

# **Approach to the different risk groups for HBV and/or HCV**

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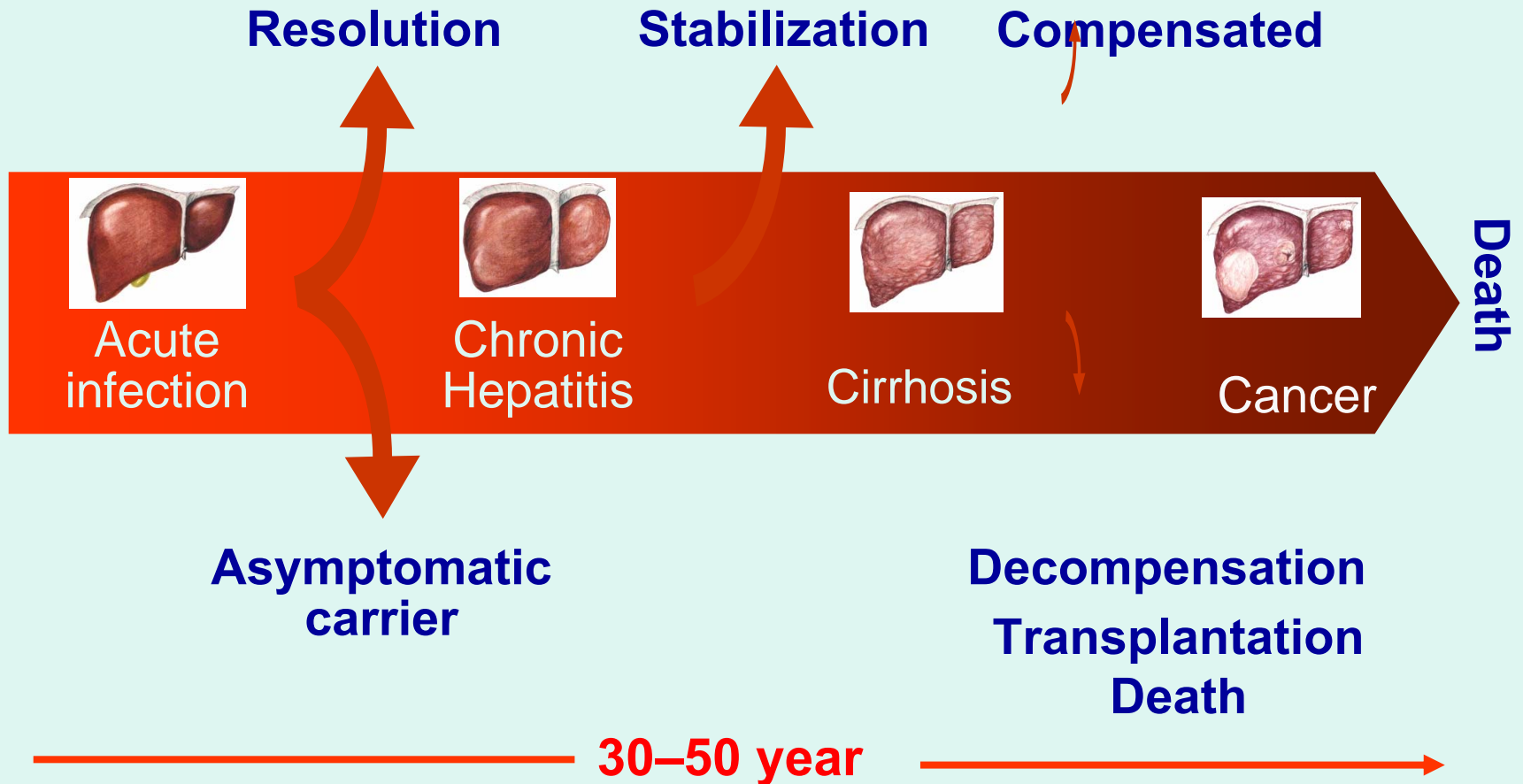
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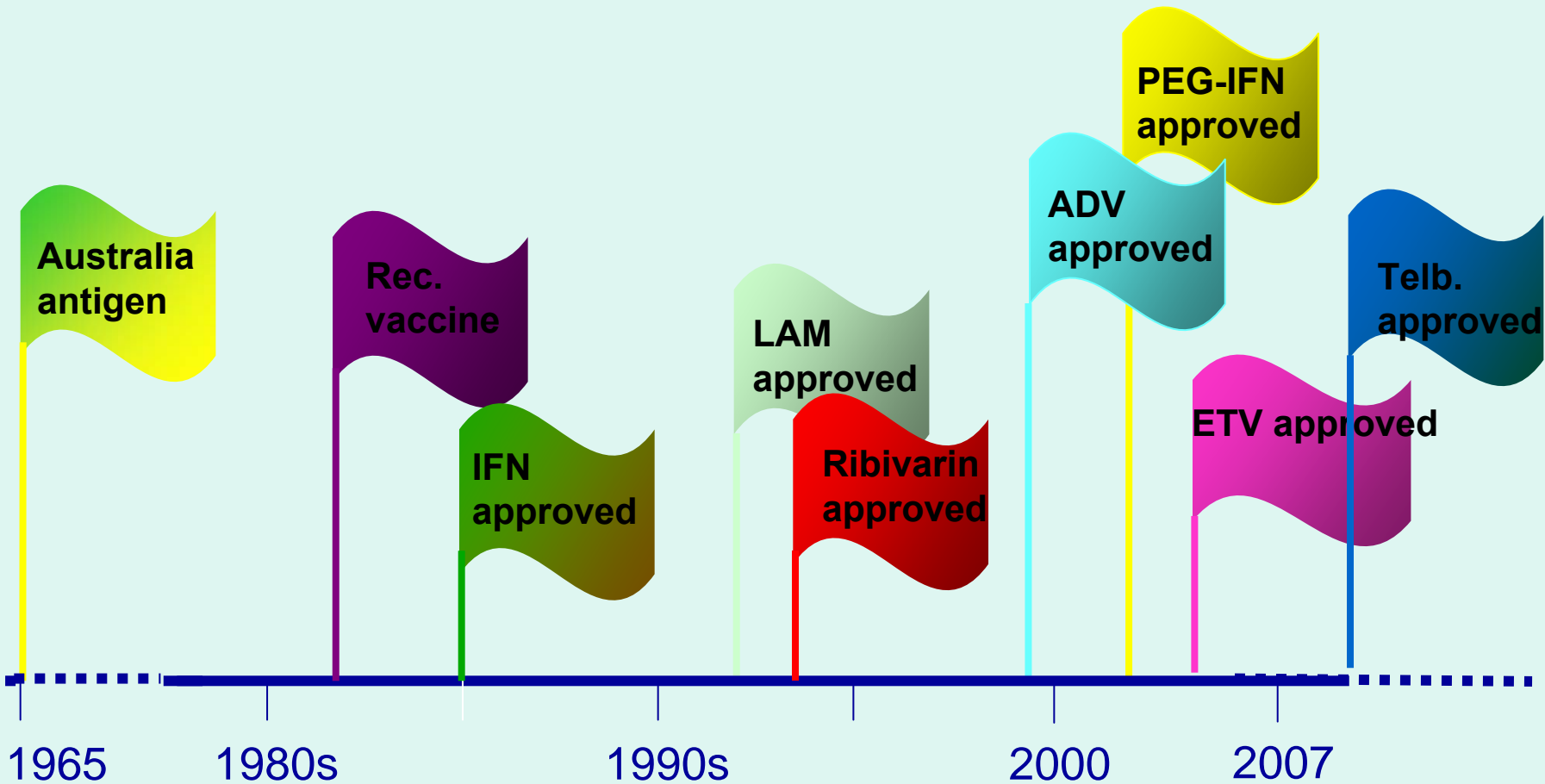
**Thursday, November 13, 2008**

