

# Challenges in the micro-elimination of HCV in HIV co-infected individuals



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## Background

In 2011 an epidemic outbreak of HIV infection amongst intravenous drug users (IDU) took place in Athens, Greece, increasing the burden of HIV-HCV co-infection and overcrowding the infectious diseases clinics. [1] Recent national policy changes have permitted the enrolment of HIV infected patients into HCV treatment programmes with direct acting antivirals (DAA) regardless of fibrosis status, allowing for micro-elimination attempts to flourish. [2,3]

## Materials and Methods

To facilitate this endeavor, we dedicated one of our clinic days, solely to HCV treatment and made incremental steps to access the full range of health care services to individuals' needs. Elastography was offered by a community organization (Prometheus) at our practice. We systematically sought and arranged appointments and made sure that our patients adhere to treatment by frequently contacting them for encouragement and for rescheduling appointments if missed.

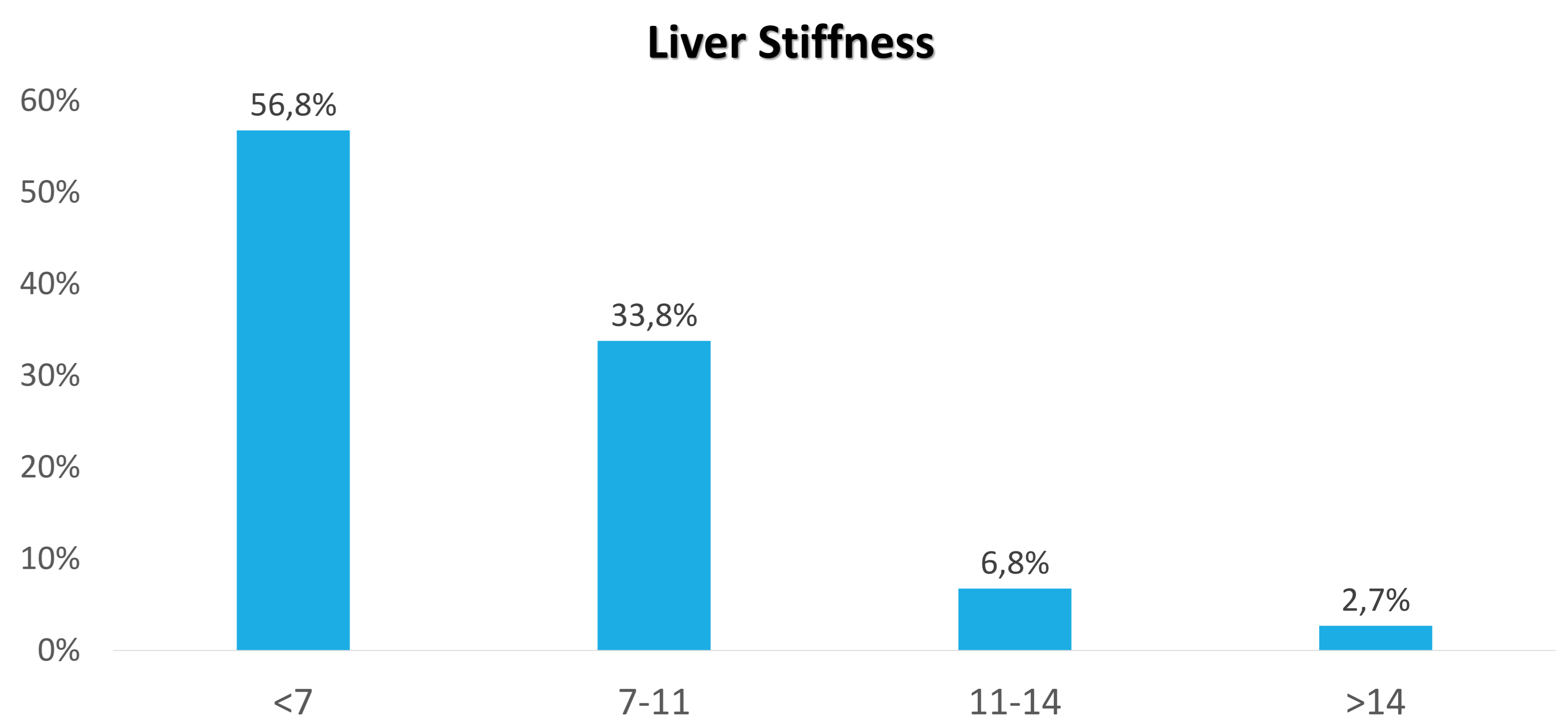
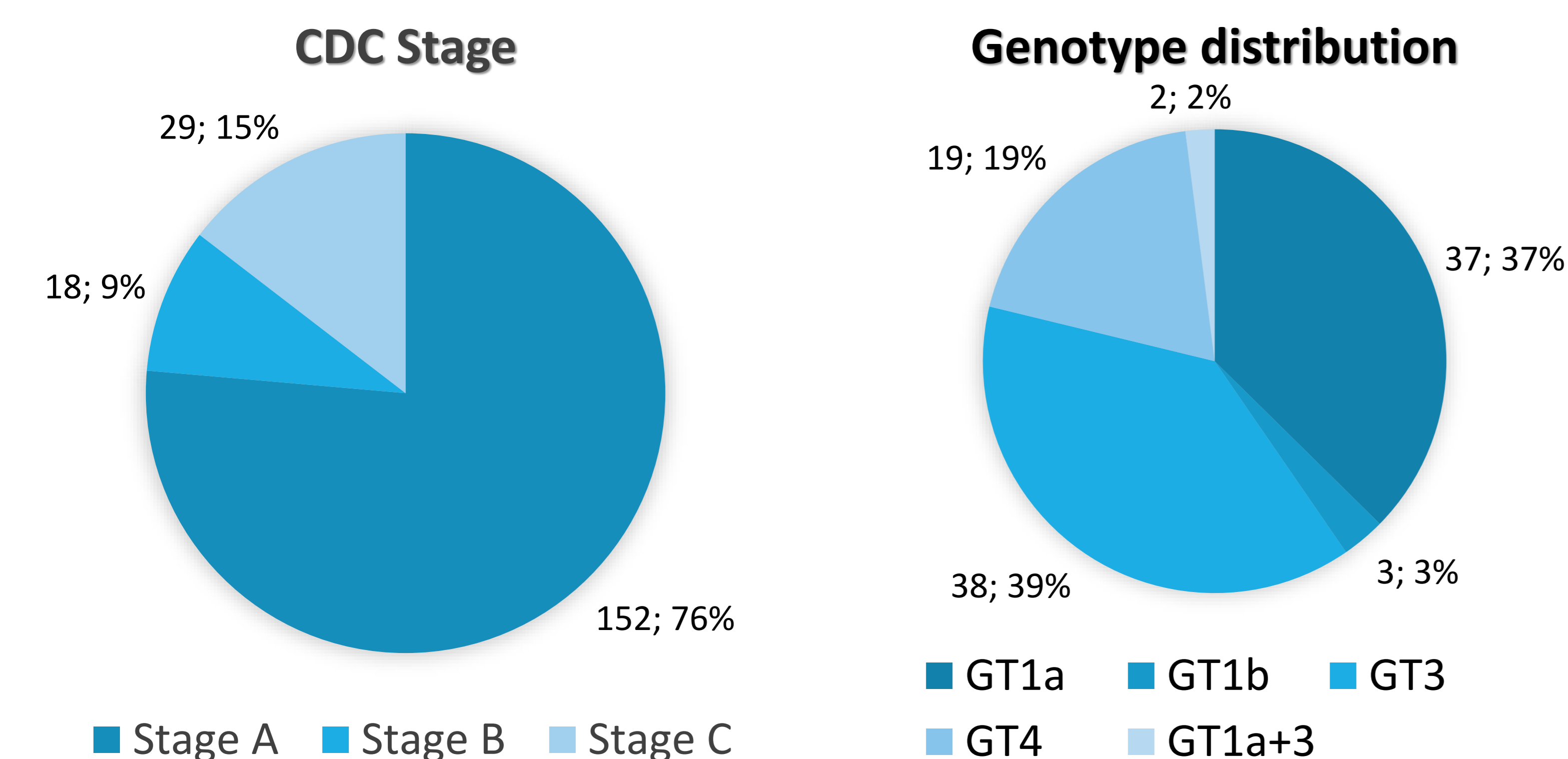
## Results

