



Could this be HIV?

A guide to diagnosing HIV early

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JUSTRI is a UK-based not-for-profit organisation dedicated to providing resources and education for those with and working with HIV, viral hepatitis and tuberculosis
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JUSTRI Slide is a free, on-line, searchable, downloadable slide library with over 11,000 slide presentations on HIV and allied subjects. Register at www.justrislide.com

Further information on HIV is available at: www.aidsmap.com, and www.i-base.info

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Section 1: Introduction

Welcome to 'Could this be HIV?' - A guide to diagnosing HIV early

HIV affects over 35 million people globally and represents a serious public health problem in many countries. It is the sixth greatest killer globally, accounts for huge morbidity draining health care and country resources, as well as resulting in great individual suffering.

This guide is for practical use by doctors and nurses, delivering care to individuals who may have *undiagnosed* HIV infection, including general practitioners (GPs), staff in Accident and Emergency departments, and general medical and nursing staff in non-HIV specialities. It provides the basis for diagnosing HIV in a wide range of settings, so not all aspects will be relevant to your particular practice.

It's now time to diagnose all HIV infections effectively.

Through images of common HIV-related presentations and lists of HIV indicator conditions we hope this guide will help you and others to avoid missing this important diagnosis by prompting early HIV testing.

The diagnosis of HIV infection is simple. It is vital, therefore, that clinical pathways are developed to improve HIV testing, especially in individuals with a high possibility of having the infection and who may present to a variety of different healthcare settings.

“It's now time to diagnose all HIV infections effectively.”

The need to diagnose HIV more effectively

HIV testing is essential to achieve universal access to HIV prevention, treatment, care and support and it is vital that all health care professionals know when an HIV diagnosis is a possibility, and then offer testing.

In Europe it is estimated that a third of HIV is undiagnosed and around 50% of newly diagnosed HIV-positive individuals enter care late (i.e. with a CD4 count <350 cells/ μ L). Regardless of HIV acquisition route, underutilization of testing results in later diagnosis and the risk of serious, possibly irreversible, disease and avoidable deaths. Early diagnosis reduces onward transmission and improves health outcomes, thereby decreasing the morbidity and mortality from HIV associated disease.

Barriers to testing include: low perception of being at risk, difficulty in disclosing risk for fear of stigma or discrimination and failure of health care professionals to assess or understand risk factors or clinical presentations of suspected HIV. A significant proportion of those eventually diagnosed with HIV have often presented to health care settings multiple times, with symptoms or signs of potential HIV. It is this group that this guide is especially focussed on in order to improve their medical care by offering early testing for HIV.

We hope that this guide will help you to have a clearer understanding of the issues involved in identifying those at risk of HIV and to establishing the diagnosis promptly. Also, by sharing the information with your colleagues and other health professionals, testing may be performed earlier in those with clinical signs of HIV related disease - a good thing.

HIV is a constantly changing field and there are excellent online sources in the Further Information section of this guide that provide scientific and general information about the disease.

Don't be afraid of using the internet to find things out – we all do nowadays!

However, some on-line information varies in quality and should be read with caution. As with all printed information, please check for updates to this resource, the latest version will always be online at www.justri.org.

Who to target for HIV testing?

HIV testing rates are highest in settings where the test is presented as part of routine care, such as sexual health or antenatal clinics. However, it continues to be vital to specifically offer testing, in other settings, to those with a high risk of HIV infection. These include:

AT-RISK GROUPS

1. Sexual partners or children of those known to be HIV positive
2. With a sexually transmitted infection
3. Men who have sex with men
4. Being from a place with high HIV prevalence (>0.1%) such as all of sub-Saharan Africa and South London
5. With a history of injecting drug use
6. Pregnant women
7. Having a history of sex-work
8. Requesting an HIV test
9. Sustaining a needle-stick injury or blood exposure

INDICATOR CONDITIONS

There is strong evidence that it is beneficial to use indicator conditions (Appendices 1 and 2) to target patients who should be offered testing.

