

# The effectiveness of indicator condition based HIV testing across Europe: results from HIDES-2, a prospective multi-centre study

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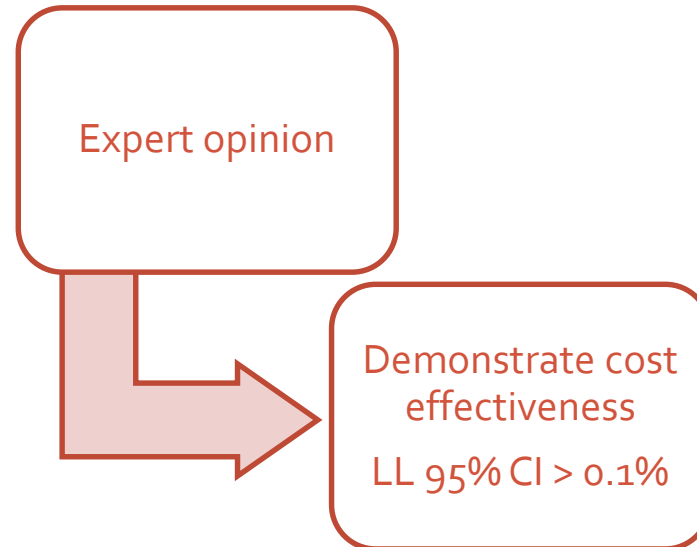
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# What is indicator condition based HIV testing?

- Indicator conditions are conditions known to be, or believed to be, associated with an excess risk of being HIV-positive
- There is a paucity of evidence of prevalence of previously undiagnosed HIV in indicator conditions
- Indicator condition based testing may be an effective HIV testing strategy
- Routine HIV testing is cost effective when the undiagnosed HIV prevalence in the target group  $>0.1\%$

# Objectives of HIV Indicator Diseases Across Europe Study

- To implement large scale surveys to prospectively assess prevalence of previously undiagnosed HIV in patients presenting for care of putative, non-AIDS defining indicator conditions



# HIV Indicator Diseases Across Europe Study – Phase 2

- Open call to European centres
- Routine offer of HIV test to patients (18-65 yrs) presenting with indicator condition
- Simple demographic data collected; additional data items for those newly diagnosed HIV+
- **Primary endpoint:** demonstration of previously undiagnosed HIV infection >0.1% in each indicator condition (IC)
- Projected n=11 000
- Open 2012 - 2014

Disease Area	Indicator Conditions
Malignancies	Lymphoma Cervical dysplasia or cancer (CIN II and above) Anal dysplasia or cancer (AIN II and above) Primary lung cancer
Viral infections	Hepatitis B infection Hepatitis C infection Hepatitis B & C co-infection Ongoing mononucleosis-like illness
Haematological disorders	Leucocytopenia and / or thrombocytopenia Lymphadenopathy
Dermatological	Severe psoriasis Seborrhoeic dermatitis
Other	Pneumonia (hospitalised) Peripheral neuropathy

# Enrolment

- 150 surveys were performed, across 42 clinical centres in 20 countries across four regions of Europe
- 10 139 patients were enrolled
- Excluded participants: 668
- Total of **9471** participants

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Recruitment by region	Number enrolled	%
<b>Total</b>	<b>9471</b>	<b>100</b>
South	500	5.3
Central	942	10.0
North	2297	24.3
East	5732	60.5

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# Characteristics of participants

- 54% male
- Median age 37 yrs (IQR 29 – 49 yrs)
- 86.6% white
- 14.4% had previously tested for HIV (median time since last test was 1.3 years [IQR 0.4 – 3.2 years])

Setting of test:	Number enrolled	%
Outpatient	4500	47.5
Inpatient	3564	37.6
Primary Care	270	2.9
Unknown	1137	12.0

