



# Missed Opportunities for HIV and Viral Hepatitis Testing in the Danish Health Care System

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## BACKGROUND

Late diagnosis continues to be a challenge for the management of Viral Hepatitis and HIV in Europe. In Denmark 45,7% of new HIV diagnoses in 2016 were late presenters with CD4 cell counts below 350 cells/mm3 (1) and late presentation is also a significant problem for hepatitis. National guidelines on testing indicate that individuals in high risk of HBV, HCV and HIV should regularly be offered a test, when in contact with the health care system and recommend routine testing, when people present with HIV indicator conditions (ICs) (2).

## OBJECTIVE

To describe healthcare seeking behaviour of people newly diagnosed with HIV, HBV or HCV two years prior to diagnosis.

## METHODS

Data from the Danish National Patient Registry and the National Health Insurance Service Registry on all people newly diagnosed with HIV, HCV or HBV between 1 January 2013-31 December 2014 and their visits to general practitioners (GP) and hospital departments in the two years prior to and up to seven days before the diagnosis, were included. Logistic regression was used to identify factors associated with presenting with an AIDS defining condition (ADC) and end-stage liver disease (ESLD) or hepatocellular carcinoma (HCC) for people diagnosed with HIV and hepatitis B or C, respectively.

## RESULTS

A total of 495 people were newly diagnosed with HIV during the study period. The majority were male (74.7%) with a median age of 35 (IQR 27–43) years. Thirty-two (6.5%) presented with an ADC at the time of first HIV diagnosis. The majority had visited either a GP (82.2%) or hospital (50.7%) in the two years prior to the HIV diagnosis, but an HIV test was only performed in 59/407 (14.5%) of those with a GP visit.

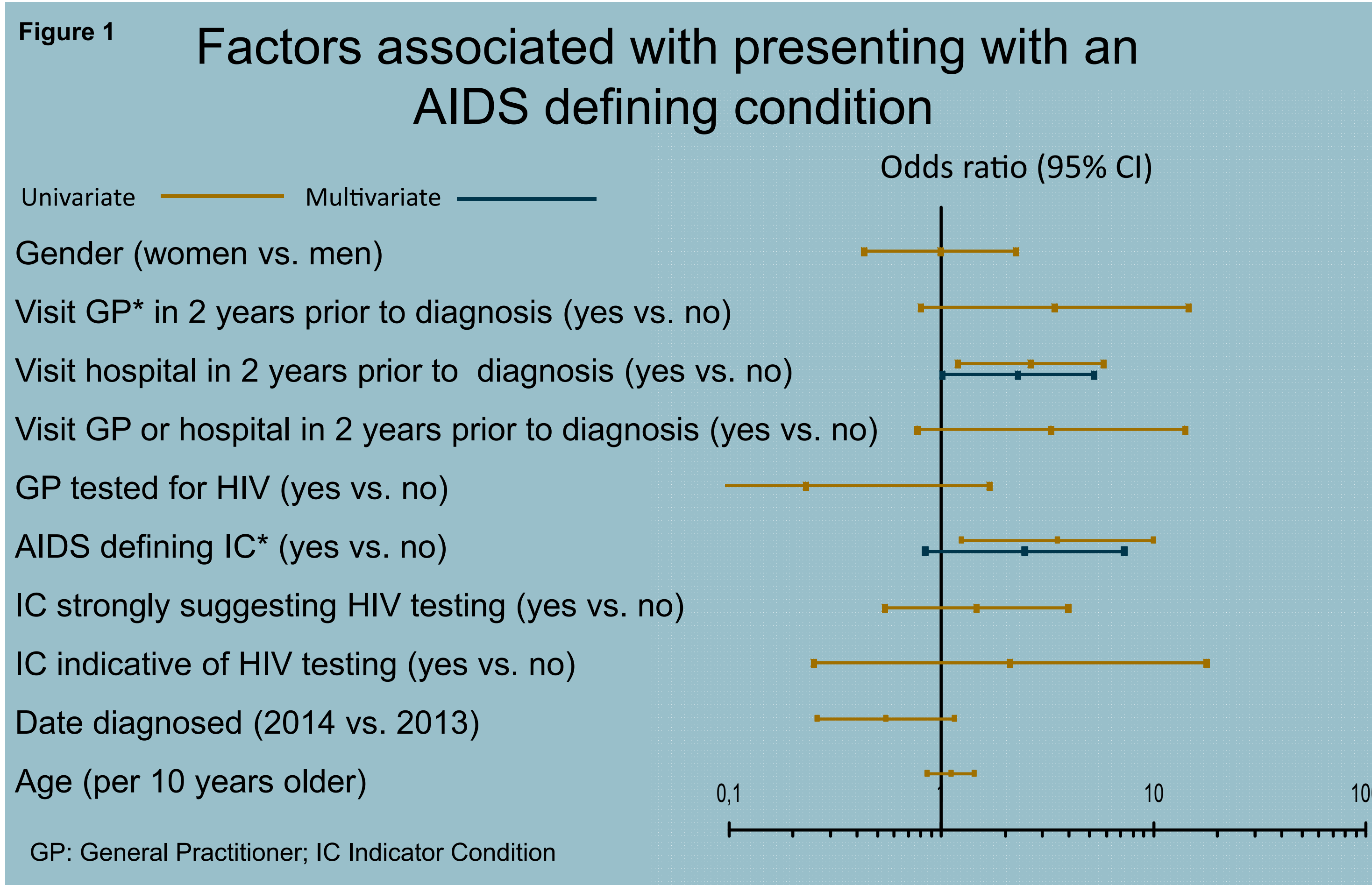
Compared to those presenting without an ADC, people presenting with an ADC were a little older (median age 38 vs. 34 years) and more likely to have visited a hospital (71.9% vs. 49.2%) or GP (93.8% vs. 81.4%) but less likely to have an HIV test performed by a GP (3.1% vs. 12.5%). Factors associated with presenting with an ADC are shown in **Figure 1**. Among the 32 with an ADC at the time of HIV diagnosis (**Table 1**), five had also presented with an ADC in the previous two years but without a reported HIV test, five with an indicator condition (IC) strongly suggesting HIV testing, and one with an IC indicative of HIV testing [2]. In addition, 23 not presenting with an ADC at the time of HIV diagnosis had presented with one in the previous two years, 59 with an IC.