# Chronic Hepatitis B and C

## Silent Killers



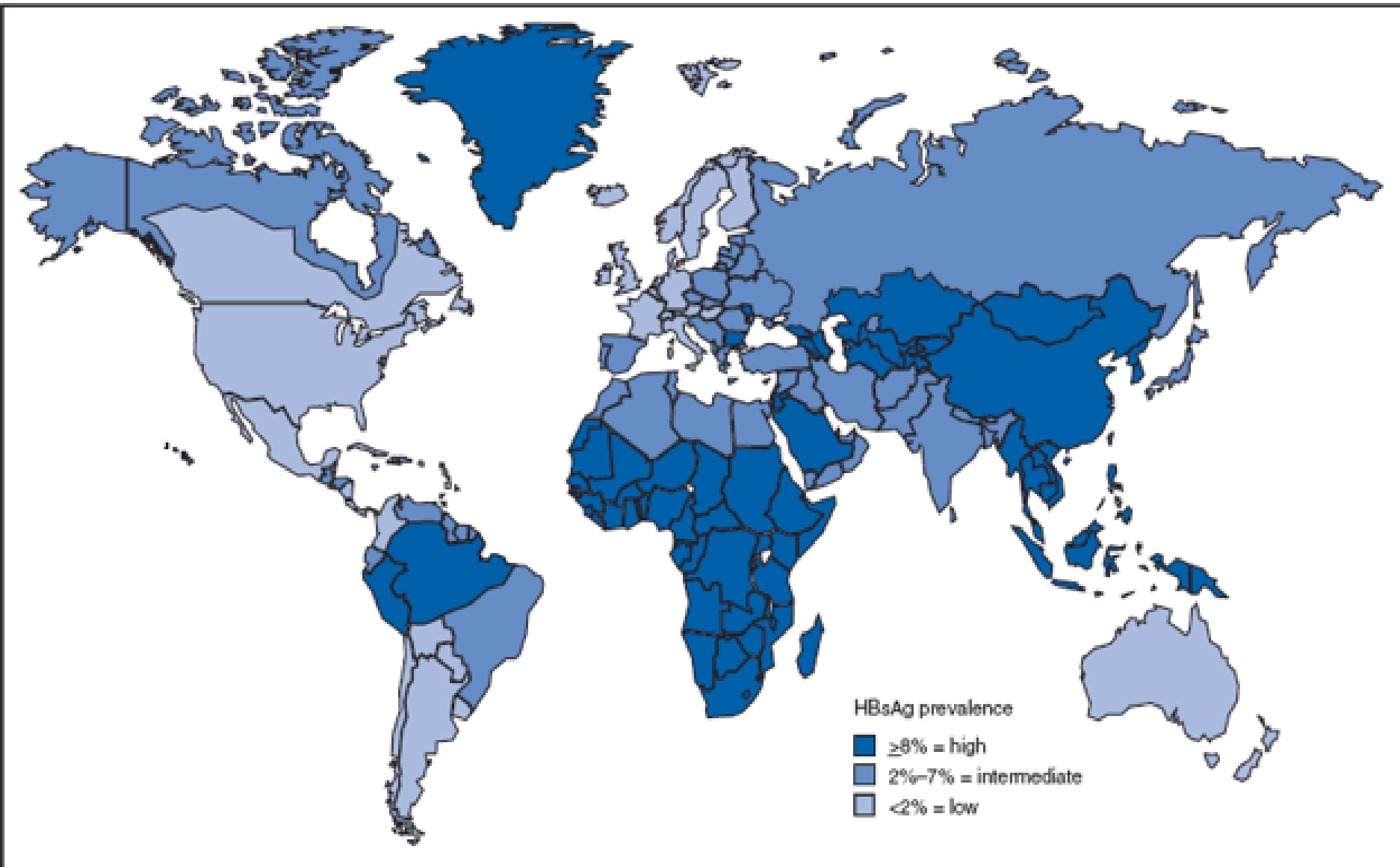
# Increasing Treatment Strategies for HBV and HCV