199 patients with co-infection were referred to our centre in a median time of 1.1 months (Interquartile range: 0.00-3.4) after diagnosis. 94.5% (188/199) were IDUs, distribution according to CDC stage is shown in image 1. 163 (81.9%) were male, predominantly of Greek descent (172/199, 86.4%), with a mean age of 34.3 ± 8.2 years. 26/199 (13.1%) attended only one visit. 173/199 (86.9%) patients were successfully linked (>one visit) and 163/173 (94.2%) started HAART. 29/163 patients (17.8%) discontinued, and 4 (2.5%) were transferred to a different clinic.

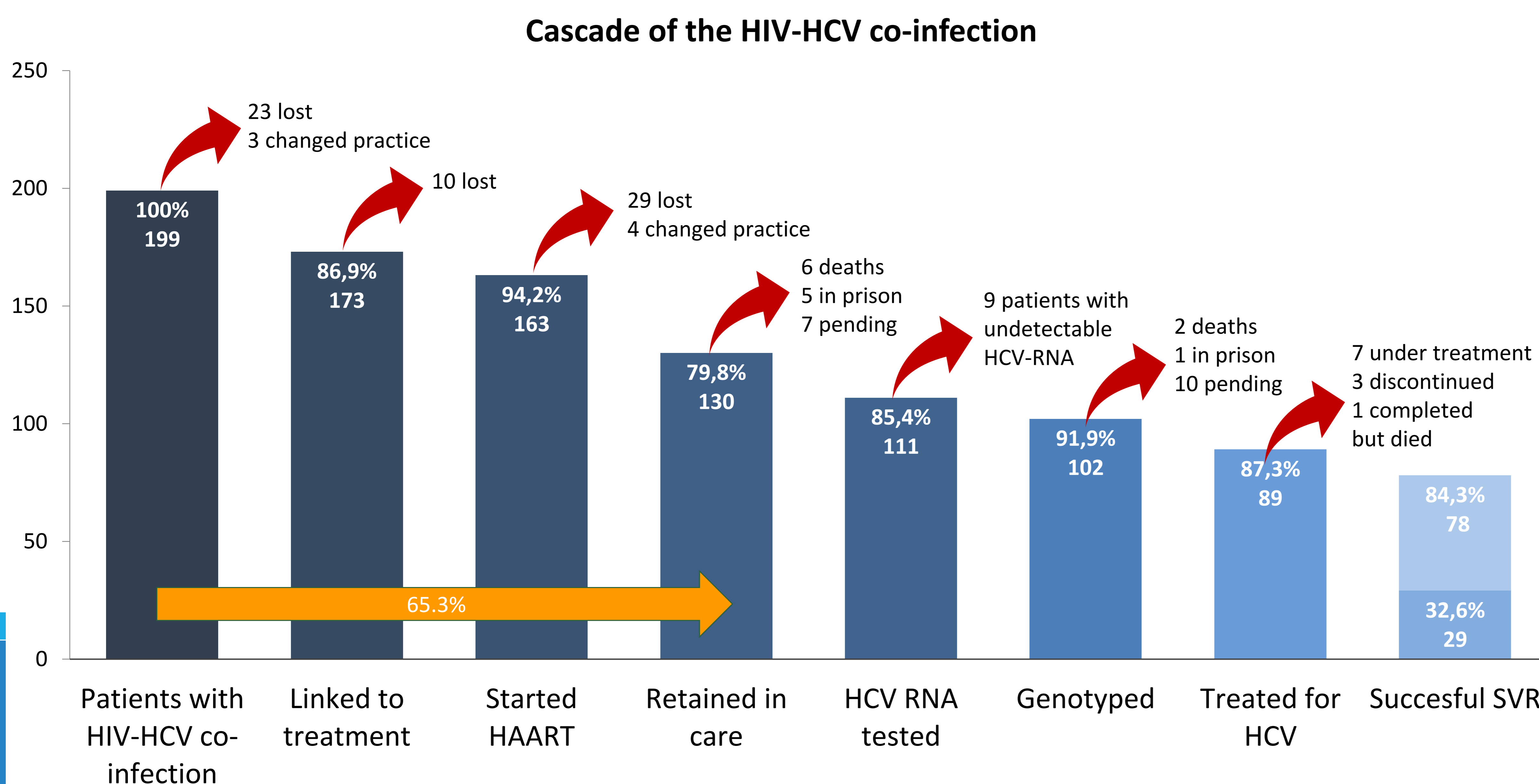
130 (65.3%) of 199 patients were retained in our care with a median follow up of 47.8 months (IQR: 13.3-60.1) and were all receiving HAART. In 111/130 (85.4%), HCV-RNA was evaluated. Of these, 9 (8.1%) had an undetectable viral load. Median HCV-RNA load was 6.19 log<sub>10</sub> IU/ml (IQR: 5.71-6.61). Liver stiffness was measured in 74/130 patients (56.9%) with a median of 6.1kPa (IQR: 5.2-8.2, range=10.6).(image 3)

All 102 patients with detectable HCV viral load, were tested for genotype. (image 2)

87.3% (89/102) were treated for HCV infection. Five were treated with Peg-interferon/ribavirin successfully before the advent of DAAs, while 84/89 (94.4%) received DAA treatment. 82.9% (74/84) have already completed the antiviral scheme, 3 discontinued due to compliance issues and 7 are still undergoing treatment. One patient committed suicide after completing his regimen and while being incarcerated. So far, 24 patients under DAAs, have been tested for SVR with 100% success. (image 4)



**Image 1 (above, left):** Distribution of our population according to CDC Stage  
**Image 2 (above, right):** Genotype distribution of tested patients  
**Image 3 (right):** Distribution of tested subjects according to liver stiffness. Patients are grouped based on predicted fibrosis stage  
**Image 4 (below):** Cascade of care for the HIV-HCV co-infection. In the last column, the light blue rectangle denotes the population of patients with expected SVR the following months.



## Conclusions

Micro-elimination is achievable only in patients retained to care. A large population of coinfecting IDUs is not retained to care and micro-elimination seems challenging. Novel models of care, reducing barriers, are needed to link and retain key populations and to allow the therapeutic advances to deliver a public health benefit.

## References

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