

<http://www.savinglivesuk.com/>



HIV Awareness Study Morning

24th November 2017



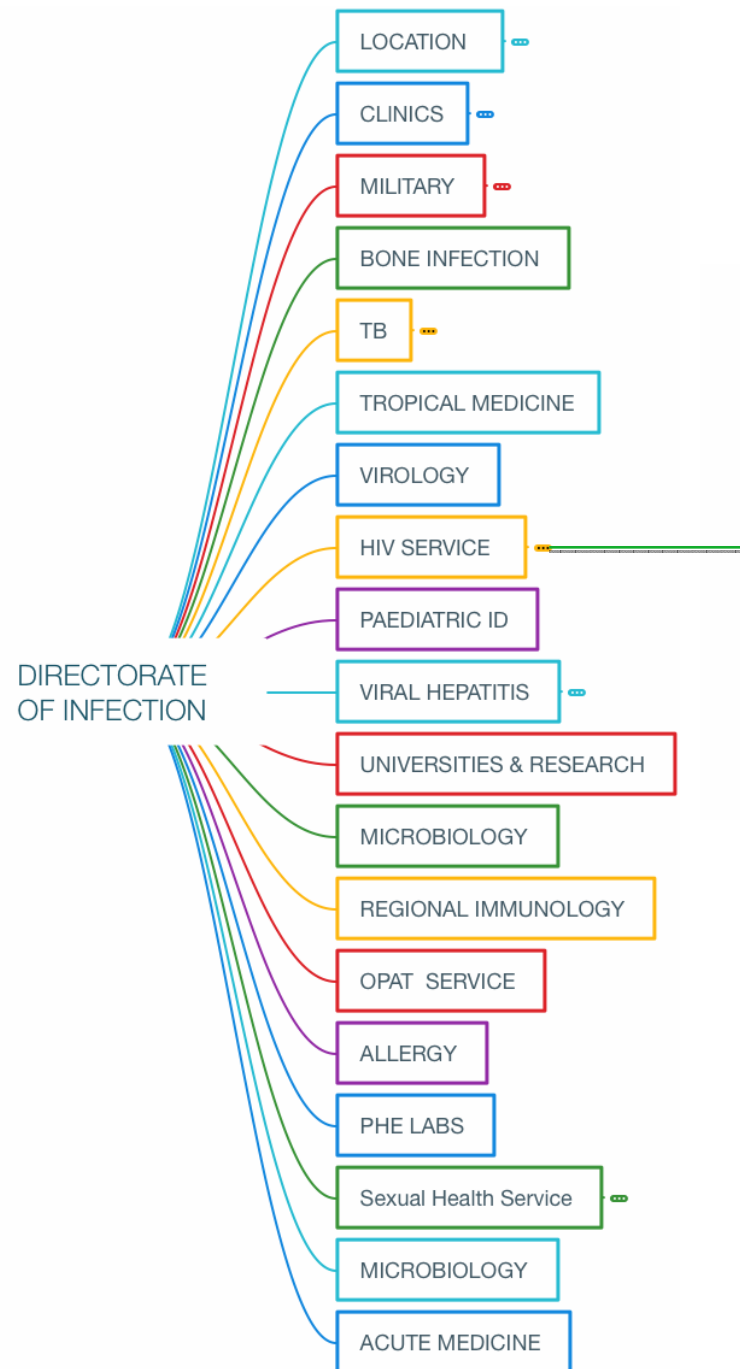
Building **healthier** lives

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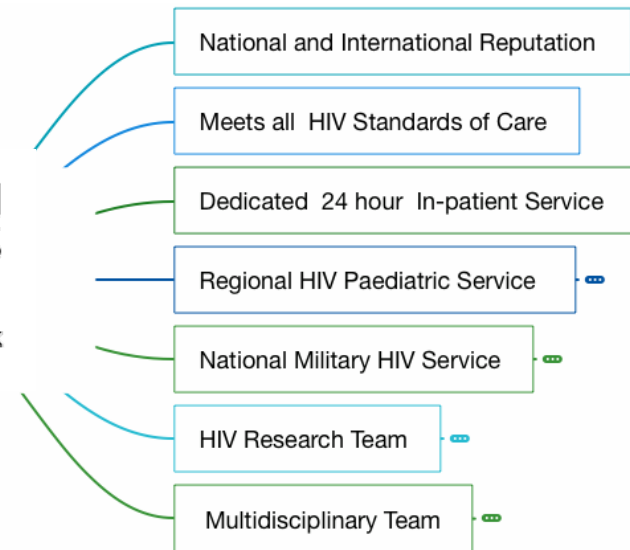
Agenda

- **HIV Basics & Stages of HIV**
- **HIV Testing, Health Advising & Sexual Health**
- **Saving Lives**
- **Antiretroviral Medication**
- **Antenatal/Postnatal & Paediatric Care**
- **Co-Infection**
- **Case Studies**
- **Evaluation & Close**



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Patients aged 18 and over
West Midlands

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Attract patients from
all
over the West
Midlands and accept
in-patient and
outpatient referrals
from all over the
region

Volume of patient

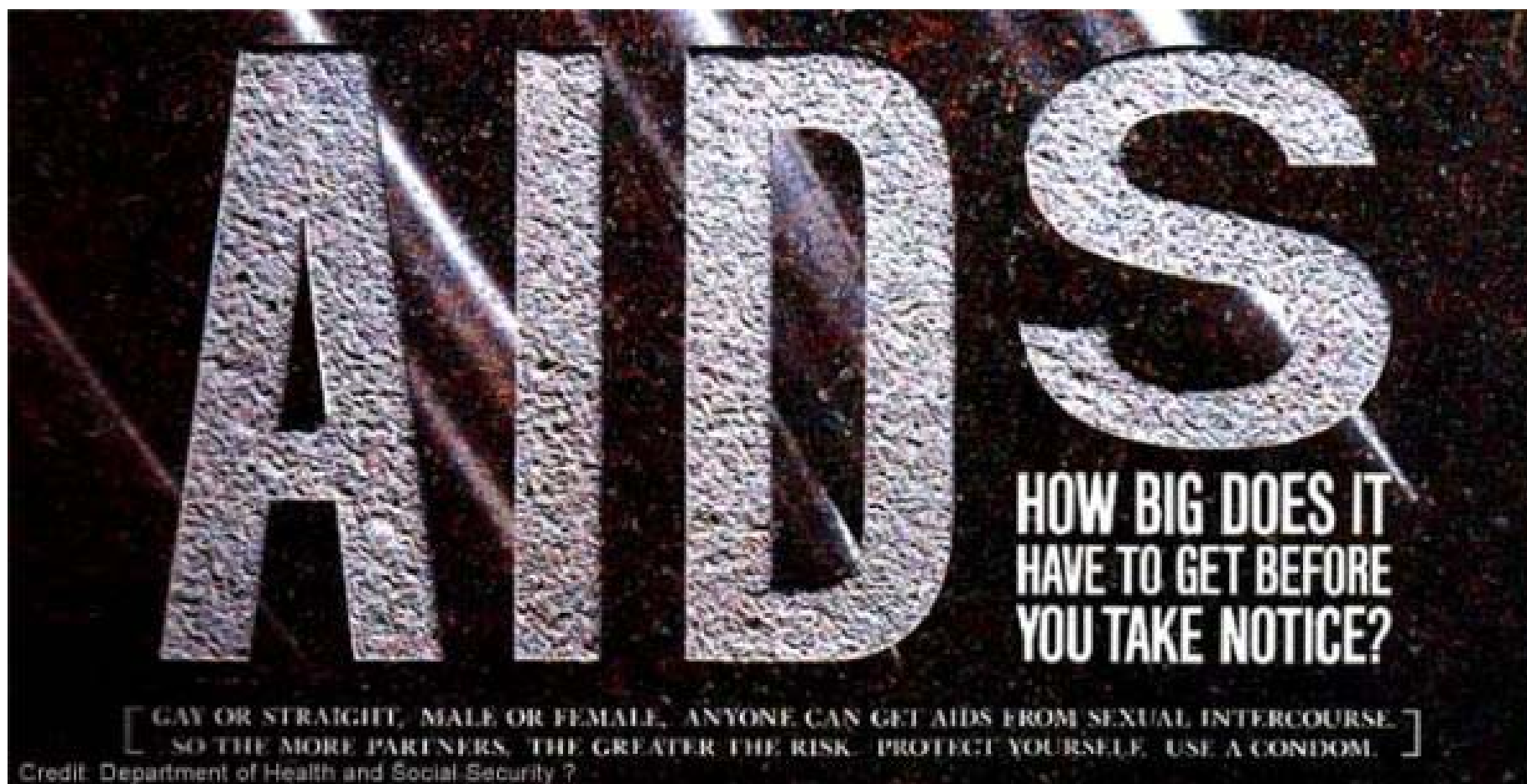


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HIV Consultant and Specialist Clinics

- Our HIV Clinics run Monday – Friday, and every HIV Clinic is supported by:
 - HIV Specialist Pharmacists
 - HIV Specialist Dieticians
 - HIV Clinical Nurse Specialists
 - HIV Specialist Occupational Therapists
 - HIV Specialist Health Advisors
 - HIV Sexual Health Nurses
 - Specialist Infectious Diseases Consultants
- Specialist HIV Clinics
 - Dermatology
 - Renal
 - Hepatitis Co-infection
 - Haematology/oncology
 - Pre-conception
 - Pregnancy Clinic
 - Adolescent Clinic

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[AIDS-Monolith-512K.wmv](#)