**HBV and HCV  
are treatable diseases**

**HBV can also be prevented  
(vaccination)**

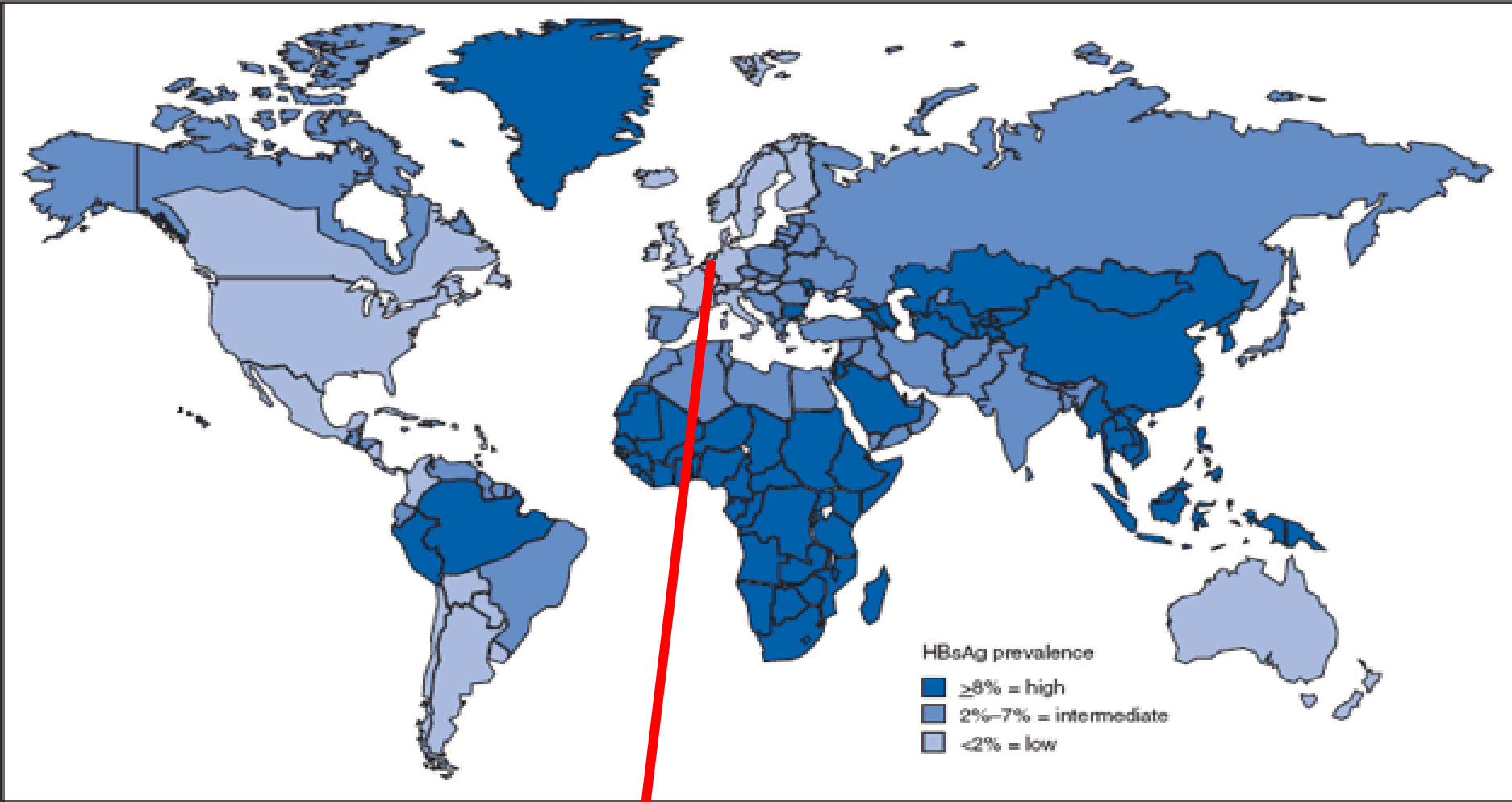
FIGURE 3. Geographic distribution of chronic hepatitis B virus (HBV) infection — worldwide, 2006\*



\* For multiple countries, estimates of prevalence of hepatitis B surface antigen (HBsAg), a marker of chronic HBV infection, are based on limited data and might not reflect current prevalence in countries that have implemented childhood hepatitis B vaccination. In addition, HBsAg prevalence might vary within countries by subpopulation and locality.

Source: CDC. Travelers' health; yellow book. Atlanta, GA: US Department of Health and Human Services, CDC; 2008. Available at <http://www.cdc.gov/travel/yellowbookch4-HepB.aspx>.