A total of 1840 people were newly diagnosed with hepatitis B or C (59.6% male, median age 39, IQR 30-49). Thirty-six (2.0%) presented with ESLD (N=28), HCC (N=6) and two with both at the time of the hepatitis diagnosis). Most had visited their GP (97.8%) or a hospital (71.8%) in the two years prior to the hepatitis diagnosis for various reasons. A hepatitis test was performed in 195/1800 (10.8%) with a GP visit.

Compared with those presenting without ESLD and/or HCC, people presenting with ESLD and/or HCC were older (median age 39 vs. 53 years) where there was no significant difference between the two groups in hospital visits (71.7% vs 80.6%) a GP (97,9% vs 94,4%), and having an HIV test performed (10,6% vs 11,1%). Factors associated with presenting with ESLD and/or HCC are shown in **Figure 2**.

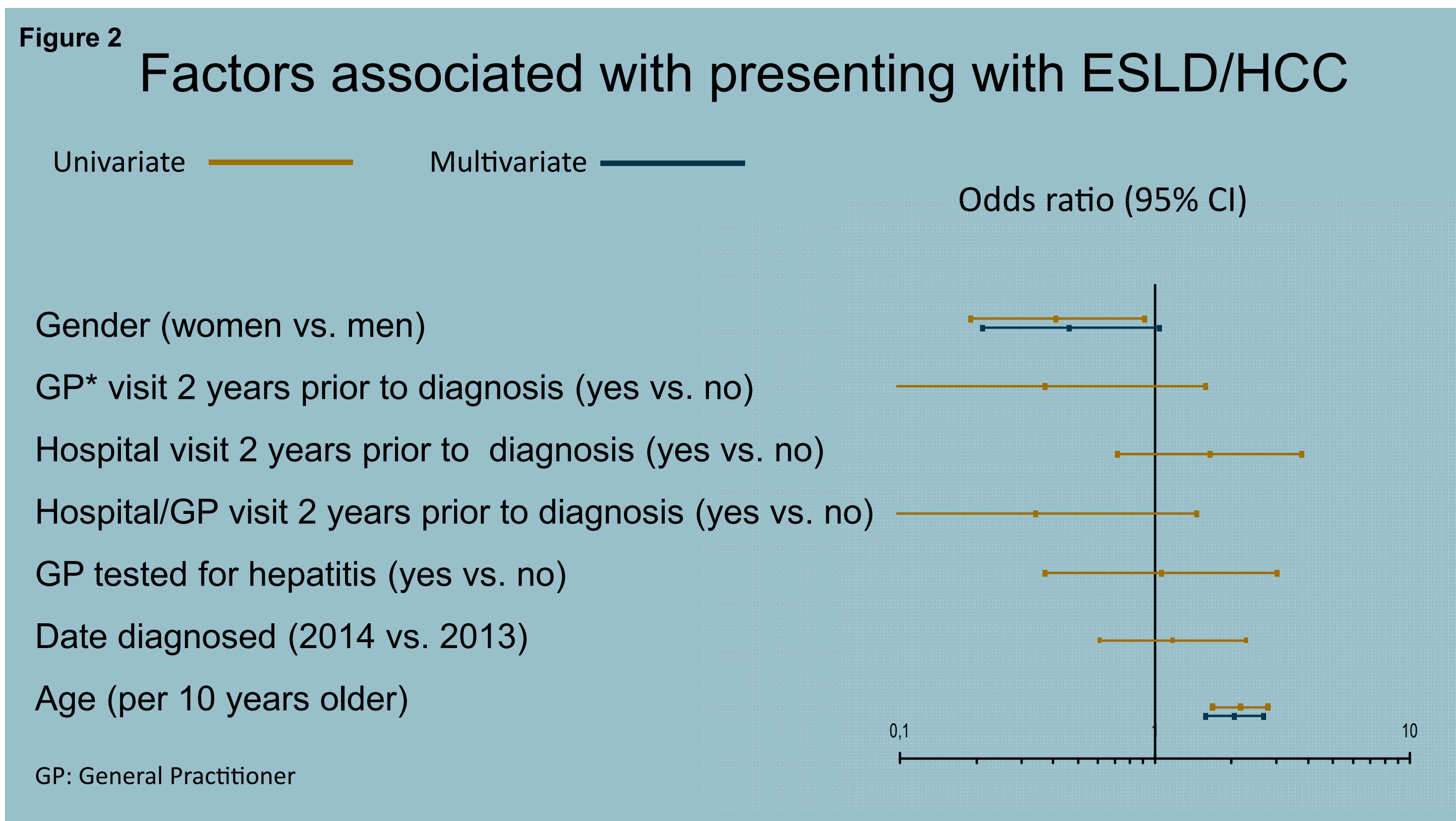
## CONCLUSION

A high percentage of people newly diagnosed with HIV or viral hepatitis have visited a GP or hospital two years prior to diagnosis without being tested, despite presenting with some clear indicator illnesses which suggest HIV testing. The results support European guidelines that call for increased normalisation of testing for HIV and viral hepatitis in health care settings to improve earlier diagnosis and entry into care for both HIV and hepatitis [3].