HIV – The Basics

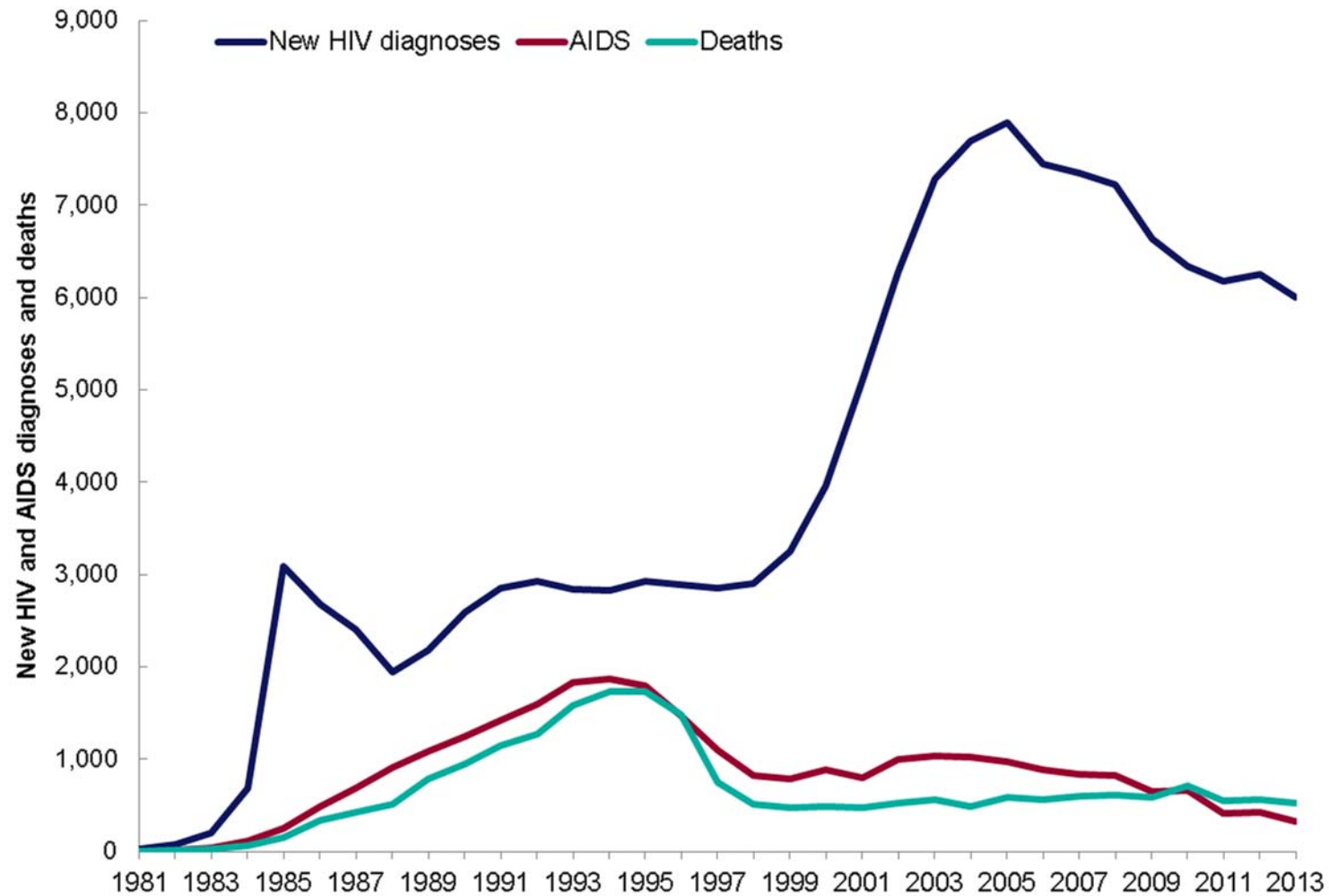
Lorraine Lewis

HIV Clinical Nurse Specialist

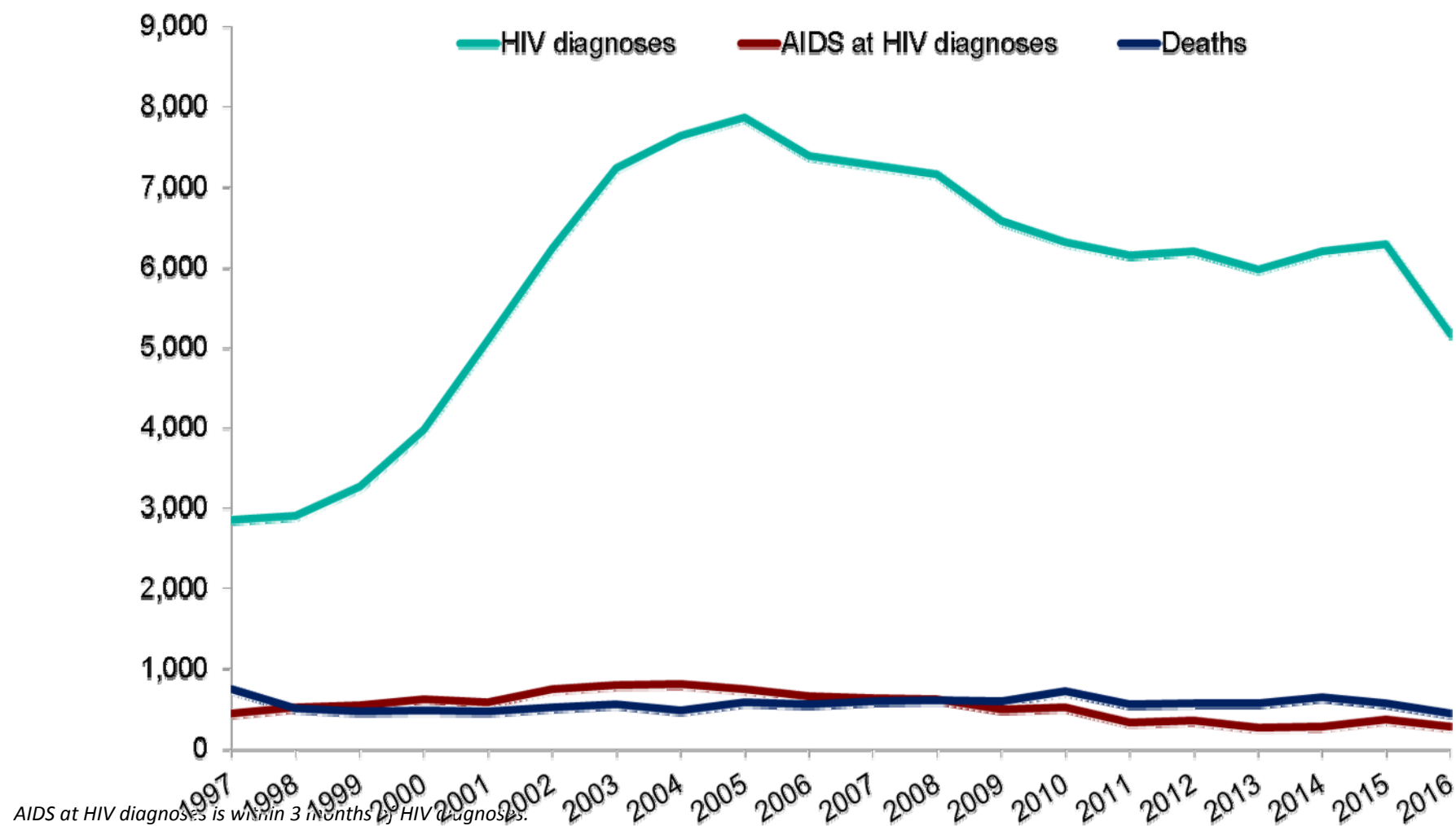
24th November 2017



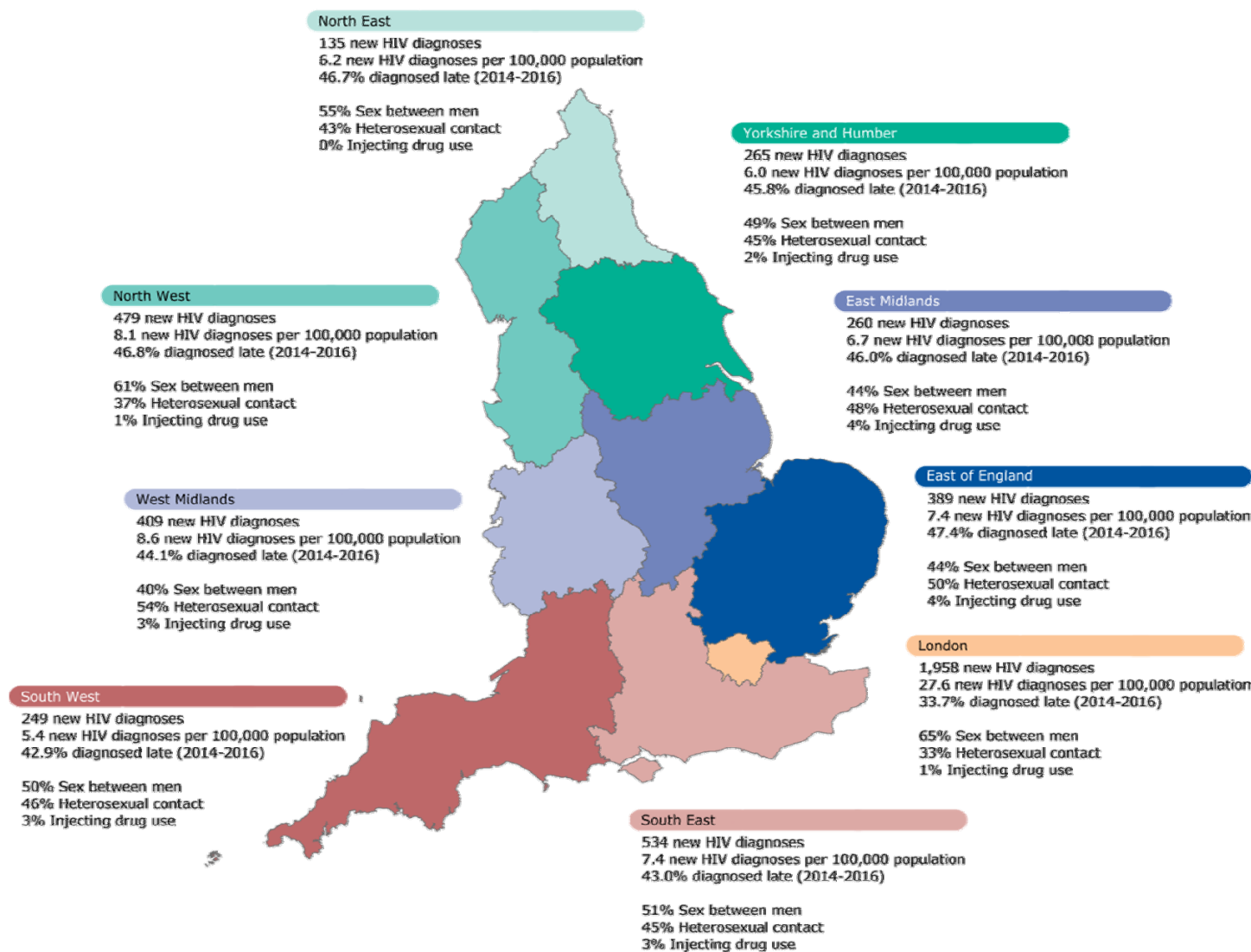
Annual new HIV and AIDS diagnoses and deaths: UK, 1981-2013



