Reproduced with permission.

Overall cure rates in NS5A inhibitor–experienced patients

Sofosbuvir/velpatasvir/voxilaprevir (genotypes 1–6)



No placebo patients achieved an SVR12.
*P<0.001 for superiority versus pre-specified goal of 85% for sofosbuvir/velpatasvir/voxilaprevir.

Bourlière M, et al. Hepatology. 2016;64(suppl S1):102A. Abstract 194.

HCV Screening: transition from risk-based to universal

1998

Risk-based

Test people who report risk factors. Misses many, because risk is under-disclosed and under-asked.

2012–13

Birth cohort

One-time test for adults born 1945–1965 (CDC 2012, USPSTF 2013).

2020

Universal

All adults at least once (CDC ≥18; USPSTF 18–79), **every pregnancy**, and periodic testing with ongoing risk.

2023

Complete testing

Reflex RNA on every reactive antibody; perinatally exposed infants get HCV RNA at 2–6 months.

ACOG (2021, reaffirmed 2023) and AASLD-IDSA also recommend testing at the start of **each** pregnancy.

Sources: Schillie S, et al. MMWR Recomm Rep 2020;69(RR-2); USPSTF, JAMA 2020;323:970–975; CDC 2023 testing recommendations; AASLD-IDSA HCV Guidance.

Automated testing prompts raise HCV screening rates

EHR best-practice alert in the ED

218 → 14,981

patients screened in matched 11-month periods (~69,000 ED visits each), with more new diagnoses.

Universal prenatal screening

23% → 81%

of prenatal patients screened after EHR reminders plus reflex RNA; more exposed infants identified.

Reflex RNA testing

1 draw

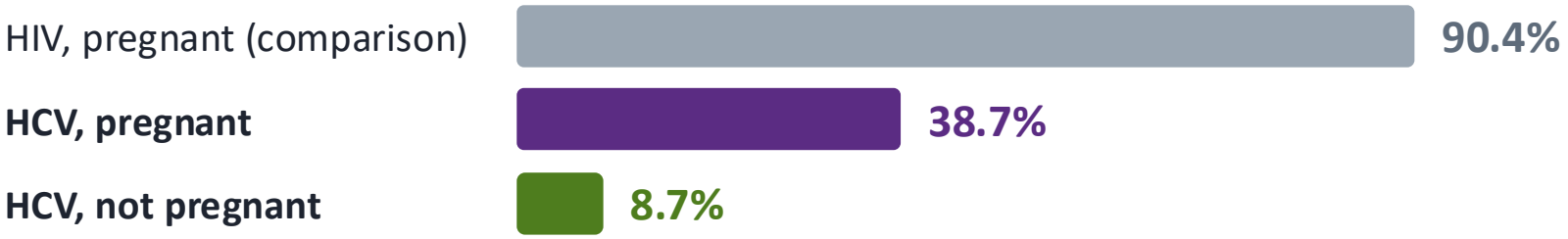
Antibody and RNA from the same sample, so no second visit for confirmation.

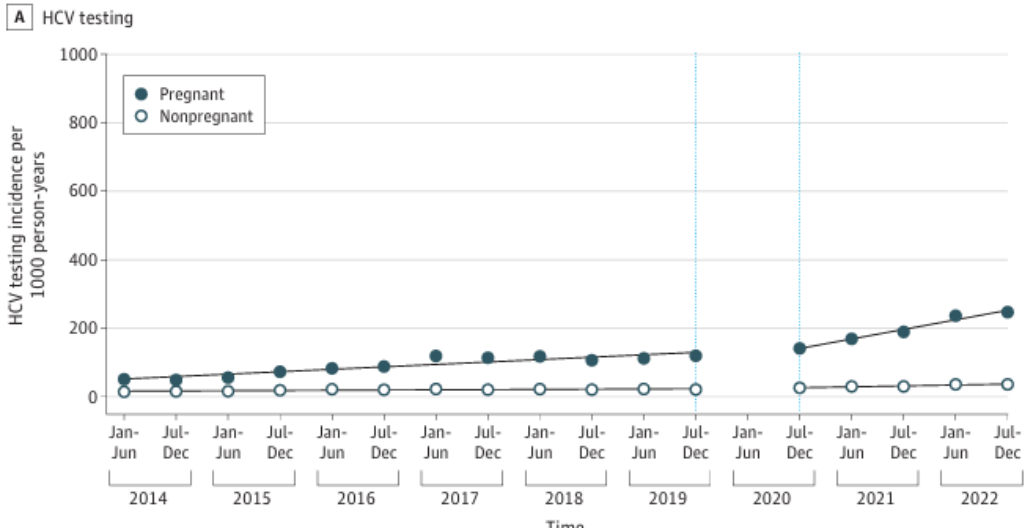
Also effective: opt-out testing, standing orders, and testing wherever people already are (ED, prenatal, OTP, jail).

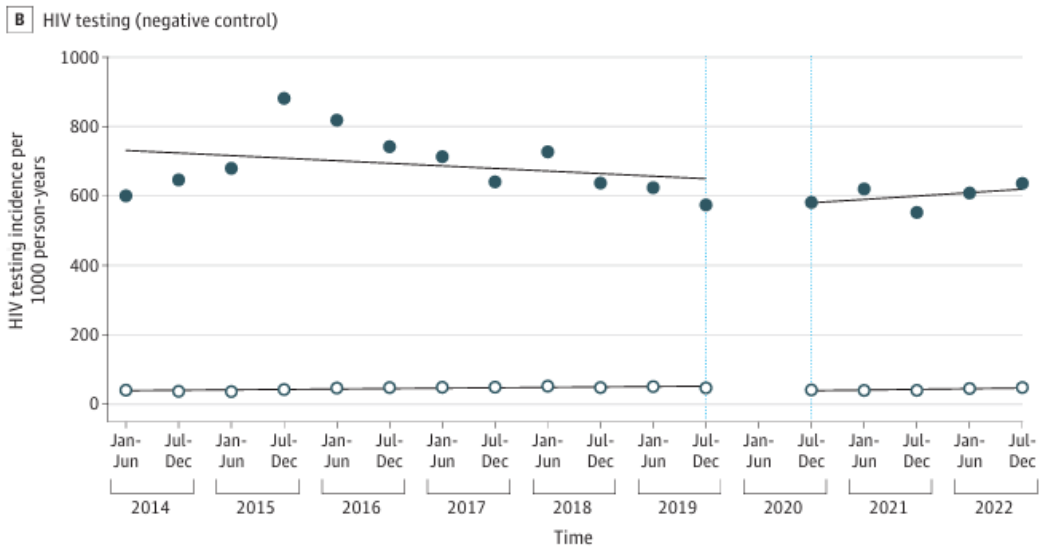
Ford JS, et al. West J Emerg Med. 2021; Chappell C, et al. CROI 2022; CDC 2023 recommendations for complete HCV testing.

Most women of reproductive age have not been tested for HCV

Ever tested by Dec 2022, women aged 15–45 (68 US health systems, >115M women)







Singh RP, et al. JAMA 2025.

Prenatal HCV screening rose to 69% in San Francisco, but most viremic women went untreated

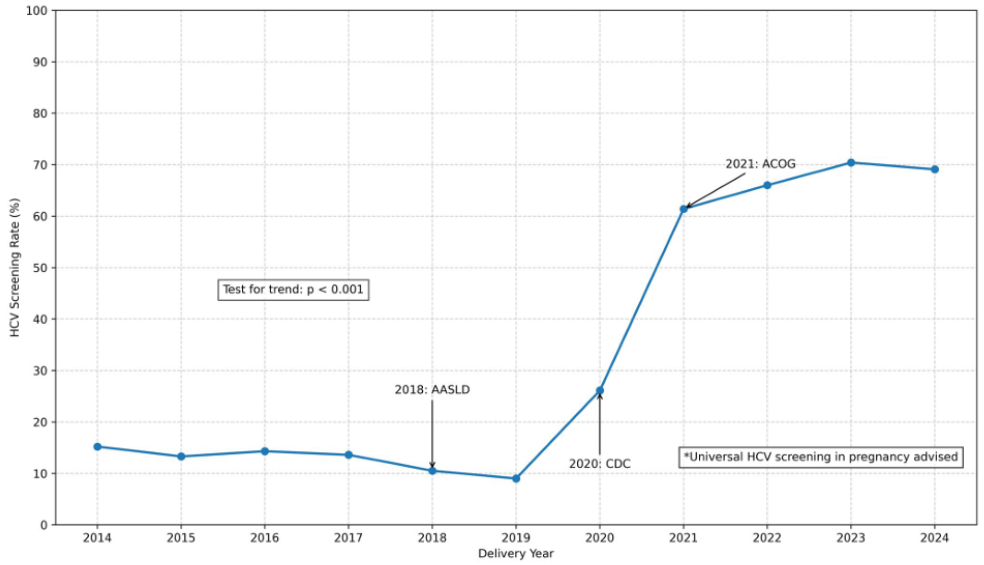


Figure 1. HCV screening rates in pregnancy by delivery year 2014–2024 (n = 41,951). Year of recommended screening by national societies is denoted. AASLD, American Association for the Study of Liver Diseases; ACOG, American College of Obstetricians and Gynecologists; CDC, Centers for Disease Control and Prevention; HCV, hepatitis C virus.