Three groups of indicator conditions have been identified by HIV in Europe www.hiveurope.eu/Portals/0/Guidance.pdf (Appendix 1) as relevant to consider testing individuals with:

1. **Conditions which are AIDS-defining** (not testing is clearly bad clinical practice)
2. **Conditions associated with an undiagnosed prevalence of >0.1%** (this has been determined to be cost-effective and testing should be strongly recommended)

3. **Conditions where not identifying the presence of HIV-infection would be detrimental for the individual's clinical management, such as the use of immunosuppressant therapy** (testing recommended)

Until recently the need for extensive pre-test counselling and written consent has been a barrier to some provider's willingness to offer testing. Evidence exists that the more junior a doctor is, the more likely they are to offer testing. Nurses are often best placed to assess information needs, provide resources on transmission, prevention, treatment and support and discuss testing. A significant benefit of identifying an indicator condition is that it can trigger the provider to recommend HIV testing, thereby helping to normalise the process.

How to implement testing?

The way you conduct HIV testing will be very specific to your setting and to which local services exist. Below are some general issues to be considered.

It is important that you have a plan for how to deal with an individual who presents to your service with an indication of HIV. If in a hospital, you may wish to refer to your in-house HIV service or in general practice to your local HIV testing providers or a local hospital.

However, whatever the plan, there must be a clear pathway to offer testing, to assess the results and to act on them. Of course it would be best if you can offer prompt testing in your service and then liaise immediately with your local HIV service but that may not always be possible.

HIV TESTS

The type of HIV tests you use for diagnosis will vary and it is best to discuss

which are most appropriate for you to use with your local diagnostic laboratory.

EDUCATION AND TRAINING

If you offer testing in your service it is important that the staff that provide testing are well-trained and proficient at discussing testing and performing it. This training can usually be provided by

your local HIV services. It should be in the competence of any doctor or trained nurse to offer an HIV test and the more you test the easier and more routine it becomes for all staff.

TEST OFFERING:

Plan, in advance, how to offer testing, which should be performed in a confidential environment. Be explicit in your language when offering the test.

A good example would be to say: **“You have been diagnosed with [name the indicator condition] and we routinely**

do some tests, which includes one for HIV, in everyone who has this condition. Is that OK?”

Written information on testing must be available and the patient should be given ample time to ask questions and discuss concerns.

FREQUENTLY ASKED QUESTIONS:

Q *Do you think I have HIV?*

A I don't know, but we routinely recommend an HIV test to everyone with this condition.

Q *Who will know that I have been tested?*

A As with all tests we do, the HIV test is confidential and only the clinical team looking after you will know you have been tested.

Q *I am not at risk of HIV – why do I need a test?*

A Many people are at risk of infection without knowing it; unless you tested recently we would recommend all with this condition to have an HIV test to find out what is wrong with your health.

WHEN A PATIENT DECLINES

If the patient declines a test, reasons should be explored to ensure that their choice is not based on incorrect beliefs about the virus or the consequences of being tested. The potential risks in terms of complications to the condition they have should be explained. They should

not be pressurised into being tested but opportunities for testing at a later date or clinic visit should not be missed, and/or referral made to the local sexual health or HIV services if your concerns are high. Often those who refuse testing know that they are positive already.

POST-TEST DISCUSSION: This will depend on the result.

If the HIV test is negative:

...discussion we need to cover the window period if HIV is highly suspected, such as with a seroconversion-like illness, where prompt referral for assessment and HIV RNA testing is best. There is an opportunity for health promotion and

the level of this will be determined by the setting of the testing. Plans should be in place for onward signposting of patients for support and provision of information (e.g. websites or other healthcare professionals).

If the HIV test is positive:

...it is vital that the healthcare setting has a clear agreed written policy on how to manage an HIV positive diagnosis. Important issues to consider are, how the test result is to be given and where and by whom. Like all important health related communication, giving an HIV positive result should be handled with empathy and a clear plan of what will

happen next. Arrangements for swift referral or transfer to the appropriate HIV services, as would be the case for any serious health condition, should be pre-planned and clear. The individual should be informed of the necessity to protect current and future sexual and/or needle sharing partners and partner notification should be discussed.

Section 2

Clinical indicators to test for HIV

THE SYMPTOMS AND SIGNS

HIV should be considered in any patient in with persistent symptoms or for which no diagnosis can be made. Not all patients with HIV have symptoms or signs of infection, but many do. These include:

1. Mononucleosis-like acute illness (seroconversion illness may be mistaken for glandular fever and often is)
2. Tiredness, lethargy, malaise
3. Unintended weight loss
4. Diarrhoea
5. Night sweats
6. Persistent or frequent fever
7. Seroconversion rash
8. Generalised lymphadenopathy

PRIMARY HIV INFECTION - SEROCONVERSION ILLNESS

Recent HIV infection often presents as a moderate to severe flu-like illness with fever, fatigue, sore throat, generalised lymphadenopathy, rash, headache and sometimes marked neurological manifestations.