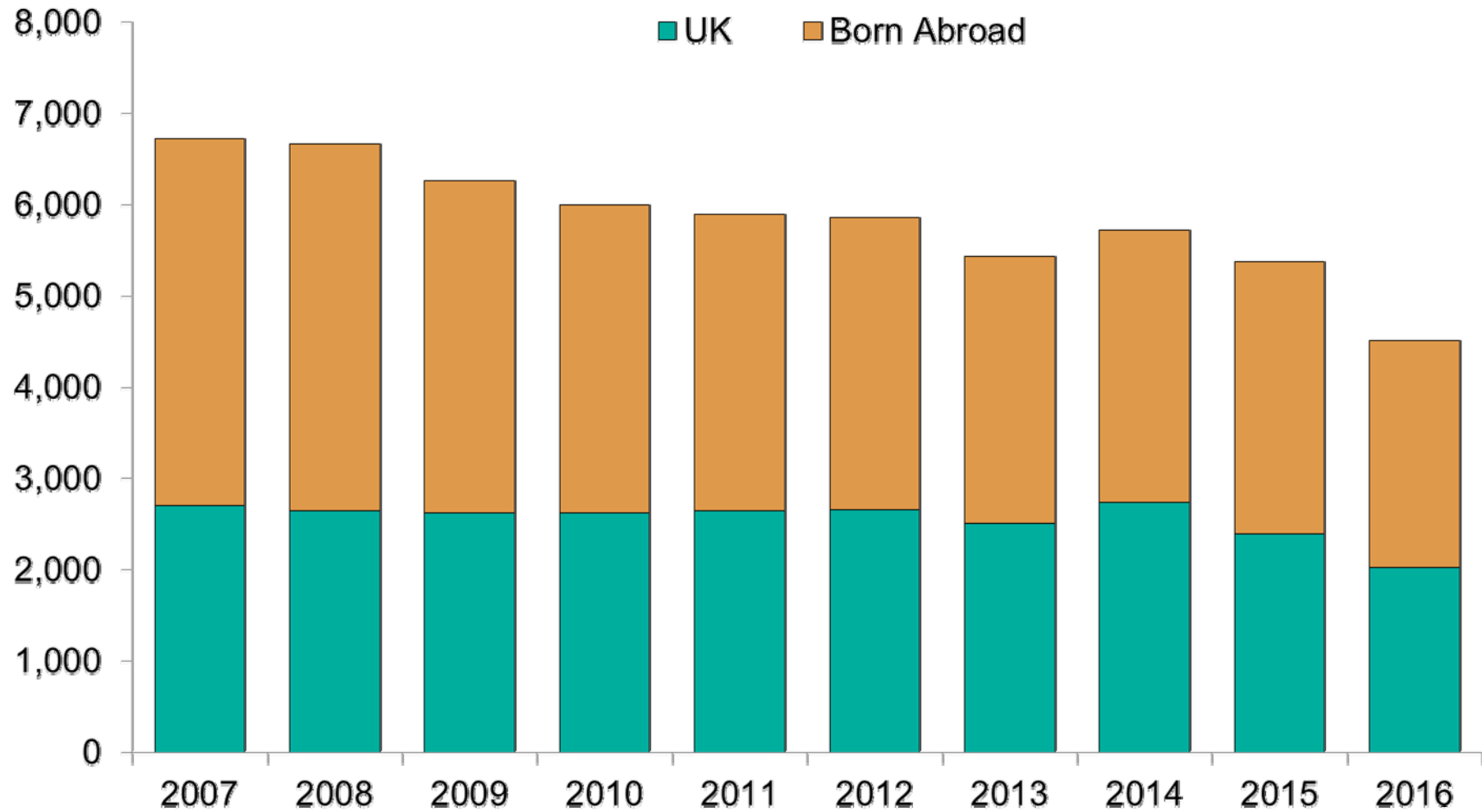
Number of people newly diagnosed with HIV and AIDS, and all-cause deaths among people with HIV in the ART era: United Kingdom, 1997 - 2016



New HIV diagnosis rate among adults (aged 15+) by PHE centre of residence: England, 2016