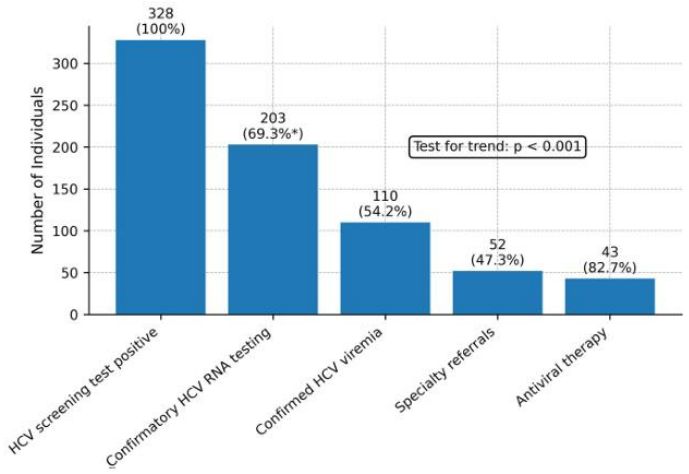


Figure 2. Cascade of care: from positive screening test to treatment (n = 328). Bar chart reflects the number of HCV screening test-positive pregnant individuals progressing through each stage of HCV care at University of California, San Francisco, and Zuckerburg San Francisco General Hospital. Stages include receipt of confirmatory HCV RNA testing (*only among those with HCV-positive Ab screening during pregnancy), confirmed HCV viremia, referral to specialty care for HCV treatment, and initiation of antiviral therapy. This cascade highlights significant drop-off at each stage. HCV, hepatitis C virus.

SAN FRANCISCO · UCSF + ZSFG · 41,951 PREGNANCIES, 2014–2024

15% → 69%
screened in pregnancy

39%
of 110 viremic treated

57-71%
lost to follow-up

26%
of exposed infants tested

Source: Betancourt M, et al. Am J Gastroenterol 2026 (UCSF and Zuckerberg San Francisco General).

Re-linkage of women with untreated or incompletely diagnosed HCV



248 → 99

Women reached by navigators

248 eligible; 130 (52%) reached by phone; 99 (76% of those reached) completed the survey.

8%

Ever received antivirals

41% were viremic, 34% were antibody-positive with no RNA test, and 12% had cirrhosis.

42%

Never received any HCV care

Mean age 56; 72% publicly insured; only 16% had an established primary care provider.

When navigators called, three in four women reached completed the survey.

Sedki M, Caliz M, Price J, Fox R. Women's perspectives on care barriers in the setting of untreated HCV. EASL Congress 2026.

Women cited structural barriers, not lack of interest

Dissatisfied with each step of prior HCV care, % of respondents (n=99)



Barriers in free responses

Over one-third named a barrier to care:

- **Competing priorities**
- **Limited access to providers**
- **Fragmented follow-up**

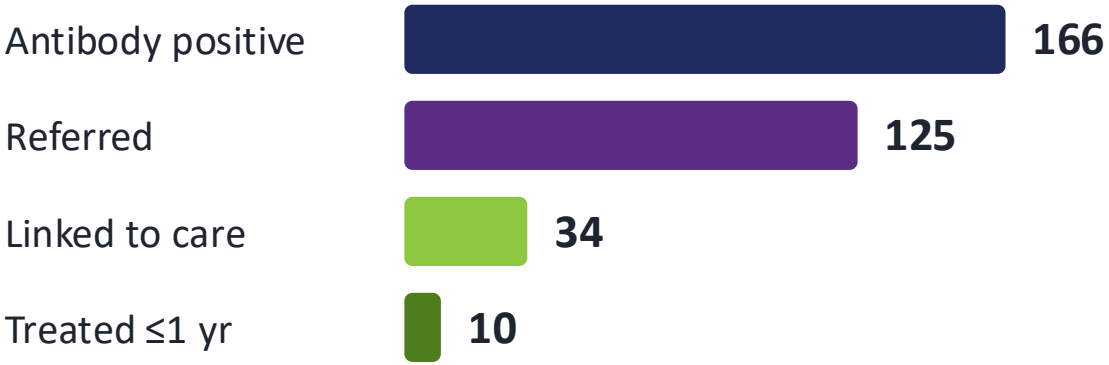
Women asked for proactive outreach and clearer explanation of results.

Women engaged when care reached out to them; outreach and clearer results close the gap.

Sedki M, Caliz M, Price J, Fox R. Women's perspectives on care barriers in the setting of untreated HCV. EASL Congress 2026.

Post-partum HCV care cascade fall off

Alabama tertiary center, 2014–2018



Only 9% of viremic women started treatment within a year of delivery.

Ontario, population-level

5.2% treated 5 years after RNA positivity

47.5% had another pregnancy before treatment

19% had multiple untreated pregnancies, meaning repeated infant exposures.

Where women fall out of care at linkage

- Hand-off from obstetrics to hepatology after delivery is lost
- Postpartum priorities, childcare and transport compete
- Pregnancy coverage ends; prior-auth and specialist rules
- Mother and infant followed in separate clinics

Bushman et al. Am J Perinatol 2021; Mendlowitz AB, et al. Clin Infect Dis 2026; Cary C, et al. 2025; Epstein RL, et al. Hepatol Commun; AASLD-IDSA HCV Guidance.

Managing HCV through pregnancy

Prenatal

1. Test every pregnancy at the first visit: antibody with reflex RNA
2. If antibody-positive: HCV RNA and liver panel; assess fibrosis
3. Pruritus or jaundice: check ALT, AST and bile acids for cholestasis
4. Cirrhosis: co-manage with maternal-fetal medicine

Delivery and postpartum

1. Avoid internal fetal monitoring and early artificial rupture of membranes
2. No change in mode of delivery for HCV alone
3. Breastfeeding is not contraindicated, except with cracked or bleeding nipples, or HIV
4. Recheck HCV RNA postpartum (spontaneous clearance up to ~10%) and link to treatment

AASLD-IDSA HCV Guidance, ACOG Clinical Practice Guideline No. 6 (2023).

Testing the exposed infant (CDC 2023)



If testing not performed at 2-6 months:

7–17 months: HCV RNA. 18 months or older: antibody with reflex RNA.

Reason for the change

The old antibody test at 18 months lost most children to follow-up; early RNA is cost-saving.

Panagiotakopoulos L, et al. MMWR Recomm Rep 2023

Emerging data for DAAs during pregnancy

Current Guidance

AASLD-IDSA

Treat before pregnancy when feasible; can be considered during pregnancy after shared decision-making

EASL

Can be considered with multidisciplinary input

ACOG / SMFM

Start DAAs in pregnancy only within a clinical trial

Prospective data on DAAs in pregnancy

Study	N	SVR12	Infants infected
LDV/SOF, phase 1 (2020)	9	100%	0
LDV/SOF, India cohort (2023)	26	100%	0
SOF/VEL, phase 1 PK (2024)	11	100%*	0 of 8
STORC, SOF/VEL phase 4 (interim, Mar 2026)	83	63/65 (97%)	0

*Among those completing follow-up. STORC starts in the 2nd trimester; final results pending. Untreated comparison cohort: 8% transmission (26/314).

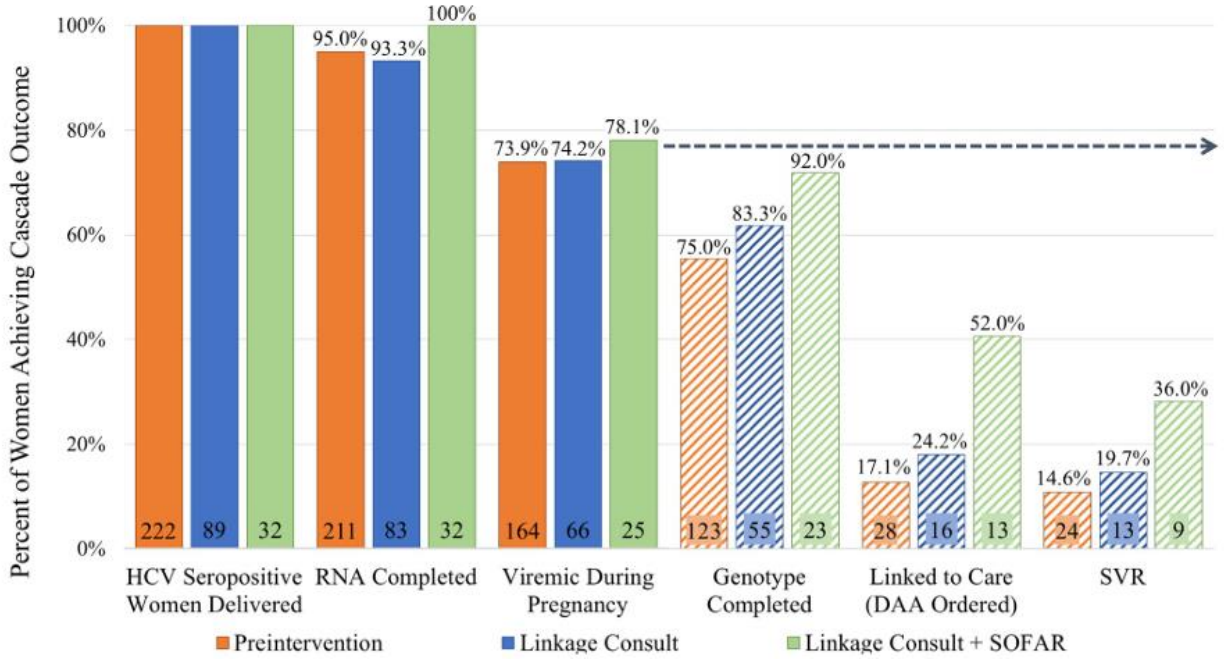
G/P, retrospective (2026)

14 started at 14–32 wks; 10 completed. All undetectable at delivery; 9/9 SVR4; no preterm births; 0/6 infants infected.