All or some of these symptoms should prompt the offer of an HIV antibody and HIV RNA test to diagnose HIV seroconversion. A sexual or other risk history is a vital part of the process.

THE MOUTH

Several sentinel signs of HIV infection can be found in the mouth, it's a place you should always examine!

Look for:

1. Oral candida (the prevalence of oral candidiasis among people with HIV can be as high as 50%)
2. Hairy leucoplakia
3. Kaposi's sarcoma
4. Oral warts
5. Necrotising gingivitis

THE SKIN

The skin is the commonest place where signs of HIV are found; any new rash or lesion should be considered a possible marker of underlying HIV. There should be a high index of suspicion if any of following are severe or persistent:

1. Shingles (herpes zoster), especially if multi-dermatomal
2. Seborrhoeic eczema
3. Folliculitis
4. Molluscum contagiosum
5. Kaposi's sarcoma (a test should always be performed if suspected)
6. Psoriasis
7. Anal or vulval warts
8. Syphilitic chancre or rash

CO-INFECTIONS AND OTHER HIV-RELATED PRESENTATIONS

HIV is associated with many other sexual or blood contact acquired infections, such as syphilis and viral hepatitis, and a test should always be offered to anyone who has these diagnosed.

1. Syphilis
2. Viral hepatitis (HBV or HCV)
3. Sexually transmitted infections
4. Warts (AIN and/or CIN)

THE CHEST X-RAY

A chest X-ray can reveal many of the common HIV related diagnoses of which these are the most frequent:

1. Pneumonia, especially if recurrent
2. Pneumocystis pneumonia, PCP
3. Tuberculosis
4. Kaposi's sarcoma

FURTHER INFORMATION

The following websites provide up to date information on HIV and testing.

www.aidsmap.com

www.aidsetc.org

www.bashh.org

www.bhiva.org

www.hivineurope.eu

www.justrislide.com

Could this be HIV? The signs



Weight Loss



Dry Skin



Fungal nails



Seroconversion rash

Could this be HIV? The mouth



Gingivitis



Angular Stomatitis

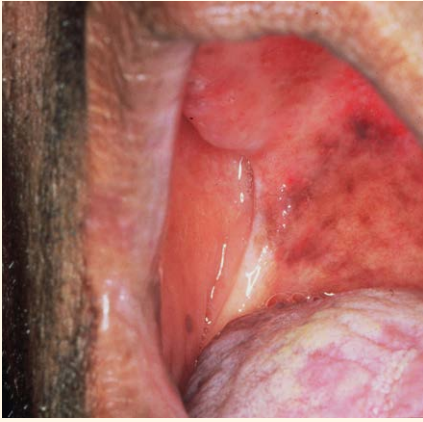


Aphthous ulceration



Syphilitic chancre

Could this be HIV? The mouth



Oral Candida



Oral Hairy Leucoplakia



Kaposi's Sarcoma (KS)



Oral Warts

Could this be HIV? The skin and eyes



Shingles



Seborrheic Eczema



Folliculitis



Molluscum contagiosum

Could this be HIV? The skin and eyes



Kaposi's sarcoma



Psoriasis

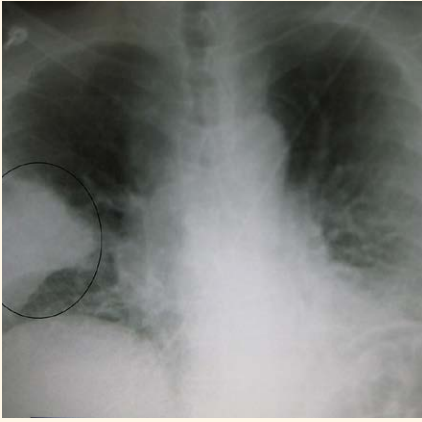


CMV retinitis



Syphilis rash

Could this be HIV? The chest x-ray



Pneumonia



PCP



Tuberculosis



Kaposi's sarcoma

Appendix 1: Definitions of indicator conditions and recommendations for HIV testing

STRONGLY RECOMMEND TESTING FOR:

Conditions which are AIDS defining*

Neoplasms:

- Cervical cancer
- Non-Hodgkin lymphoma
- Kaposi's sarcoma

Viral infections

- Cytomegalovirus retinitis
- Cytomegalovirus, other (except liver, spleen, glands)
- Herpes simplex, ulcer(s) >1 month/ bronchitis/pneumonitis
- Progressive multifocal leucoencephalopathy

Parasitic infections

- Cerebral toxoplasmosis
- Cryptosporidiosis >1 month
- Isosporiasis >1 month
- Atypical disseminated leishmaniasis
- Reactivation of American trypanosomiasis (meningoencephalitis or myocarditis)

Bacterial infections

- Mycobacterium tuberculosis, pulmonary or extrapulmonary
- Mycobacterium avium complex (MAC) or Mycobacterium kansasii, disseminated or extrapulmonary
- Mycobacterium, other species extrapulmonary/ disseminated
- Pneumonia, recurrent (2 or more episodes in 1 year)
- Salmonella septicaemia, recurrent

Fungal infections

- Pneumocystis carinii pneumonia
- Candidiasis, oesophageal
- Pulmonary candidiasis
- Cryptococcosis, extra-pulmonary
- Histoplasmosis, disseminated/ extra pulmonary
- Coccidioidomycosis, disseminated/ extra pulmonary
- Penicilliosis, disseminated

* Based on CDC and WHO classification system

STRONGLY RECOMMEND TESTING FOR:

Conditions associated/likely to have an undiagnosed HIV prevalence of >0.1%

- Sexually transmitted infections
- Malignant lymphoma
- Anal cancer/dysplasia
- Cervical dysplasia
- Herpes zoster
- Hepatitis B or C (acute or chronic)
- Mononucleosis-like illness
- Unexplained leucopenia / thrombocytopenia lasting >1 month
- Seborrheic dermatitis/exanthema
- Invasive pneumococcal disease
- Unexplained fever
- Candidaemia
- Visceral leishmaniasis
- Pregnancy (implications for the unborn child)
- Primary lung cancer
- Lymphocytic meningitis
- Oral hairy leukoplakia
- Severe or atypical psoriasis
- Guillain–Barré syndrome
- Mononeuritis
- Subcortical dementia
- Multiplesclerosis-like disease
- Peripheral neuropathy
- Hepatitis A
- Unexplained:
 - » weightloss
 - » lymphadenopathy
 - » oral candidiasis
 - » chronic diarrhoea
 - » chronic renal impairment
- Community-acquired pneumonia
- Candidiasis

SUGGEST TESTING FOR:

Conditions where not identifying the presence of HIV infection may have significant adverse implications for the individual's clinical management despite that the estimated prevalence of HIV is most likely lower than 0.1%

- Conditions requiring aggressive immuno-suppressive therapy:
 - » Cancer
 - » Transplantation
 - » Auto-immune disease treated with immunosuppressive therapy
- Primary space occupying lesion of the brain.
- Idiopathic/thrombotic thrombocytopenic purpura

Appendix 2: Indicator conditions by speciality

KEY: ➔ AIDS-defining ⇨ Conditions associated/likely to have an undiagnosed HIV prevalence of >0.1% – Strongly recommend testing
→ Conditions where not identifying the presence of HIV infection may have significant adverse implications for the individual's clinical management

ONCOLOGY

- ➔ Lymphoma, non-Hodgkin
- ➔ Kaposi's sarcoma
- ⇨ Primary lung cancer
- ⇨ Anal cancer/dysplasia
- Cancer requiring aggressive immuno-suppressive therapy

NEPHROLOGY

- ⇨ Unexplained chronic renal impairment

DENTISTRY

- ➔ Candidiasis, oral and oesophageal
- ➔ Kaposi's sarcoma
- ⇨ Oral hairy leukoplakia