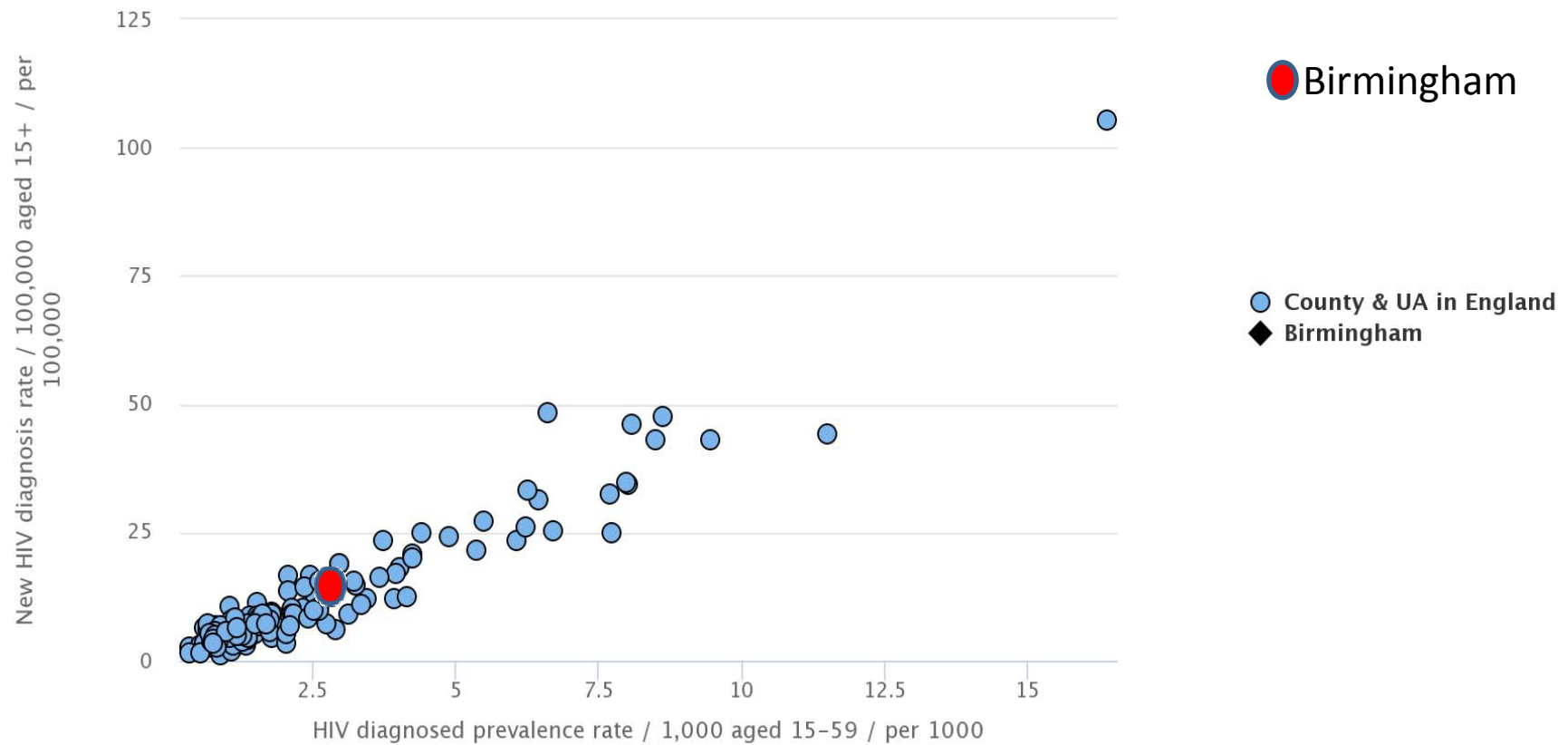


New HIV diagnosis by place of birth: United Kingdom, 2007 - 2016



Excludes people with missing country of birth information

New HIV diagnosis rate per 100,000 population



HIV

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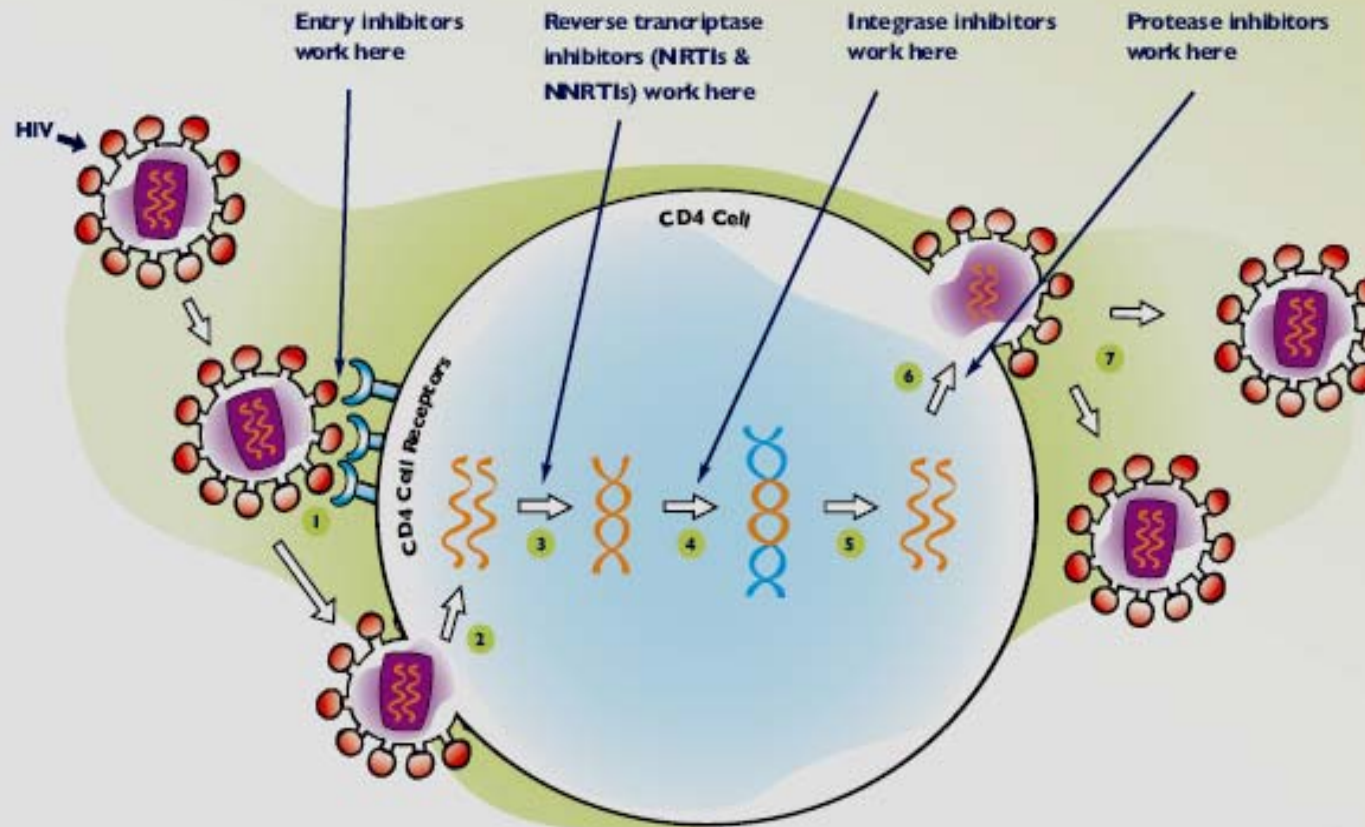
Human Immunodeficiency Virus

- A Virus (retrovirus) which attacks the immune system in order to replicate
- During replication CD4 cells are destroyed
- If this process continues, immune system fails
- Pt vulnerable to opportunistic diseases
- AIDS
- Death



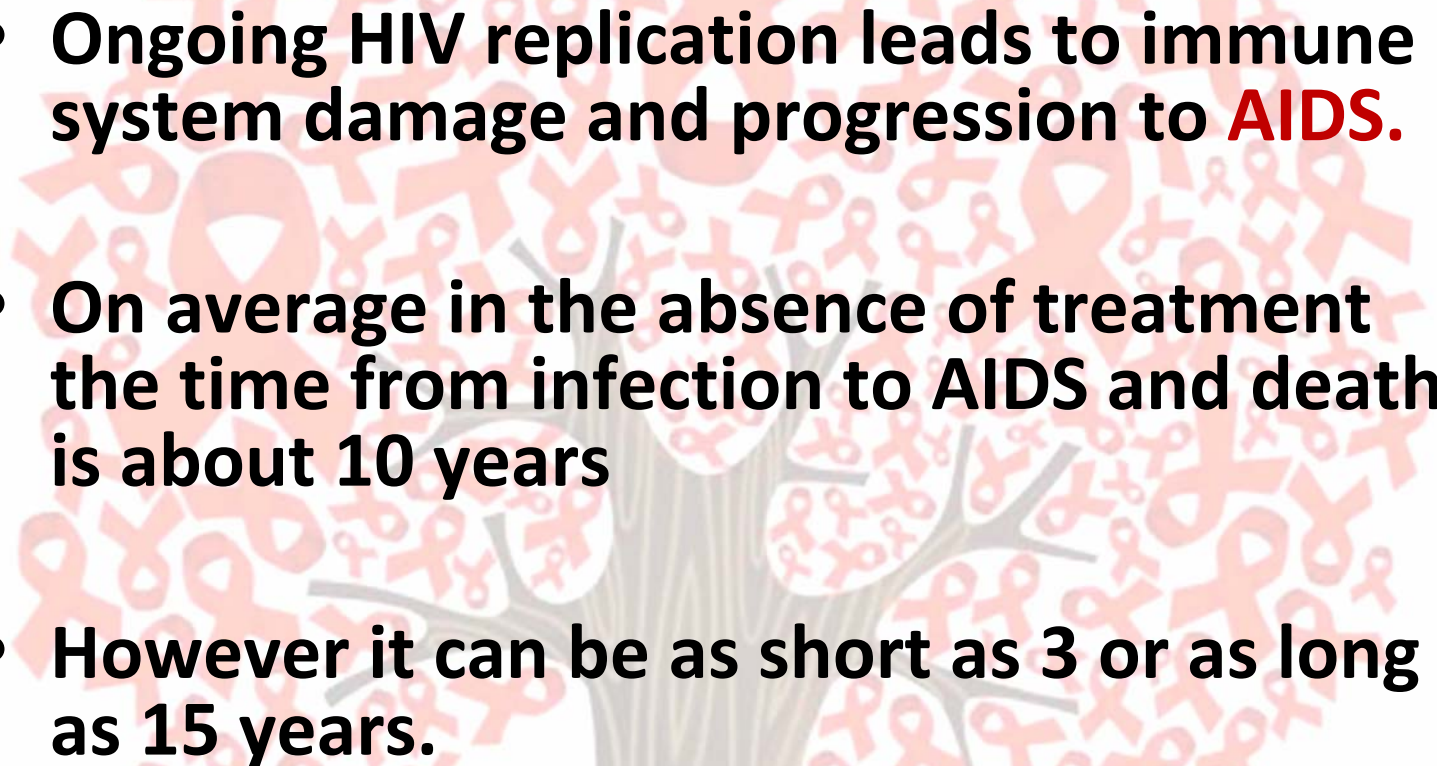
Your Life. Your Choice.