AASLD-IDSA HCV Guidance; Chappell CA, et al. Lancet Microbe 2020 and Clin Infect Dis 2024; Yattoo GN, et al. 2023; STORC interim (IDWeek 2025, EASL 2026) as summarized in IMPAACT 2041 design paper, OFID 2026; McCray LM, et al. Clin Infect Dis 2026

Co-located care closes the gap

Postpartum HCV treatment initiation, Boston safety-net hospital



Epstein RL, et al. Hepatol Commun 2021

LINKAGE PROGRAM

Pediatric ID consult for **every postpartum woman with a positive HCV antibody:**

1. Chart review by an NP or physician
2. Education on HCV treatment and transmission
3. Active linkage: mother to an HCV clinician of her choice, infant to pediatric ID; visits scheduled, reminders by call, text and in person

SOFAR CLINIC

Supporting Our Families through Addiction and Recovery: **mother and infant cared for under one roof**

- Infant primary, developmental and behavioral care; ID
- Maternal psychiatric and addiction care
- Social work, case management, peer navigation
- Fewer postpartum appointments for mother and baby

DAAs among people who use or inject drugs

38 studies, 3,634 participants (28 observational, 10 clinical trials), 2013–2018; interferon-free DAAs

Population	Studies (n)	SVR (ITT)	SVR (mITT)
Recent drug use	21 (1,408)	**87.7%**	92.4%
Recent injecting	8 (670)	**87.4%**	91.7%
On opioid agonist therapy	36 (2,987)	**90.7%**	94.4%

Cure rates with recent drug use, injecting or opioid agonist therapy approach 90%.

Hajarizadeh B, et al. Lancet Gastroenterol Hepatol 2018.

HCV-ST&RT: bring simplified treatment to where people are

Randomized pilot, young PWID (18–29) at a syringe service program

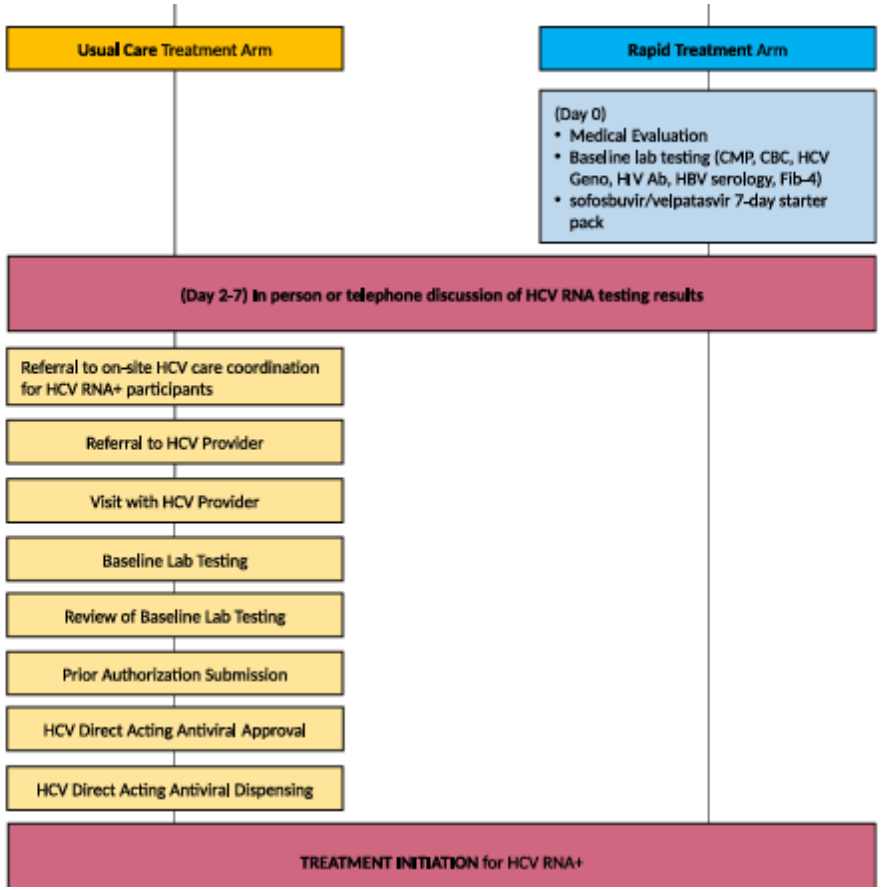
Rapid treatment: same-day evaluation + 7-day SOF/VEL starter pack

64%

Usual care: facilitated referral to a local provider

9%

Confirmed SVR12, modified ITT (9/14 vs 1/11; P = .01). Small pilot, large effect.

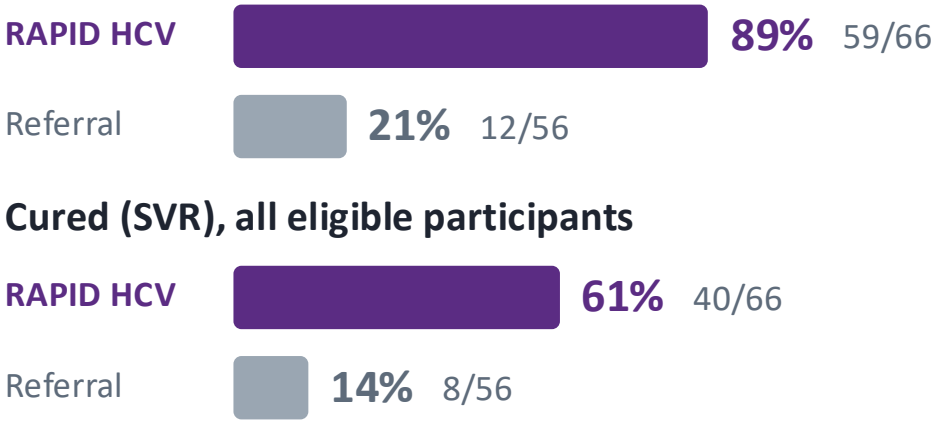


Eckhardt B, et al. Open Forum Infect Dis 2022.

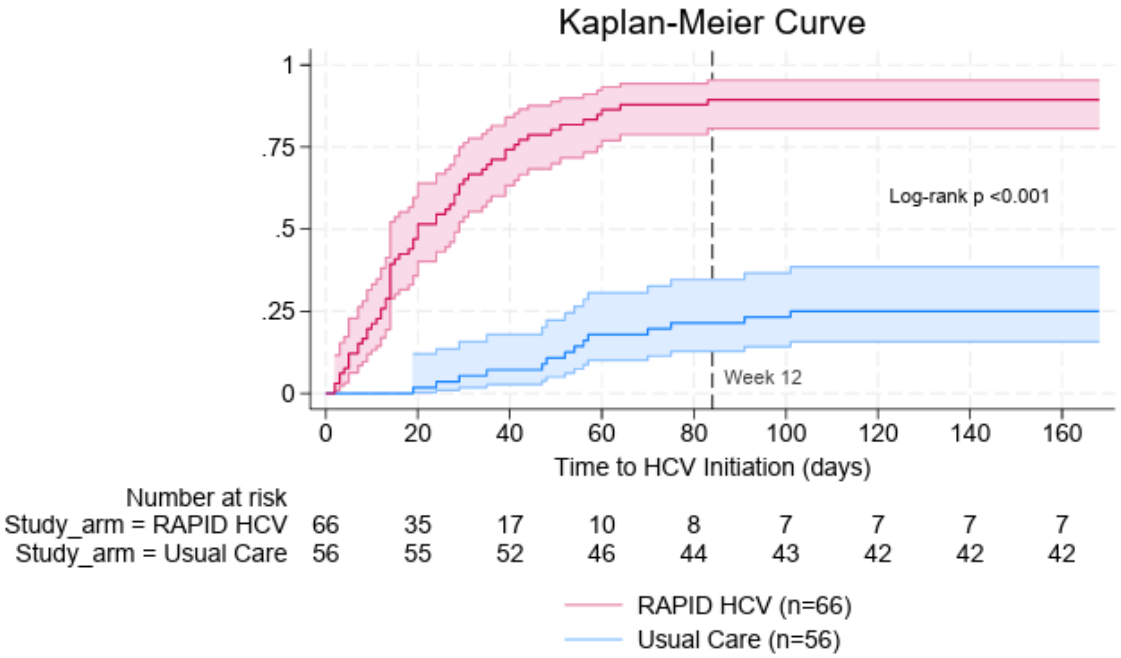
RAPID HCV: test and treat inside the OTP

Randomized trial, 5 opioid treatment programs (US and Canada), 2021–2023. Onsite G/P with peer support vs offsite specialist referral.

Started treatment within 12 weeks



Cured (SVR), all eligible participants



Median time to treatment initiation: 20 days vs 168 days

Falade-Nwulia O et al. Lancet Reg Health Am 2026.

No One Waits (NOW) Study: treatment at diagnosis

San Francisco community site, 2020–2021: street outreach to people who inject drugs and are homeless



84% per protocol: most non-cures were loss to follow-up, not treatment failure.

STUDY DESIGN

14-day SOF/VEL starter pack provided when HCV RNA results are disclosed; telemedicine clinician; bridged to insurance

STUDY POPULATION

80% injecting now; 61% unsheltered in past year; 97% below the poverty line.

Morris MD, et al JAMA Netw Open 2023.