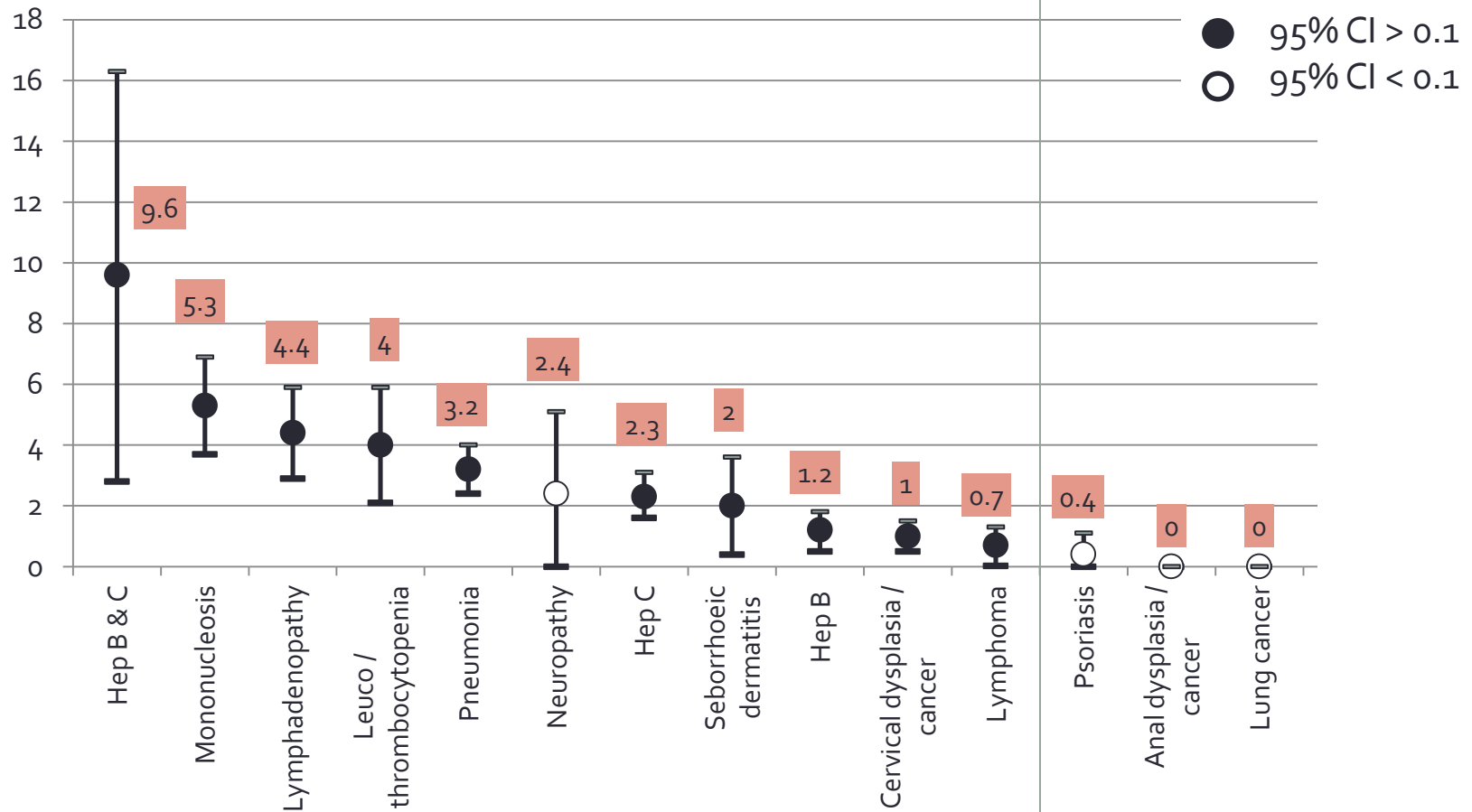
# HIV test positivity (overall)

- 235/9471 individuals tested HIV+
- HIV prevalence: 2.5% [95%CI 2.2 – 2.8]
- Marked variation by region:

Region	Number enrolled	Number HIV+	%	95%CI
<b>All</b>	<b>9471</b>	<b>235</b>	<b>2.5</b>	<b>2.2 – 2.8</b>
South	500	25	5.0	3.1 – 6.9
Central	942	10	1.1	0.4 – 1.7
North	2297	31	1.4	0.9 – 1.8
East	5732	169	3.0	2.5 – 3.4

# HIV prevalence by indicator condition

0.1% and LL 95%CI>0.1%



Tested	73	734	401	722	1881	84	1751	299	1126	1339	588	276	53	144
HIV+	7	39	16	32	61	2	41	6	13	13	4	1	0	0