HIV treatments prevent HIV from multiplying

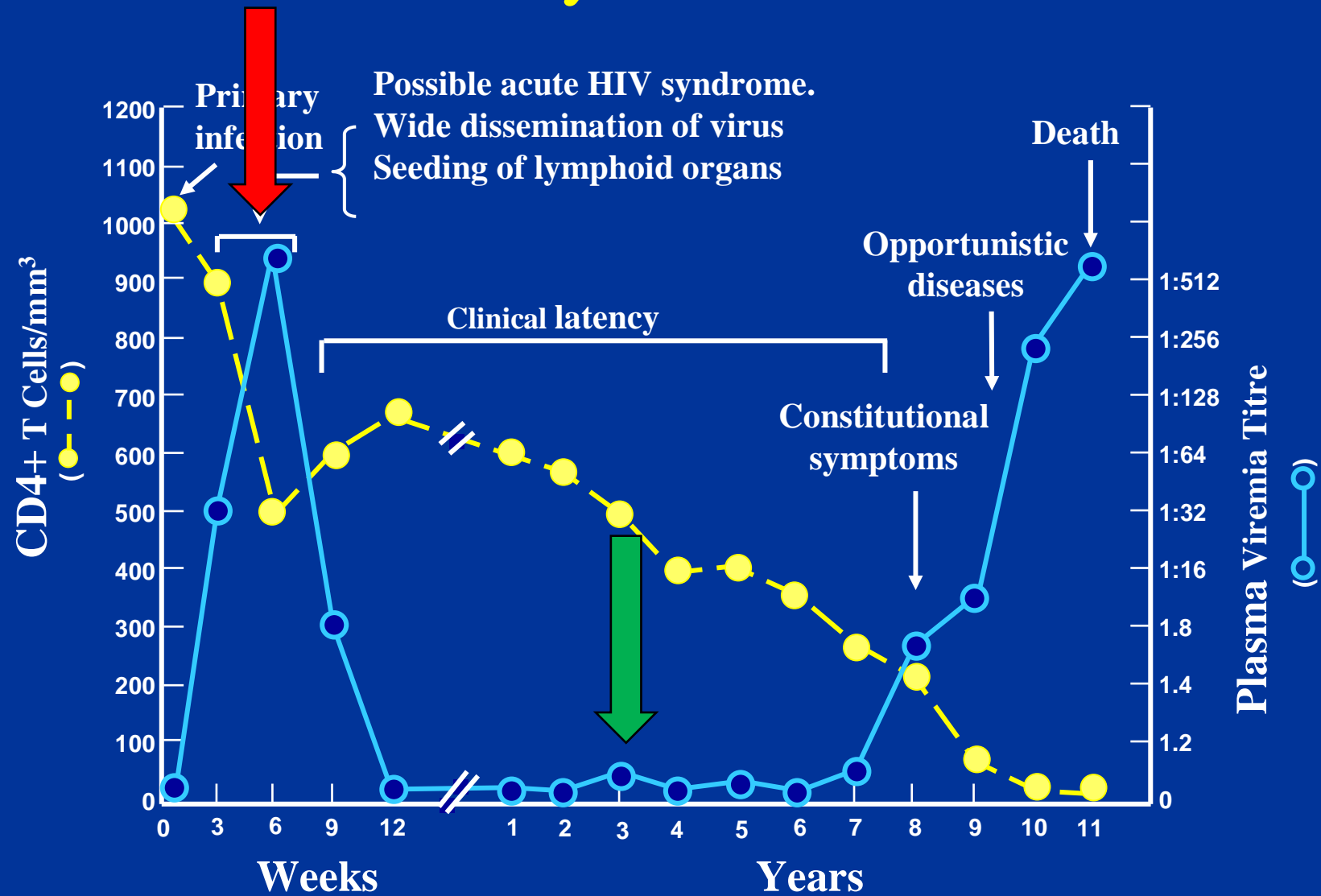


- 1 HIV binds to receptors on the CD4 cell
- 2 HIV enters the cell and inserts its genes (RNA)
- 3 HIV converts its genes into a form compatible with the CD4 cell's genes (DNA)
- 4 HIV inserts its genes into the CD4 cell's genes
- 5 The CD4 cell reads its infected genes and produces HIV components
- 6 HIV components are assembled to form new HIV
- 7 The new HIV destroys the CD4 cell as it exits, leaving to infect another CD4 cell

This diagram is an original concept by Anna Poppa

- 
- Ongoing HIV replication leads to immune system damage and progression to **AIDS**.
 - On average in the absence of treatment the time from infection to AIDS and death is about 10 years
 - However it can be as short as 3 or as long as 15 years.

Natural History of HIV Infection



HIV is present in the body of an infected person and can be found in:

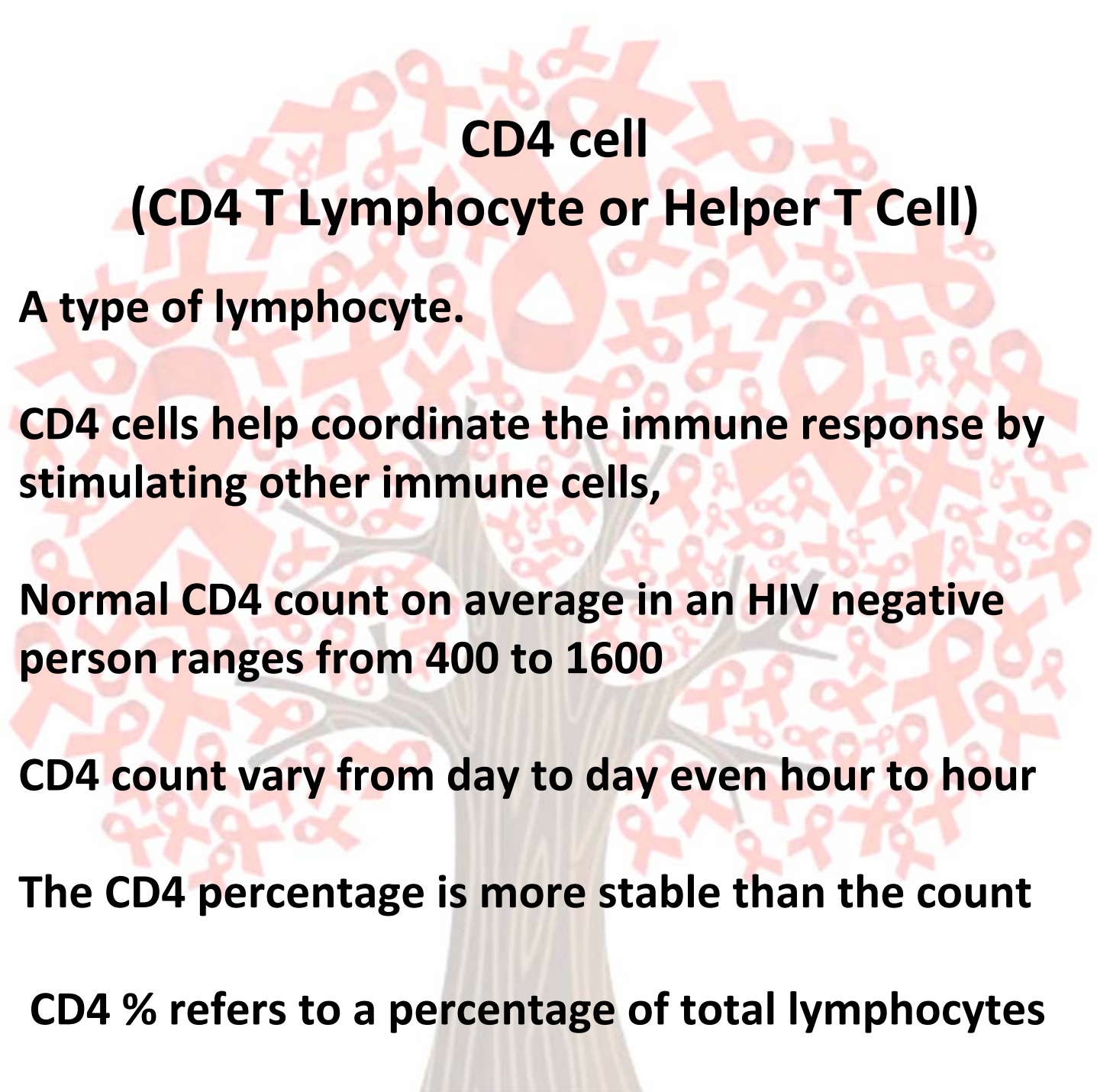
- **Semen or pre-seminal fluid**
- **Vaginal Fluid**
- **Breast milk**
- **Blood including menstrual blood**
- **Rectal secretions/ Mucosa**

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HIV can directly enter the body via the Bloodstream or via Mucous Membranes such as:

- **Vagina – via the lining of the vagina, cervix or womb**
- **Penis – via the urethra or inside of the foreskin**
- **Anus – via the lining**



CD4 cell (CD4 T Lymphocyte or Helper T Cell)

- **A type of lymphocyte.**
- **CD4 cells help coordinate the immune response by stimulating other immune cells,**
- **Normal CD4 count on average in an HIV negative person ranges from 400 to 1600**
- **CD4 count vary from day to day even hour to hour**
- **The CD4 percentage is more stable than the count**
- **CD4 % refers to a percentage of total lymphocytes**

Viral Load



- The amount of HIV Virus in a millimetre of blood
- It determines how infectious an individual is
- It determines how quickly HIV progresses

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Stages of HIV



Lorraine Lewis

HIV Clinical Nurse Specialist

November 24th 2017

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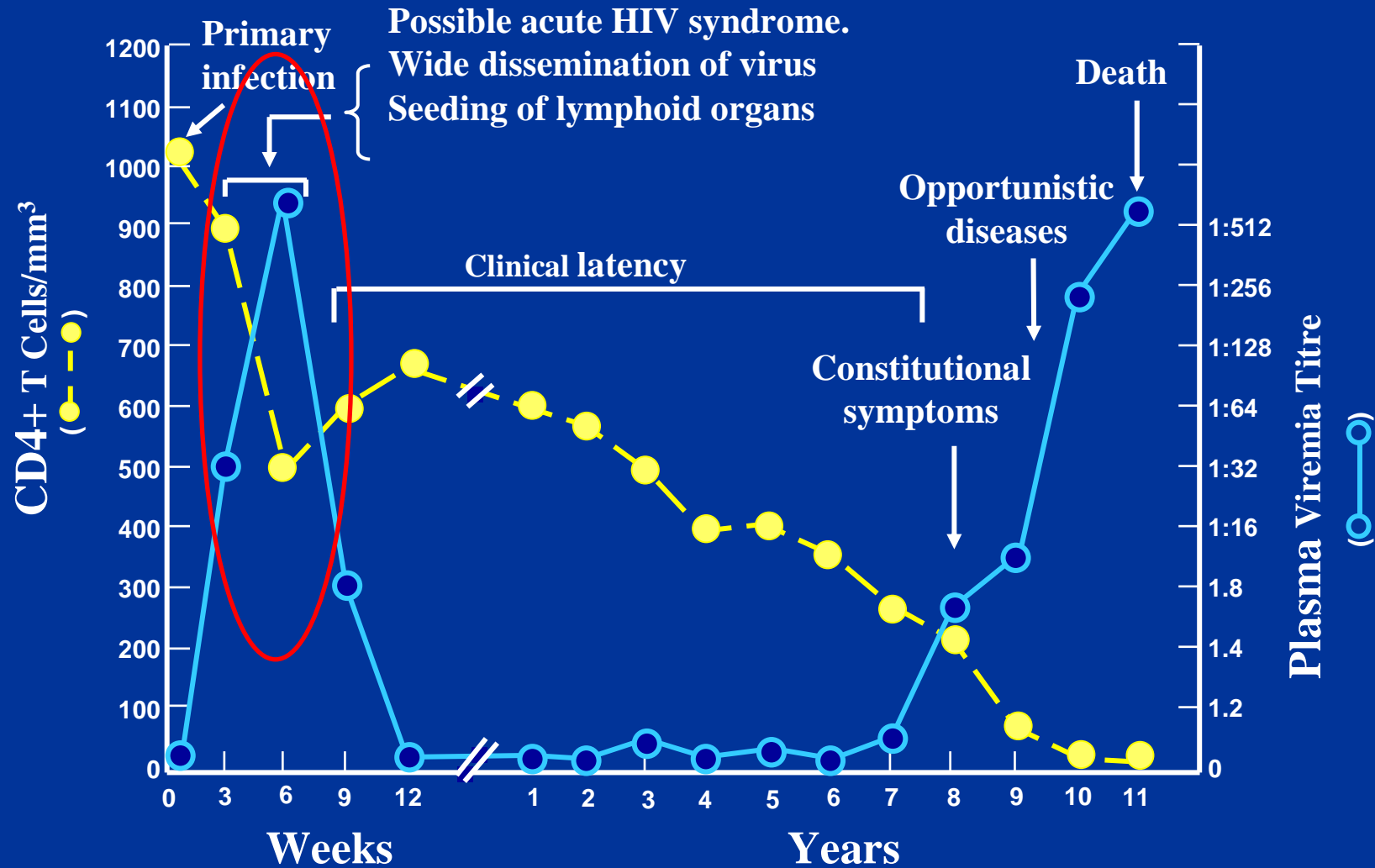
How Do Patients Present