Point-of-care RNA theoretically makes one visit possible

Xpert HCV (FDA, June 2024)

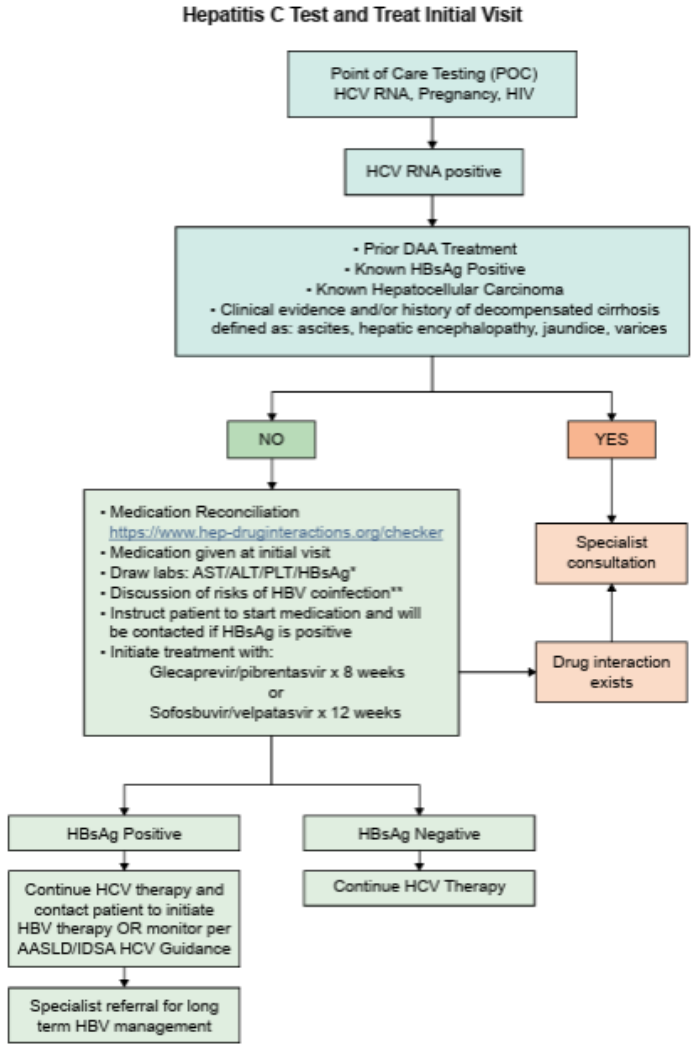
First CLIA-waived HCV RNA test in the US. Fingerstick capillary blood; result in about an hour (positives as early as ~41 minutes).

Fingerstick → RNA in ~1 hr → Start DAA same day

Cleared for CLIA-waived sites: SUD treatment programs, syringe services, jails and prisons, EDs, urgent care, physician offices. Not for treatment monitoring.

Test and treat at the first visit (AASLD-IDSA)

- **Not applicable** if prior DAA, known HBsAg+, HCC or decompensated cirrhosis
- **Same visit:** check drug interactions; POC HIV, HCG as applicable, draw AST, ALT, platelets, HBsAg if not done
- **Treatment start that day:** G/P × 8 weeks or SOF/VEL × 12 weeks; okay to wait for HBsAg results depending on site/patient preferences



AASLD-IDSA HCV Guidance, Hepatitis C test and treat initial visit.

Mobile Hepatitis C Screening and Treatment



1 week

- OraQuick® Rapid HCV Ab
- Venipuncture for confirmatory HCV RNA testing

- HCV RNA + results disclosure
- Insurance information collection and clinic form completion



Same Day

No known history of hepatitis C or recent (<6 mo) exposure

- OraQuick® Rapid HCV Ab, if reactive:
  - –Xpert® HCV RNA point-of-care, OR
  - –Venipuncture

History of hepatitis C or recent (<6 mo) exposure

- Xpert® HCV RNA point-of-care, OR
- Venipuncture

- HCV RNA + results disclosure
- Insurance information collection and clinic forms completion

Components of DeLIVER Mobile Model



- Collaboration with community-based organizations
  - Monthly educational gatherings
- Point-of-care hep C testing
  - Any risk factor, no insurance collected
- Positive RNA results disclosure, standard-of-care treatment via facilitated telehealth
- Incentives for completing appointments or milestones
- Peer navigation- Lived Experience Alliance (LEA)
- Medication security strategies

Incentives and Support Boost Treatment Engagement



- Gift card incentives important to support adherence
- Food and clothes appreciated and motivating
- LEAs (peer navigators) play critical role in HCV treatment experience

LEAs help patients make it to DeLIVER appointments	LEAs relate to patients' experiences of drug use and HCV treatment	LEAs encourage DeLIVER patients
"I didn't have a phone …but the LEA…came every week and picked me up and made sure I was here on time to get my meds."	"It's better to have somebody who has been through the process and has had drug use in the past, because…they know what's up and what you're going through."	"I missed a pill …They're like, 'you'll be all right. Just keep doing it.' It's crucial to have somebody like that…they advocate for you, and you need them to get here."

Patient Testing and Treatment Feedback



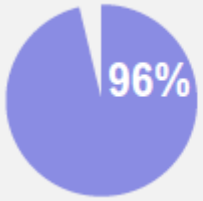


Exhibit II. 96% of DeLIVER patients (n=282/293) chose Xpert HCV testing over a standard blood draw when presented with both options.

- Patients appreciate the convenience
- Express gratitude for staff kindness and holistic care (e.g., hygiene packs, snacks, water)

"People are generally more excited about the finger stick than they are about a blood draw. I would say that it's been received really well."

– DeLIVER staff

"[Xpert is] better than getting the blood drawn with the IV, because it's less painful."

– DeLIVER patient

"[DeLIVER] was easier…more convenient. When you're out here on the streets, it's not always easy to go to a facility."

-DeLIVER patient

"It was super convenient, and the people here, hecka friendly man. I feel assertive, and then just get it done real fast, maybe 15 minutes, now just got to come back in an hour to get my results."

-DeLIVER patient

Patient Testing and Treatment Feedback



- Patients almost universally preferred a weekly medication pick up schedule

> "I wouldn't like [receiving my entire course of treatment at once] because I have a tendency to lose or misplace stuff. The week's actually perfect, because it keeps you accountable to taking it, because you come over here and then you got your [medicine], 'Okay, I took these seven days.' I like it the way it is."
>
> *-DeLIVER patient*

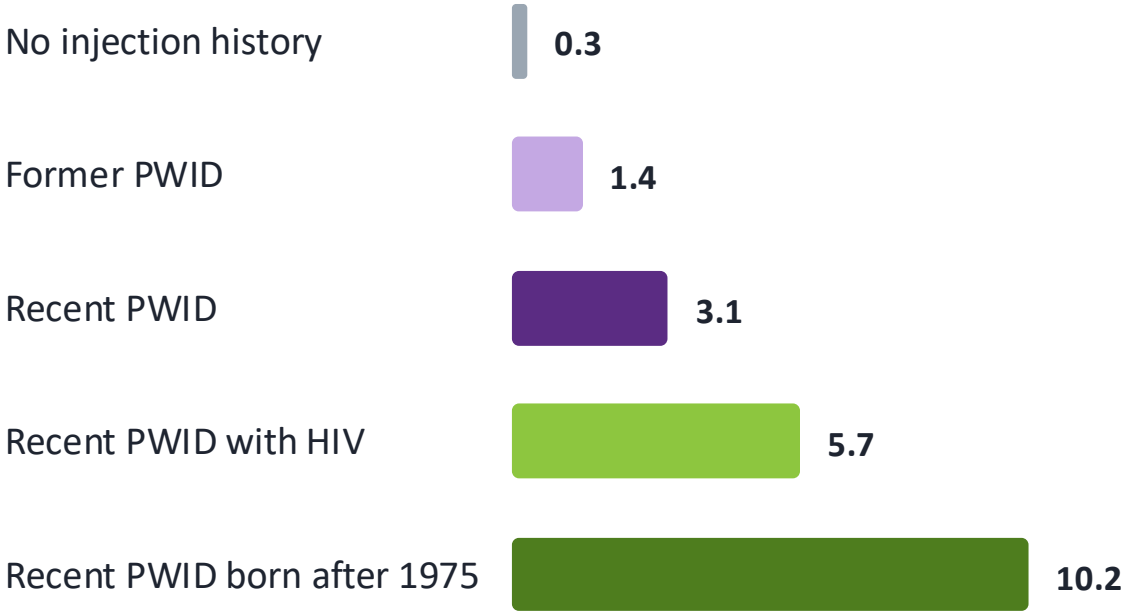
- Most patients expressed a preference to start treatment as soon as possible after diagnosis.

> "The follow up appointment should be sooner than later. Because when you hear you have hep C…you want to get it taken care of."
>
> *– DeLIVER patient*

After SVR

Hepatitis C virus reinfection

Reinfection per 100 person-years after DAA cure, British Columbia



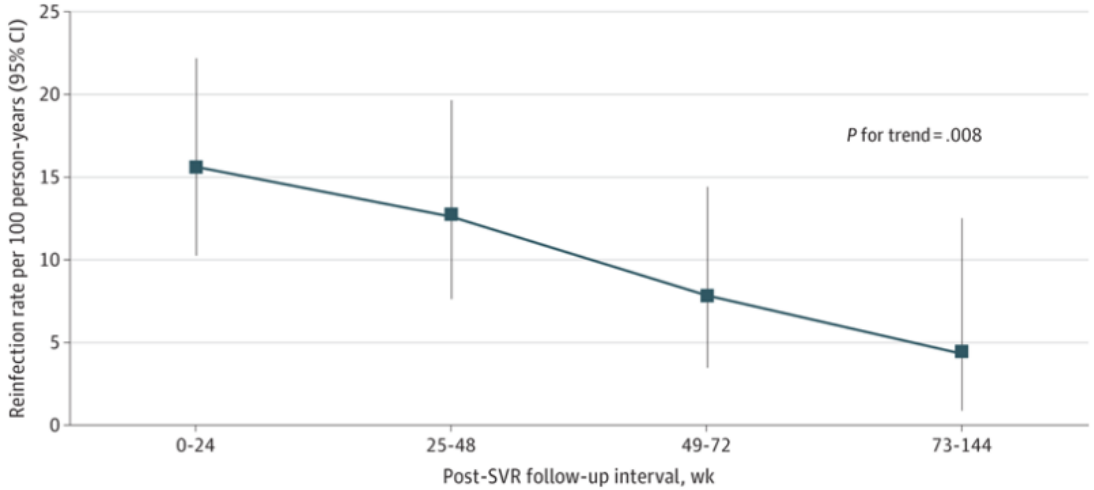
Only one reinfection among PWID on daily opioid agonist therapy.