GP/ hospital visit with ADC & ICs 2 years prior to HIV diagnosis								
	At time of HIV diagnosis			At time of HIV diagnosis			At time of HIV diagnosis	
	No ADC N=463	ADC N=32		No ADC N=463	ADC N=32		No ADC N=463	ADC N=32
ADCs in last 2 years	23	5	ICs; Strong indication for testing	52		ICs; Indication for testing	7	1
Unspec. ADC cancer	1		Anal cancer	1		Other Candidiasis	3	
Cervical	1		Cervical dysplasia	2		Oral hairy leukoplakia	1	
Kaposi sarcoma	1	1	Pneumonia (CAP)	10		Oral Candidiasis	1	
Tuberculosis	1		Fever (unexpl)	5		Periph. neuropathy	1	
Rec. Pneumonia	10		Hepatitis B&C	2		Psoriasis	1	
CMV	1	4	Herpes zoster	1		Renal impairment	1	
PCP	7		Lymphadenopathy	1		Weight loss (unexpl)	2	1
Oes. Candidiasis	4		Pregnancy	11				
			STI	22				

CMV: cytomegalo virus; PCP: pneumosystis carinii pneumonia; STI: Sexually transmitted infections



## LIMITATIONS

We are not able to determine when during the two years previous to testing positive for HIV or hepatitis that persons were infected.

The results of this study are consistent with a similar study presented at EACS 2017 by the Danish HIV Cohort (4)

## REFERENCES

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