# Odds of testing HIV+ by indicator condition (adjusted)

## Indicator Condition

Pneumonia

Cervical dysplasia

Hepatitis B

Hepatitis C

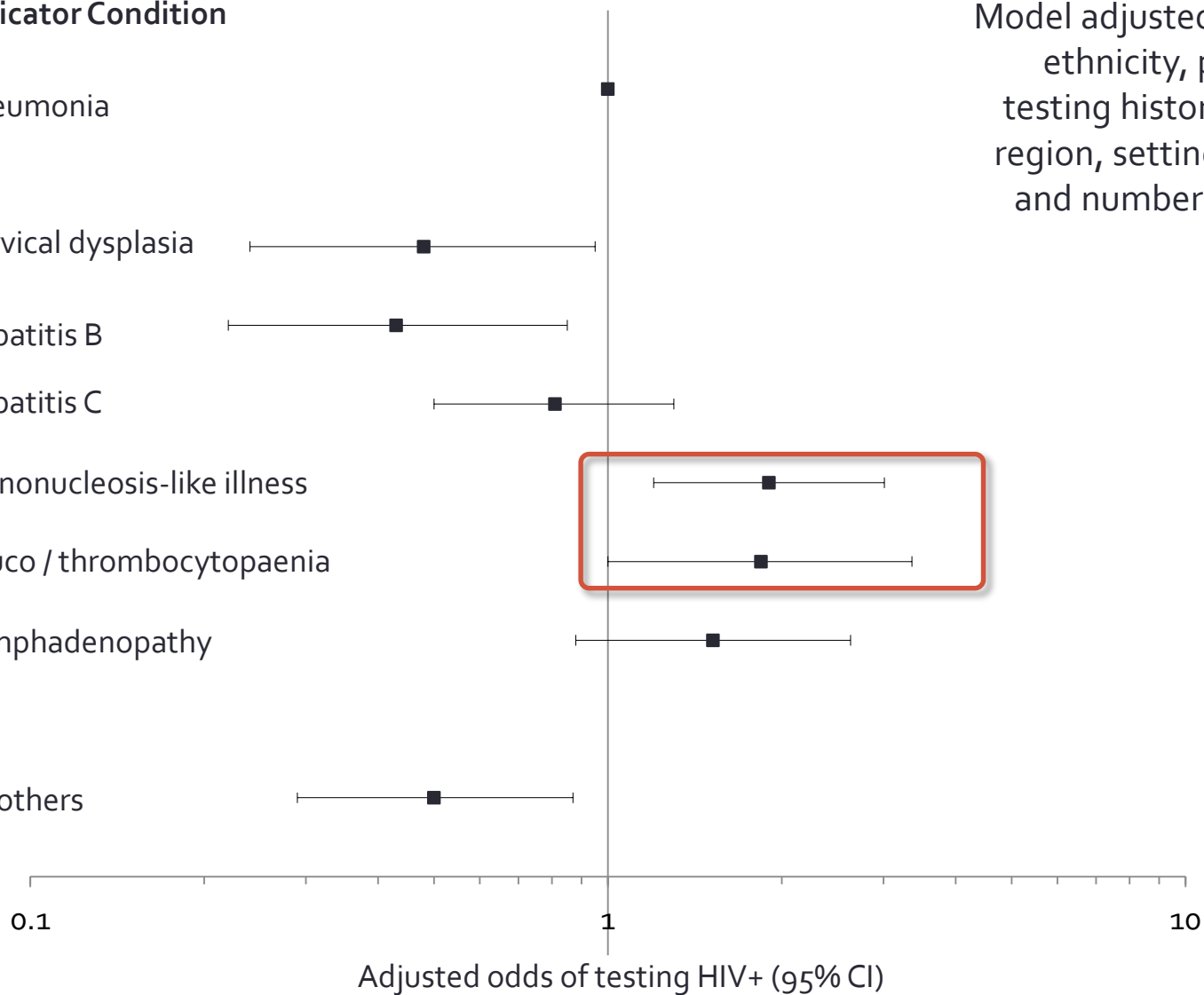
Mononucleosis-like illness

Leuco / thrombocytopaenia

Lymphadenopathy

All others

Model adjusted for gender, ethnicity, previous HIV testing history, European region, setting, age, date, and number from centre



## Stage of presentation

- Median CD<sub>4</sub> count at diagnosis was 200 cells/ $\mu$ l (IQR 65 – 390)
- **71.9%** (143/235) were late presenters (defined as CD<sub>4</sub><350 cells/ $\mu$ l)
- **28.2%** (61/216) persons reported prior minor HIV-associated symptoms
- In multivariate analysis, older persons were more likely to be late presenters, as were those seen outside of outpatient departments. Of note, IC and region did not predict late presentation

# Conclusions

- Cost effectiveness was established for ten of 14 ICs, in which an HIV prevalence  $>0.1\%$  was definitively demonstrated
- For the remaining conditions, relatively low numbers of patients were tested, and there were few events

# Recommendations and ongoing work

- The conditions with a proven HIV prevalence of  $>0.1\%$  should be adopted into HIV testing and IC specialty guidelines on both national and European level
- Audits of testing performance in indicator conditions should be performed to evaluate the level of implementation
- An extension of the survey in mononucleosis-like illness is continuing until end of June 2015
- An EU funded project on "Optimising Testing and Linkage to Care for HIV across Europe" (OptTEST) will build on and develop tools for the implementation of IC-guided testing

# Acknowledgments

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