HERO: 415 PWID cured at OTPs and CHCs, 8 US cities

11.4 per 100 person-years overall; 14% reinfected

15.5 → 4.3 first 24 wks vs weeks 73–144

Figure 2. Reinfection Rate Across 24-Week Intervals After Sustained Virologic Response (SVR)



Higher with injecting in past 3 months (aIRR 3.33); lower at age ≥40 (0.32) and without methamphetamine (0.41).

Rossi C, et al. J Hepatol 2018; Litwin AH, et al. JAMA Netw Open 2024.

Approach to hepatitis C virus reinfection

Anticipate Reinfection

- Expect reinfections to occur
- Counsel on reinfection risk early and often
- Consider simultaneously treating injecting partners/social network



Provide Harm Reduction

- Offer opioid substitution therapy and other drug use treatment
- Provide access to syringe services programs
- Co-localize HCV treatment with other services when possible
- Support safer injection practices
- Tailor approaches depending on population

Recognize and Treat Reinfection

- After SVR, check HCV RNA at least annually
- Treat new HCV infections early

Address Other Health Risks

- Optimize overdose prevention strategies
- Provide mental health resources
- Link to social services, including housing

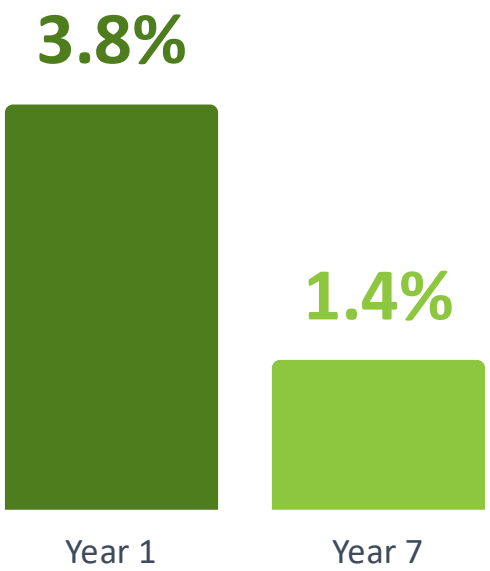
Destigmatize Reinfection

- Do not frame reinfection as a “failure”
- Avoid stigmatizing language around HCV “cure”, drug use, and sexual practices
- Normalize monitoring for reinfection
- Offer retreatment when reinfection occurs

Kim RG and Price JC. Clin Liver Dis 2024

Hepatocellular Carcinoma (HCC): Risk decreases but persists

Annual HCC incidence after DAA cure, FIB-4 ≥3.25 (29,033 veterans)



Still above 1%/yr at 7 years: no point at which surveillance can safely stop.

Fibrosis markers are dynamic: check FIB-4 before and after SVR

Pre-treatment cirrhosis
FIB-4 falling below 3.25 halves risk, which still stays near 2%/yr

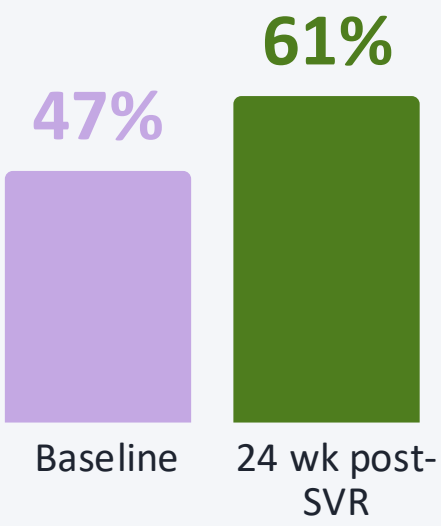
No cirrhosis, FIB-4 ≥3.25
Stable ~0.8–1.3%/yr for up to 7 years

No cirrhosis, FIB-4 falls
Risk roughly halves; lowest when FIB-4 is low before and after

Ioannou GN, et al. Gastroenterology 2019; Kim NJ et al. Gastroenterology 2022.

Hepatic Steatosis (aka fatty liver) persists or develops after cure

Steatosis by CAP, 108 DAA-cured patients (Montreal, Milan)



- New steatosis in 37%
- Among those with steatosis at baseline, 88% kept it; even as fibrosis markers improved

HIV/HCV and advanced fibrosis or cirrhosis, after SVR

29% → 45%

MASLD prevalence at 1 vs 6 years after cure

History of HCV, prevalence of significant fibrosis:

58% vs 39%

In those with MASLD vs no steatosis

Shengir M, et al. Clin Res Hepatol Gastroenterol 2025; Virseda-Berdices A, et al. J Infect Public Health 2025;18:102981; Elgretli W, et al. J Viral Hepat 2025.

Steatotic liver disease (formerly fatty liver disease)

Steatotic liver disease (SLD): hepatic steatosis on imaging or biopsy

MASLD
≥1 cardiometabolic criterion; little or no alcohol. MASH = steatohepatitis subset

MetALD
MASLD plus 10–25 drinks/wk (women) or 15–30 drinks/wk (men)

ALD
Alcohol-related; above MetALD ranges

Specific aetiology
Drug-induced, monogenic, HCV genotype 3 and others

Cryptogenic SLD
No metabolic criteria and no other cause



None / less — Alcohol intake — More

Dual etiology: a person can have **MASLD and HCV**, for example

Steatotic liver disease affects 1 in 3 adults globally

1 standard drink = 14 g alcohol (US). Rinella ME, et al. Hepatology, 2023

Diagnosing hepatic steatosis

Tool	Strengths	Limitations
Ultrasound	Cheap, everywhere; also screens for HCC and spleen size	Qualitative; misses mild steatosis; operator- and habitus-dependent
VCTE with CAP	Point of care; steatosis and stiffness in one exam	Less reliable with severe obesity (use XL probe); CAP cutoffs vary
CT	Often already done; incidental finding	Insensitive for mild steatosis; radiation
MRI-PDFF	Most accurate quantification; tracks change	Cost and access; mostly trials and specialty care

Normal ALT does not exclude MASLD

or advanced fibrosis; enzymes alone don't dictate who gets staged

Steatosis and Fibrosis are different

Fibrosis stage, not fat content, predicts liver events and mortality

AASLD Practice Guidance on NAFLD/MASLD, Hepatology 2023; EASL-EASD-EASO MASLD guideline 2024

MASLD Treatment

Sustained weight loss

≥5% less liver fat

7–10% less inflammation

≥10% fibrosis improves

>150 min/wk moderate activity; Mediterranean-style diet; avoid sugary drinks.

Alcohol

Discourage drinking in all SLD; no proven benefit of “light” drinking.

Advanced fibrosis or cirrhosis: abstain completely.

MetALD: treat both the metabolic and the alcohol drivers.

Approved for non-cirrhotic MASH, F2–F3

Resmetirom (FDA, Mar 2024)

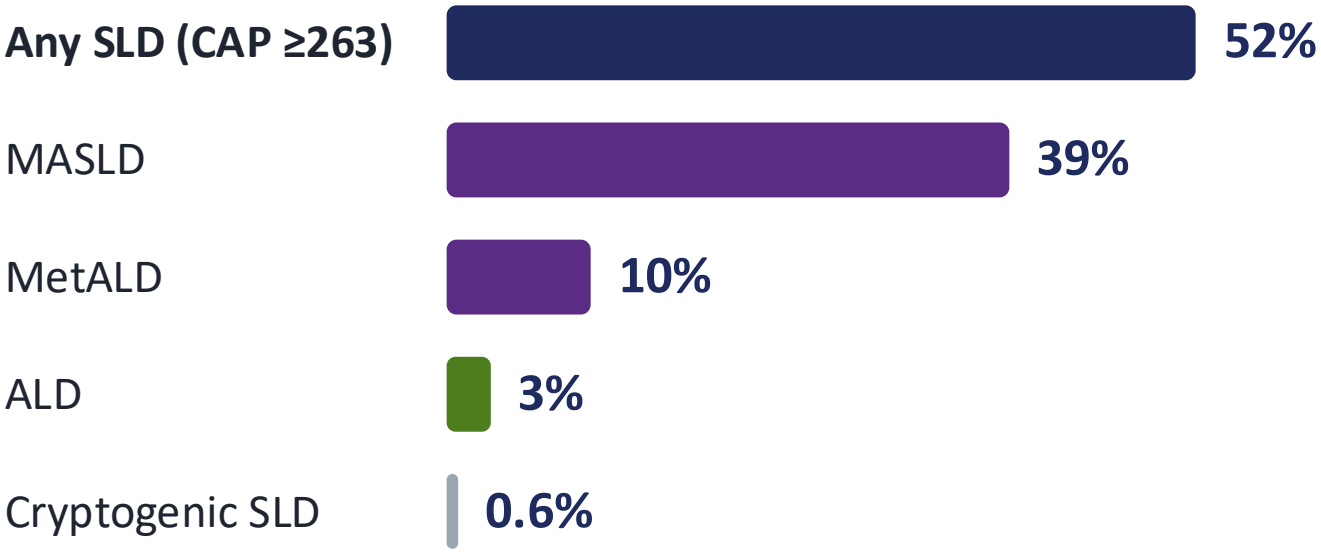
Semaglutide 2.4 mg (FDA, Aug 2025)

Statins, GLP-1 RAs, SGLT2i, metformin and pioglitazone are safe for usual indications; statins even in compensated cirrhosis.