- Primary HIV – Seroconversion
- Unknown HIV – early signs
- Unknown HIV – late syndromes



Primary HIV (seroconversion)

Natural History of HIV Infection



Primary HIV Infection

- Initial infection period with HIV
- Occurs 2-4 weeks after exposure.
- Immune system unprepared to attack the virus – therefore high viral load and often dramatic drop in CD4 count.
- Antibodies to HIV can take time to be produced. A specific protein on the HIV virus is therefore also tested for.

What is Seroconversion Illness?

- The symptomatic development of HIV-specific antibodies
- Also known as Acute Retroviral Syndrome



Why do we need to recognise primary HIV infection?

Why do we need to recognise primary HIV infection?

- 1 in 8 HIV + people in the UK remain undiagnosed.
- 80% will have symptoms
- 60-70% will seek help
- Only 5% are diagnosed

Why do we need to recognise primary HIV infection?

- **For the patient:**
- Earlier diagnosis = optimum management (nearly half of deaths in 2013 were AIDS related)
- Treat concurrent STIs
- Treatment with antiretrovirals

Why do we need to recognise primary HIV infection?

To protect others:

- Higher risk of transmission in primary HIV infection
- Easier to contact trace early

Better for the NHS:

- £14,000 – Early diagnosis
- £28,000 – Late diagnosis

How Does Primary HIV infection Present?

- **Non-specific, self-limiting symptoms**
- Fever (80-97%)
- Lymphadenopathy (40-77%)
- Rash (51-70%)
- Pharyngitis (44-73%)
- Myalgia/arthralgia (49-70%)
- Headache/aseptic meningitis (30-70%)
- Also – mucosal ulcers, peripheral neuropathy, Bell's Palsy, diarrhoea, nausea/vomiting



Bloods

- Thrombocytopenia
- Neutropenia
- Deranged LFTs



So, fever, lymphadenopathy, rash,
pharyngitis – THINK HIV!



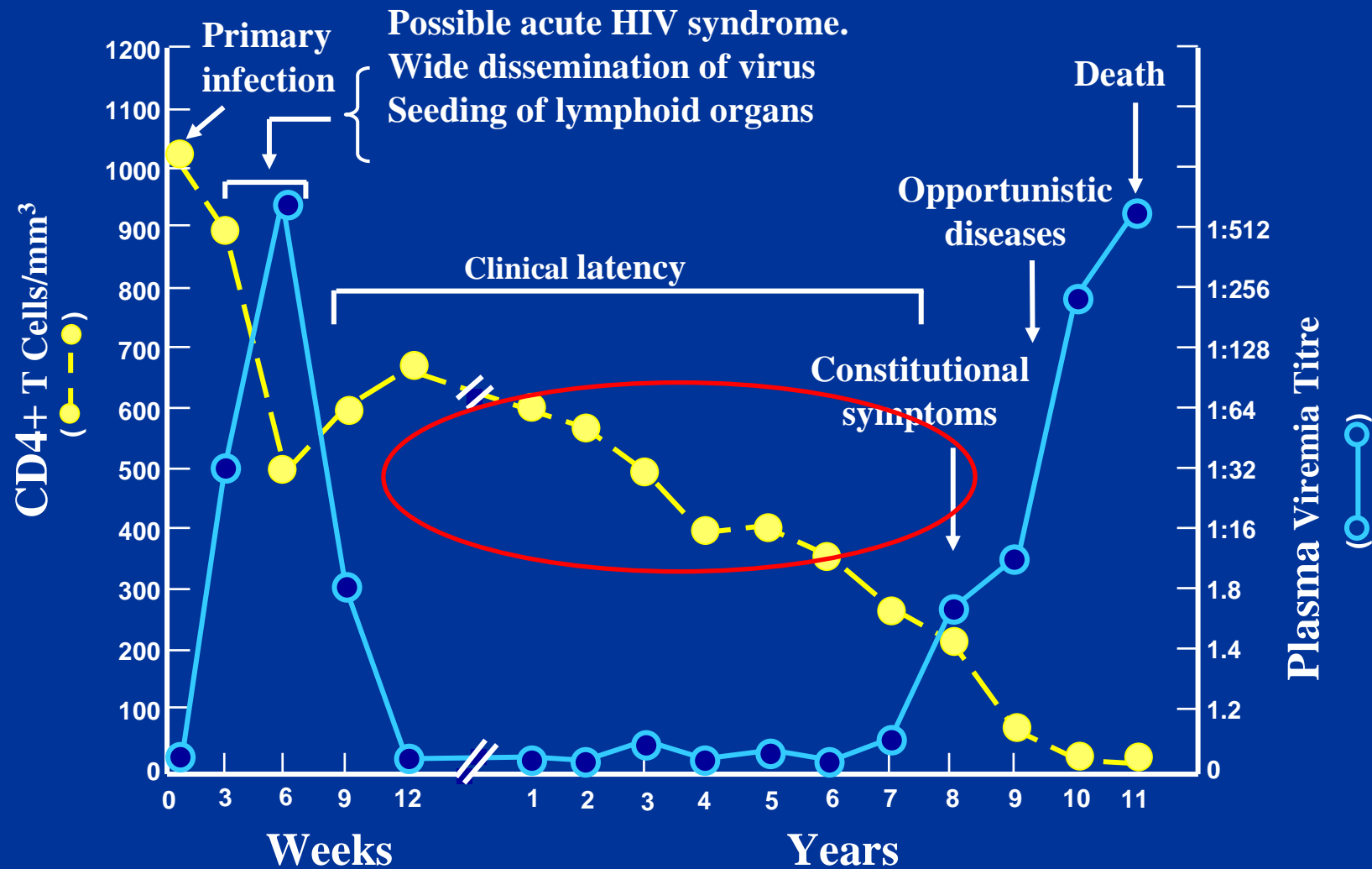
Unknown HIV, Early Clinical Signs

Skin

Mouth

Lymph Nodes

Natural History of HIV Infection



Early HIV

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Seborrhoeic Dermatitis



Early HIV

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Psoriasis



Early HIV

Third attack!



Chicken Pox - Varicella Zoster (VZV)

Early HIV

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Molluscum

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Early HIV



Shingles – Herpes Zoster



Herpes simplex



AIDS DIAGNOSIS

A documented AIDS-defining condition or a CD4 cell count less than 200 cells/mm³ or a CD4 cell percentage under 14%.

Candidiasis of bronchi, trachea or lungs

Candidiasis of oesophagus

Cervical cancer - invasive

Coccidioidomycosis - disseminated or extrapulmonary

Cryptococcosis - extrapulmonary

Cryptosporidiosis - chronic intestinal for more than 1 month

Cytomegalovirus disease - other than liver, spleen or nodes

Cytomegalovirus retinitis (with loss of vision)

Encephalopathy - HIV related

Herpes simplex: chronic ulcers for more than 1 month - or bronchitis, pneumonitis or oesophagitis

Histoplasmosis - disseminated or extra pulmonary

Isosporiasis - chronic intestinal for more than 1 month

Kaposi's sarcoma

Lymphoma - Burkitt (or equivalent term)

Lymphoma - immunoblastic (or equivalent term)

Lymphoma - primary, of brain

Mycobacterium avium complex or Mycobacterium kansasii - disseminated or extra pulmonary

Mycobacterium tuberculosis of any site - pulmonary, disseminated, or extra pulmonary

Mycobacterium - other species or unidentified species, disseminated or extra pulmonary

Pneumocystis jirovecii pneumonia (PCP)