RHEUMATOLOGY

- Auto-immune disease treated with aggressive immuno-suppressive therapy

EAR NOSE THROAT

- ➔ Candidiasis tracheal/oesophageal
- ⇨ Mononucleosis-like illness

INFECTIOUS DISEASES/INTERNAL MEDICINE

- ➔ Tuberculosis
- ➔ Mycobacterium Tuberculosis, pulmonary or extrapulmonary
- ➔ Mycobacterium avium complex (MAC) or Mycobacterium kansasii, disseminated
- ➔ or extrapulmonary
- ➔ Mycobacterium, other species or unidentified species, disseminated or extrapulmonary
- ➔ Pneumonia, recurrent (2 or more episodes in 12 months)
- ➔ Pneumocystis carinii pneumonia
- ➔ Cryptococcosis, extrapulmonary
- ➔ Salmonella septicaemia
- ➔ Cytomegalovirus, other (except liver, spleen, glands)
- ➔ Herpes Simplex ulcer(s) >1 month/ bronchitis/pneumonitis
- ➔ Candidiasis bronchial/tracheal/lungs.
- ➔ Candidiasis, oesophageal
- ➔ Atypical disseminated leishmaniasis
- ➔ Histoplasmosis, disseminated/ extrapulmonary
- ➔ Coccidioidomycosis, disseminated/ extra pulmonary
- ➔ Reactivation of American trypanosomiasis (meningoencephalitis or myocarditis)
- ➔ Penicilliosis, disseminated
- ⇨ Sexually transmitted infection
- ⇨ Hepatitis B or C (acute or chronic)
- ⇨ Mononucleosis-like illness
- ⇨ Invasive pneumococcal disease
- ⇨ Herpes zoster
- ⇨ Lymphocytic meningitis
- ⇨ Visceral leishmaniasis
- ⇨ Unexplained weightloss
- ⇨ Unexplained fever
- ⇨ Unexplained chronic diarrhoea
- ⇨ Unexplained lymphadenopathy
- ⇨ Unexplained leukocytopenia/ thrombocytopenia lasting >4 weeks

RESPIRATORY/PULMONOLOGY

- ➔ Tuberculosis
- ➔ Pneumocystis carinii pneumonia
- ➔ Pneumonia, recurrent
- ➔ MAC lung disease
- ➔ Histoplasmosis, disseminated/extra pulmonary
- ➔ Herpes simplex bronchitis/pneumonitis
- ➔ Candidiasis bronchial/lungs
- ⇒ Community-acquired pneumonia

DERMATOLOGY / DERMATOVENEREOLOGY / GENITOURINARY MEDICINE

- ➔ Kaposi's sarcoma
- ➔ Herpes Simplex ulcer(s)
- ➔ Atypical disseminated leishmaniasis
- ➔ Penicilliosis, disseminated
- ⇒ Seborrheic dermatitis/exanthema
- ⇒ Herpes zoster
- ⇒ Sexually transmitted infections
- ⇒ Hepatitis B or C (acute or chronic)
- ⇒ Severe or recalcitrant psoriasis
- ⇒ Candidaemia
- ⇒ Candidiasis

GASTROENTEROLOGY/HEPATOLOGY

- ➔ Cryptosporidiosis diarrhoea, >1 month
- ➔ Microsporidiosis, >1 month
- ➔ Isosporiasis, >1 month
- ➔ Candidiasis, oesophageal
- ⇒ Hepatitis B or C (acute or chronic)
- ⇒ Unexplained chronic diarrhoea

OPHTHALMOLOGY

- ➔ Cytomegalovirus retinitis

NEUROLOGY AND NEUROSURGERY

- ➔ Cerebral toxoplasmosis
- ➔ Cryptococcosis, extrapulmonary
- ➔ Progressive multifocal leucoencephalopathy
- ➔ Reactivation of American trypanosomiasis (meningoencephalitis or myocarditis)
- ⇒ Guillain-Barré syndrome
- ⇒ Mononeuritis
- ⇒ Subcortical dementia
- ⇒ Multiple sclerosis-like disease
- ⇒ Peripheral neuropathy
- Primary space occupying lesion of the brain

GYNECOLOGY/OBSTETRICS

- ➔ Cervical cancer
- ⇒ Sexually transmitted infections
- ⇒ Hepatitis B or C (acute or chronic)
- ⇒ Pregnancy (implications for the unborn child)
- ⇒ Cervical dysplasia

HEMATOLOGY

- ➔ Lymphoma, non-Hodgkin
- ⇒ Malignant lymphoma
- ⇒ Unexplained leukocytopenia/thrombocytopenia lasting >4 weeks
- ⇒ Unexplained lymphadenopathy
- Thrombotic thrombocytopenic purpura

GENERAL PRACTICE & EMERGENCY MEDICINE

Symptomatology fitting *any* of the listed conditions

HIV TESTING CONTACT DETAILS [for you to complete]

Local HIV consultant

Name: Mobile:

Email:

Virologist

Name: Mobile:

Email:

Sexual Health service contact

Name: Mobile:

Email:

Off-site HIV testing service contact

Who: Mobile:

Email:

Other

What: Who:

Mobile: Email:

Other

What: Who:

Mobile: Email:

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