EASL-EASD-EASO MASLD guideline 2024;FDA approvals of resmetirom (Mar 2024) and semaglutide for MASH (Aug 15, 2025; ESSENCE).

Half of people with HIV in a US cohort have steatotic liver disease

HIV NASH CRN: 1,065 people with HIV on ART, 9 US centers, VCTE with CAP



Fibrosis: **15%** clinically significant (LSM ≥8 kPa); **4%** advanced (≥12 kPa).

Gawrieh S et al, Aliment Pharmacol Ther 2024.

STUDY POPULATION

Cohort: 74% male, 46% Black, 74% undetectable HIV RNA.

FACTORS ASSOCIATED WITH MASLD

- Obesity, higher ALT and AST: higher risk
- HIV factors and ART not associated
- Almost all with NAFLD met MASLD criteria

Women with HIV have similar steatosis but more fibrosis than women without HIV

WIHS/MWCCS LIVRA: 1,580 women (1,117 with HIV, 463 without), VCTE with CAP

STEATOSIS

47% · 47%

with vs without HIV; HIV not associated with SLD (OR 1.19, NS). **~82% of SLD was MASLD in both.**

FIBROSIS WITH STEATOSIS

OR 1.48

for HIV (95% CI 1.01–2.16); no link without steatosis (OR 0.72). HIV × SLD interaction p = 0.03.

WITHIN WOMEN WITH HIV

OR 2.41

for SLD-fibrosis with detectable viral load (1.50–3.88).

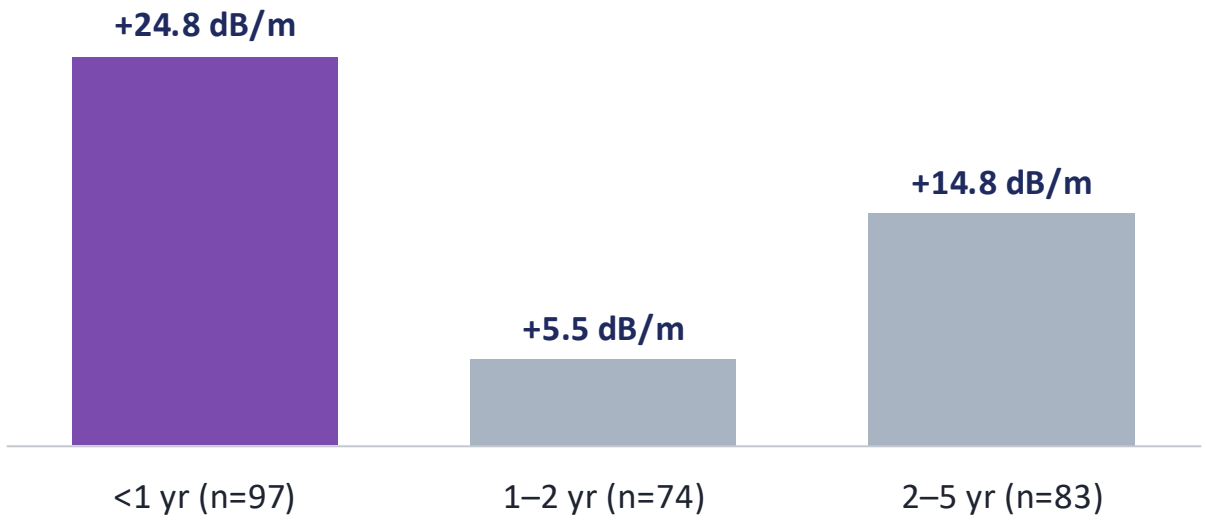
"Return to health": current ART (OR 2.34) and higher CD4 were linked to MASLD.

Different mix: less ALD (2% vs 7%), more cryptogenic SLD (3% vs 0.4%) with HIV.

Duarte MJ, et al. J Acquir Immune Defic Syndr 2025.

Steatosis rose in women the first year after an INSTI switch, then leveled off

Adjusted CAP difference, INSTI vs non-INSTI, dB/m
By time since switch or add; only year 1 significant (P=0.048)



3.7× **odds of CAP ≥248, year 1**
OR 3.72 (1.22–11.36), P=0.02

1.23× **liver stiffness, year 1**
95% CI 1.01–1.49, P=0.04

1.97× **FAST score, year 1**
95% CI 1.17–3.31, P=0.01

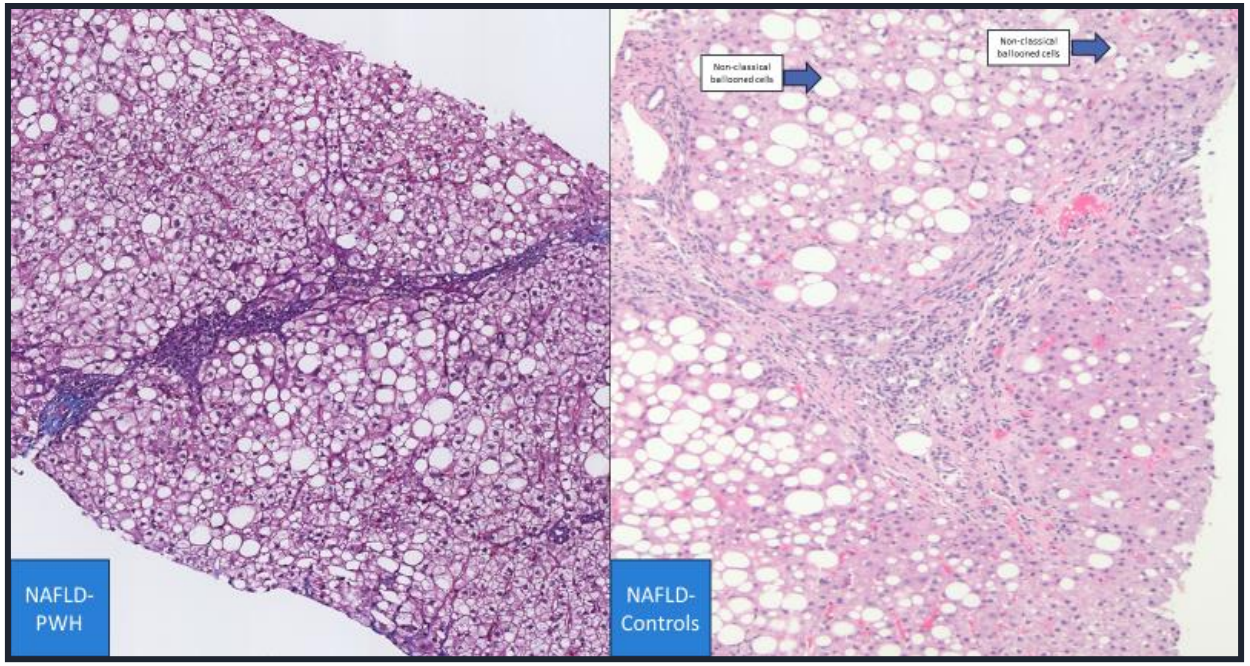
No measure differed significantly at 1–2 or 2–5 years after the switch. Models adjusted for baseline CD4, BMI, ABC, TDF, TAF and alcohol use.

Yu MA, et al. Clin Infect Dis 2025

PWH with NAFLD have more fibrosis despite less steatosis, inflammation and ballooning

107 PWH with NAFLD (5 US academic centers + NIAID) vs 107 matched controls without HIV (NASH CRN); matched on age, sex, race/ethnicity, BMI, diabetes and ALT

	NAFLD-PWH vs. Controls		
	Odds ratio	95%CI	P value
Steatosis grade (0-3)	0.66	(0.46, 0.95)	0.03
Portal chronic inflammation score (0-2)	0.34	(0.18, 0.65)	0.001
Ballooning score (0-2)	0.55	(0.34, 0.88)	0.01
Fibrosis stage (0-4)	1.42	(1.03, 1.97)	0.03



- NAFLD Activity Score was lower in PWH (3.2 vs 4.0, P<0.001), yet fibrosis odds were 42% higher.
- HIV-specific factors beyond necroinflammation likely drive fibrosis in PWH.

Allende DS, et al. Aliment Pharmacol Ther 2024.

Immune activation predicts new fibrosis in women with HIV

709 women from WIHS/MWCCS with HIV, no baseline fibrosis or viral hepatitis; serial VCTE, mean 42 months

Incident outcome	IRR per log-unit KT ratio
Any fibrosis (≥7.1 kPa)	1.46 (1.21–1.76)
Advanced fibrosis (≥9.5 kPa)	1.59 (1.27–1.99)
Fibrosis without steatosis	1.59 (1.31–1.94)
Fibrosis with steatosis	1.16 (0.94–1.42), NS

sCD163 (macrophage activation) predicted all outcomes; sCD14 and I-FABP did not.

INCIDENT FIBROSIS

18.7% developed fibrosis

8.3% advanced fibrosis

74% of new fibrosis occurred with steatosis.