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**1800 new patients reported each year**

# Prevention of HBV Infection

- **Vaccine is highly effective – HBV incidence is declining**
  - **Infants and children vaccination rates high**
  - **In countries endemic for HBV, infant vaccination has reduced rates of liver complications**
- **HBV-related HCC is vaccine-preventable cancer**

# HBV Modes of Transmission

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- Sexual
- Parenteral
- Perinatal





# **HBV high risk groups in the Netherlands – ca. 50000 patients**

- **On hemodialysis**
- **Hemophilia, or others who are regularly in need for blood products**
- **Mentally ill patients**
- **Down syndrome**

# **HBV high risk groups in the Netherlands – healthy people**

- **Partners of HBV patients**
- **Newborns from HBV mothers**
- **People who had contact with HBV blood or blood of unknown origin**
- **People with multiple sexpartners**
- **Those living in high-endemic areas**
- **IV drug abuse**
- **Family members of an HBV patient**
- **Children in asylum-centers**
- **People who visit a clinic for sexual transmitted disease**
- **Children with one parent born in a high-endemic area**

# **HBV high risk groups in the Netherlands**

- **Medics and paramedics – ca. 300.000  
people**

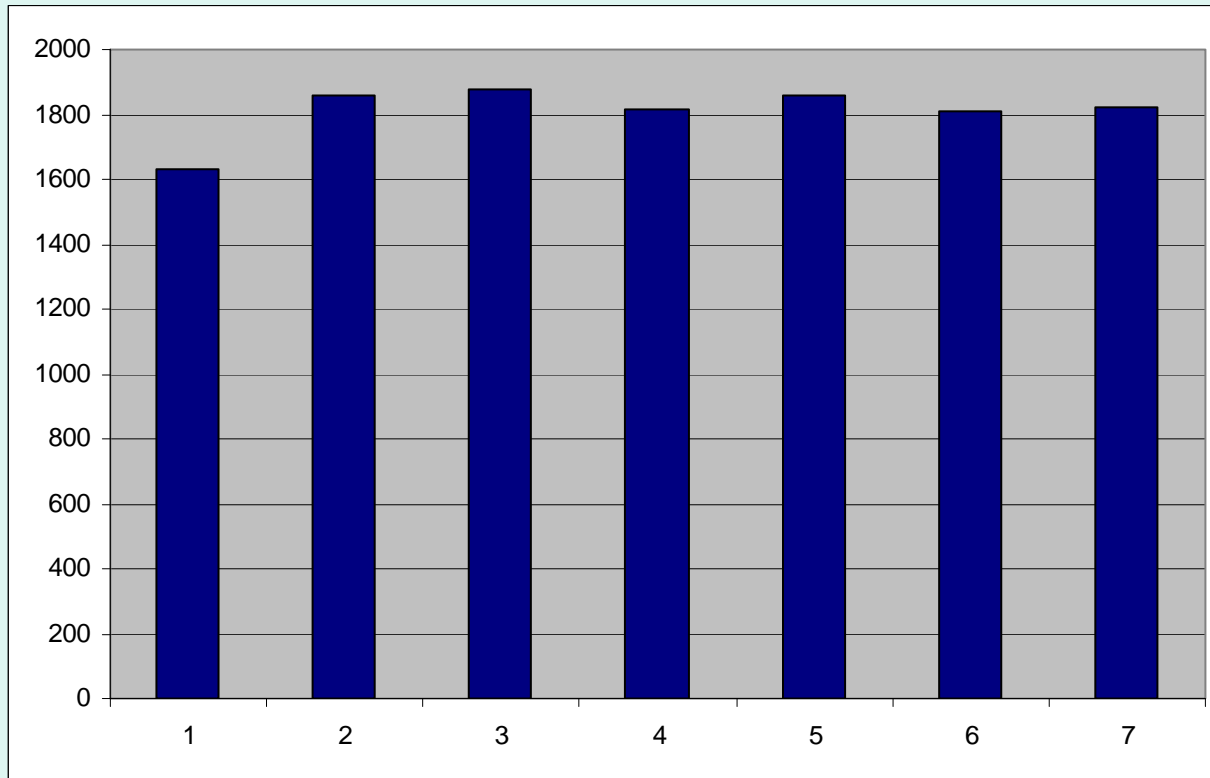
# Who does the work ?

- **Those who take care of pregnant women**
- **GGD and SOA-clinics, for high risk groups**
- **Arbo/GGD, for medical personnel**

# Hepatitis B vaccination

- All infants, beginning at birth
- All children aged <19 years who have not been vaccinated previously
- Susceptible sex partners of hepatitis B surface antigen (HBsAg)-positive persons
- Sexually active persons who are not in a long-term, mutually monogamous relationship (e.g., >1 sex partner during the previous 6 months)
- Persons seeking evaluation or treatment for a sexually transmitted disease
- Men who have sex with men
- Injection drug users
- Susceptible household contacts of HBsAg-positive persons
- Healthcare and public safety workers at risk for exposure to blood or blood-contaminated body fluids
- Persons with end-stage renal disease, including predialysis, hemodialysis, peritoneal dialysis, and home dialysis patients
- Residents and staff of facilities for developmentally disabled persons
- Travelers to regions with intermediate or high rates of endemic HBV infection
- Persons with chronic liver disease
- Persons with HIV infection
- All other persons seeking protection from HBV infection — acknowledgment of a specific risk factor is not a requirement for vaccination

# Reported HBV cases 2001-2007 in the Netherlands



# **Countries which do worse ?**

- **Scandinavia, Baltic and Balkan**

# Conclusions

- **HBV in special risk groups:**
  - **HBV: Predefined high risk groups**
  - **HBV: focus on prevention**