Pneumonia - recurrent

Progressive multifocal leukoencephalopathy

Salmonella septicaemia - recurrent

Toxoplasmosis of brain

Wasting syndrome attributed to HIV

Unknown HIV +ve with late clinical syndromes



Kaposi's Sarcoma



Kaposi Sarcoma



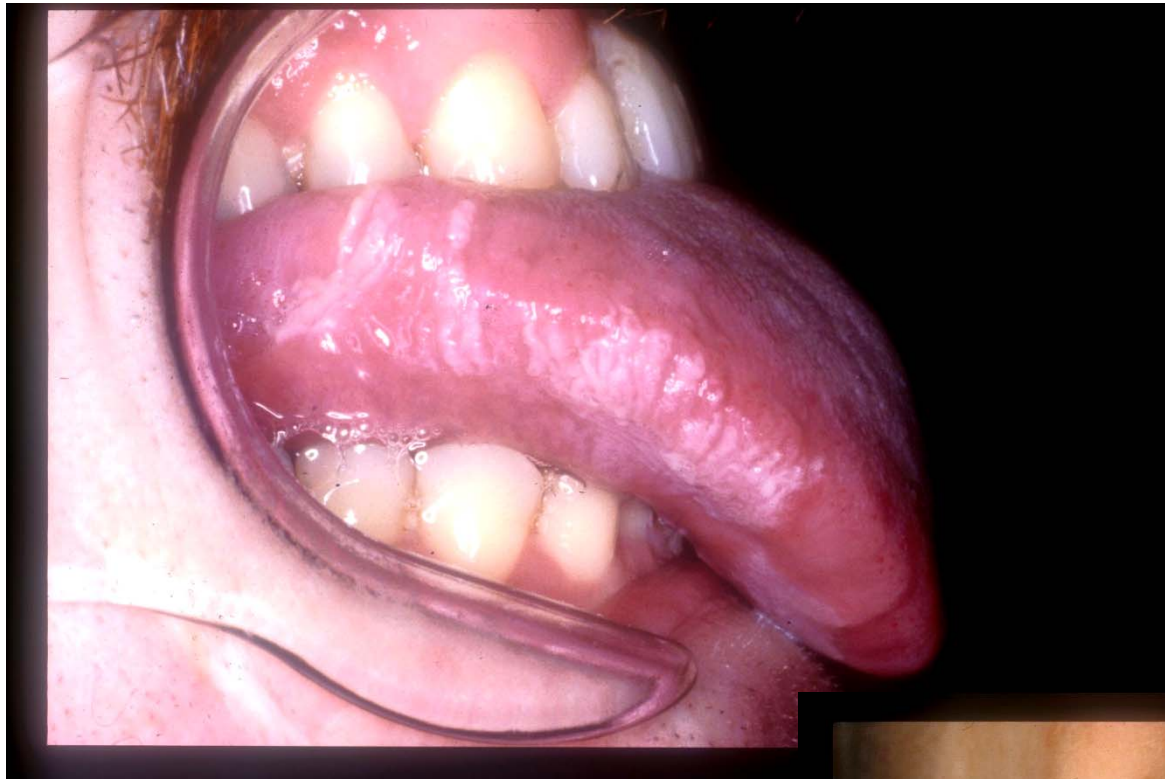


Oral Candida

Oesophageal candida

Commonest GI manifestation





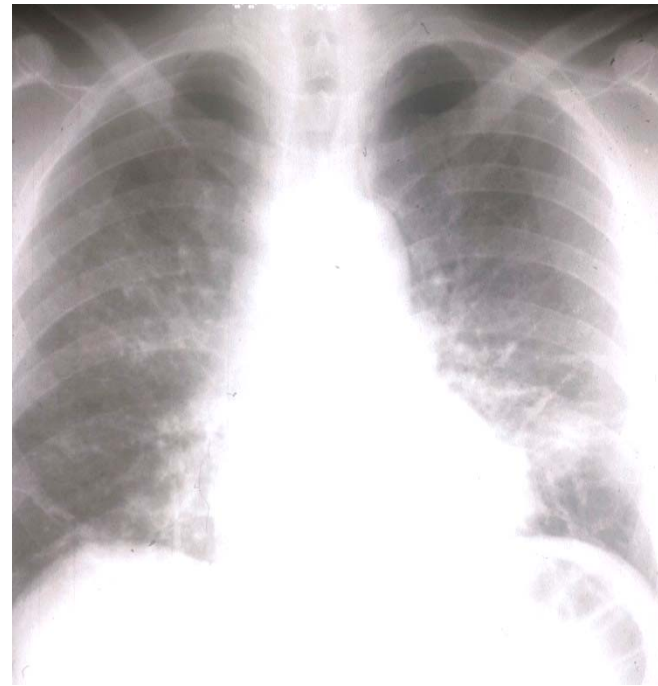
Oral Hairy
Leukoplakia

Oral
Candida



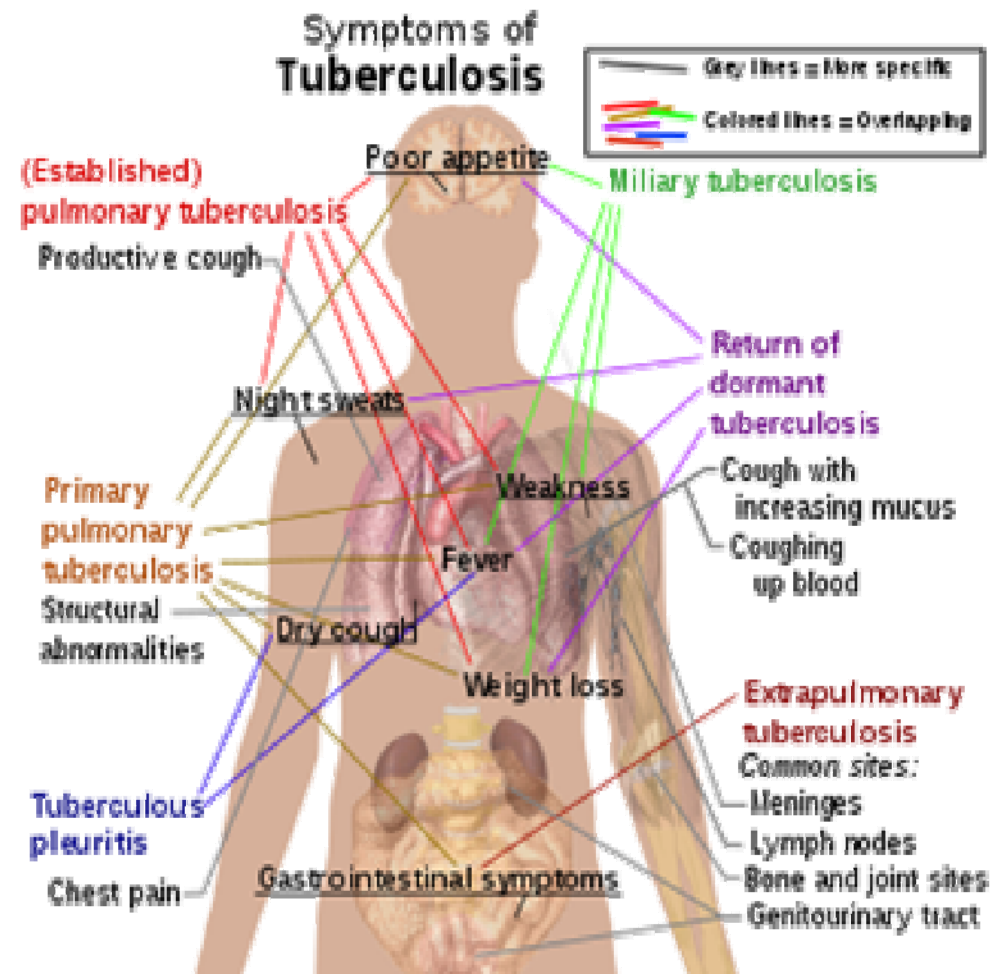
Pneumocystis jirovecii pneumonia (PCP)

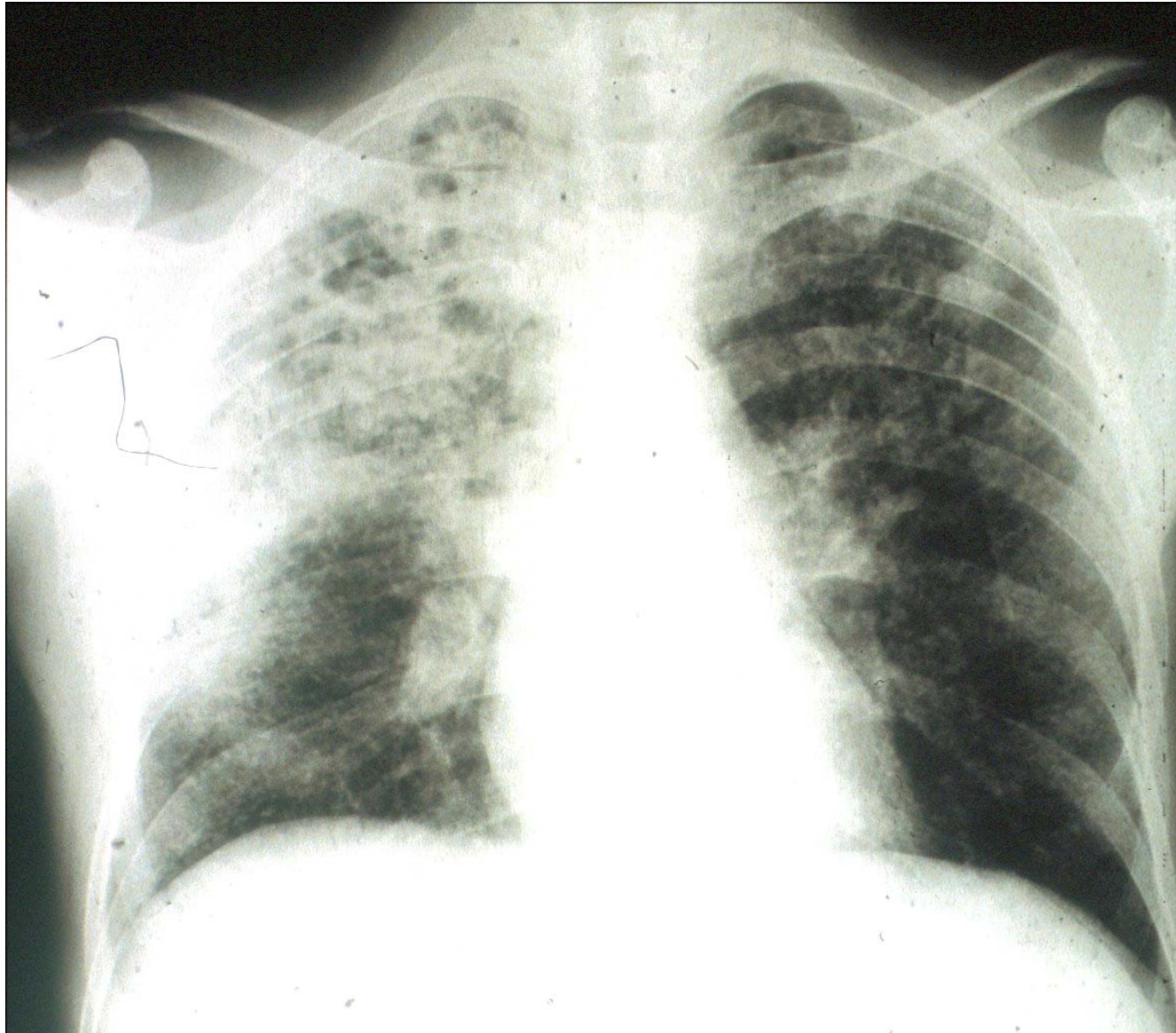
- Leading AIDS defining opportunistic infection in UK
 - Caused by the pneumocystis organism
 - Usually affects patient with a CD4 count lower <200
-
- Cough usually non-productive
 - SOB/OE
 - Fever
 - Increased respiration
 - Chest pain
 - Respiratory examination often normal
 - SaO₂ - Low
 - CXR can be normal
 - Sputum not always cultured
 - Bronchoscopy and lavage can detect the organism