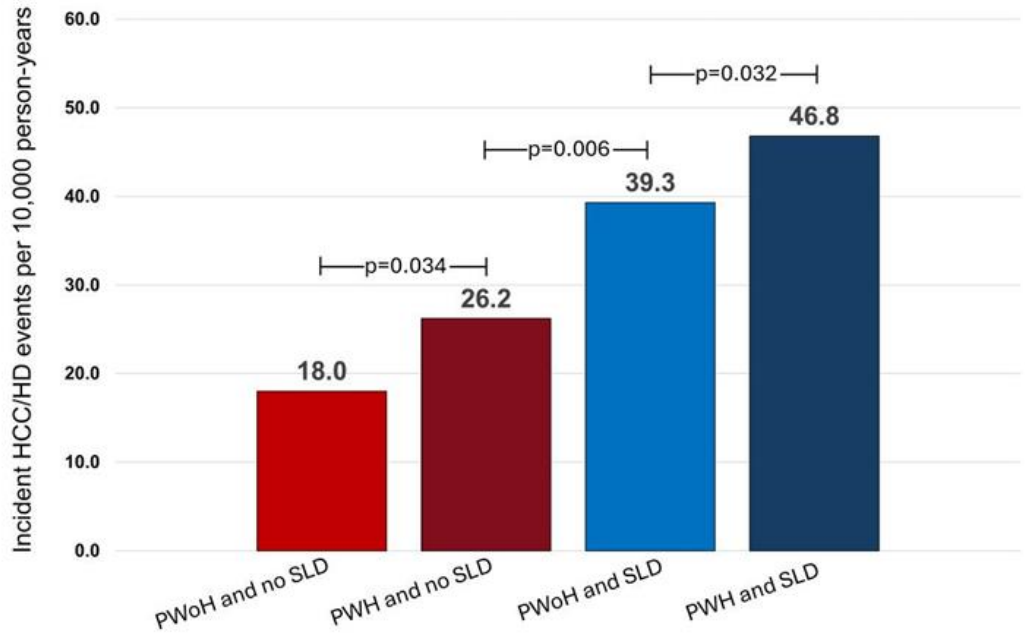
Kynurenine-to-tryptophan (KT) ratio reflects immune activation and gut barrier injury.

Duarte MJ, et al. AIDS 2025.

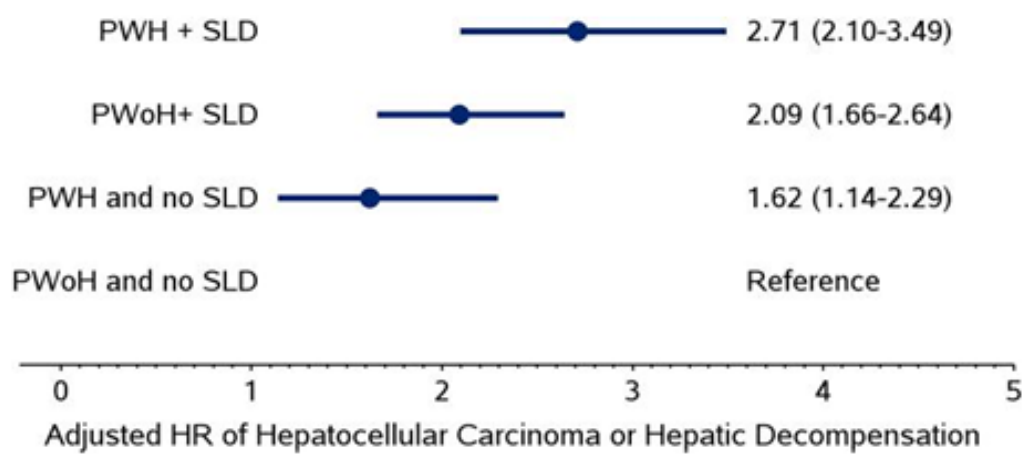
HIV with steatosis nearly triples the risk of HCC or decompensation

VACS-HIV: 19,546 veterans with liver imaging, no cirrhosis or viral hepatitis; median follow-up 12.5 yrs

HCC or hepatic decompensation per 10,000 person-years



Adjusted hazard ratio vs PWoH and no SLD (95% CI)



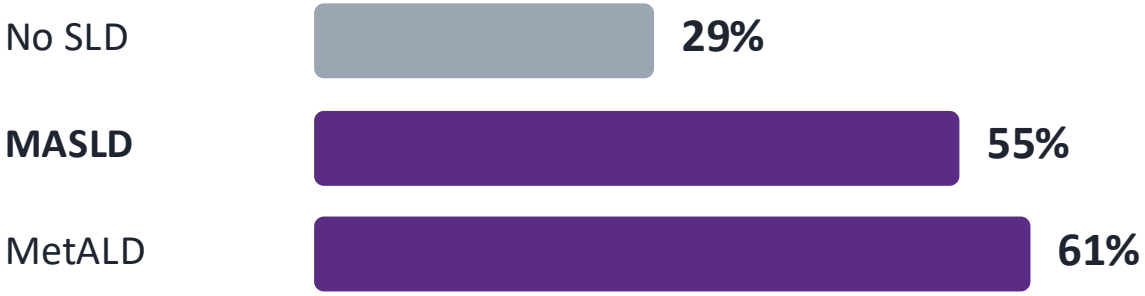
Adjusted for metabolic factors, alcohol and tobacco.

Torgersen J, et al. Open Forum Infect Dis 2026

People with HIV and MASLD have higher cardiovascular risk

HIV NASH CRN: 991 people with HIV and no prior CVD (MASLD 40%, MetALD 9%)

Meet ≥4 of 5 cardiometabolic criteria



Over 95% of people with MASLD met ≥2 criteria; overweight and hypertension were most common.

Mean 10-year risk, PREVENT equations

	No SLD	MASLD
Total CVD	7.1%	8.6%
ASCVD	4.1%	5.1%
Heart failure	4.5%	5.8%

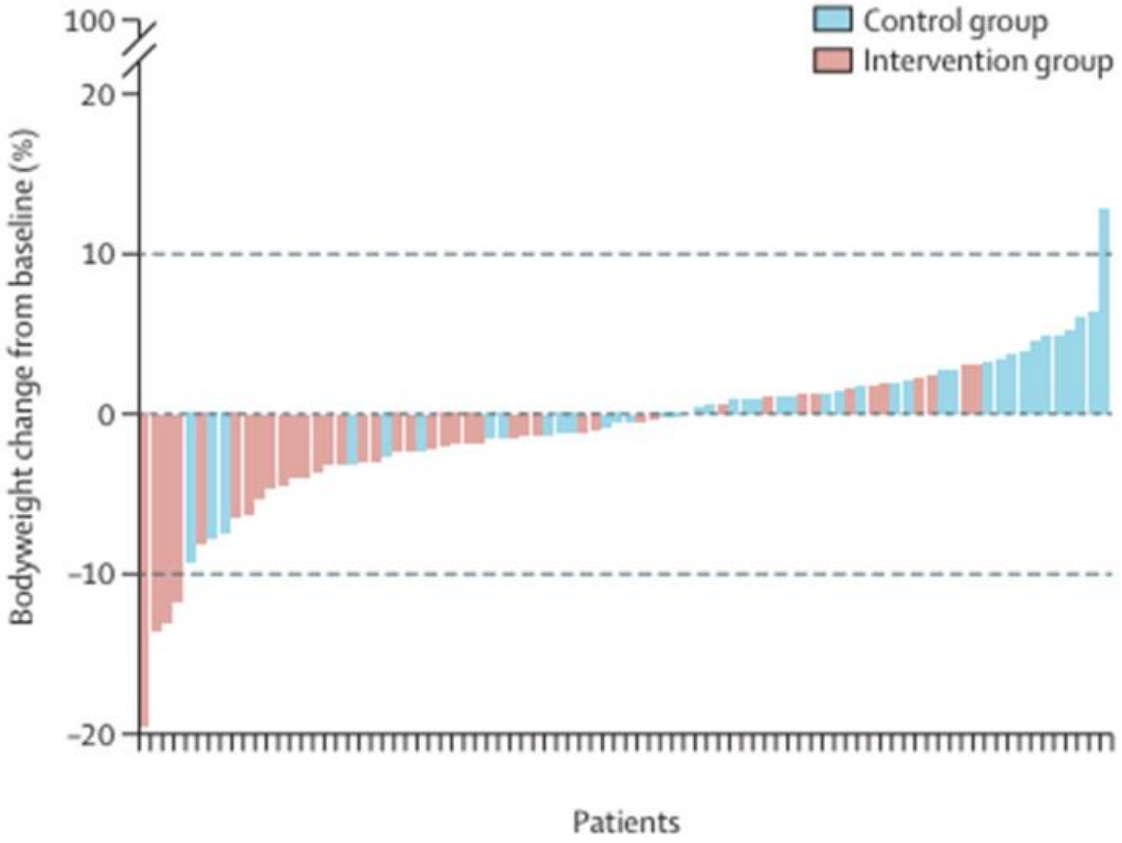
All p ≤0.003. MetALD scored similar to no SLD, partly because PREVENT does not include alcohol.

> Cardiovascular risk factors should be aggressively managed

Sterling RK, et al. Am J Prev Cardiol 2025.

Structured Lifestyle Intervention

Weight change from baseline at 12 months, each bar one participant



84 people with HIV and MASLD; personalized education, dietary counseling and exercise consultations vs usual care, 12 months

	Lifestyle	Control
MASLD resolved	28%	10%
Partial resolution	47%	29%
Liver fat (^{1}H-MRS), change	−5.1 pts	−0.2 pts
Total body fat, kg	−1.8	+0.1
Fibrosis regression	40%	47%

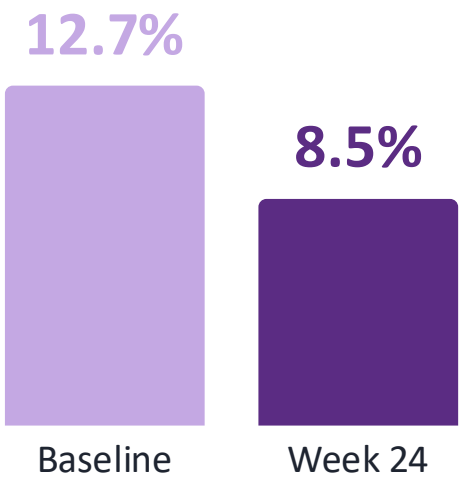
p = 0.040 (resolution), 0.004 (liver fat), 0.0005 (body fat). Lean mass preserved; fibrosis unchanged.