# HCV in the Netherlands

**Tableau 1 / Table 1**

**Nombre d'infections à VHC déclarées par mode de transmission suspecté, Pays-Bas, avril 1999-février 2001**  
**Number of HCV infections reported by suspected transmission route, The Netherlands, April 1999-February 2001**

| <b>Mode de transmission</b><br><b>Transmission route</b>    | <b>No. de cas</b><br><b>Nr. cases</b> | <b>%</b>   |
|---|---------------------------------------|------------|
| Utilisateurs de drogues injectables<br>Injecting drug users | 440                                   | 64,0       |
| Sang et produits sanguins<br>Blood and blood products       | 42                                    | 6,0        |
| Autres / Others   | 38                                    | 5,5        |
| Blessure par piqûre / Needle stick injury                   | 12                                    |            |
| Voie sexuelle / Sexual                                      | 9                                     |            |
| Transmission maternelle/ Mother to child                    | 8                                     |            |
| Chirurgie / Surgery   | 5                                     |            |
| Dialyse / Dialysis  | 4                                     |            |
| Inconnu / Unknown   | 170                                   | 24,5       |
| <b>Total</b>  | <b>690</b>                            | <b>100</b> |

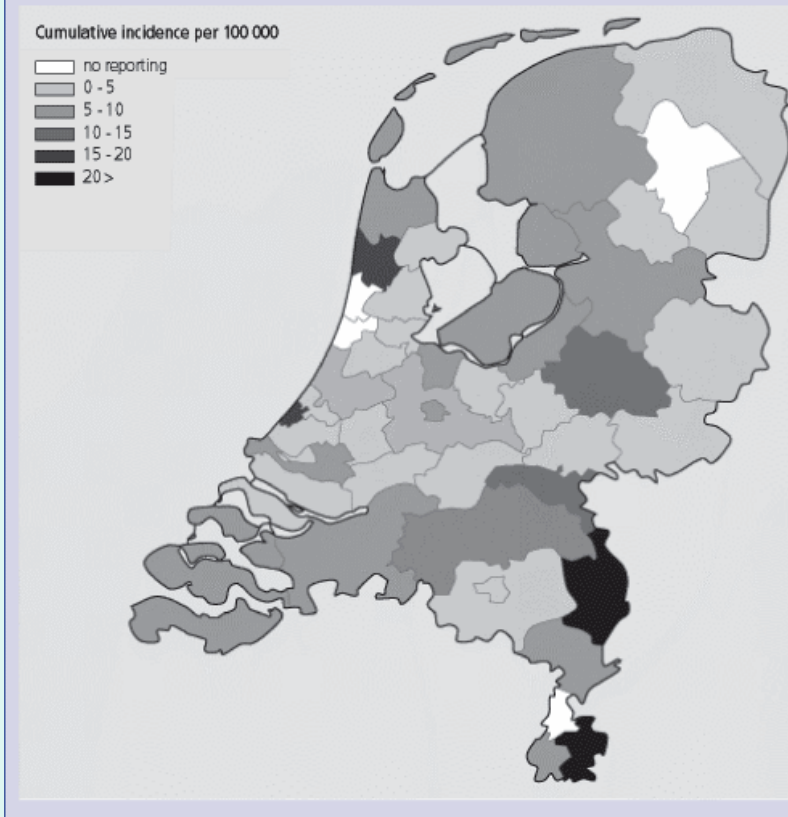
Manque 185 / Missing 185

# HCV in the Netherlands

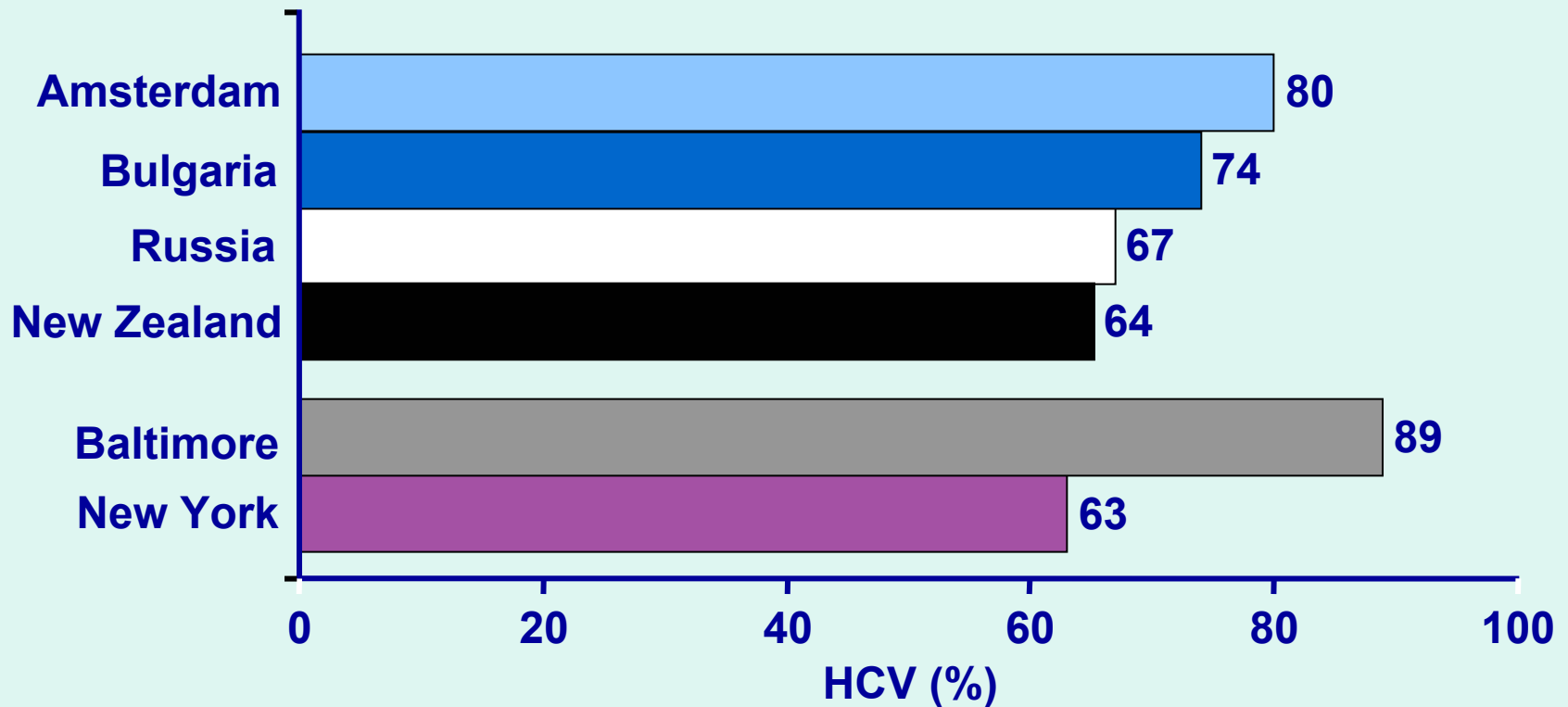
**Figure 3**

Incidence cumulée pour 100 000 de l'infection à VHC déclarée par administrations sanitaires régionales, avril 1999-février 2001, Pays-Bas.

Cumulative incidence per 100 000 of notified hepatitis C virus infections by Municipal Health Authority, April 1999-February 2001, The Netherlands.

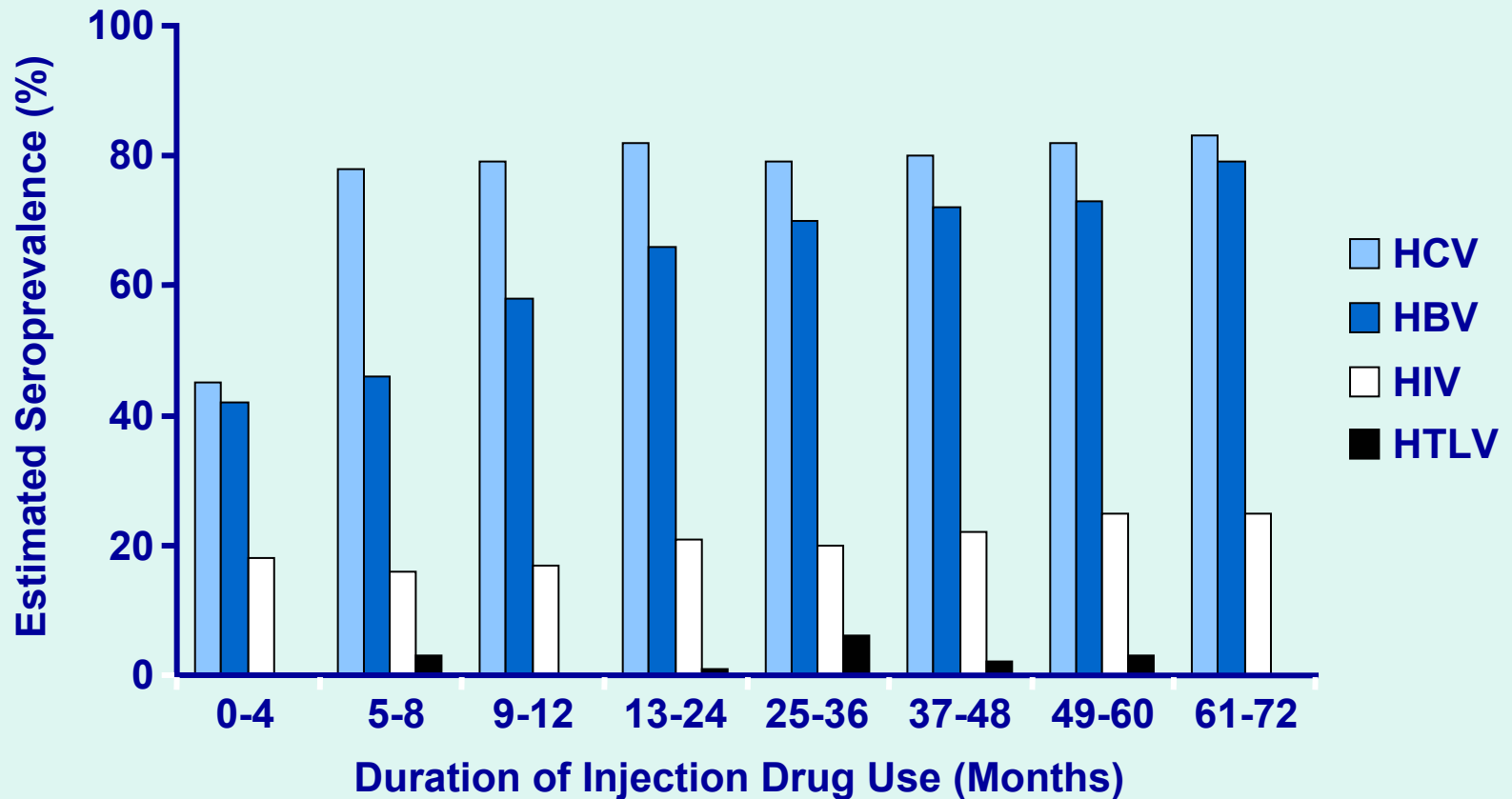


# High Prevalence of HCV Among IDUs Worldwide



Thomas DL, et al. *Medicine (Baltimore)*. 1995;74:212-220. Des Jarlais DC, et al. *AIDS*. 2005;19(suppl 3):S20-S25. Vassilev ZP, et al. *Int J STD AIDS*. 2006;17:621-626. Kemp R, et al. *N Z Med J*. 1998;111:50-53.