Tuberculosis

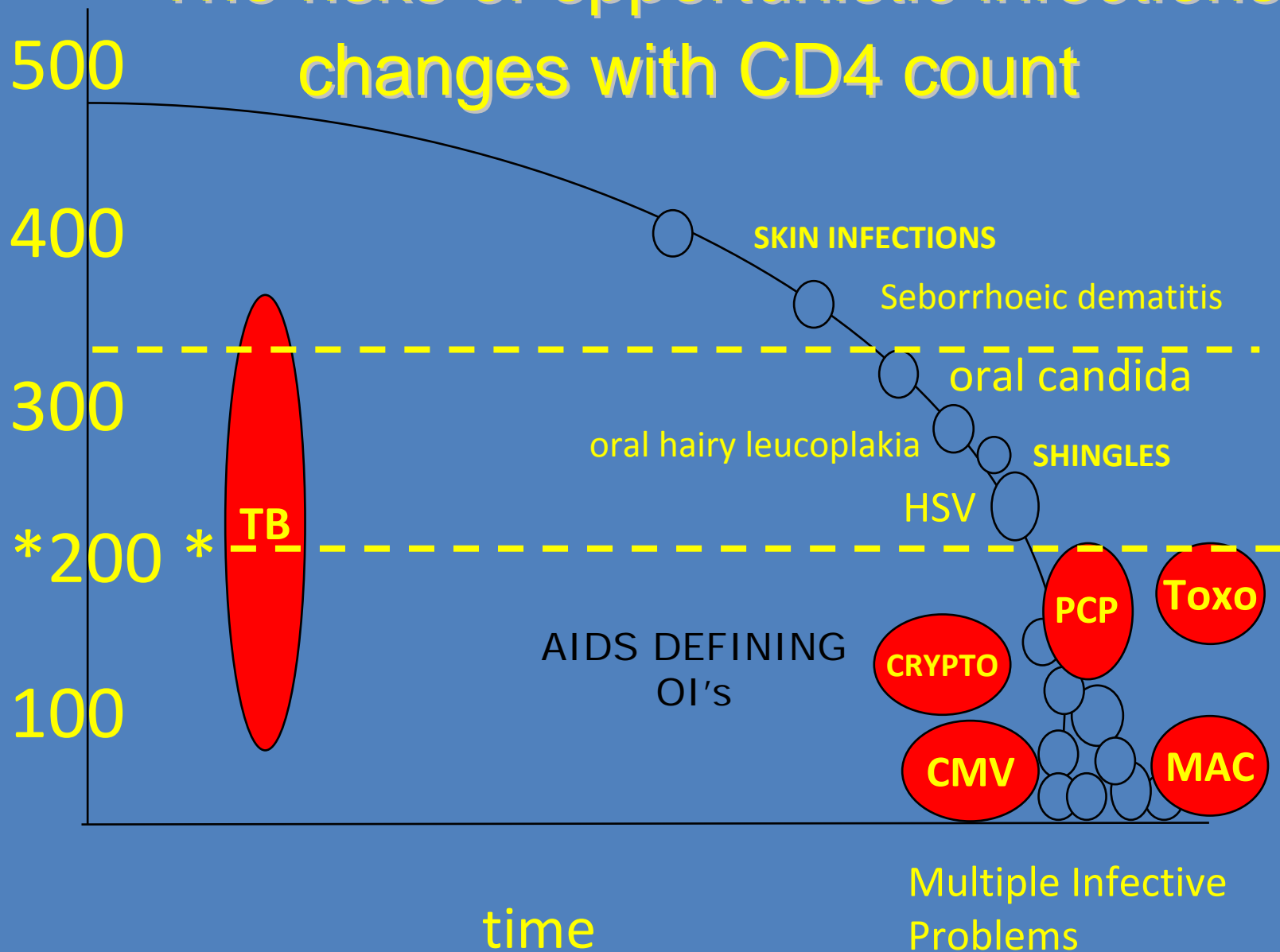
- Most common opportunistic infection worldwide
- There are >50% of people co-infected with HIV & TB in Sub-Saharan Africa
- If HIV +ve more at risk of TB
- More likely to have extra pulmonary TB
- HIV+ve people with latent TB are 3 times more likely to develop active TB disease than HIV –ve people
- Interactions between HIV and TB treatment are complex





Tuberculosis

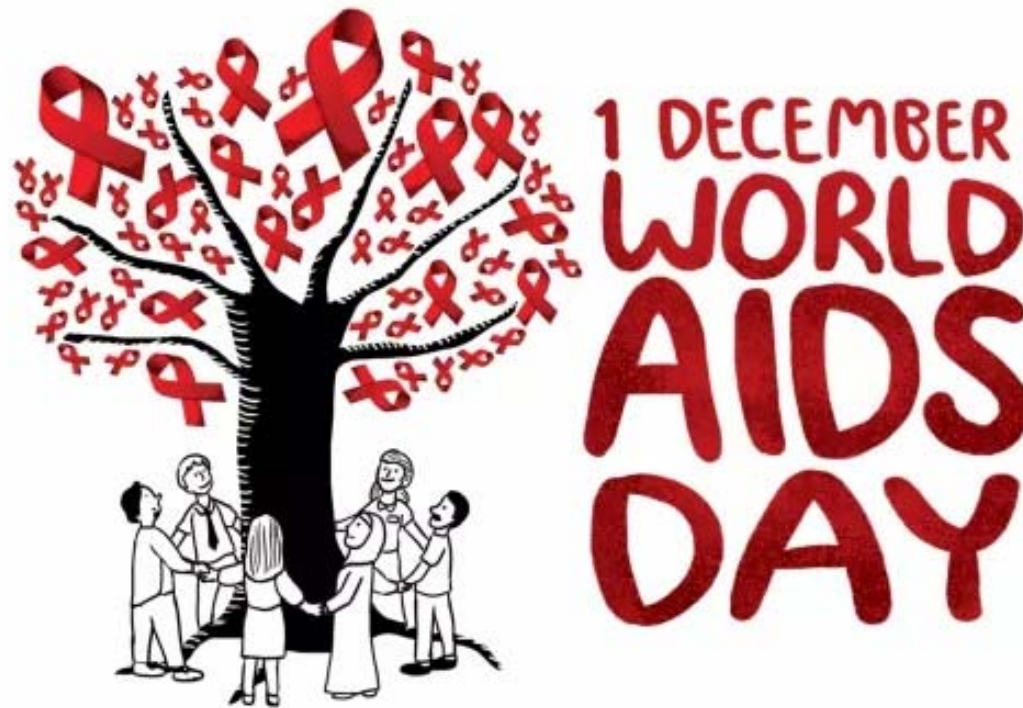
CD4 The risks of opportunistic infections changes with CD4 count



Thank you
Any Questions?



www.savinglivesuk.com



<https://www.worldaidsday.org/>



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TAKEA
TEST
UK.COM



Summary

- Please fill in your Evaluation forms to get your Certificate
- Please contact us!!
- Meet us at the dolphins today
- Big Red Bus 1st Dec for WORLD AIDS DAY
- Volunteers needed!!

www.hivbirmingham.nhs.uk



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Here @bhamcathedral for #WorldAIDSDay
Thanks to @SavingLivesUK for providing us with the big red bus to Digbeth for part two



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11:33 AM - 1 Dec 2016

2 3

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@SavingLivesUK

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Thankyou @iam_yafai @22Gards @Robbo04pr
@NathanRedmond22 @Sberahino
@JackButland_One for supporting
#WorldAIDSDay TakeATestUK.com



Thank you so much to All Saints Church in Smallheath for being out base whilst we did local outreach! TakeATestUK.com #WorldAIDSDay



RETWEETS 4 LIKES 3

8:29 AM - 1 Dec 2016