Li G, et al. Lancet HIV 2025.

Semaglutide cut liver fat by a third in people with HIV

Phase 2b, single-arm, open-label: semaglutide 1 mg weekly for 24 weeks in people with HIV, central adiposity, insulin resistance or prediabetes, and liver fat ≥5%

Primary end point: liver fat by MRI-PDFF



−31%

relative (−4.2 points; 95% CI −5.4 to −3.1)

SECONDARY, WEEK 24

Weight	**−7.8 kg (−8%)**
Waist	−6.7 cm
HbA1c	5.7 → 5.5%
Triglycerides	150 → 131
ALT	30.7 → 24.8

CD4 count stable; HIV RNA <50 copies in 100% at baseline and 98% at week 24.

Lake JE, et al. Ann Intern Med 2024.

HCRN005: Resmetirom in people with HIV, now enrolling

Randomized, double-blind, placebo-controlled, multicenter **24-week** trial of resmetirom (Rezdiffra) for MASLD in people with HIV

Why it matters

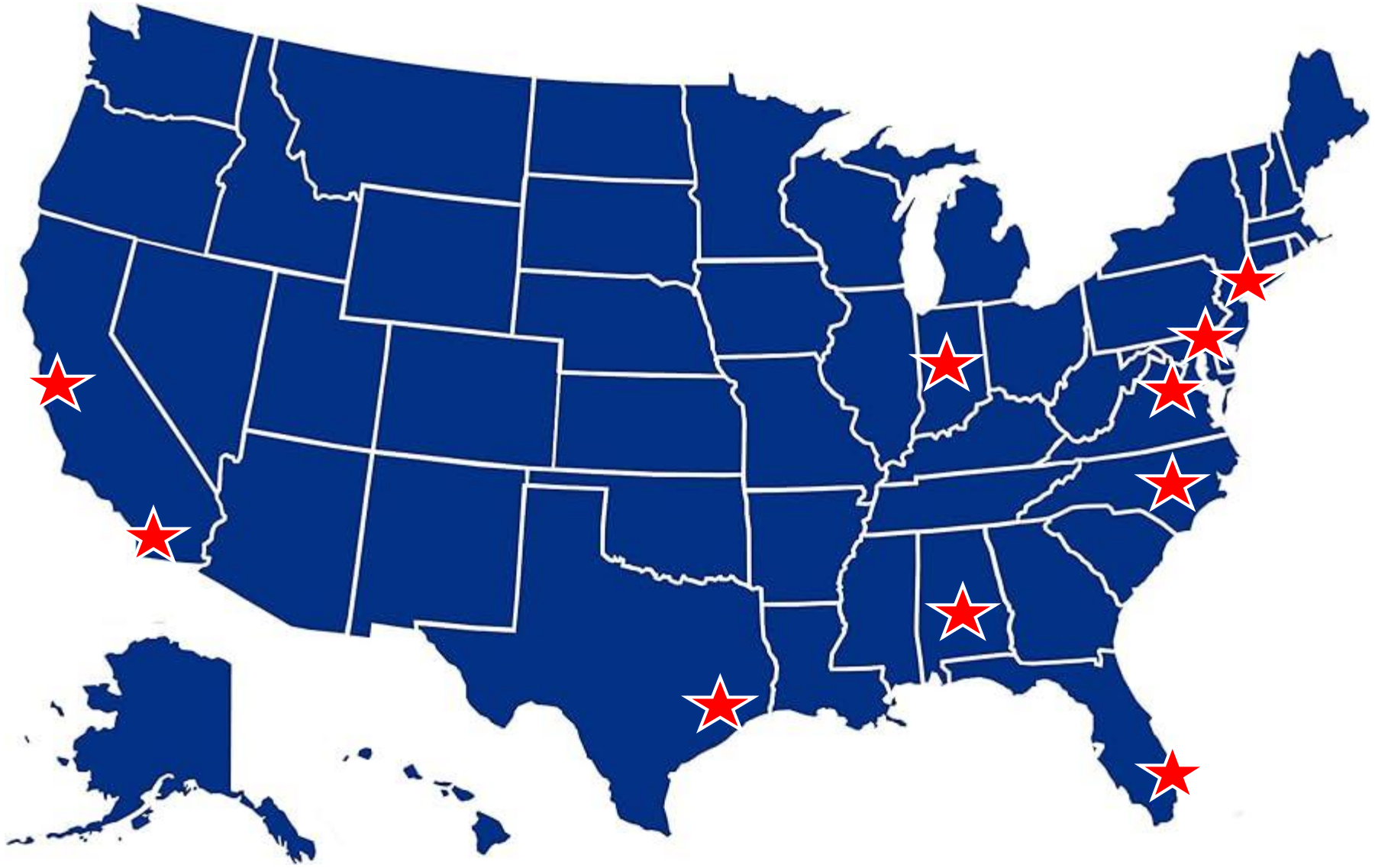
FDA-approved for MASH with F2–F3 fibrosis since 2024, but never tested in people with HIV

Who can enroll

- Adults 18 or older with MASLD
- Stable ART
- HIV-1 RNA <200 copies/mL for the past 6 months

HIV NASH Clinical Research Network (HCRN); NCT07143968. Resmetirom FDA approval: March 2024 (MAESTRO-NASH).

HCRN005 Sites



*Indianapolis, IN - Indiana University

*Durham, NC - Duke University

*Baltimore, MD - Johns Hopkins University

*San Diego, CA – UCSD

*San Francisco, CA – UCSF

*Houston, TX - UT Health Houston

*Richmond, VA - Virginia Commonwealth University

*Birmingham, AL - University of Alabama

*West Palm Beach, FL – Atlantic Clinical Research Institute

* New York, NY – Mt Sinai

HIV providers want guidance on fatty liver

National survey of 214 American Academy of HIV Medicine providers (60% physicians, mostly primary care), 2023

65%

screen people with HIV for NAFLD; **28%** screen everyone

~1 in 3

use elastography; most rely on liver enzymes and ultrasound

28–29%

unsure what tests to order or how to make the diagnosis

73%

want society guidelines; 55–57% want provider and patient education

> Screening is mostly triggered by raised enzymes (89%), metabolic syndrome (64%), obesity (61%) or diabetes (56%); people with normal ALT are often missed.

Price JC, et al. J Assoc Nurses AIDS Care 2025.

FIB-4 in HIV: good for ruling out advanced fibrosis

HIV NASH CRN: 1,065 people with HIV on ART, no viral hepatitis or alcohol excess; FIB-4 vs VCTE

ADVANCED FIBROSIS (≥11 KPA, 6%)

97%

NPV at FIB-4 <1.3: **low score rules it out**

11%

PPV at FIB-4 ≥1.3: **321 of 362 flagged were false positives**

FIB-4 >2.67: PPV 28% (34 of 47 false positive). **Confirm with VCTE.**

SIGNIFICANT FIBROSIS (≥8 KPA, 15%)

54%

sensitivity at FIB-4 <1.3: **72 of 156 missed**

0.66

AUROC: only moderate discrimination

FIB-4 and NFS **will miss significant fibrosis** in people with HIV.

Sterling RK, et al. Am J Gastroenterol 2024.

FIB-4 misses a third of significant fibrosis in PWH

4,917 PWH, routine VCTE screening at 7 centers on 3 continents, 2015–2025; no viral hepatitis or alcohol excess

12.6%

significant fibrosis (≥8 kPa); 6.1% advanced

36%

of them had FIB-4 <1.3 (224 of 622)

FIB-4 AUROC, significant fibrosis	
Overall	0.69
With MASLD	0.60
Without MASLD	0.76

At FIB-4 <1.3: sensitivity 64%, PPV 21%, NPV 92%.

WHO GETS MISSED

- **Metabolic phenotype:** steatosis (RR 1.96) and higher BMI
- Younger, with normal AST and platelets
- Less often prior HCV or D-drug exposure

Cinque F et al., Hepatology 2026.

Summary

- DAAs cure over 95%, including with HIV; drug use is not a reason to wait
- Screen every adult once and every pregnancy; reflex RNA and EHR prompts help
- Bring care to people: co-located, same-day models close the gap
- Women fall out of care at linkage, especially postpartum
- After cure, continue HCC surveillance for cirrhosis
- If non-cirrhotic, monitor for steatosis and periodically re-stage fibrosis

Thank you!

DeLIVER Care



LEA



NOW Study



End Hep C SF



Funding

P30 DK026743, R01DK121378, R01DK109823
U01-HL146241, U01-HL146201, U01-HL146204, U01-HL146202, U01-HL146193, U01-HL146245, U01-HL146240, U01-HL146242, U01-HL146333, U01-HL146205, U01-HL146203, U01-HL146208, U01-HL146192, U01-HL146194

Funding

SF CAN
SFHP Population Health Grant
San Francisco DPH
AbbVie
Merck Investigator Studies Program
UCSF RAP
Gilead Sciences

FACENTE CONSULTING
UNDERSTAND - IMPLEMENT - TELL YOUR STORY