# Duration of Injection Drug Use and the Prevalence of Blood-Borne Viruses



# HCV Infection: High-Risk Populations in Which Screening Is Indicated

- **Injection drug use**
- Nasal inhalation of cocaine
- Chronic renal failure on dialysis
- Incarceration
- Multiple sexual partners, MSM, HIV positive
- Transplantation or transfusion of blood products before 1992
- Occupational exposure to blood products
- Body piercing and possibly tattoo
- Children born to HCV-positive women

# Different risk groups for HBV and/or HCV

- **HBV**
  - **Identification**
  - **Vaccination**
- **HCV**
  - **Identification**
  - **Treatment**

# Demographic Factors Associated with HCV Infection

| Factor                                      | Prevalence of HCV Infection, % | Odds Ratio | 95% CI     |
|---|--------------------------------|------------|------------|
| Age $\leq$ 30 years                         | 16.7                           | 1.00       |            |
| Age $\geq$ 51 years                         | 63.2                           | 8.57       | 3.10-23.69 |
| Cumulative incarceration < 2 years          | 11.6                           | 1.00       |            |
| Cumulative incarceration $\geq$ 5 years     | 48.4                           | 7.16       | 3.29-15.57 |
| Age < 15 years when first incarcerated      | 44.8                           | 1.00       |            |
| Age $\geq$ 30 years when first incarcerated | 20.4                           | 0.32       | 0.15-0.68  |

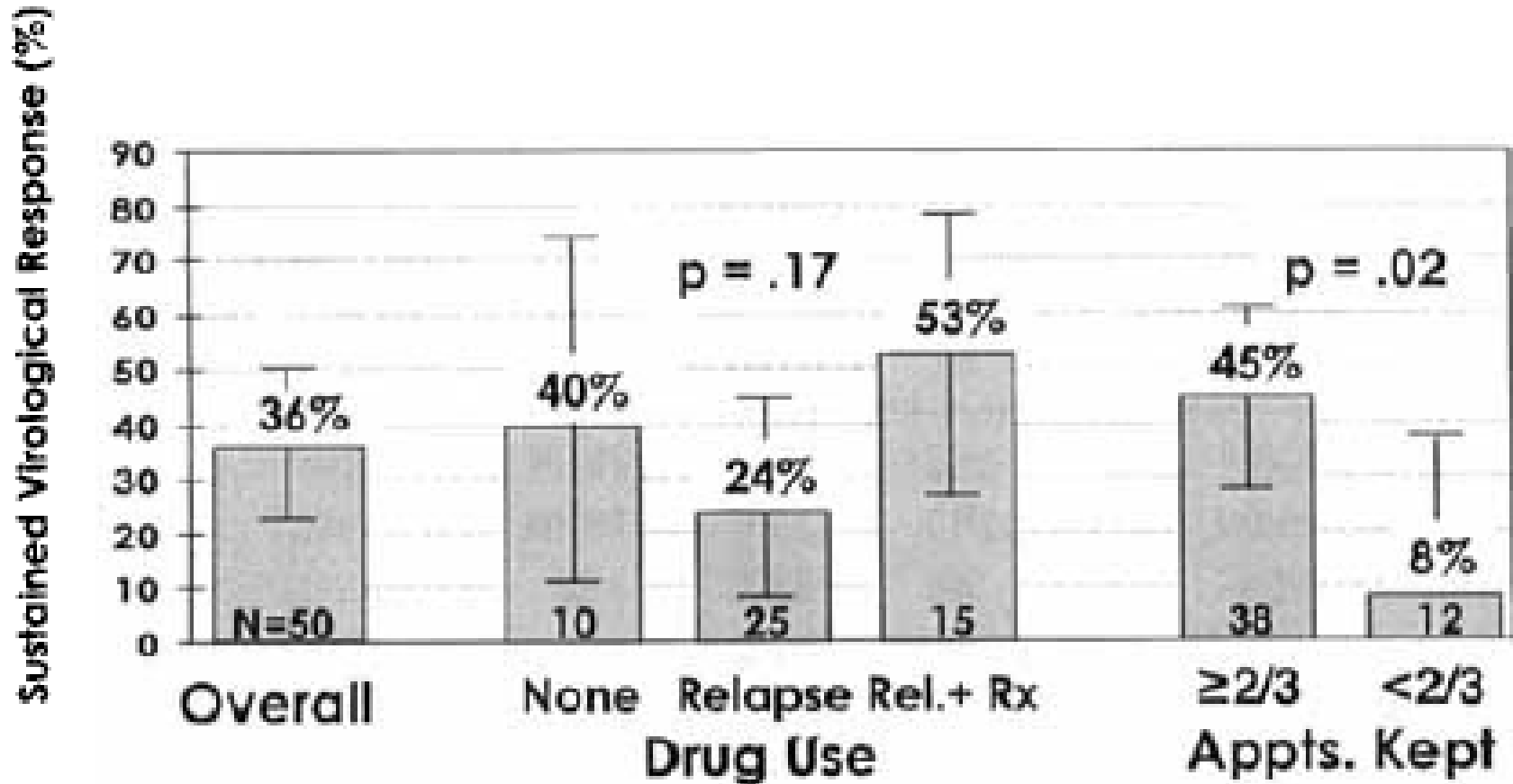
# Role of Methadone Programs

- **Screening is recommended for all clients**
- **Methadone use itself can reduce risk of infection/ transmission**
- **Ideal setting for risk reduction counseling**
- **Potential setting for additional health interventions**

**ACTIEF TESTEN ! (ACTIVE TESTING !)**



# HCV SVR rates in drug users entering detoxification (50 patients)

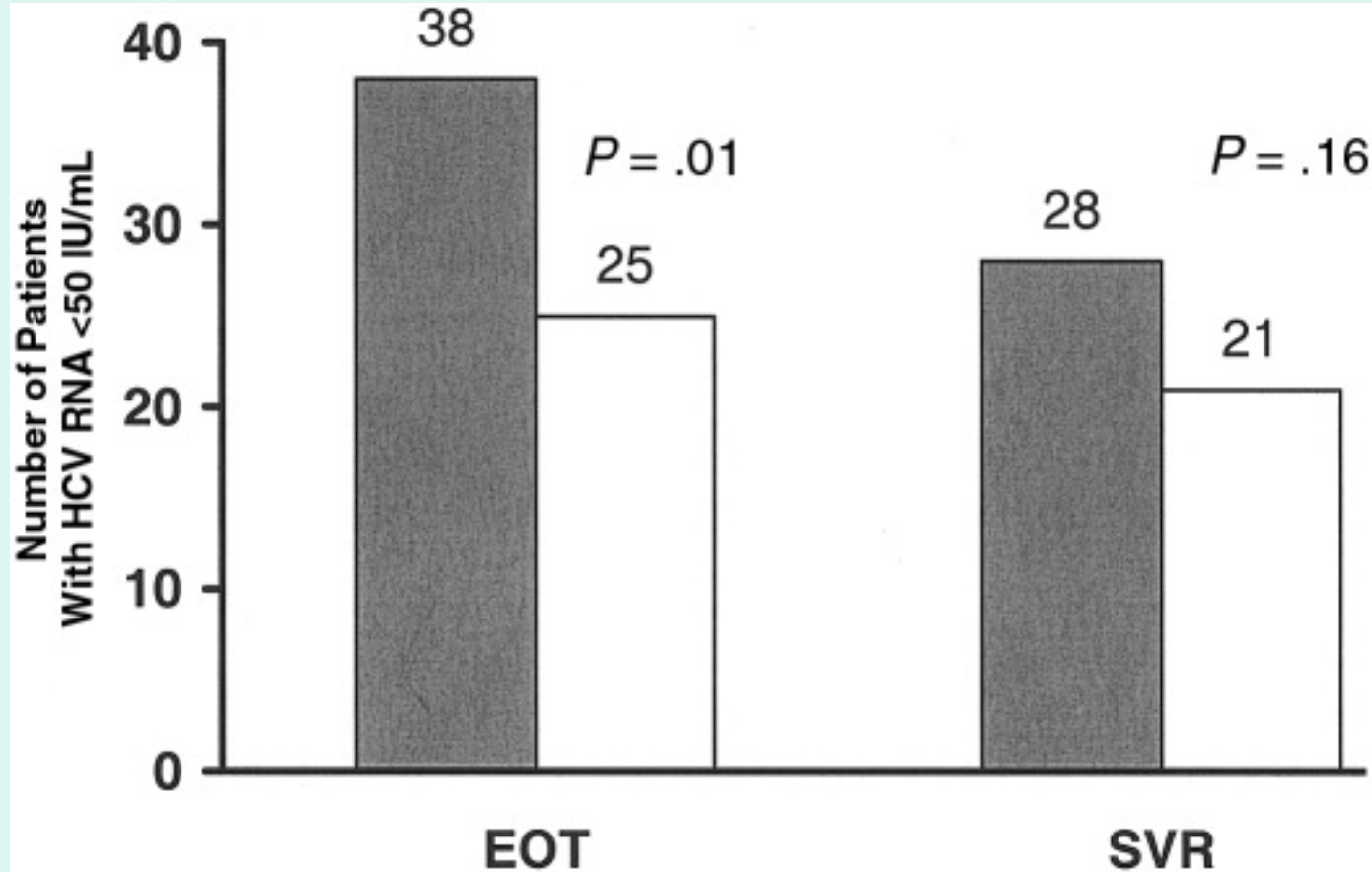


# **Management of HCV in high risk groups**

## **- iv drug abusers**

- **Methadone maintenance**
- **Directly observed therapy**
- **Multidisciplinary management**

# Methadone maintenance



# Directedly observed therapy

- **Grebeley J et al, J Gastr Hepatol 2004**
- **40 patients**
- **14 discontinued (5 toxicity, 6 illicit drug use, 3 non-response)**
- **SVR 22/40**

# Multidisciplinary management

- **Guadagnino V et al, Addiction 2007**
- **53 patients**
- **19 drop outs, 3 non-responders**
- **SVR 27/53**

# Conclusions

- **HBV and HCV in special risk groups:**
  - **HBV: Predefined high risk groups**
  - **HCV: In particular iv drug abusers, marginally housed people and prisoners**
  
  - **HBV: focus on prevention**
  
  - **HCV: focus on treatment**
    - **Methadone maintenance, directly observed therapy and multidisciplinary management**

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